

# N

## nahr

Canal or river.

## namazgah

Turkish and Persian term for an open-air prayer place often used by the army. Sometimes these are quite elaborately built with a minbar and a standing mihrab.

## naqqar khana

Mughal term for a drum house or place for an orchestra during ceremonies.

## Natanz, shrine of Abd al-Samad

*Sufi funerary complex at Natanz in western Iran.*

Natanz is located on the edge of the Dasht-i Kavir desert 60 km south-east of Kashan. This is a large funerary complex which has grown up organically around the tomb of Abd al-Samad, a follower of the famous Sufi saint Abu Said who died in 1049. The central feature of the site is the octagonal tomb around which is built a four-iwan congregational mosque dated to 1309. Internally the tomb is a cruciform chamber which is converted to an octagon at roof level. The roof is a blue-tiled octagonal pyramid dome outside and internally comprises a tall muqarnas vault. Another important structure at the site is the khanqa or dervish hostel built in 1317 which is located to the south-west of the tomb. Only the portal of this structure survives with a large muqarnas semi-dome.

## Nilometer

*Device located on Roda island, Egypt for measuring the rise of the Nile during the period of inundation.*

This structure was built in 861–2 CE during the reign of Caliph al-Mutawakil. The purpose of the device is to measure the level of the flood to work out the amount of tax due to the government (a higher flood level indicates a higher yield). The

structure consists of a 2 m square stone-lined pit 13.14 m deep connected to the Nile by three tunnels. In the centre of the square pit is a tall octagonal column divided into cubits each of which is subdivided into twenty-four smaller units. A staircase runs down the four sides so that the central column could be read. The floor at the bottom was made of cedar beams. Approximately halfway up there are four pointed relieving arches, one on each side of the pit. The arches are of a two-centred type used in Gothic architecture in Europe during the fourteenth century. The curves of the arches are emphasized by two bands of moulding whilst above there are foliated kufic inscriptions which contain Quranic passages referring to crops and harvests.

### Further reading:

K. A. C. Creswell, *A Short Account of Early Muslim Architecture*, revised and enlarged edn. J. W. Allan, Aldershot 1989, 383–5.

## nine-domed mosque

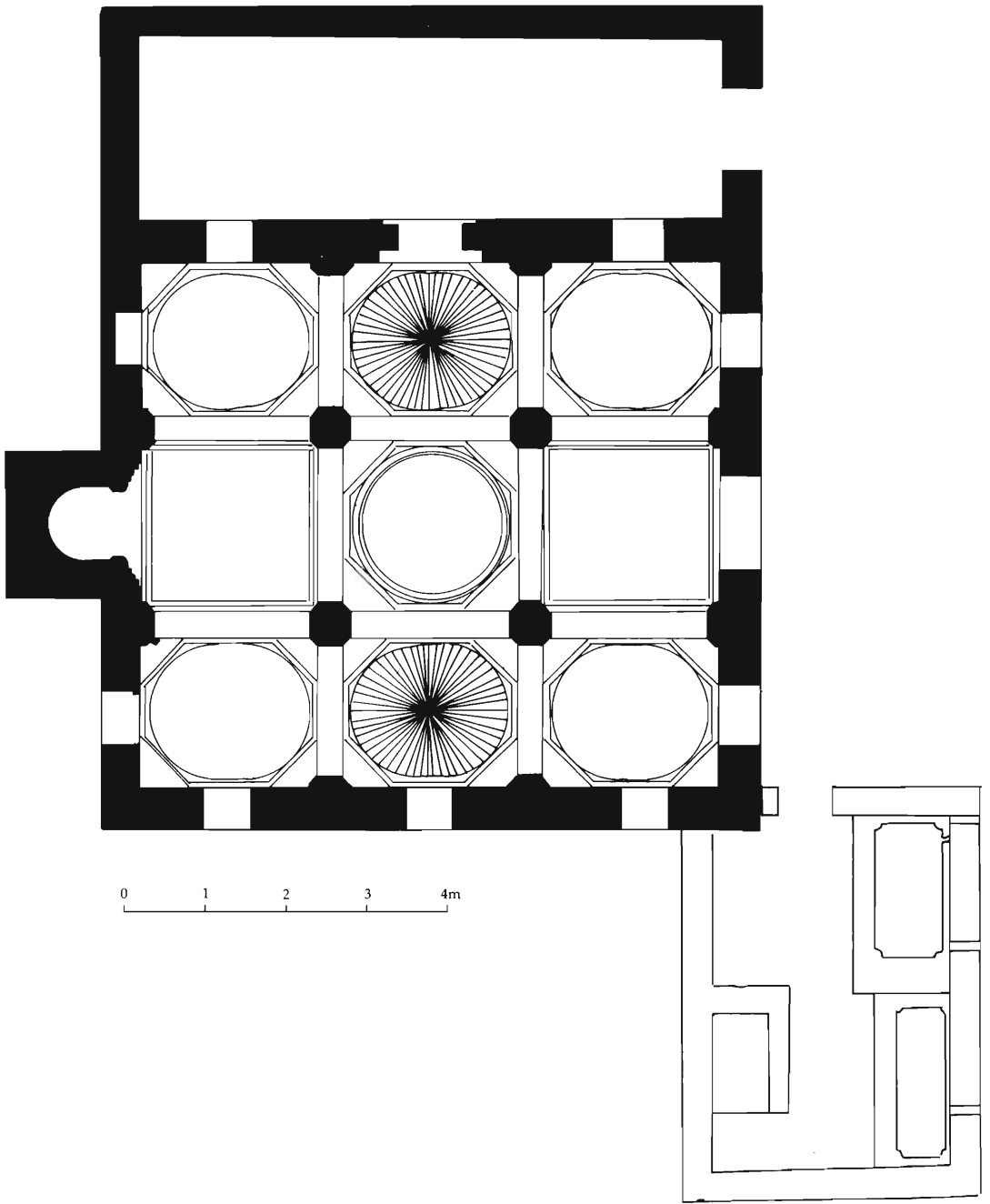
*This is a type of mosque roofed by nine domes of equal size.*

Although the distribution of this building type is very wide (it is found as far apart as East Africa, Bangladesh, Central Asia and North Africa) it does not occur in great numbers in any one area. The earliest extant examples date from the ninth century CE, whilst there are few buildings of this type later than the sixteenth century.

Most nine-domed mosques are fairly small (usually 10–15 m square) though substantially built. It is common for these buildings to be open on two, three or even four sides but it is rare for them to have a sahn or minaret. Sometimes the central row of domes is raised to emphasize the mihrab axis.

There are two theories about the origin of this type of mosque. The older theory originated by Creswell asserts that the mosque is derived from the earliest forms of Islamic funerary monuments,

nine-domed mosque



*Nine-domed mosque, Kilwa (after Garlake)*

such as the Qubbat al-Sulaybiyya at Samarra, which were domed and had open sides. More recently it

has been suggested that the type derives from honorific buildings such as Khirbet al-Mafjar.

Whilst the origin of the design may be disputed it is clear that many of the mosques were associated with tombs or burials so that it is reasonable to suggest that they should be regarded as memorial mosques. Important examples can be found at Kilwa, Fustat, and Toledo.

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K. A. C. Creswell, *Muslim Architecture of Egypt I*, Oxford 1952, 11–13.

R. Ettinghausen, *From Byzantium to Sassanian Iran and the Islamic World*, London 1972, 57–8.

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## Nishapur

*Famous medieval city located in the Khurassan region of eastern Iran.*

Nishapur was founded in Sassanian times as 'New Shapur' and rose to prominence in early Islamic times as capital of the Tahirid dynasty in the ninth century. The city was at the height of its prosperity and importance under the Samanid dynasty in the tenth century. In 1037 the city was captured by the Seljuks and remained a part of that empire until 1153 when it was sacked by the Ghuzz. Despite the sacking and several earthquakes the city continued to function until 1221 when it was sacked by the Mongols. A modern city of the same name has grown up near the site based around an eighteenth-century shrine.

Although no standing architecture remains at the site, excavation has revealed extensive architectural remains together with a large number of finds making this one of the best examples of a medieval

Islamic city. The remains were found mostly within three mounds known as Tepe Madrasseh, Sabz Pushan and Qanat Tepe. There is no evidence of occupation at any of the sites before the eighth century indicating that the Sassanian city may have been elsewhere. The main materials of construction were mud brick (*khist*) and trodden earth or pisé (*chineh*) and baked brick. Wood was used as a strengthening material in walls as well as for columns. Many of the walls were covered with stucco and painted plaster panels (frescoes). The remains of several mosques were found on the site all with rectangular recessed mihrabs. At Tepe Madrasseh remains of a prayer-hall iwan were found together with the base of a minaret. The minaret had an octagonal shaft and was built of yellow fired bricks with decorated with shallow vertical slots. Elsewhere on the site columns built of baked brick were also decorated with slots. At Qanat Tepe remains of a mosque were found close to the remains of a bath house. The bath house had hypocaust heating, a plunge pool and a nine-sided octagonal basin in the centre. The most remarkable feature of the bath house was the frescoes which included representations of human figures. At Sabz Pushan remains of small houses were found which included centrally placed sunken fireplaces made from earthenware jars set into the ground. Among the most important finds at the site were the remains of eleven muqarnas panels excavated from a cellar. These were prefabricated plaster panels which would have been attached to the zone of transition in the roof of the cellar and are some of the earliest evidence for the use of muqarnas.

# O

## ocak

Turkish word for a chimney hood, also used to designate a unit of Ottoman troops of Janissaries. The typical Ottoman ocak consists of a tall conical hood set against the inside wall of a building. Some of the best examples can be found in the kitchens in the Topkapisarai.

**See also:** Ottomans

## Oman

*The sultanate of Oman is located in the south-east corner of the Arabian peninsula and borders on the Indian Ocean.*

It is the third largest country in Arabia after Saudi Arabia and Yemen and comprises five distinct geographical regions, the Musandam peninsula, the Batinah coastal strip, the Hajjar mountains, the Naj desert and Dhofar. The Musandam peninsula is separate from the rest of the country and comprises a rocky headland adjacent to the straits of Hormuz. The Batinah coastal strip is located between the sea and the mountains in the northern part of the country and varies between 20 and 25 km wide, this is the most densely populated region of Oman. The Hajjar mountains are a very distinctive feature; running in a belt parallel to the coast in the northern part of the country, they are the source of most of Oman's water. The Naj desert, comprising several areas including the Wahiba sands, separates the northern mountains from those of the south and its population is mostly nomadic. Dhofar is a mountainous region in the south of the country with a tropical climate and is the only part of Arabia to experience a summer monsoon.

Until the discovery of oil Oman's economy was based upon a number of natural resources, the most important of which were copper from the mountains in the north and frankincense from Dhofar. Also Oman's position on the Indian Ocean meant that it was able to establish a long-distance

maritime trade based on the monsoons of the Indian Ocean. In addition, fishing and dates have remained important components of Oman's economy even after the discovery of oil.

The earliest settled communities in Oman have been dated to 3000 BCE and by 2000 BCE copper was being exported to Mesopotamia. In the fourth century BCE Oman was occupied by the Persians who remained in control of the country until the advent of Islam in 630 CE. Under Islam Oman's trading network flourished and included East Africa, India and the Far East. During this period various coastal towns grew up, the most important of which were Sohar, Qalhat and Dhofar (al-Balid). In 1503 the coastal towns were captured and occupied by the Portuguese. As a result the towns of the interior, the most important of which were Nizwa and Bahla, grew in power and influence. By 1650 the Portuguese had been expelled by the Ya'ariba leader, Sultan bin Sayf, who rebuilt the fort at Nizwa. Internal conflicts allowed a Persian invasion in 1743 but this was brought to an end by Ahmad ibn Sa'id governor of Sohar who was elected imam in 1743. He was the founder of the Al Bu Sa'id dynasty which continues to rule Oman today.

In 1730 Oman had acquired the island of Zanzibar and by the 1830s Sultan Sa'id ibn Sultan had built a new capital in Zanzibar. From 1856 Oman and Zanzibar were ruled by two branches of the same family.

For various reasons Oman was not modernized until the 1970s, which has meant that traditional architecture has survived here better than in most of the other Gulf states. The main building materials employed in Oman are mud brick, baked brick, stone, mangrove poles, palm trees and lime (used for mortar and plaster). The particular combination of materials employed depends on the region and type of building.

Baked brick is used fairly infrequently in Oman and is confined mostly to the port of Sohar. Baked bricks were first used in the early Islamic city and were also used in houses of the nineteenth century

although it is not certain if bricks were still made in nineteenth-century Oman or imported from elsewhere. Occasionally baked bricks are found incorporated into buildings outside Sohar such as the arches of the Great Mosque in Bahla or in the columns of the mosque of the Samad quarter in Nizwa. Mud brick on the other hand is more common and is frequently used in the oasis towns of the interior. It is usually used in conjunction with mud mortar and plaster sometimes mixed with lime. Mangrove poles imported from East Africa are frequently used for roofing in the houses of the coast. Palm trunks are also used for roofing there and for inland parts of the country. Palm fronds and trunks are also used for less permanent structures on the coast. Several types of stone are used for building in Oman; amongst the more common types are coral blocks on the north coast, coastal limestone in Dhofar and roughly hewn blocks of igneous rock in the mountains. Lime for use in mortars is either made from burning limestone or coral blocks.

The architecture of Oman can be divided into several types based on the type of building, the materials used and the location. The main groups are houses, mosques, forts and mansions.

Until recently the most common form of architecture on the coast was the palm-frond house which may take several forms from a single-room temporary dwelling used for the date harvest to a large enclosure incorporating winter and summer rooms. The basic unit of construction is a rectangular room measuring approximately 3 by 5.5 m. The walls are made from stems (*zur*) tied together to form a panel whilst the main form of support are palm trunks placed externally. The winter houses have flat roofs whereas the summer houses have pitched roofs and are called *Khaymah* (tent). Often houses made of other materials have palm-frond roofs or verandas.

Mud-brick houses are found throughout Oman, although they are most common in oasis towns. They are usually built with very shallow foundations or directly on to the ground, and the first metre or so is often built out of irregular stones to serve as a base for the mud-brick superstructure. Simple mud-brick houses have pitched palm-frond (*barristi*) roofs whilst the larger houses have flat earth roofs supported by palm trunks or mangrove poles. Some of the larger mud-brick houses are three storeys high.

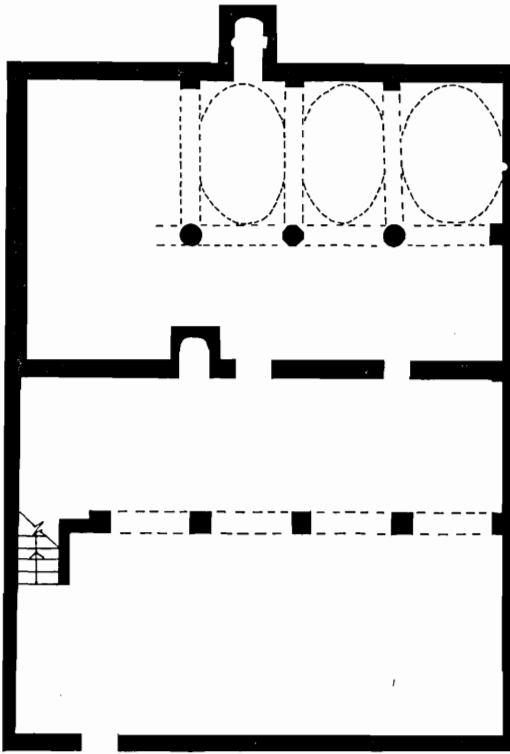
Stone-built houses are common on the coast or in the mountains. One of the simplest forms is a type of coral house found in the Batinah. These are built out of rough lumps of coral rag which are plastered over with mud; the roofs are usually made of palm fronds; locally these are called *kerin*. In Salalah and the Dhofar coast houses are made out of roughly squared limestone blocks which are laid in courses and interspersed with wooden tie-beams. Usually, however, stone buildings in Oman are made out of rough-hewn stones laid in successive bands approximately half a metre high and covered with a plaster surface, producing walls with layers of overlapping plaster coats.

Mosques are mostly built out of stone or mud brick with flat roofs. Minarets are rare in Oman before the nineteenth century. A fairly common feature in Omani mosques is the combination of *mihrab* and *minbar*, where the *minbar* is entered through an opening in the *mihrab* (this feature is also found in other parts of the Indian Ocean littoral such as East Africa and Yemen). In the north of Oman mosque roofs are usually supported by arches resting on cylindrical columns, in Dhofar the columns are usually octagonal. Built shrines do not occur in the Ibadi region of the north but are fairly common in the predominantly Sunni region of Dhofar where they usually have pointed domes.

Fortified buildings are one of the most noticeable features of Omani architecture. Most settlements, however small, have some form of fortified structure. There are two main types of fortified building in Oman, the *sur* or fortified enclosure and the *citadel*. A *sur* is a fortified enclosure which is used on a temporary basis during raids or other disturbances, consequently the design of such enclosures is fairly simple and consists of a roughly square enclosure which may or may not have a tower. On the other hand the *citadels* or *forts* of the main towns are fairly sophisticated structures designed for use with artillery. The most famous forts in Oman are at Nizwa, Ibra, Izki, *Mudhairib* and *al-Rustaq*. These buildings were influenced by the Portuguese forts of the sixteenth and seventeenth centuries, although they also included local developments such as the use of two diagonally opposed towers linked by thick curtain walls.

One of the consequences of Oman's vast trading links was the growth of a wealthy mercantile class who were able to build mansions. Some of these are located within coastal cities such as *Sur* or

## Ottomans (Turkish: Osmanli)



Traditional mosque, Banu Bu Ali, Oman

Muscat, whilst others are rural dwellings set in their own grounds such as Bayt Na'man on the Batinah plain. Common features found in mansions and in more important houses include elaborately carved doorways, pre-cast stucco mouldings around doorways and recesses, and painted wooden ceilings. Such buildings often have a private prayer room, a light well (shamsiya) and ventilation slits above the windows.

### Further reading:

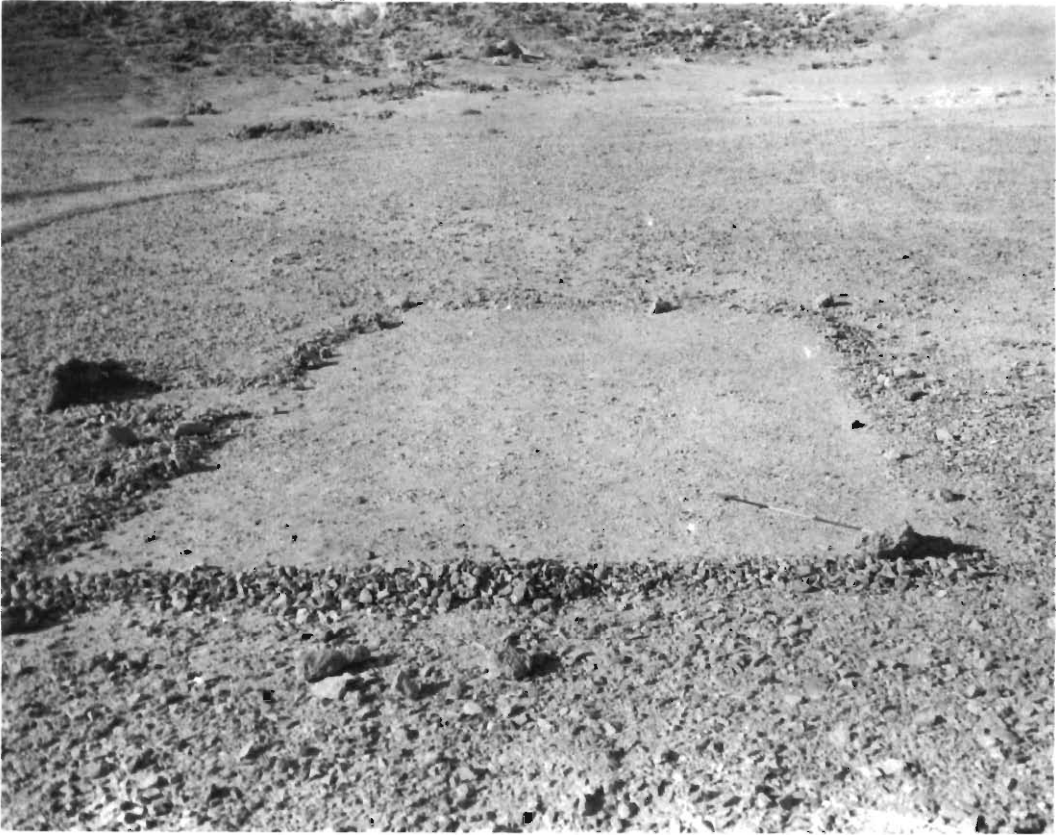
- The most useful works on the architecture and archaeology of Oman can be found in the *Journal of Oman Studies*, including those listed below.
- P. and G. Bonnenfant and Salim ibn Hamad ibn Sulaiman al-Hathri, 'Architecture and social history at Mudayrib', 3: 107–35, 1977.
- P. M. Costa, 'The study of the city of Zafar (al-Balid)', 5: 111–50, 1979.
- 'Studies on the built environment of the Batinah', 8(2): 1985.
- 'Bayt Na'man, a seventeenth-century mansion of the Batinah', 8(2): 195–210, 1985.
- P. M. Costa and S. Kite, 'The architecture of Salalah and the Dhofar littoral', 7: 131–53, 1985.

- E. Enrico, 'Introduction to Omani architecture of the sixteenth, seventeenth and eighteenth centuries', 6(2): 291–306, 1983.
- E. Galdieri, 'A masterpiece of Omani 17th-century architecture. The palace of Imam Bilarab Sultan al-Yaariba at Jabrin', 1: 167–79, 1975.
- M. Kerveran, C. LeCouer-Grandmaison, M. Soubeyran and A. Vialatte de Pemille, 'Suhari houses', 6(2): 307–16, 1983.

## Ottomans (Turkish: Osmanli)

*Major Islamic dynasty based in Turkey which at its height controlled a vast area including all of modern Turkey, the Balkans and much of the Middle East and North Africa.*

The origins of the Ottoman dynasty can be traced back as far as their thirteenth-century founder Othman (Osman). Othman was a leader of a branch of the Qayigh clan which was part of the Turkic Öghuz tribe originally from Central Asia. The Öghuz was amongst those Turkic groups who had fled west with the Mongol invasions of the thirteenth century and now threatened the ailing Byzantine Empire. Originally the Ottomans had been based around the southern city of Konya but later moved north-west to the area of Bursa later known in Turkish as the Hüdavendigâr (royal) region. The position of the Ottomans on the border with Byzantine territory meant that they constantly attracted fresh Turkic warriors (ghazis) willing to fight the Christians. The constant warfare and arrival of new soldiers meant that the emerging Ottoman state developed a strong military organization and tradition which enabled it gradually to take over rival Turkish states in the vicinity. In 1357 a new phase in Ottoman expansion was achieved by crossing the Dardanelles into Europe and fighting the divided Balkan Christians. By 1366 the Balkan provinces had become so important to the Ottoman state that the capital was moved from Bursa to Edirne. Another result of the move into Europe was that instead of relying on the Turkic warriors the army was now formed by Christians who had been captured as children and converted to Islam. The advantage of this new method was that the religious orthodoxy and absolute allegiance of the soldiers could be ensured. The new troops known as Janissaries were the élite force of the growing empire; at the same time a system of feudal land grants was adopted for the Ottoman cavalry. In 1394 Ottoman control of the



*Open-air mosque, Ras al-Junayz, Oman*

Balkan provinces was recognized when Bayazit was granted the title Sultan of Rum by the Abbasid caliph in Cairo. A major setback occurred in 1402 when a second Mongol invasion led by Timur (Tamerlane) conquered much of Anatolia and defeated the Ottoman sultan at Ankara. However, Timurid success was short lived and soon the Ottomans were able to regain control of much of their territory in Anatolia. The major event of the fifteenth century was the capture of Constantinople (later known as Istanbul) and the defeat of the Byzantine Empire by Mehmet the Conqueror in 1453.

Having consolidated their position in Anatolia during the fifteenth century by the beginning of the sixteenth century the Ottomans were able to launch a major offensive in Europe and the Middle East. In 1517 the defeat of the Mamluks brought

Syria and Egypt into the Ottoman Empire and in 1526 Hungary was brought under Ottoman control. For the next century and a half the Ottomans were the world's foremost Islamic power and undisputed rulers of most of the eastern Mediterranean. As orthodox Sunnis the Ottomans established contacts with their co-religionists the Mughals of India although the distance was too great for any meaningful co-operation beyond sending a few Turkish ships against the Portuguese in the Indian Ocean.

The siege of Vienna in 1683 marked the high point of their military power in Europe and their defeat marked the beginning of an irreversible decline which continued into the eighteenth century. Nevertheless, Turkey remained a major power during the nineteenth century despite the loss of large amounts of territory to local leaders in Europe

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*Bibi Miriyam, domed thirteenth-century mausoleum, Qalhat, Oman*

and the Middle East. Turkey's disastrous participation in the First World War led to the loss of its remaining Arab provinces and a European attempt to take control of Anatolia. European expansionism in turn prompted a reaction in Turkey which led to the rise of the Young Turks and the abolition of the Ottoman sultanate in 1922.

For over 500 years the Ottomans ruled an area now occupied by more than fifteen modern states so that Ottoman buildings now represent a sizeable proportion of the historic architecture of the region. The Ottoman presence in these areas was marked by the erection of imperial structures such as fortresses, mosques and khans which preserve a remarkable degree of uniformity despite the large distances involved. However this picture must be modified by two observations, first that direct Ottoman control over some areas was limited to relatively short periods and second that Ottoman architecture was subject to local influences. The first observation may be illustrated by the case of Iraq where constant warfare with the Saffavids meant that Ottoman control fluctuated throughout the sixteenth, seventeenth and eighteenth centuries and was only firmly established in the nineteenth century. The consequence of this is that Iraq contains few distinctively Ottoman buildings from before the nineteenth century. The second observa-

tion is important as it calls for a distinction between buildings in the imperial style and locally derived buildings – thus an imperial mosque in Damascus (e.g. the Tekkiye) may differ from a local mosque in the Syrian style. Even in the case of imperial Ottoman buildings concessions were made to local taste; thus the Sinan Pasha Cami in Cairo is Ottoman in plan but has distinct Egyptian features like the use of muqarnas above the windows, the short minaret and the use of ablaq masonry. Sometimes local styles affected the imperial style – thus the tall domes of Syria and Egypt influenced the 'baroque' buildings of seventeenth-century Istanbul.

The heartland of the Ottoman Empire was western Anatolia and Thrace and it was in this area that the imperial style developed out of Byzantine and Seljuk architectural traditions. The Byzantine tradition is characterized by domes, baked brick and tiles, the Seljuk by iwans, carved stonework and the use of spolia. The main building materials used in Ottoman architecture were baked bricks and tiles, cut limestone, marble and wood, whilst glazed tiles and glass (coloured and plain) were used for decoration.

The use of baked brick in Ottoman architecture was inherited directly from Byzantine practice which in turn was copied from earlier Roman work. Brick is used on a much greater scale in



early Ottoman buildings than those of the later period possibly in imitation of contemporary Byzantine practice which used bricks until the beginning of the fourteenth century when they were no longer available. The usual brick form was a flat square of varying dimensions, the Ottomans had a much wider range of brick sizes than the Byzantines whose bricks were of a standard size although better in quality. The standard Byzantine construction technique, copied in early Ottoman buildings, was rubble and brick construction where the size of bricks determined the thickness of the walls. Often layers of brick alternate with layers of cut stone thus the *Hacı Özbek Cami* at Iznik is built of triple layers of brick alternating with layers of individual cut stone blocks separated by single vertically laid bricks. The ratio of layers of brick to layers of stone does not seem to have been standard for every building and in some cases the thickness of layers varies in the same building. In general, however, three layers of brick to one of stone was fairly usual during most periods. The standardized size of bricks and their lightness compared with stone also made them ideal material for the construction of domes, barrel vaults and arches. When stone replaced brick and stone as the main facing material, bricks continued to be used for arches, domes and vaults. In early Ottoman buildings tiles were used to cover the outside of the dome although from the sixteenth century onwards lead was increasingly used.

The walls of Ottoman buildings were built with a rubble stone core enclosed by a facing of stone or brick and stone. In some of the earlier buildings rubble stone was used on the exterior of buildings either contained within layers of brick or plastered over. Later on the use of cut limestone became more usual, first in conjunction with brick and later on its own. Immediately after the conquest of Constantinople there seems to have been a reversion to brick and stone due to a shortage of cut limestone. However, from the beginning of the sixteenth century onwards most important buildings were faced in cut stone, although subsidiary structures continued to use brick and stone. The quality of masonry in Ottoman buildings is extraordinary due to its precision and smoothness which gave buildings a monumentality not easily achieved with brick and stone.

In addition to limestone Ottoman buildings used large quantities of antique and Byzantine marble

both as columns and for decoration. During the sixteenth century there were large numbers of disused Byzantine churches which were used as quarries for marble columns thus the Ottoman buildings of this period tend to use more columns than earlier or later periods. The hardest form of marble available was porphyry, which is twice as hard as granite, although this was only used rarely as it tended to crack. New marble seems only to have been available from the quarries at Marmara although there was enough ancient marble available to fulfil most needs. Sometimes, however, there seems to have been an acute shortage of marble; thus the tomb of *Suleyman* was built using fake red and green marble. Fake marble was often used for voussoirs of arches where the weight of real marble would cause structural problems. Fake marble voussoirs were usually made of brick and covered with plaster which was then painted.

Wood was essential in the construction of Ottoman buildings and was used for the centring of vaults and domes, for tie-beams and as scaffolding. In addition wood was used for projecting galleries and also for pitched wooden roofs, although these were less common than brick domes in monumental buildings. In domestic architecture, however, wood was the predominant material and most of the houses of Istanbul were built entirely out of wood.

One of the most distinctive features of imperial Ottoman architecture is its use of polychrome glazed tiles as wall decoration. Glazed tiles were used by the Ottomans as early as thirteenth century at the *Yeşil Cami* at Iznik although it was not until the fifteenth century that the first of the famous Iznik tiles were produced. During the sixteenth century Iznik tiles replaced marble as the main form of decoration in mosques thus in the *Ivaz Efendi Cami* in Istanbul tilework columns are placed either side of the mihrab instead of the usual marble columns.

The windows of mosques were often decorated with stained glass set into thick plasterwork frames. Coloured glass made with a high proportion of lead was mostly imported from Europe and clipped to the sizes required. Although coloured glass was used more often, the architect *Sinan* preferred to use clear glass and altered the structural arrangement of buildings to introduce the maximum amount of light into the interior.



*Sixteenth-century Ottoman fortress at Ras al-'Ayn, Israel/Palestine*

Ottoman architecture can be divided into three major periods which roughly correspond to historical developments. The early period between the thirteenth and mid-fifteenth century was the period before the capture of Constantinople in 1453 and characterized by the transition from a small principality to a sultanate. The second period from the capture of Constantinople (Istanbul) to the mid-sixteenth century is regarded as the classical Ottoman period and saw the most brilliant developments in arts and technology to match the spectacular Ottoman victories in Europe, North Africa and the Middle East. The third period from the end of the sixteenth century to the twentieth century is known for political and economic decline, matched in architecture by weaker forms on a smaller scale and the increasing influence of Europe.

### *Early Period*

Possibly the oldest Ottoman building is the Etrugrul Mescit in Söğüt 40 km south-east of Iznik which dates from the first years of the fourteenth century. The mosque has been significantly altered by the addition of a minaret and tall arched windows although its essential form of a tall cube capped by a dome remains unchanged. More authentic and better dated is the Hacı Özbek Cami at

Iznik which is dated to 1333, two years after the capture of the city from the Byzantines. Like the mosque at Söğüt the Hacı Özbek Cami is a small cube covered with an almost hemispherical dome (radius 4 m) resting on a zone of Turkish triangles. The original portico was on the west side (i.e. at right angles to the qibla) and consisted of three bays resting on two marble columns. Two of the bays were covered by barrel vaults, whilst that above the entrance was covered with a cross vault; the north and south sides of the portico were walled in as protection against the wind. Other early Ottoman mosques include the Alaettin Cami at Bursa and the Orhan Ghazi Cami at Bilecik. The Alaettin Cami was built in 1335 after the Ottoman capture of Bursa and is of a similar form and size to the Hacı Özbek Cami except that the portico and entrance is on the north side in line with the mihrab. The Orhan Ghazi also has a similar plan but here the size of the prayer hall is increased by four large (approximately 9 by 2.5 m) arched recesses which make it twice as large as the Hacı Özbek Cami whose dome is approximately the same size. The walls are pierced with windows and the mihrab is flanked by two large windows in an arrangement which became standard in later Ottoman mosques. The Orhan Ghazi Mosque also has a detached minaret which may be the oldest surviving Ottoman minaret.

The next major development in Ottoman mosque architecture is the Yeşil Cami at Iznik built in the late fourteenth century (1378–92). This is one of the first buildings for which the name of the architect is known (Hacı bin Musa). The portico consists of three long bays set side by side with a high fluted dome in the central bay. The portico is open on three sides with the entrance in the middle of the north side formed by a stone door frame. The portico leads into the main part of the mosque which contains a rectangular vestibule and a prayer hall. The vestibule is an arcade of three bays resting on two thick columns and opening into the main prayer hall. The central bay of the arcade is covered by a fluted dome and is flanked by two flat-topped cross vaults. The prayer hall is the usual square domed unit although its diameter is slightly larger (11 m) and the vestibule on the north side appears to increase its floor area. The Seljuk-style brick minaret is set on the north-west side of the mosque, a position which became traditional in Ottoman mosques.

The capture of Bursa in 1325 led to its growth as the Ottoman capital city with mosques, khans, public baths and madrassas. A result of this centralizing process was the development of new, more specialized, architectural forms. The most remarkable changes occurred in mosque architecture with Orhan's royal mosque which is an adaptation of the Ottoman square domed unit to a Seljuk madrasa plan. The building consists of a central domed courtyard opening on to three domed chambers one either side on the east and west and a larger one on the south side. The building is entered via a five-bay portico and a small vestibule. The plan is ultimately derived from the Iranian four-iwan plan although the northern iwan has been reduced to a shallow vestibule. The side rooms were used as teaching areas as the building was also a zawiya, or convent, and the main room to the south is the prayer hall. The courtyard dome is higher than that of the prayer hall and originally had an oculus or hole at the apex to let in light and air. This plan was later used by Orhan's successor Murat for the famous Hüdavendigâr Mosque which he built just outside Bursa at Çekirge. This extraordinary two-storey building combines two functions, a zawiya on the ground floor and a madrasa on top. The combination seems particularly surprising when it is realized that the zawiya represents a mystical form of Islam

and the madrasa represents orthodox Sunni Islam which would generally have been opposed to mystical sects. This combination suggests a royal attempt to incorporate reconciled mystical and orthodox forces in the service of the Ottoman state.

The zawiya on the ground floor has the same basic T-plan as Orhan's mosque with a central domed courtyard leading off to iwans; however, in this building the iwans are vaults instead of domes and the mihrab projects out of the south wall of the southern iwan. The walls of the central courtyard and the prayer hall are raised up above the upper floor thus forming a two-storey courtyard. The upper floor is reached by twin staircases either side of the main entrance which lead upwards to a five-bay portico directly above that on the ground floor. Five entrances lead off the portico into the body of the madrasa which also has a four-iwan plan around a central courtyard. The centre of the courtyard is occupied by the prayer hall and courtyard from the ground floor and so is reduced to a vaulted walkway with windows opening on to the courtyard below. To the north of the upper courtyard between the staircases is a vaulted iwan which is the main entrance to the upper floor. Either side of the courtyard are six vaulted cells whilst at the south end there is a domed room directly above the mihrab on the ground floor. The same T-plan is used for the mosque of Murat's successor Beyazıt, built between 1391 and 1395. Modifications in this mosque include the positioning of the lateral iwans along the side of the prayer hall, or in other words the prayer hall is brought into the body of the mosque instead of projecting beyond it. This building is also noted for its portico which is regarded as the first monumental Ottoman portico because of its height and the use of wide stilted arches to create an elevated and open space separate from the mosque inside. The Yeşil Cami built in 1412 has essentially the same plan although the portico was not completed.

In addition to the royal mosque Beyazıt also built the first great Ottoman congregational mosque or Ulu Cami at Bursa. The building was begun in 1396 and completed four years later in 1400. Before this period congregational mosques had usually been re-used Byzantine churches. The Ulu Cami represents a different design concept from either the square domed unit or the Bursa T-plan mosques and is more closely related to the

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ancient mosques of Syria, Egypt and Iraq. The Ulu Cami consists of a large rectangular enclosure five bays wide by four bays deep (63 by 50 m) and roofed by twenty domes resting on twelve massive central piers. The mihrab is centrally placed and is on the same axis as the main doorway. In the second bay in front of the mihrab is the courtyard represented by an open dome above a sunken pool. The mosque has two minarets, one on the north-east and one on the north-west corner of the mosque; the north-east minaret was added later by Mehmet I, some time after 1413. Mehmet also built a smaller version of the Bursa Ulu Cami at Edirne known as the Eski (old) Cami which consists of nine domes.

The climax of the first period of Ottoman architecture was the Yeşil Cami at Bursa which was part of a complex built for Mehmet I. The complex consists of a mosque, madrasa, bath house (hammam), an imaret, or kitchen, and the turba (tomb) of Mehmet. Earlier sultans had built complexes such as that of Beyazıt or Orhan, but this is the best preserved example of its type. The madrasa has a standard form consisting of cells on three sides and a domed prayer hall on the south side. The kitchen and bath house are both rectangular domed structures whilst the turba is an octagonal domed building located high up above the rest of the complex. The mosque is of the familiar Bursa T-plan design and closely resembles that of the Beyazıt complex. The chief differences are the use of brilliant green tiles to decorate the interior and royal boxes or loggias which overlook the internal domed courtyard.

The development of mosques and religious buildings is paralleled in secular architecture by the evolution of classical Ottoman forms from the Seljuk period. The clearest examples of this are bridges, which in the early period are graceful structures with a high central arch flanked by two lower arches, whereas those of the later period are more heavily built in the Roman style, with a succession of evenly spaced arches resting on massive piers. Several bath houses survive from this period particularly in Bursa which contains simple structures like the Çekirge Hammam and complex double-domed structures like the Bey Hammam. The plan of these bath houses develops from a single-domed area leading off to two or three smaller domed or vaulted chambers to a building consisting of one or two large domed areas which

open on to a series of small cells arranged around a cruciform covered courtyard.

### *Classical Period*

The second period of Ottoman architecture, often referred to as the 'Classical' period, has its origins in the Üç Şerefeli Cami in Edirne built by Murat II and completed in 1447 six years before the conquest of Constantinople. The Üç Şerefeli Mosque had its origins in the fourteenth-century Ulu Cami of Manisa which was visited by Murat II sometime before 1437. The Ulu Cami of Manisa differs from others of the time in having a large central dome in front of the mihrab covering a space equivalent to nine bays. The Manisa Ulu Cami is also unusual because the central courtyard is separated from the main body of the mosque and is not covered by a dome as in the Bursa tradition. Both of these features were found in the Üç Şerefeli Mosque built over seventy years later. However, the dome of the Edirne mosque is much larger and measures over 24 m in diameter, more than double that of its Manisa prototype. Also in the Edirne mosque, the size of the central courtyard is increased so that it resembles those of Syria and Egypt rather than the internal courtyards of the Bursa tradition. However, the arcade on the south side of the courtyard adjacent to the sanctuary of the mosque is raised up in the manner of earlier Ottoman porticoes (e.g. Beyazıt Cami in Bursa). The exterior of the building is distinguished by four minarets placed outside each corner of the courtyard. The two north minarets have one balcony (şeref) each whilst the south-east minaret has two balconies and the massive north-west minaret (from which the mosque gets its name) has three balconies each with its own spiral staircase.

The conquest of Constantinople in 1453 exposed Ottoman architects to a whole new range of buildings, the most important of which is the Hagia Sophia (Aya Sophia) which was immediately converted into a mosque by the addition of a wooden minaret to one of the corner turrets. The new concepts introduced by the Üç Şerefeli were not immediately incorporated into Ottoman buildings, and the first mosques were either converted churches or single-domed units in the traditional style. The first major complex to include these features was the Mehmet Fatih Cami built for Murat II between 1463 and 1470. Unfortunately

the complex suffered an earthquake in 1766 and the main part of the mosque collapsed so that the present building is an eighteenth-century replica built on the same foundations. The most notable feature of the Fatih Cami was its 26 m dome which for the next hundred years was the largest dome in the empire with the exception of the Hagia Sophia dome of 32 m. The internal arrangement of the Fatih Cami consisted of a large central dome combined with a semi-dome of similar diameter flanked on two sides by three smaller domes and a half dome. This huge area (approximately 40 by 58 m) is entirely open except for two massive piers either side of the semi-dome and two smaller piers either side of the main dome. Outside the mosque is the original rectangular courtyard built to the same design as the Üç Şerefeli Cami courtyard although here there are only two minarets placed against the north wall of the mosque. In addition to the mosque itself the Fatih Cami is remarkable for the ordered geometry of the vast complex which surrounds it. The complex is located on an artificially levelled terrace with the western part of the complex raised up on a vaulted substructure. To the west and east of the mosque are eight orthodox madrassas, four on the west and four on the east side. The design of the madrassas is uniform and consists of nineteen cells arranged around three sides of a rectangular arcaded courtyard with a domed teaching room (*dershane*) on the fourth side. The complex also includes a hospital and a hostel for travellers and dervishes built on a similar plan to the madrassas.

The next major imperial complex was built by Beyazıt II at Edirne in 1484. This complex is the major monument to Beyazıt's reign and significantly is not in Istanbul, which was dominated by Mehmet's complex, but at Edirne the former capital. The mosque at the centre of the complex combined the new concepts of courtyard and large domes with older ideas of the single-domed unit and the incorporation of *tabhanes* (hostels for dervishes). The central area of the mosque is a single square unit covered with a dome of 20 m diameter. Flanking this central area but separate from it are two square nine-domed *tabhanes* (one on either side). Although separate from the central area the *tabhanes* are definitely part of the mosque as they are both incorporated into the south side of the courtyard and each has a minaret attached

on the exposed north corner. The rest of the complex includes the elements found in earlier structures, although here the buildings are specifically directed towards medical facilities, thus there is a hospital, asylum and medical college as well as the usual kitchen, bath house and bakery. The main hospital building is hexagonal and consists of series of iwans opening on to a central hexagonal hall covered by a dome. Another complex built by Beyazıt at Amasya also contains a building which departs from the traditional square form of Ottoman architecture. This is the Kapiaga Madrasa which is an octagonal building built around a central arcaded courtyard.

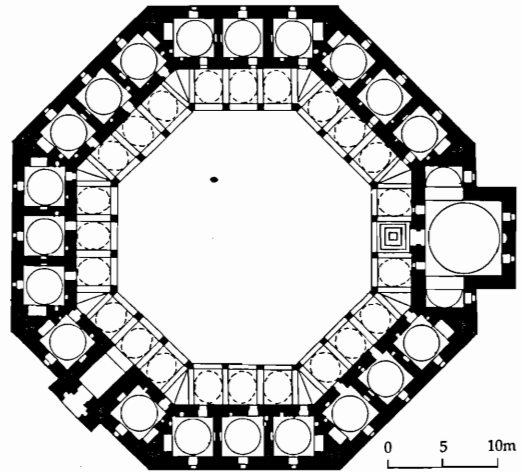
Although Beyazıt's complex at Edirne is the largest monument to his reign, probably the finest is his mosque in Istanbul begun in 1491. The building has a cruciform plan consisting of the square domed sanctuary, a square courtyard of equal size and two small rectangular wings projecting out of the sides. Like the Edirne mosque these wings were officially *tabhanes* although unlike Edirne they are not separated from the main area of the mosque by walls suggesting resting rooms rather than hostels. The architectural achievement of this mosque is the incorporation of a second semi-dome so that the large central dome (in this case only 17 m diameter) is balanced by a semi-dome either side, one above the door and the other above the *mihrab*. Either side of this central domed area are rows of four domes balancing the space of the central area. Like other imperial mosques before it with the exception of the Üç Şerefeli Mosque, this building has two minarets placed at the northern corners of the covered area. The next major mosque to be erected in Istanbul was the Selim I Cami completed in 1522 during the reign of Suleyman the Magnificent. The building comprised a single-domed space flanked by *tabhanes* and opening on to a rectangular arcaded courtyard. The main dome has a diameter of 24.5 m and was the largest Ottoman dome of the time. However, the design of the building with its single dome covering a square area recalled earlier Ottoman mosques and represented no significant architectural advance. The real advance came with Sinan, whose designs ensured him a place as the foremost of Ottoman architects.

Sinan's first major project was the mosque of Şehzade built for Suleyman the Magnificent in memory of his son Şehzade who died at the

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age of 22. The mosque was begun in 1543 and completed five years later. The main feature of the design was the quatrefoil arrangement of domes based on the use of a single central dome flanked by four semi-domes, one on each side. The idea was not entirely new and had been used before in the Fatih Pasha Cami at Diyarbakir and Piri Pasha Mosque at Hasköy. Sinan's achievement was to translate this plan into a large scale and reduce to a minimum the obstruction of piers to create an open space horizontally and vertically. The domes rest on four huge central piers and sixteen wall piers and four major corner piers which also functioned as buttresses for the outward thrust of the domes. The size and proportions of the domed area are matched by those of the courtyard, a symmetry which is improved by the absence of the tabhane rooms of the Beyazit and Selim mosques.

Sinan's next major work was the mosque of Süleyman the Magnificent begun in 1550 and known as the Süleymaniye. This building and its associated complex was Sinan's largest commission and took seven years to build. Like the Fatih complex the Süleymaniye is located on a large artificially levelled terrace and has foundations which reach 12 m into the ground. At the centre the complex consists of the mosque in the middle with a courtyard to the north and a tomb garden to the south all enclosed within a wall defining the mosque precincts (cf. ziyada). Outside this enclosure are the usual buildings of an imperial complex including a hospital, medical college, hospice, advanced religious college, primary school, soup kitchen and bath house. In the north-east corner of the complex there is a small garden containing the tomb of Sinan who was buried there thirty years after the completion of this complex. The mosque at the centre of the complex was covered by a large central dome (26 m diameter) contained within two semi-domes instead of the four used at Şehzade's complex. Either side of the central dome are a series smaller domes alternating in size from 5 to 10 m in diameter. The same principal of four massive central piers and several external piers is used here as in the Şehzade Mosque although here the arrangement of the outer piers is more complex – on the south (qibla) side they are on the outside as buttresses whilst on the north side abutting the courtyard they are inside the mosque to enable a neat join with the courtyard portico.



*Kapiaga Madrasa, Amasya, Turkey (sixteenth century)*

Several other of Sinan's buildings stand out including the Rüstem Pasha Cami noted for its profusion of Iznik tilework, the Mirimah Pasha Cami and the Zal Mahmut Pasha complex. However, undoubtedly Sinan's greatest achievement is the Selimiye Cami in Edirne built between 1569 and 1575. This building, with a dome of equal dimensions to that of Hagia Sophia, is regarded as the supreme achievement of Ottoman architecture. The brilliance of the building relies on the enormous size of the dome which is emphasized by the use of giant squinches or exhedra instead of the semi-domes used earlier at the Süleymaniye or the Şehzade Mosque. In the earlier buildings the semi-domes tended to break up the interior space whereas the giant squinches emphasize the circular space. The central dome and its supporting domes rest on eight huge circular piers which are detached from the exterior walls and appear as free-standing columns although they are actually tied to huge external piers of buttresses. The mihrab space is emphasized by placing it in an apse-like half-dome which projects out of the mosque between the two southern piers. Like the Üç Şerefeli Cami the Selimiye is equipped with four minarets, two on the north side of the dome and two at the north end of the courtyard. Although Sinan continued for another thirteen years after the completion of the Selimiye, his most important work had already been done.

In contrast to the advances of religious architecture, secular buildings of the period are fairly

conservative and tend to stick to established forms. Where there is development this is often influenced by mosque architecture; thus the Haseki Hürrem Hamam in Istanbul designed by Sinan owes much of its grandeur to its tall domes inspired by contemporary mosques. Civil engineering, including bridges and forts, is characterized by solid construction and austere design reminiscent of Roman architecture. This can be seen in Rumeli Hisar, the fortress built by Mehmet II to control the Bosphorus before the conquest of Constantinople. The building consists of a huge enclosure (approximately 220 by 100 m) formed by three huge towers (two semi-circular and one polygonal) linked by a tall crenellated wall strengthened by interval towers or bastions. The interior was filled with a mosque and a large number of wooden buildings which have now disappeared. The bastions and towers represent a variety of different shapes and designs which suggest that the fortress was built by a number of individuals working to a broad general design rather than a detailed architect's plan. Bridges on the other hand tended to be built to a standard plan which was applied to a variety of situations. The most famous bridge of the period is that of Büyükçekmece to the west of Istanbul; built by Sinan in 1566, it consists of a series of four humped bridges resting on three artificial islands. At the west end of the bridge there is a rectangular caravanserai covered with a wooden gabled roof. Other important caravanserais of the period include the Sokollu Mehmed Pasha Caravanserai at Lüleburgaz and the Selim II complex at Payas in eastern Anatolia both built by Sinan. One area where secular architecture was innovative and influential was in the imperial palace or Topkapısarai. This building was established as the centre of imperial power soon after Mehmed II entered Istanbul and remained the centre until the collapse of Ottoman power in the twentieth century. Several parts of the fifteenth-century palace remain, the most important of which is the Çinili Kiosk built in 1473. This pavilion, based on a four-iwan plan, was designed by a Persian architect and decorated with blue glazed bricks in Timurid style. The building influenced much of the subsequent domestic architecture of Istanbul, in particular some of the Bosphorus mansions.

#### *Later Period*

In the last years of the sixteenth century and the

first years of the seventeenth century Ottoman architecture continued to use the forms and style developed by Sinan during the Classical period. Thus the Yeni Valide complex built by Sinan's successor Davut is a copy of the Şehzade Mosque with a few alterations to the size and shape of the courtyard. The most famous building in this late classical style is the Sultan Ahmet Cami in Istanbul also known as the Blue Mosque begun in 1609 and completed in 1617. The most distinctive feature of this building is the use of six minarets instead of the previous maximum of four. It is roofed with the quatrefoil design used in the Şehzade Cami with four huge cylindrical fluted piers supporting the 23.5 m dome (considerably smaller than the Selimiye). The plan has several weaknesses, the most notable of which is the way the mihrab is placed in the middle of a flat wall without any architectural emphasis. Also the portico is not raised to the level of the central domed area thus making the mosque and courtyard seem like two independent units rather than a gradual development of mass.

From the end of the sixteenth century slavish copying of the Classical style was gradually replaced; characteristic features of the new style are flamboyant decoration, increased use of windows and curves, and growing European influences. The most famous example is the Nuruosmaniye Cami in Istanbul completed in 1755. The plan of this building is still based on the square covered by a dome but the strict geometry of the Classical period is modified, thus there are small projecting wings either end of the qibla wall and the mihrab is located in a curved apse in a manner similar to that of the Selimiye in Edirne although here the apse is curved. The recessed porches, which in earlier mosques would have been filled with muqarnas mouldings, are here filled with carved acanthus leaves. The most striking feature of the building is the courtyard which is built in a curved D-shape with the straight side forming the portico of the mosque. The courtyard is also unusual because the domes above the two north entrances are pierced with a series of arched windows which add to the light coming from the trefoil arched windows at the sides. The absence of a central fountain and the positioning of the mosque on an irregular-shaped terrace add to the surprise of this building. Other eighteenth- and nineteenth-century mosques, however, retained the strict square geometry which

## Oualata (also known as Walata, Iwalatan and Birou)

was now prescribed by the religious orthodoxy as the necessary form for a mosque. Thus the Laleli Cami and complex built ten years later in 1783 has a conventional plan, although this is modified by making the prayer hall rectangular instead of square, by cutting off the two side aisles either side of the main dome and making them into external arcades. The apse form of the mihrab area used in the Nuruosmaniye is retained although here it has a square form similar to the Selimiye in Edirne instead of the curved form of the Nuruosmaniye. The Laleli is also noticeable for its use of Ionic capitals instead of the muqarnas capitals preferred in the Classical period.

Several methods were used to break away from the enforced geometry of the square domed unit; one method was to give an undulating curved form to the outer edges of domes. This was a technique which was first used on the wooden roofs of sebils (fountains) and kiosks such as that on the tomb of Mehmet II rebuilt in 1784. The use of this technique on mosque domes can be seen on the Beylerbey Cami of 1778 and in an extravagant form at the Iliyas Bey Cami built in 1812. Similar techniques were used for windows and arches which had undulating curves hung as drapery in the European manner. Outside the strict boundaries of orthodoxy there was more room for experimentation, thus the Küçük Efendi complex in Istanbul was built for dervishes and has a radical plan. The building, completed in 1825, consists of an oval structure which combines a mosque and dervish dance hall.

The nineteenth century saw the emergence of new building forms and types influenced by Europe. The most successful of these new forms was the clock tower which by the beginning of the First World War had been established in Ottoman cities throughout the empire. The earliest example was a three-storey wooden tower outside the Nusretiye Cami in Istanbul, other early examples are at Yozgat and Adana. The extent of European influence can be seen in the decision to move the royal residence from the Topkapisarai in old Istanbul to the newly fashionable banks of the Bosphorus. The new residence known as the Dolmabahçe Palace was built in 1853 in the European Classical style with a colonnaded façade looking out over the water. The palace stretches out along the side of the Bosphorus in a series of blocks or wings, the most famous of which is the throne room measuring 44 by 46 m.

Increased European interest in Ottoman and Seljuk architecture also stimulated an interest in revivalist architecture. One of the earliest examples of revivalism in Turkish architecture is the palace of Ishak Pasha at Dogubayazit in eastern Anatolia completed in 1784. This imposing building, set against the backdrop of Mount Ararat, recalls the Seljuk architecture of eastern Anatolia with carved animals and huge monumental doorways. However, this building is exceptional and it is not until the late nineteenth and early twentieth centuries that revivalism becomes established as a style in Ottoman art. Notable examples are the Vakif Han built by Kemalettin in 1914 and the Istanbul main post office built in 1909. Both these buildings incorporate medieval and early Ottoman features in buildings made using modern methods and materials.

**See also:** Albania, Bosnia, Bulgaria, Bursa, Byzantine architecture, Cairo, Cyprus, Edirne, Greece, Iraq, Istanbul, Iznik, Jordan, Lebanon, Palestine, Sinan, Syria, Turkey

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## Oualata (also known as Walata, Iwalatan and Birou)

*Important trading city in south-west Mauritania.*

The collapse of the empire of Ghana in 1224 led refugees from Awdaghost to found a new city in the small village of Birou. The new city was called Oualata and contained immigrants from several ethnic groups including Berbers, Islamized Soninke and Massufa nomads. The Berbers were the reli-



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gious leaders as well as the merchants whilst the Soninke provided craftsmen and the Massufa nomads acted as caravan leaders and guides. The rise of the empire of Mali and the subsequent shift of political power to the south strengthened the position of Oualata as a regional centre and as a terminus for trans-Saharan caravans. The main partner for this desert trade was the city of Sijimassa from which goods would be traded to Fez and Tlemcen in Morocco.

During the fourteenth century Mansa Musa started his famous pilgrimage from Oualata and on his return brought with him the famous architect and poet al-Saheli who built an audience hall there. In 1352 the city was visited by Ibn Battuta who stayed there for seven weeks. He described the city as a cosmopolitan trading and intellectual centre under the administration of the empire of Mali. In the sixteenth century a new component was added to the city's ethnic composition with the arrival of the Arabic Beni Hassan tribe. The lasting result of this was the adoption of Hassaniya, a mixed Arabic Berber language which became the main language of commerce in the city. The other main language of Oualata is the Soninke language of Azer.

The buildings of Oualata are made of stone with roofs made of split-palm beams and palm-frond matting overlaid with earth. The houses consist of a central courtyard entered through an inner and outer vestibule. There are often two storeys in the houses with the upper floor reached by an external staircase in the courtyard. All the rooms lead directly off from the courtyard which is the centre of activity and contains beds for the servants. The stone walls of the houses are covered with a thick layer of mud plaster (banco) on both the outside

and the inside. This technique is unique to Oualata and distinguishes it from other Berber towns of Mauritania suggesting the influence of non-Berber architecture from further south. This idea is strengthened by the fact that the mud rendering is carried out by the women of the society. The most remarkable feature of the earthen rendering is the application of striking white-painted designs around the doorways, windows and niches of the courtyard. It is noticeable that the designs are restricted to the interior of the courtyards and are not visible from the outside, consisting of arabesque medallions and chain motifs executed in thick but precise white lines. The most elaborate decoration is reserved for the doorway of the senior wife's room where a number of different motifs are used to produce a highly ornate design. The doorways are made of wooden planks with wooden locks and are decorated with Moroccan brass medallions. Either side of the doorway are elaborately carved wooden pillars, or asnads, which are used as calabash supports. The pillars are set into an earthen base made in the shape of a small stepped pyramid but at the top divide into three branches. Similar pillars are found in Berber tents and their presence in these houses are reminders of a nomadic past. Inside, the rooms are fairly bare except for a large canopied platform bed hung with tapestries and mats.

**See also:** Agades, Timbuktu, West Africa

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# P

## **Pakistan**

*Predominantly Muslim country in the north-west corner of the Indian subcontinent.*

Pakistan is located in a strategic position with Afghanistan and Iran to the west, India to the east, the Sinkiang region of China to the north and the Indian Ocean to the south. Running down the centre of the country from the Chinese border to the Indian Ocean is the Indus river which unites the diverse regions and cultures through which it passes. In the north and west the country is dominated by the highest mountains in the world and includes parts of Himalayas, the Hindu Kush and the Karakoram mountain ranges. Officially the country is divided into five regions, the Northern Areas, the North-West Frontier, the Punjab, Baluchistan and Sind. Each region has its own languages and cultures reflecting a complex historical development. Most of the population lives in the Indus valley which comprises the states of Punjab and Sind. The valley is home to one of the world's oldest civilizations based on the cities of Mohenjodaro and Harrapa which flourished more than 4,000 years ago. During the fourth century BCE the northern part of the country was conquered by Alexander the Great who established a Macedonian garrison at Taxilla. The Greeks were soon defeated by the Mauryans who later introduced Buddhism as the state religion. For the next 400 years or more the region was the centre of a Graeco-Indian Buddhist culture illustrated by the great stupas of Taxilla. During the fifth century CE there was a period of Hindu revival under the Gupta dynasty, remains of which can be seen in Hindu and Jain stone shrines.

The first Muslims in Pakistan were probably Arab seafarers taking part in the extensive Indian Ocean trade network. However, the first Muslim conquest of the area was by Mohammad ibn al-Qasim who captured the region of Sind in 711. For the next one and a half centuries Sind was ruled by Umayyad and later Abbasid governors

until 873 when the province broke away from the caliphate. The province was now divided into several independent city states the most important of which were Multan and Mansurah. During the tenth century Sind developed as an important centre of Ismaili and Khariji thought which was brought to an abrupt end by the invasions of Mahmud of Ghazni between 1004 and 1008. Several years later the province of Punjab, then under Hindu control, was captured by Mahmud who established a fort and mint at Lahore. For the next 150 years much of the present area of Pakistan was under Ghaznavid control, until the invasions of Mahmud of Ghur at the end of the twelfth century. Mahmud's deputy Qutb al-Din Aybak soon took over and ruled the Punjab from his Indian capital of Delhi. For the following 300 years with a few exceptions Pakistan was under the control of the various dynasties ruling from Delhi the most significant of which was the Tughluqs. In the sixteenth century the Punjab was incorporated into the Mughal Empire and Lahore became one of the three main cities of the empire. For a period of about fifty years in the early nineteenth century the Punjab was under the control of the Sikhs although by the end of the century it was firmly incorporated into British India. In 1947 the Muslim parts of India comprising the modern states of Pakistan and Bangladesh were made independent as one country despite the great distances separating them. In 1970 the country separated into two independent states, Pakistan and Bangladesh.

The range of building materials and techniques used in Pakistan reflects both the variety of its natural environment and its long cultural history. The scarcity of suitable building stone in the Indus valley has meant that mud or clay has always been the main building material. Mud may be used in several forms: as mud brick, baked brick or pisé. Mud brick was first used in the cities of Harrapa and Mohenjodaro over 4,000 years ago and continues to be used in many of the villages of the

Punjab today. Baked brick is used for more permanent structures such as wells, important houses or mosques whilst pisé is used for structures which need to be built cheaply and quickly. On the coast of Sind mud is used as a thick plaster over a wooden frame to produce wattle-and-daub constructions. In the mountains of the North-West Frontier the typical form of construction consists of rubble stone walls set in mud mortar and covered over with a mud-plaster finish. These buildings are covered with flat roofs made of timber branches overlaid with matting and then covered with earth. The only region where timber is plentiful is in the northern region of the Swat valley where there are dense pine forests. The architecture of this region is similar to its Indian neighbour, Kashmir with finely carved wooden mosques covered by pagoda-style roofs.

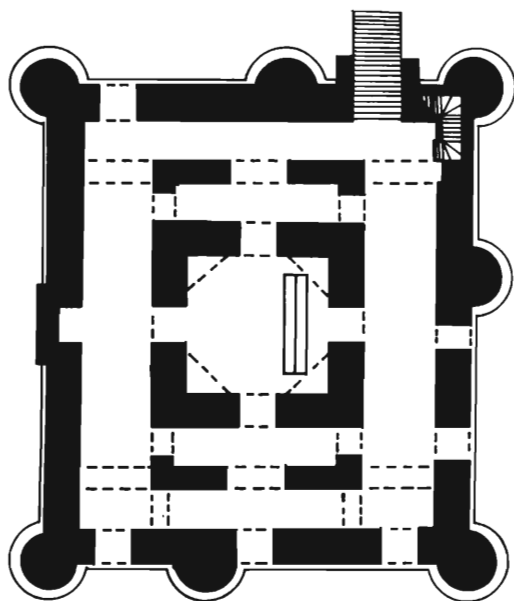
Archaeological work in Sind has revealed the remains of several early Islamic sites, the most significant of which is Bhambore, thought to be the ancient city of Debal. The city was divided into two parts and enclosed with a defensive wall fortified with semi-circular buttress towers. Probably the most important discovery is the congregational mosque with a large central courtyard and no mihrab. The absence of a mihrab confirms the

early date of the building given by an inscription dated to 727.

Medieval architecture in Pakistan is best represented by the funerary and religious buildings of Multan and Uchch in the Punjab. There are few remains from the Ghaznavid period apart from the twelfth-century tomb of Khalid Walid or Khalid Walid near Multan. The tomb consists of a rectangular baked-brick enclosure containing a square domed chamber. The outer enclosure wall is strengthened with semi-circular buttress towers and includes a rectangular projection marking the position of the mihrab in the west wall. Inside, the mihrab consists of a rectangular recess covered with an arched hood and framed by bands of inscriptions cut into the brickwork. In the centre of the recess is a blind niche set between pilasters and crowned with a trefoil arch. The design of this mausoleum represents the first stage in the evolution of the medieval tombs of Multan which culminated in the tomb of Shah Rukn-i Alam built during the reign of Ghiyas al-Din Tughluq. In the latter tomb the outer walls no longer form an enclosure but are wrapped around the central octagonal tomb. Externally the walls slope inward and are strengthened at the corners by tapering domed turrets providing a counter thrust to the weight of the dome. The distinctive sloping walls and corner turrets of this tomb were later repeated in the Tughluqid architecture of Delhi.

Another architectural tradition is represented by the flat-roofed tombs and mosques of Uchch a small city to the south of Multan. A typical Uchch mosque consists of a rectangular hall with wooden pillars supporting beams resting on carved brackets. The areas between the beams are covered with wooden boards which are usually painted in yellow or white against a bright orange or red ground. The walls of the buildings are usually made of baked brick covered in decorative cut plaster. Most buildings of this type are entered via a projecting wooden porch also supported on wooden columns. Prominent buildings of this type are the tombs of Jalal Din Surkh Bukhari, Abu Hanifa and Rajan Qattal.

During the sixteenth century most of the area of modern Pakistan was brought under Mughal rule. In general imperial Mughal architecture was restricted to Lahore, whilst the rest of the country developed its own regional style. One exception to this general rule is the fort at Attock in the



Plan of tomb of Khalid Walid at Kabriwala, Pakistan (after Mumtaz)

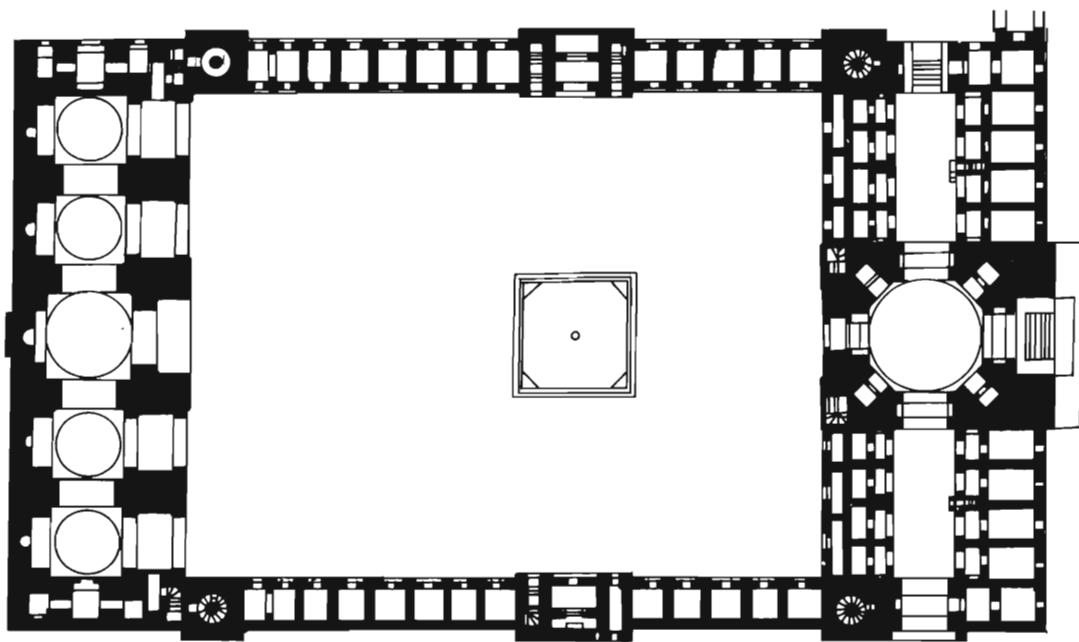
## Pakistan

North-West Province built by Akbar as a defence against invasion from the west. The fort is built on a hillside between the Indus and Kabul rivers and consists of a huge enclosure wall fortified by projecting machicolations and large round bastions. Other buildings at Attock include the garden and palace of Akbar which are small structures hidden amongst the hills. Certainly the most developed expression of Mughal architecture in Pakistan is the fort at Lahore built by Akbar in 1556 on the banks of the river Ravi. The plan of the Lahore fort resembles those of Agra and Delhi with its riverside position and its arrangement of gardens and pavilions. The fort is entered via a main gateway leading into a large rectangular courtyard with the imperial reception hall (diwan-i amm) in the centre of the wall opposite the entrance. Behind the reception hall is the private area of the palace divided into courtyards and gardens overlooking the river. Apart from the fort the most important imperial building in the city is the Badshahi Mosque built by Aurangzeb in 1674. The mosque has the same general plan as that of the Jami Masjid in Delhi although the Badshahi Mosque is much larger. Other imperial Mughal buildings in

Lahore include the tomb of Jahangir, the Shahdara complex and the Shalamar Bagh.

In addition to the imperial Mughal complexes, Lahore also contains some of the finest examples of the regional Mughal style which is a mixture of Mughal forms with local and Persian modifications. Characteristic features of this style are the use of brightly coloured tile mosaics, thick octagonal minarets, wide flattened domes and arches. Probably the finest example of tile mosaic (kashi) is the Picture Wall in the fort at Lahore which includes both animal and human figures. Probably more representative of the local style is the tilework of the Wazir Khan Mosque, where all surfaces are covered with floral and geometric designs in coloured tiles. This mosque also has the earliest examples of the thick octagonal minarets which later became characteristic features of Lahore architecture.

Outside Lahore, Mughal-period architecture may be divided into a number of local styles, the most significant of which is that of Sind. The architecture of Sind was heavily influenced by the neighbouring state of Gujarat in India which consists of heavily carved trabeate stone buildings. Some of the finest examples can be found in the Makli cemetery in



*Seventeenth-century Mosque of Wazir Khan, Lahore, Pakistan (after Mumtaz)*

lower Sind, where exuberantly carved tombs are covered by corbelled domed canopies resting on square carved monolithic columns. Sind is also noted for its geometric tile mosaics which may have been the inspiration for the more naturalistic tilework of Lahore. Some of the best examples of tilework can be seen in the monuments of Hyderabad and Thatta in upper Sind. Other characteristic features of architecture in this region are the use of multiple blind niches on outer walls and elaborately shaped crenellations. During the period of British rule the architecture of Pakistan was represented by an eclectic mixture of European, Hindu and Mughal styles. Immediately after Independence, Pakistani architecture developed under the influence of Modernism which saw its culmination in the establishment of a new capital at Islamabad in 1960. Although the design of Islamabad was based on religious and national criteria it did not include provision for a national mosque. This situation was rectified in 1970 when work began on the Shah Faisal Masjid which is a huge structure covered with a roof in the form of a truncated pyramid flanked by four tall pointed minarets.

**See also:** Banbhore, India, Lahore, mihrab, Mughals

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## Palestine

*Small country on the eastern shore of the Mediterranean comprising an area of 26,650 square km.*

Physically it is divided into four main regions; a low-lying coastal strip along the Mediterranean, a central hilly or mountainous area running north to south through the centre of the country, the Jordan Rift Valley containing the Sea of Galilee and the Dead Sea, and the Negev desert which covers most of the southern part of the country.

Until 1918, when it was conquered by Britain, the country was part of the Ottoman Empire. At

present the land is divided between the state of Israel and the occupied territories of Gaza and the West Bank. Israel is a new state created in 1948 with a largely immigrant population, whose architecture is alien to the region. However the people of Gaza and the West Bank are mostly the indigenous inhabitants of the country, whose architecture has developed within the landscape for at least the last two thousand years.

Palestine was one of the first areas to be conquered by the Arab armies of Islam in 637 and from that point onwards has remained one of the main centres of Islamic culture. For some time during the seventh century Muslims were expected to pray towards Jerusalem rather than Mecca, thus establishing Jerusalem's position as one of the holiest sites of Islam. However, throughout the Umayyad period the culture of the area remained predominantly Byzantine and there was only gradual change to a new Islamic culture. With the Abbasid revolution in 750 Palestine was no longer near the centre of the empire and consequently was exposed to a number of competing forces including the Tulunids and Ikhshids. In the tenth century Palestine came under the control of the Fatimids who ruled the area from their newly founded capital at Cairo. During the following century the country was fought over by Byzantines and the Fatimids, but it was eventually conquered by the European Crusaders at the end of the eleventh century. For the next two hundred years, parts of Palestine were ruled by a series of Crusader kings. The Crusaders were gradually expelled through a series of wars conducted first by the Ayyubids under Nur al-Din and Salah al-Din, and later by the Mamluks under Baybars and his successors. Cultural, spiritual and commercial life flourished under the Mamluks until the late fifteenth century when internal problems and external pressures allowed the conquest of the area by the Ottoman Turks in 1516. For the next four hundred years Palestine was part of the Ottoman province of Damascus. However, during this period various local governors were able to achieve semi-independent status. During the eighteenth century Dhahir al 'Umar ruled a large area of northern Palestine and amassed a great deal of wealth from the cotton trade. Dhahir was succeeded by Ahmad al-Jazzar Pasha the governor of Sidon who re-established the city of Acre as one of the major

## Palestine

ports of the Mediterranean. During the nineteenth century the country was subjected to increasing European influence with colonies established in Haifa and Jerusalem. The British defeat of the Ottomans in 1918 led to the establishment of the British Mandate which ruled the country until 1948. In 1948 Palestine was divided between Jordan, Israel and Egypt; in 1968 Israel occupied the entire country.

The main building materials in Palestine are stone and unbaked mud brick. Wood and baked brick are hardly ever used. Three main types of stone are used, depending on the region of the country. Along the Mediterranean coast kurkar, a silicious limestone, is used for building. This has the property that it can easily be cut from the outcrops near the seashore, although it also weathers easily and is difficult to dress to a fine finish. Both the cities of Acre and Jaffa are built of this material. In the northern part of the Jordan Rift Valley and around the Sea of Galilee, basalt blocks are used in construction. Basalt is extremely hard and is consequently difficult to cut or carve, although once shaped it does not weather much. As a consequence basalt is often used in combination with limestone which is used for architectural details. The cities of Tiberias and Beisan (Bet Shean) have the best examples of basalt architecture. The best-quality building stone comes from the central hilly region. In this area various types of limestone can be found. Limestone is fairly easy to cut and does not erode as much as kurkar stone. Limestone cut and dressed to a fine finish is known as ashlar masonry and is used in some of the finest buildings in the country. Limestone occurs in a variety of colours from white to honey yellow and pink; some of the best examples can be found in Jerusalem, Hebron and Ramla. In addition various types of marble are obtained from the hills around Jerusalem, whilst Dolomite (hard limestone with magnesium) is used in areas of Galilee.

Until recently a large number of buildings were made out of mud brick and pisé particularly in the Jordan valley and the coastal plain where building stone was not so readily available as in the hills. Mud brick has the advantages of being cheap, easy to work with good thermal insulating properties. Unfortunately mud brick also requires a high degree of maintenance and it has mostly been replaced with reinforced concrete which has some of the same plastic qualities. The best examples of

mud-brick architecture still surviving are in Jericho, where a wide variety of buildings, including mosques and cinemas, are built out of this material.

### *Early Islamic Period*

Undoubtedly the most famous building in Palestine is the Dome of the Rock built by the caliph Abd al-Malik in 691. The significance of this building extends beyond its immediate architectural design to its symbolic function of demonstrating the presence of Islam and its status as a major religion in Jerusalem, home to both Christianity and Judaism. Together with the Aqsa Mosque and the Royal Palace to the south of the Haram, Jerusalem's place as a religious and cultural centre of Islam was established.

However, the capital of Palestine during the Umayyad and Abbasid periods was not Jerusalem but Ramla. Like Basra, Kufa and Wasit, Ramla was one of the new towns established in the first years of the Arab conquests. Today little survives of the early Islamic city with the exception of two large underground cisterns, one below the congregational mosque (Jami' al-Abiyad) and one outside the city to the west. Generally, however, the major cities of the Byzantine period continued to be the major settlements; thus archaeology has demonstrated the continued occupation of Lydda, Beisan, Tiberias, Gaza, Caesarea and Acre into the Umayyad and Abbasid periods. As much of the population remained Christian, churches continued to be built during the period.

Outside the cities and in the Negev a number of new settlements were built in the early Islamic period. Some of these were agricultural centres, whilst others were palaces and mansions for the new élite. The best known of these is the Umayyad palace of Khirbet al-Mafjar near Jericho in the Jordan valley (known locally as Hisham's palace although it has now been reliably attributed to Walid II). This building was modelled on a Roman bath house and was lavishly decorated with mosaics and stucco. The stucco includes representations of semi-naked women and is unique in Islamic art. A similar but smaller structure was built at the south end of Lake Tiberias (the Sea of Galilee) in an area of hot springs. The original building was a Roman fort although this was substantially rebuilt during the Umayyad period to resemble a palace, with mosaics etc.

In the Negev large numbers of early Islamic sites have been found, which indicate a growth in the settlement of the area. This parallels the increased building activity in the deserts of Jordan, Iraq and Saudi Arabia and may be linked to a shift in emphasis towards Arabia in the early Islamic period.

Increasing political tension and fragmentation in the later Abbasid and Fatimid periods meant that few major monuments can be dated to this period. Significantly two large monuments in Palestine which can be dated to this period (tenth and eleventh centuries) are fortified structures built to guard against an impending Byzantine invasion. One of these buildings, Kefar Lam is built on the north coast south of Haifa and the other, Mina al-Qal'a (now known as Ashdod Yam) is located on the southern coast near Ashdod. Both are built of thin slabs of kurkar stone (laid in a manner resembling brick construction) forming large rectangular enclosures with solid corner towers and semi-circular buttresses. The fort at Ashdod was fairly luxurious and includes a line of marble columns in the centre re-used from the classical site of Ashdod. Outside the fort at Ashdod there are the remains of a domed building which has been interpreted as a bath house. The domes are supported on shell-like squinches (characteristic of the Fatimid period) with pierced holes for light.

### *Crusader Period*

The Crusader conquest of Palestine had a profound influence on the appearance of the country. In Jerusalem the Aqsa Mosque was converted into a palace by Baldwin I and the Dome of the Rock was converted into an Augustinian church. In the countryside numerous castles, tower houses and churches testify to the Crusader presence. The castles guarding prominent positions are perhaps the best-known architectural legacy of the Crusades. The most famous in Palestine are Monfort and Belvoir, although there are numerous smaller fortresses throughout the area. Typically a Crusader castle consisted of a square or rectangular tower surrounded by thick enclosing walls. The enclosure walls would follow the shape of the land unlike the regular shapes of the earlier Islamic forts. Many of the features found in Crusader fortification were later re-used in Arab castles such as Ajlun (Qal'at Rabad) and Nimrud.

Whilst the Crusader castles controlled the land physically, the spiritual possession of the holy land was marked by the construction of hundreds of churches. In Jerusalem alone there were sixty, some of which were built on the ruins of Byzantine churches. The churches were distinguished with fine carved capitals and sculptures.

With the Muslim reconquest of Jerusalem in 1187 the Crusader presence was reduced to the area around Acre, which for the next hundred years (until it too fell in 1191) was the centre of the Crusader kingdoms, and was enriched with some of the finest Crusader architecture in the Middle East.

The Crusades influenced the architecture of Palestine in two ways: directly through the copying of techniques and the re-use of buildings, and indirectly through the development of the counter-Crusade. The direct influence is seen in the adaptation of certain techniques for Islamic buildings such as cushion-shaped voussoirs and folded cross vaults, all of which can be found in the Mamluk buildings of Jerusalem. One of the best examples of this influence can be seen in the minaret of the Great Mosque of Ramla, which resembles a Crusader church tower. The indirect influence can be seen in the development of a propaganda expressed through monumental inscriptions and carved devices. One of the most famous examples of the latter, of the lion of Baybars catching a mouse, is depicted on the Lion Gate in Jerusalem (this can also be seen at Jisr Jindas between Ramla and Lydda).

### *Mamluk Era*

Mamluk rule in Palestine produced some of the best examples of medieval architecture in the Middle East, with a proliferation of religious buildings including mosques, madrassas, khanqas and commemorative mausoleums. Jerusalem in particular was provided with a large number of religious buildings as befitted Islam's holiest shrine after Mecca and Medina. Mamluk architecture in Jerusalem was characterized by the use of joggled voussoirs, ablaq masonry, muqarnas mouldings and coloured marble inlays. In Ramla, the Great Mosque was rebuilt and the Crusader church was converted into a mosque.

One of the more beautiful Mamluk buildings of Palestine is the tomb of Abu Hoeira near Yabne

## Persia

(modern Yavne). This consists of a triple-domed portico and a central area covered by a large dome set on squinches. The decoration is restrained and restricted to the areas around the doorway and mihrab which are decorated with inlaid marble and inscriptions.

A characteristic feature of the Mamluk period was the revitalization of the road systems which were provided with khans, mosques and bridges. Examples of Mamluk khans include Khan al-Tujjar, Khan al-Minya, Jaljuliyya, Ramla and Lydda. Probably the most impressive of these is Khan Yunis at Ghaza built out of ablaq masonry with a mosque and minaret included in its design. Several Mamluk bridges survive in Palestine, the most impressive of which is Jisr Jindas, decorated with an inscription flanked by two lions (other bridges include Jisr Banat Yaqub and a bridge at Beisan).

### *Ottoman Conquest*

The Ottoman conquest of Palestine in 1516 introduced new architectural concepts, although these were only gradually adopted and never became universal. The most obvious symbol of the Ottoman conquest was the redevelopment of Jerusalem; this included rebuilding the walls, tiling the Dome of the Rock and renovating the city's water supply.

The city of Acre, rebuilt in the eighteenth century, is the best example of a complete Ottoman city in Palestine. It has several khans, at least two bath houses, three main suqs, at least ten mosques and a citadel. The wealth of the city was expressed in the mosque of al-Jazzar Pasha and the large bath complex known as Hammam al-Basha. The mosque was modelled on those of Istanbul with a large central dome and a pencil-like minaret. The baths were extensively decorated with Armenian tiles and inlaid marble floors. The houses of Acre were two, three- or even four-storeyed structures with painted wooden ceilings.

Important cities during the Ottoman period included Hebron, Nablus, Ramla, Jaffa, Safed, Tiberias and Acre (from the eighteenth century onwards). Most of the cities were surrounded by walls, the best surviving example of which are the walls of Tiberias rebuilt by Dhahir al 'Umar. The walls of Acre date mostly from the late eighteenth century and are of Italian design.

The houses of Ottoman Palestine varied depend-

ing on the region in which they were located. There are few or no remains of the mud-brick houses of the coastal plain although the stone houses of the villages have survived well until recent times. The predominant form of roofing for stone houses was the dome made by filling a room with earth, covering this with a reed mat and then building the dome over the top. During the eighteenth century domes were often decorated with carved plaster usually in the form of swirls, rosettes and semi-circles. In Galilee, buildings were roofed by using transverse stone arches to support short beams over which a roof could be laid.

Outside Jerusalem Ottoman control was established through a series of forts garrisoned by Janissaries (imperial Ottoman troops). These fortresses were large square or rectangular structures with square corner towers; surviving examples can be seen at Ras al-Ain near Tel Aviv, Khan al-Tujjar near Kefar Kanna and Qal'at Burak south of Jerusalem.

**See also:** Abbasids, al-Aqsa Mosque, Dome of the Rock, Fatimids, Jerusalem, Khirbet al-Mafjar, Khirbet al-Minya, Mamluks, Ottomans, Ramla, Umayyads

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## **Persia**

See Iran.

## **Philippines**

*Country composed of a group of islands on the east side of the South China Sea between Taiwan, Indonesia and Malaysia.*

The country consists of two main islands, Mindanao in the south and Luzon in the north and more than twenty smaller islands. The south-western islands have a large Muslim population whereas the northern ones are predominantly Roman Catho-



lic. Filipino Muslims share much in common with their Indonesian and Malaysian neighbours who first introduced Islam to the Philippines. The first areas to be converted to Islam were the islands of the Sulu archipelago between the fourteenth and fifteenth centuries. By the mid-sixteenth century Muslim missionaries from Borneo were working on the island of Luzon. However, earlier in 1522 the islands were discovered by the Spanish who established their first permanent settlement in 1565 and in 1571 founded the capital of Manila. There was some conflict with the newly established Muslim sultanates of Luzon but the Spanish won with their superior firepower. Nevertheless, the south-western part of the Philippines remained Muslim despite constant attempts to defeat them by the Spanish. The Muslims of the islands were given the name Moros by the Spanish who associated them with the Muslims of North Africa. Throughout the seventeenth, eighteenth and nineteenth centuries the Spanish tried unsuccessfully to conquer the Moro people. When the Philippines passed into American control in 1898 the Americans continued the Spanish policy of trying to subdue the Muslims of the south-west. In 1913 the Moros were finally defeated by superior American arms and a peace treaty was signed. The peace treaty was a success as it allowed the Muslims complete control over their own affairs and equality with the Catholic Filipinos.

The earliest physical evidence of Islam in the Philippines is a tombstone on the island of Jolo which has been provisionally dated to 1310. Oral history recounts how Islam was brought to the island of Jolo by Tuan ul Makdum (later called Sharif Aulia) who built 'a house for religious worship'. Later, in 1380 he built another mosque at Tubig Indangan on Simunul island south of Jolo. This mosque, considerably altered, is now known as the oldest mosque in the Philippines. A photograph of the building taken in 1923 shows a square wooden structure open on one side with remains of a two-tier coconut-palm thatch roof. The mosque was comprehensively rebuilt in the 1970s with concrete walls and a two-tier tin roof.

Islam came to the island of Mindanao in the fifteenth century and several mosques on the shores of Lake Lanao may have been founded in this early period, although no early remains seem to have survived. One of the oldest mosques is

the Taraka Mosque in Lanao del Sur which is a square structure with a three-tier tin roof and painted abstract designs on the walls. Another early mosque is the Ranggar in Karigongan which consists of a simple square room with bamboo walls and a pyramid roof. A later development is represented by the insertion of an onion-shaped dome on an octagonal drum in the centre of the roof also found in one of the Lake Lanao mosques. This design reaches its climax in one of the Lanao mosques where there is a central onion dome flanked by four pagoda-like minarets. It is generally assumed that the use of domes reflects Indian influence via Malaysia and Indonesia, although it may also be through Chinese influence. After the Second World War, since Filipinos have been able to travel to Mecca, a new Middle-Eastern mosque style is noticeable in the Philippines. One of the more notable examples is the mosque of Jolo town on Jolo island which consists of a large rectangular prayer hall with a central dome and four flanking minarets. Probably the most famous mosque in the Philippines is the Quiapo Mosque in Manila which has an arcaded courtyard containing a fountain and a domed prayer hall.

Other examples of Islamic architecture in the Maranao area include royal residences and fortifications. Royal residences are known as 'torogan' and consist of raised platforms with tall sloping roofs. Inside, a torogan consists of one room with the king's bed in the centre and a small bedroom for the royal daughters. Sometimes the daughters' room (known as a lamin) is located in a separate room above the main roof of the torogan. Islamic forts (kota) were used to resist the Spanish and later American attempts to convert the Maranao Muslims to Christianity. Kotas consist of earthworks reinforced with wooden stakes.

**See also:** Indonesia, Java, Malaysia, Sumatra

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pisé

**pisé**

*A form of mud brick where the brick is moulded in situ on a wall.*

This technique is quicker than mud-brick construction because larger bricks can be produced which could not be transported under normal circumstances. Because pisé allows high-speed (and therefore cheaper) construction it was often used for large-scale works such as enclosures or city walls.

**pishtaq**

*Iranian term for a portal projecting from the façade of a building.*

This device is most common in Anatolian and Iranian architecture although it also occurs in India. In its most characteristic form this consists of a high arch set within a rectangular frame, which may be decorated with bands of calligraphy, glazed tilework, geometric and vegetal designs.

# Q

## **qa'a**

A reception hall in Cairene houses.

## **qabr**

A grave. It may also refer to the structure erected above the grave.

## **qabrstan**

An Iranian term for a cemetery, equivalent to maqbara.

## **Qairawan**

*City in north-west Tunisia which functioned as the*

*capital of the province of Ifriqiyya (roughly equivalent to modern Tunisia) during the early Islamic period.*

Qairawan was founded in 670 by 'Uqba ibn Nafi, the Arab general in command of the Muslim conquest of North Africa. The principal monument in the city is the Great Mosque also known as the mosque of Sidi 'Uqba after the general who founded it. The first mosque on the site was begun immediately after the Arab conquest and consisted of a square enclosure containing a courtyard and prayer hall or sanctuary. This first building was made of mud brick and had to be restored in 695. There was another major reconstruction in 724–43 when a minaret was added. The present minaret was



*Great Mosque, Qairawan, Tunisia, © Creswell Archive; Ashmolean Museum*

## Qairawan

added by the Aghlabids in 836. It is a giant three-tier structure built of baked bricks on a base of re-used ashlar blocks. At present the minaret stands on the north wall of the courtyard but in the ninth century it would have been outside the mosque courtyard in a manner similar to the contemporary Abbasid mosques of Samarra.

The mosque took its present form from the major rebuilding which took place under the Aghlabids which was completed in 862. The present mosque enclosure forms a large rectangle measuring 125 by 85 m. The prayer hall is one third of the mosque area and comprises seventeen aisles perpendicular to the qibla wall with another aisle parallel to the wall. Aghlabid modifications included the present mihrab, the dome in front of the mihrab and the minbar. The mihrab niche is lined with perforated marble panels decorated with vegetal designs. Surrounding the mihrab are a series of polychrome lustre tiles which are believed to have been imported from Baghdad. The dome covering the area in front of the mihrab is built of stone and rests on a drum supported by large shell-shaped squinches. The dome has a gadrooned form which internally takes the form of thin radiating ribs. The inside of the drum is circular and decorated with a series of sixteen blind niches and eight arched windows. The minbar is the oldest in existence and consists of a high staircase with a series of intricately carved panels on the side decorated with geometric and stylized vegetal designs. The present maqsura (screen) was added in restorations of the eleventh century. Further restorations were carried out in 1294 when the arches of the arcades were remodelled and the projecting portal of Bab Lalla Rayhana was added. Other Aghlabid monuments at Qairawan include the Mosque of the Three Gates, and the famous polygonal cisterns or artificial lakes. Outside Qairawan three satellite cities were established known as al-Abbasiya, Raqqada and Sabra al-Mansuriyya. Nothing remains of Abasiyya, although at Raqqada there are huge reservoirs and the remains of a large palace built of baked brick. Other cities with Aghlabid monuments include Tunis, Susa, Sfax and Monastir. In 1052 the city was enclosed with a crenellated brick wall which was extensively restored in the eighteenth century.

**See also:** Aghlabids, Monastir, Sfax, Susa, Tunis, Tunisia

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## qal'a

Castle, fortress or citadel.

## Qal'at Banu Hammad

*Eleventh-century capital of the Hammadids located in the mountains to the south of Algiers.*

The city was founded in 1007 by Hammad ibn Buluggin, although it did not become capital until 1015 when Hammad withdrew his allegiance from the Fatimids. Excavations at the site have revealed the plan of the Great Mosque and three palaces. The buildings were constructed of roughly squared stones laid in courses which were originally covered in plaster. The Great Mosque was built in the North African style with its aisle running perpendicular to the qibla wall. Opposite the qibla wall is a square minaret 25 m high, with large blind niches which were originally decorated with coloured glazed tiles. The remains of the palaces indicate a high degree of wealth and probably an elaborate ceremonial function. One of the palaces is built around a cruciform tower containing ramps which led to a domed pavilion on the top. Another palace was built around a rectangular pond or lake measuring 65 by 45 m. The palaces were decorated with stucco which included early examples of muqarnas decoration.

**See also:** Algeria

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## qanat

Subterranean canal system usually used to bring water some distance from a river or mountains. Access to the qanat is by vertical shafts at regular distances.

## qasaba

Central part of a town or citadel.

### qasr

Palace or mansion.

### Qasr al-Hayr East (Qasr al-Hayr al-Sharqi)

*Settlement in the Syrian desert built by the Umayyads in 730 CE.*

Qasr al-Hayr East is located 80 km east of Palmyra and 80 km south of Dayr al-Zor on the Euphrates. The Qasr represents a large complex which may be divided into four main groups: the small enclosure, the large enclosure, the bath house and the outer enclosure.

The small enclosure is a square building, approximately 70 m per side, with two solid semi-circular buttress towers on each side and four round towers at the corners. The entrance is on the western side through a monumental gateway flanked by two half-round towers. The lintel of the gateway is made of joggled voussoirs above which there is a relieving arch outlined by a continuous moulding which also runs along the front of the towers. Either side of the relieving arch there are shallow recessed niches with engaged side columns. At the top of the gateway is a panelled frieze, in the centre of which there is a projecting machicolation. Inside there is a courtyard with a central pool around which there is a columned arcade or portico. On the north, east and south sides the rooms are arranged in groups of three with a central room and two rooms either side. At the north- and south-east corners there are small rooms with latrines set into the wall. On the west side there are two long vaulted rooms either side of the gateway which includes a mihrab in its south wall. The pattern of the upper floor is similar to the ground floor. The building probably functioned as a khan.

The large enclosure has a similar plan to the small enclosure but is much larger, measuring 167 m per side. This building also differs in having four axial entrances leading into a large central courtyard lined with an arcade. The internal plan comprises twelve structural units, eight of which (two per side) are courtyard buildings. Three of the four corner units seem to have been open areas, whilst the south-east corner contains a small mosque with a raised central aisle. One of the courtyard buildings on the east side appears to have been an industrial building for the production of olive oil (i.e. presses

and vats). The function of the building is not clear although it may have been a governor's residence.

The bath house comprises a triple-aisled hall with cold plunge pools, a series of three hot rooms and a warm room with a heated pool. The complex included a furnace, latrines and two service rooms. There were two separate sets of latrines and two entrances which implies there may have been some sexual segregation.

The outer enclosure from which the complex derives its name (Hayr) is a vast wall of irregular shape which stretches for more than 15 km. The wall is approximately 1 m wide and is buttressed internally and externally with solid semi-circular buttresses. Four gates were discovered, each contained within pairs of circular buttress towers. The purpose of the enclosure is debated, although it may have been partially for water conservation, for agriculture and animals (domestic or wild?).

**See also:** Qasr al-Hayr West, Syria, Umayyads

#### Further reading:

O. Grabar, R. Holod, J. Knutstad and W. Trousdale, *A City in the Desert: Qasr al-Hayr East*, Harvard Middle Eastern Monographs 22/24, 1978.

### Qasr al-Hayr West (Qasr al-Hayr al-Gharbi)

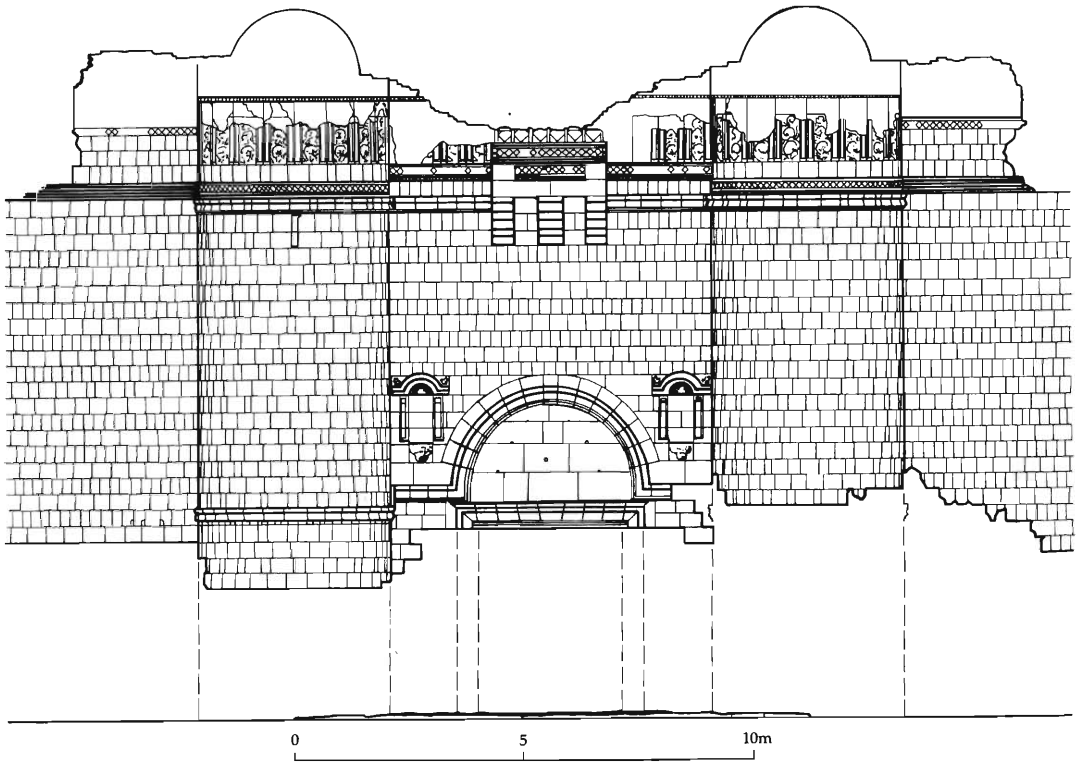
*Umayyad palace and settlement in the Syrian desert.*

Qasr al-Hayr was built by the Umayyad caliph al-Walid in 728. It is located in the Syrian desert 40 km east of Palmyra and 40 km west of Qasr al-Hayr East. The complex comprises a khan, a palace, a bath house, mills and various hydraulic installations.

The khan is a square courtyard structure with two projecting wings to the east, on the side of the entrance. The foundations of the building were of stone but the upper parts (with the exception of the stone doorway) were of mud brick and have not survived. The southern wing on the outside is a small mosque with the mihrab in the centre of the south wall; the north wing has a water trough against the wall and may have been a stable or place for watering animals. The entrance to the khan is through a large rectangular doorway above which is an Arabic inscription with the date of construction 727. Internally the khan comprises a series of rooms around a colonnaded central courtyard.

The palace is one of the most luxurious examples

## Qasr al-Hayr West (Qasr al-Hayr al-Gharbi)



Gateway to lesser enclosure, Qasr al-Hayr al-Gharbi, Syria (after Grabar). Note machicolation above gate

of Umayyad palatial architecture. The structure, which is approximately square, is built on to a pre-existing Byzantine monastic tower dating from the sixth century. The tower is built of massive dressed masonry whereas the rest of the palace is built of mud brick on stone foundation. Above the entrance to the tower are the remains of a box machicolation which may have been the example for the gateway at Qasr al-Hayr East. The main part of the palace comprises a square enclosure with solid semi-circular buttress towers and round corner towers built around a paved courtyard. There are eight living-units, or bayts (two per side), each comprising a central hall leading out on either side to a set of side rooms including a latrine. The most impressive feature of the building is the arched gateway set between two half-round towers. The outer façade was decorated with panels of elaborate stucco which are now in the Damascus museum. The lower part of the decoration is large panels of vegetation arranged in geometric patterns, above which is a smaller set of panels

containing vegetal ornament within squares, circles and diamonds. Above the panels is a row of blind niches with alternating round and pointed arches; the top was made up of stepped merlons or crenellations. The interior of the gatehouse above the entrance was probably a palatial domed reception hall decorated with frescoes. Inside the palace the arcade around the courtyard was decorated with carved stucco animals whilst at the base of the staircase there were frescoes containing naked women and hunting scenes.

Immediately to the north of the palace there is a bath house, a fairly small building containing a vaulted hall with benches around the side and three warm rooms. An unusual feature is that a mosque was attached to the south side of the dressing hall.

The entire complex of Qasr al-Hayr al-Gharbi relied on a water system ultimately derived from a dam 15 km distant. There are two main canals, one leading to the palace and bath house and the other leading via a cistern to the khan, some mills and

then a huge rectangular enclosure containing a network of small irrigation channels. The irrigation channels are also fed by a large semi-circular bar-  
rage which collects water from the hill.

**See also:** Qasr al-Hayr East, Syria, Umayyads

**Further reading:**

D. Schlumberger (ed.), *Qasr el-Heir el Gharbi*, Paris 1986.

**Qasr al-Tuba**

*Unfinished Umayyad complex in south-east Jordan.*

Qasr al-Tuba is a large rectangular enclosure divided into three strips; only the west wing appears to have been completed, although there are traces of mud-brick structures elsewhere in the complex. Like Mshatta the remaining parts of the building

are made of ashlar masonry with baked brick used for the barrel-vaulted roofs. There is a dam and several wells associated with the qasr but no other



*Slightly pointed doorway arches, Qasr al-Tuba, Jordan*



*Stone and brick construction, Qasr al-Tuba, Jordan*



*Qasr al-Tuba, Jordan*

## qibla

structures have been identified. The purpose of the building is not clear but it may have been connected with the Wadi Sirhan caravan route.

## Qatar

*A peninsula on the east coast of Arabia projecting northwards into the Gulf.*

Although it used to be dependent on pearl diving and fishing, today the main economy of the State of Qatar is oil. The country is predominantly desert with few natural water resources. It is ruled by the Amir of Qatar from the capital Doha.

Until recently permanent architecture has been confined to one or two towns and several semi-permanent encampments. Archaeological excavations at Ras Abrak has revealed the presence of several semi-permanent seasonal encampments. One of these has been interpreted as a fish-curing complex and consisted of two roughly rectangular rooms linked by a sheltered courtyard containing fireplaces and a cairn. The entire complex was built out of thin limestone slabs laid without mortar although there may have been a superstructure built out of some less durable material.

On the northern tip of the country are the remains of a small town, al-Huwailah. At present the site is largely in ruins but the main features can be distinguished, including a fort surrounded by several stone houses. Around this central complex are the remains of further structures which were probably huts built of palm fronds and were the main form of accommodation in the town.

Recent development has meant that little survives of the traditional town of Doha with the exception of the Old Amiri Palace which has recently been restored and is now used as a museum. This is a large complex containing quarters for several families. There are three gatehouses and two public reception rooms (an inner and outer majlis). The main material for construction is coral blocks (both in the form of lumps and thin slabs) used in conjunction with mangrove poles in a panel-and-frame construction. For ornamental purposes carved teak and mahogany from India were used.

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## qibla

*Direction of Mecca which determines the direction of prayer.*

The qibla is the prime factor in the orientation of mosques and is usually marked by a mihrab (or more in India). Many early mosques were not built to a correct qibla orientation, as has been demonstrated in the excavations of the Great Mosque of Wasit, where three different qibla orientations are recorded. It is believed that idea of qibla orientation is derived from the Jewish practice of indicating the direction of Jerusalem in synagogues.

## qubba

*Literally 'dome', often used to refer to a domed mausoleum which contains the grave of a saint or some important personage.*

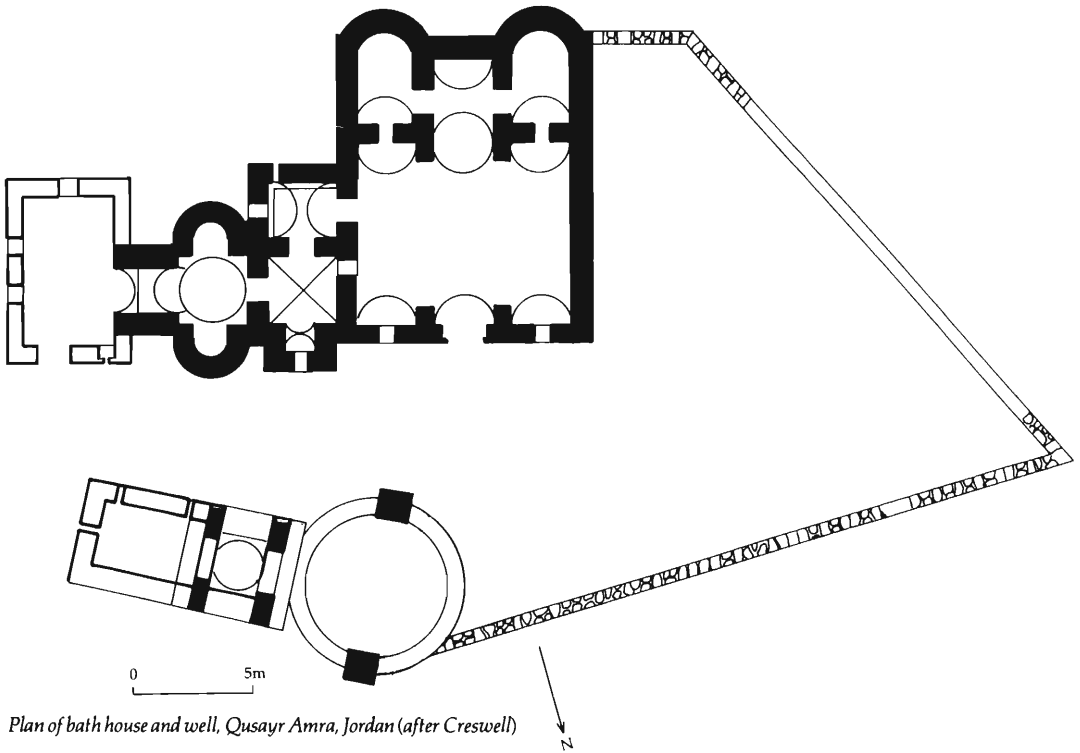
The earliest surviving example of this type of structure is the Qubbat al-Sulaybiyya at Samarra which is octagonal. Another early example is the tomb of Ismail the Samanid in Balkh which is a square structure with a hemispherical dome. Also dated to the ninth century are large numbers of domed mausoleums at Aswan in southern Egypt. From the eleventh century this type of structure becomes widespread in the Islamic world and is now one of the most common building types.

## Qusayr Amra

*Umayyad bath house complex in the eastern desert of Jordan famous for its painted frescoes.*

The building was probably built by the Umayyad caliph al-Walid between 712 and 715. It comprises three main parts, a hall or undressing room, three heated rooms and a well-house to the north. The hall is divided into four parts, the main hall, an alcove and two small rooms either side. The entire hall (including the two side rooms) is roofed by three barrel vaults resting on transverse arches. The walls of both the main hall and the two side rooms are covered in frescoes whilst the floors were covered with marble, except in the side rooms where there were floor mosaics. The subjects of the frescoes differ according to their position; thus the main hall is decorated with hunting scenes and semi-naked women on the soffits of the arches. The alcove is decorated with six figures representing the defeated enemies of Islam. The two rooms leading to the hot room are decorated





Plan of bath house and well, Qusayr Amra, Jordan (after Crestwell)

with bathing women whilst the dome of the hot room is painted with a representation of the zodiac. The zodiac representation is the earliest surviving example of a domed representation of the stars and is of fundamental importance to the history of science.

The exact function of Qusayr Amra is not known although it seems to have been a princely desert retreat with formal associations (e.g. the audience hall).

**See also:** hammam, Jordan, Umayyads

## Qutb Minar and Mosque

*Famous twelfth-century minaret and mosque complex in Delhi, northern India.*

The complex commemorates the first Islamic conquest of Delhi by Muhammad of Ghur in 1193. The mosque was built in the centre of the Hindu fort of Rai Pithora built earlier in the twelfth century by the Chauhan Rajputs. The area occupied by the mosque in the centre of the citadel is known as Lal Kot and was built by the Tomar Rajputs in the eleventh century. The mosque was

begun by Qutb al-Din the first Islamic sultan of Delhi and is all that remains of the first Islamic city.

### *The Mosque*

The present buildings are contained within a large, partially ruined, rectangular enclosure approximately 225 by 125 m. The enclosure is a multi-period complex containing three major phases of Islamic building, the earliest of which is dated to between 1193 and 1198. Twenty-seven Hindu and Jain temples were demolished to make room for the first mosque, which was called 'The Might of Islam' (Quwwatu'l Islam); however, the remains of the temples were used to provide building materials for the mosque, in particular the columns used in the arcades of the courtyard. This consists of a rectangular enclosure built on an east-west axis with the qibla pointing west towards Mecca. The courtyard is entered from two entrances on the north-south sides and a larger domed entrance to the east. Inside, the courtyard is bordered on three sides by arcades whilst on the west side is the sanctuary separated from the courtyard by a screen. The screen contains five arches, of which the

## Qutb Minar and Mosque

central arch is the highest; it is framed by a decorative border which combines Quranic inscriptions with dense vegetal carving and the spandrels of the arches are decorated with interlocking pierced discs. Standing in the courtyard directly in front of the central arch is an iron pillar 12 m high which was made for the Hindu god Vishnu in the fourth century CE. The columns supporting the arcades are made of finely carved red sandstone and consist of alternate square and round sections carved with various Hindu motifs, such as the bell and chain, as well as some figural sculpture. Because the columns were not sufficiently tall for the mosque they were placed one on top of the other to double the height. The arcades and sanctuary are covered with a trabeate roof where the columns support flat beams resting on brackets. The area immediately in front of the mihrab was covered by a large dome although this has now disappeared. The first stage of the Qutb Minar can also be attributed to this initial phase of construction.

The second stage of the mosque was carried out in the early thirteenth century by Iltumish, who extended the mosque laterally and completed the work of his father on the Qutb Minar. The lateral extension of the mosque was carried out by extending the screen north and south and adding an outer enclosure, or courtyard, which included the Qutb Minar in the south-east corner. The arcades of the extension were built in the same way as the inner enclosure and used columns which were specially carved to resemble the two-tier Hindu temple columns used in the first mosque. Iltumish was also responsible for commissioning his own tomb, which was begun the year before his death. The tomb is located outside the mosque to the west and consists of a square chamber covered with a dome, now collapsed. The interior is extravagantly decorated with carvings in red sandstone which included Hindu motifs intertwined with passages of Quranic calligraphy. In the centre of the building is Iltumish's tomb whilst to the west are three mihrab niches.

The third major phase of the mosque complex was carried out by Ala al-Din Khaliji, the fourteenth sultan of Delhi, between 1296 and 1316. Like his predecessor Ala al-Din decided to increase the area of the original mosque by extending the length of the screen to the north thus enclosing an area more than double the size of the previous extension. At the same time Ala al-Din also began

work on another minaret on the same pattern as the Qutb Minar which is known as the Alai Minar. For various reasons Ala al-Din was not able to complete either of these ambitious projects leaving the stump of a minaret and in the north part of the unfinished new courtyard. However, in 1311 he was able to complete a new monumental gateway to the complex known as the Alai Darwaza which linked the west wall of Iltumish's complex with the completed west wall of his new courtyard. The gateway consists of a large square domed chamber with a tall pointed arch in the north and south sides. The gateway is faced in red sandstone inlaid with bands of white marble and is completely covered in carved designs and epigraphic bands. The south façade of the chamber consists of a tall pointed arch in the centre, flanked on each side by a window covered with a pierced stone screen (jalis) and a blind arch of similar design. Above the two arches either side of the main arch are two flat rectangular panels each divided in two and containing a small square blind niche. The arches of the façade are decorated with spiky projecting tassels whilst the jambs of the arches are made up of engaged columns similar to those used to support the arcades.

East of the Alai Darwaza is a small square domed tomb built by the Turkestani Imam Zamin. This is the latest building at the site dating to 1538.

### *The Minar*

Although subsequently copied in various ways, the Qutb Minar is a unique building which announces the arrival of Islam in India. The minar comprises a tall tapering cylindrical tower standing on a circular base with five storeys which together reach a height of 72.5 m. Each of the storeys is reached by an internal spiral staircase which leads to the balconies which are supported on muqarnas corbels. The most characteristic feature of the building is the corrugated angular and rounded fluting on the shaft which forms the basis for many later imitations. The first part of the tower was built by Qutb al-Din who died in 1210 leaving only one storey completed. This is the thickest part of the tower with a base diameter of 14 m tapering to 9 m at the first balcony. This part of the minaret is built with alternating sharp-angled and rounded fluting (twelve of each type) which are decorated

with bands of inscriptions. Between 1211 and 1236 the tower was completed by Iltumish with three more storeys, each with a different pattern of fluting. The second storey added by Iltumish has rounded flutes, the third storey has angular flutes and the fourth storey was plain. During the fourteenth century the top of the building was damaged by lightning and in 1369 Firuz Shah repaired the damage to the top and added an extra storey. The diameter at the fifth storey is only 2.7 m making a reduction from an area of 44 square metres at the base to 8.5 m at the top.

The design of the Qutb Minar and in particular the fluting have clear antecedents and parallels in Afghan architecture; thus the first storey built by Qutb al-Din may be compared to the twelfth-century tower at Khwaja Siyah Push in Sistan which has eight semi-circular flutes alternating with eight shallow-angled flutes. Similarly the round flutes of the second storey may be compared with those of the early twelfth-century Jar Kurgan tower in Uzbekistan.

The effect of the tower on later Indian architecture is significant, influencing not only towers but the decoration of columns and domes. The earliest known direct copy is the Alai Minar in the same complex which was begun by Ala al-Din Khaliji in the early fourteenth century; it had twice the base area of the Qutb Minar and was projected to be twice the height. Although it was never completed, the base can still be seen and is circular, with

square flutes and a tapering cylindrical shaft with sharp-angled flutes. An earlier example of the influence of the Qutb Minar can be found in the paired minarets on top of the early thirteenth-century gateway of Arah-i-Din Mosque at Ajmer. However, the most complete copy is the Hashtsal Minar near Palam built for Shar Jahan and completed in 1634. The top of the building has been damaged, as have the two collar-like balconies of which only the projecting supports remain, so that its present height is 17 m. Like its ancient model the Hashtsal Minaret is decorated with alternating round and angled flutes although there is no attempt to recreate the muqarnas mouldings which support the balconies of the Qutb Minar. There is no mosque associated with the tower and it seems likely that this was a hunting monument consciously recalling the victory connotations of the Qutb Minar.

**See also:** Delhi, India, minaret

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# R

## Rabat

*Capital of Morocco located on the Atlantic coast.*

The city of Rabat is located at the mouth of the Bou Regreg river. Rabat stands on the south side of the river and the twin city of Sale occupies the north bank. Although there was probably a Roman settlement on the site, the present city of Rabat was founded in the twelfth century by the Almohad ruler Sultan Abd al-Mumin as a depot and launching point for the Almohad conquest of Spain. The city still retains parts of its twelfth-century walls including two monumental Almohad gateways. The façade of the gateways consists of a central entrance with a slightly pointed horseshoe arch with spandrels decorated with bold interlace designs. Both gateways form bent entrances, the Udayya gate has a passage which runs along the side of the wall before opening into the town, whilst the Bab Ruwah has a complicated zig-zag pattern with blind passages.

The most famous monument in Rabat is the mosque of Hassan begun in 1196 after the Almohad victory over Alfonso VIII at Alarcos in Spain. The mosque would have been one of the largest in the Islamic world but construction ceased after the death of Ya'qub al-Mansur in 1199. The plan of the mosque can still be discerned and consists of a huge rectangle 140 by 185 m with three courtyards and a huge minaret in the middle of the north side opposite the qibla wall. The unfinished minaret is 40 m high, but if completed it would have reached a height of over 70 m. The tower is built in the characteristic Almohad style with a square central core around which a ramp rises to reach the top. Within the central core are a series of vaulted rooms, one on each storey, each with a different form of vault. The exterior of the tower is decorated with windows set within blind niches with multi-foil and cusped arches, the upper part of the tower is covered with a network of interlaced arches.

The current main mosque of the city was built

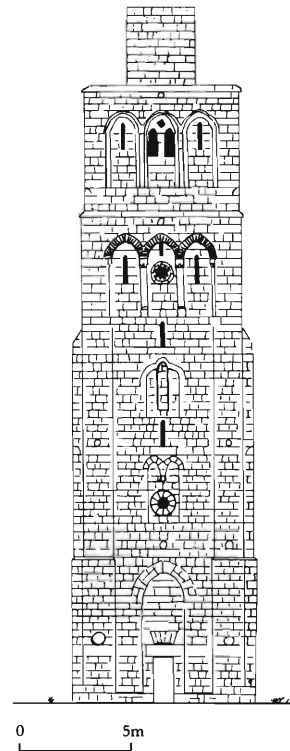
by the Marinids in the thirteenth century and stands opposite a madrassa built in the same period. The Kasba des Ouadias forms an enclosure within the city which contains houses and a twelfth-century mosque. To the south of the city is the fortified necropolis of Challa built by the Marinids in the fourteenth century.

**See also:** Almohads, Morocco

## Ramla

*Capital of Palestine in the early Islamic period.*

Ramla is located in the southern coastal plain of Palestine roughly equidistant between Gaza and



*Tower of White Mosque, Ramla, Israel/Palestine*

Jerusalem. The city was founded in 712 by the Umayyad caliph Sulayman as an alternative to nearby Lydda which had a predominantly Christian population.

Little remains from the early Islamic period, although the White Mosque to the north-east of the modern town preserves the shape of the Umayyad mosque, whilst the cistern known as Birket al-'Anaziya was built during the reign of the Abbasid caliph Harun al-Rashid. The city suffered from a series of earthquakes and the Crusader occupation of the twelfth century so that by the Mamluk period (1250s) it was at least a quarter of its former size. Although the White Mosque was rebuilt by Sultan Baybars, this area of the town never recovered. Instead, the south-east part of the city became the centre of the town with the Crusader church of St John functioning as the Great Mosque. This has remained the town centre to the present day and contains a number of interesting Mamluk and Ottoman buildings.

**See also:** Mamluks, Palestine

**Further reading:**

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## Raqqa

*Prominent Abbasid and medieval city located on the Euphrates river in Syria.*

Raqqa was founded by Alexander the Great and was known as Leontopolis in the Byzantine period. In 639 the town was captured by the Arabs and renamed Raqqa. In 772 the Abbasid caliph al-Mansur founded a new city, west of the old one, which he enclosed with a wall similar to that of Baghdad, with an inner and an outer wall and a moat or ditch. The remains of the walls can still be seen and form a rounded enclosure with a straight wall on the south side. The inner wall still survives to a height of 10 m in places and is studded with half-round towers at regular intervals. There is a gap of 20 m between this and the outer wall of which little survives. In the middle of the enclosure are the remains of the Great Mosque which was built in 772. This is a huge rectangular enclosure measuring 90 by 110 m, with a large central courtyard containing a minaret of later date (twelfth century).

The outer walls of the mosque are made of mud brick supported by solid semi-circular buttress towers. The prayer hall consisted of three arcades supported on cylindrical piers, whilst the other three sides were lined with double arcades. The building was decorated with stucco, traces of which survive.

The famous Baghdad gate which stands at the south-east corner of the city is now thought to date to the twelfth century. It is a baked-brick construction with a main gateway set below a row of two-tier blind niches separated by engaged columns. The gateway itself and the upper tier of arches are of a four-centrepiece design which makes its first appearance in the late ninth century at Samarra.

**See also:** Abbasids, Baghdad, Samarra, Syria

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## rauza

Persian term for mausoleum.

## Red Fort (Lal Qila)

*Mughal palace in Delhi built by the Mughal emperor Shah Jahan between 1638 and 1648.*

The building derives its name from the use of red sandstone as the main building material. The palace forms the core of Shah Jahan's new city of Shahjahanabad. The fort is located next to the Jumna river and surrounded on all four sides by a high crenelated wall which on the landward side is enclosed within a moat. The two main entrances to the palace are the Lahore and Delhi gates both of which were enlarged by Jahan's successor Aurangzeb. The internal layout of the palace is symmetrical and was probably based on that of the Agra fort. The Lahore gate was the main form of public access and leads into a large square with the imperial audience hall on the opposite side. The private apartments were made up of a series of pavilions and gardens arranged in a rigid geometry. The decoration of the palace is of outstanding quality and refinement and with the Alhambra is

## riad

one of the finest examples of Islamic palatial architecture. Decorative techniques include painting, gilding, pietra dura (stone inlay) gilding and white marble carved in shallow relief.

**See also:** Agra, Delhi, India, Lahore, Mughals, Taj Mahal

## riad

North African term for a walled garden.

## ribat

*Fortified enclosure for religious warriors, common in North Africa in the early Islamic period.*

A typical ribat is located near the coast and partially functions as a look-out post. Usually ribats are square or rectangular courtyard structures, two storeys high, with storage rooms and stables on the ground floor and sleeping accommodation and a mosque on the upper floor. Later ribats seem to have lost their military function. Important examples are at Sfax, Monastir and Sousse in Tunisia.

**See also:** Tunisia

## Ribat-i Sharaf

*Royal Seljuk caravanserai on the road between Nishapur and Merv.*

This building was founded in 1114 as a royal caravanserai and expanded in 1156 when it was used as a semi-permanent residence for Sultan Sanjar and his wife who were held under house arrest by the Öghuz Turks. The first part of the structure is a square enclosure built around a central courtyard with a central iwan in each side leading to a domed room. The extension is half the size and is built on to the front of the original structure. The building was decorated with elaborate stucco work and a monumental entrance pishtaq flanked with twin blind niches.

## riwaq

Arcade or portico open on at least one side.

# S

## sabil

See sebil.

## Saffavid

*Dynasty of Kurdish origin which ruled Iran during the sixteenth and seventeenth centuries.*

Although the founder of the dynasty was probably a Sunni, the Saffavids later became Shi'a and adopted this as a state religion. Little remains of the early architecture of the Saffavids who established capitals first at Tabriz and later at Qazvin. The little that does survive indicates that they continued the architectural forms established by their predecessors the Timurids. Thus the Saffavids continued to use the complex vaulting forms, with networks of arches, squinches and pendentives, developed under the Timurids. An early example of a Saffavid building is the tomb of Harun-i Vilayat which although Timurid in form has an emphasis on exterior tile decoration. This was a feature which was developed in later Saffavid architecture where the architectural form seems to be subordinated to the tile patterns.

The most productive period of Saffavid architecture began in 1598 with Shah Tahmasp's decision to redesign Isfahan as an imperial capital. The centre of the new developments was the Maidan-i-Shah which is a rectangular square or park around which was built the palace, the principal mosques and the principal bazar of the city. The main characteristics of this architecture was the layout and planning with the mosques built at a deliberate angle to the maidan to show off both their monumental portals (pishtaq iwans) and their glazed domes. Similarly the main gate of the palace, the Ali Qapu, was made into a pavilion overlooking the Maidan-i-Shah from which the shah's palace could be seen. The emphasis on accessibility is also demonstrated in the tomb complexes, where the outside faces are pierced with arches instead of

forbidding walls. This is also seen on utilitarian structures such as the famous Pol-i-Khaju bridge built in 1650. This bridge, which links Isfahan to the southern palace, is 110 m long and has two tiers of arcades which provide shelter from the summer heat. Another characteristic of the architecture is the use of lighter materials such as wood, stucco, paint and tiles, and an increasing emphasis on gardens. However, this may appear to be a development simply because earlier structures of this type have not survived.

Outside Isfahan buildings such as caravanserais are generally larger and plainer than their predecessors indicating the growth of commercial traffic.

**See also:** Iran, Isfahan

## sahn

Courtyard of a mosque.

## Samarkand

*Timurid capital located in the Central Asian state of Uzbekistan.*

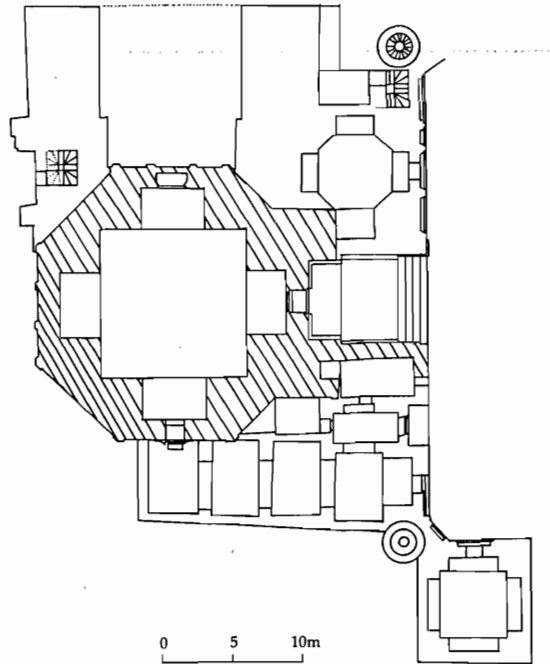
Samarkand is located on the banks of the Zeravshan river approximately 200 km east of Bukhara. Next to the present city are the ruins of Afrasiyab which was the site of the city from 500 BCE until the Mongol destruction of 1220 CE. In the eighth century the city was sacked by the Arab general Qutaiba bin Muslim. After the Arab conquest a new city was built to the south-west with Afrasiyab remaining as an industrial quarter specializing in the production of paper for which it was famous. Excavations have revealed workshops for pottery and glass in addition to a large mosque which was burnt during the Mongol invasion.

Samarkand once again rose to international prominence in 1369 when it was captured by the Mongol emperor Timur and chosen as his capital. Timur enclosed the city with a wall 7 km long and

## Samarkand

established his citadel and palace in the western part of the city. There are few monuments which survive from the reign of Timur partly because he was more concerned with conquest than architecture and partly because he was more interested in a more ephemeral type of architecture represented by gardens, pavilions and tents. Contemporary accounts describe a series of magnificent gardens with three-storey pavilions made of wood and decorated with porcelain and marble. One of the most splendid examples of this type of architecture must have been the tented encampment erected to celebrate the wedding of Timur's grandsons. It comprised 20,000 tents arranged into streets in a meadow on the banks of the Zeravshan river. The most magnificent tent was that of Timur which was 100 m square with a central dome supported on twelve giant tent poles above which was a square wooden turret.

Two major monuments have survived from Timur's reign, however; these are the Bibi Khanum Mosque and the mausoleum of Gur-i Amir. The Bibi Khanum Mosque is a massive building begun in 1399, after Timur's conquest of India. It forms a rectangle 160 by 200 m built around a huge central courtyard, entered via a monumental portal iwan flanked by twin towers. Either side of the central courtyard there were shallow iwans leading into prayer halls roofed with fluted domes covered in blue glazed tiles. The main prayer hall/sanctuary with its massive tiled dome is hidden behind a huge pishtaq iwan 40 m high and flanked with twin towers more than 50 m high. Unfortunately the speed of construction together with the massive size of the mosque combined to make it unstable and it started to disintegrate as soon as it was built. The other major monument surviving from Timur's time is the mausoleum of Gur-i Amir built by Timur for his grandson Muhamad Sultan between 1403 and 1404. This tomb eventually housed Timur himself after his death on campaign in 1405. The tomb is built on an octagonal plan and is crowned with a bulbous dome resting on a muqarnas band set on an octagonal drum. The interior of the tomb is square with deeply recessed arches set into the middle of each side. The dome is supported on a network of eight intersecting arches supported by corner squinches. On the floor of the tomb are the cenotaphs of Timur's descendants, the tomb of Timur is marked by a huge green jade slab.



*Mausoleum of Gur-i Amir, Samarkand, Uzbekistan*

Other funerary monuments erected by Timur were part of a mausoleum complex known as the Shah i-Zinda. The complex was built around the shrine of Quthman ibn Abbas whose tomb stood at the end of a narrow lane approached by a set of thirty-six stone steps. The shrine of Quthman is approached through a series of anterooms decorated with stucco and covered with a roof resting on carved wooden columns. Either side of the lane leading to the shrine there are a total of sixteen tombs representing the development of tomb architecture. The royal tombs are of two types: a square type with a main façade and polygonal type with two or more entrances. The oldest tomb, that of Timur's niece, Shad i Mulk, is of the first type with a large screen which hides the ribbed dome behind. The screen is contained within two engaged columns and frames a large recessed portal decorated with muqarnas mouldings and glazed tiles inset within carved mouldings. The tomb of Shihrin Bika Aka was built some ten years later and also has a screen façade although this is decorated with tile mosaic, a new technique imported from Persia. This tomb also has a more



advanced dome design which has a slightly bulbous form resting on a sixteen-sided drum.

The centre of the city was the Registan, although no buildings of Timur's period survive in this square, considered the finest in Central Asia. The oldest building in the Registan is the madrasa of Ulugh Beg built between 1417 and 1420. The madrasa has the typical Timurid form with a huge entrance iwan (pishtaq) set into an entrance façade flanked with twin minarets. The entire surface of the façade and minarets is decorated with blue, turquoise and yellow tile mosaic against a background of yellow/buff baked brick. One of the notable features of the decoration is the use of giant calligraphic patterns in complex geometric arrangements. The interior of the madrasa consisted of a courtyard surrounded by two storeys of cells and teaching rooms designed to accommodate 100 students. Ulugh Beg's love of learning is further demonstrated by his observatory which was a three-storey tiled structure nearly 50 m in diameter cut into the hillside. In the middle of the building was a deep slit 40 m long which contained a sextant with an arc of 63 m. With this instrument Ulugh Beg was able to produce the first precise map of the stars and planets.

Opposite the Ulugh Beg Madrasa in the Registan is the Shirdar Madrasa which has the same general form even though it was built 200 years later in the seventeenth century. On the third side of the square is the Tilakar Mosque and Madrasa also built in the seventeenth century. This building has the largest façade, which is over 120 m long with a massive entrance iwan (pishtaq) flanked on either side by two storeys of open arches facing on to the square and domed cylindrical corner turrets. Inside, the mosque is decorated with multiple layers of gold painted on to a blue background.

**See also:** Bukhara, Timurids, Uzbekistan

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## Samarra

*Abbasid capital in central Iraq.*

Samarra is now recognized as the largest archaeological site in the world and stretches for over 40 km along the banks of the Tigris. Although there were settlements in the area of Samarra before the Abbasid period, it was not established as capital until 836 CE when the Abbasid caliph al-Mu'tassim decided to set up a new city following clashes between his troops and the local population of Baghdad. The city remained capital for fifty-six years and was home to eight caliphs, until 892 when the capital was moved back to Baghdad.

The predominant building material in Samarra was mud brick and pisé with baked brick reserved for more important structures (i.e. the Great Mosque and the Bab al-Amma). Houses and palaces were decorated with carved and moulded stucco panels, and Samarra provides the earliest examples of bevelled stucco decoration. Some of the palaces were also decorated with wall paintings and glass mosaic although none of this remains in situ.

The modern town of Samarra is located approximately in the centre of the Abbasid city. Immediately to the north-west of the city, on the west bank of the Tigris, is the Jausaq al-Khaqani which for most of the time was the caliph's palace and was always his official residence. It was built by one of al-Mu'tasim's Turkish generals and reflects features of Central Asian influence such as wall paintings with Bactrian camels. The palace is a vast complex, including a mosque, a polo ground and a horse-racing track. On the west side of the palace, facing the river, there is a monumental gateway or portal known as the Bab al-Amma, or public gate. This structure was probably an official entrance and a place for public audiences. Directly to the east of the palace is the Great Mosque of Samarra with its spiral minaret (the Malwiyya). Measuring over 240 by 160 m this is one of the largest mosques in the world. It is built entirely of baked brick although marble columns on brick piles originally supported the roof. The outer wall of the mosque is supported by four corner towers and twenty semi-circular bastions resting on square bases. The curtain wall is entirely plain except for a frieze which runs between the bastions, each section consisting of six bevelled squares with shallow concave discs in the centre. The Malwiyya,

## Samarra



*Qubbat al-Sulaybiyya, Samarra, Iraq*



*Great Mosque above and smaller mosque in foreground, Samarra, Iraq*

or spiral minaret, is 52 m high and may have been influenced by earlier Mesopotamian ziggurats.

In the north of Samarra are the remains of an extension to the city built by Caliph al-Mutawakkil in an attempt to found a new city. This new area

had a palace, garrisons and a congregational mosque known as the Abu Dulaf. The Abu Dulaf Mosque is a smaller version of the Great Mosque and has a spiral minaret 19 m high. On the west bank of the Tigris is the Ashiq Palace, one of the

last buildings made before the capital was relocated in Baghdad. The palace is built on a vaulted substructure or terrace so that it can overlook the Tigris. The building forms a high rectangle with the outer walls decorated by a series of blind niches. One of the distinctive features of the palace is the use of the four-centrepoint arch for the first time in Islamic architecture.

South of the modern town of Samarra are a number of major structures, including the palaces of al-Istabulat, al-Balkuwara and Musharrahah. In addition, there is a huge octagonal enclosure, each side of which is half a kilometre long, known as the octagon of Qadisiyya. This probably represents the remains of an unfinished city started by Harun al-Rashid in the eighth century.

**See also:** Abbasids, Baghdad, Iraq

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## San'a

*Capital city of Yemen.*

The city is located on a high plateau 2,200 m above sea level. Above the city is Jabal Nuqum which acts as a collecting point for clouds and consequently precipitation. San'a seems to have risen to prominence in the third century CE although an earlier settlement probably existed on the site.

San'a has thirty-four historic mosques, the oldest of which is the Great Mosque which is said to have been founded on the orders of Muhammad during his lifetime. This early mosque was extended northwards during the Umayyad period on the orders of Caliph al-Walid. Subsequent restorations were carried out in the twelfth, thirteenth and sixteenth centuries, although the basic form of the building appears to have remained the same. In its present form the mosque consists of a large rectangle measuring 66 by 78 m with six gateways, one at the south, four on the east and west sides and one in the north wall next to the mihrab. The external walls are built of large blocks of squared basalt with a central core of rubble. The courses of the wall are marked by narrow ridges (approx-

mately 0.5 cm wide) formed by the faces of the stones leaning outwards. This is a masonry technique characteristic of pre-Islamic Yemeni architecture. In the centre of the mosque there is a square courtyard surrounded by arcades, four on the south side, three on the east and west sides and five on the north (qibla) side. The arcades have a flat wooden roof supported by arches resting either on columns or on circular stone piers. In the centre of the courtyard is a square box-shaped structure covered with a dome known as Sinan Pashas Qubbah. Although it was built in the early seventeenth century, its form and position suggest it may have earlier antecedents. There are two minarets, one in the south-east corner of the courtyard and the other at the east side of the mosque next to the outer wall. They both seem to date from the thirteenth century but may have been restored later. The mosque has four mihrabs, three subsidiary ones at its south end and a main mihrab to the left of centre in the north wall. The area above the mihrab is roofed by five corbelled wooden domes, a central dome and four smaller side domes. In the centre of each dome is a block of alabaster which would have functioned as a skylight.

Other early mosques in San'a include the Jabbanah Musalla, the Tawus Mosque, the mosque of al-Jala and the Jami al-Tawashi. The Jabbanah Musalla is an open-air prayer area which is said to date from the time of Muhammad, although it has been extended in later times. The other early mosques are rectangular box-like structures with hypostyle roofs and recall pre-Islamic Yemeni temples. Mosques of the twelfth century and later are influenced by the architecture of Egypt and Syria. This influence can be seen in the use of arches and domes, which are rare features in the traditional architecture of Yemen. After the Ottoman occupation of the sixteenth century, mosques were built with large central domes and domed arcades.

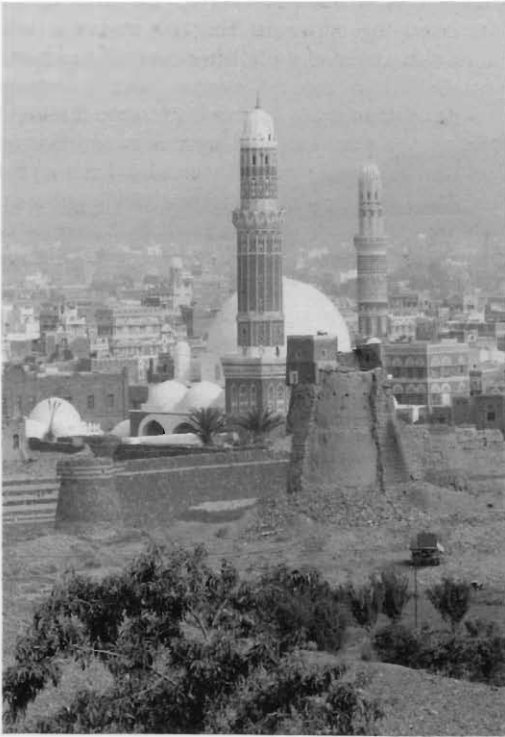
The domestic architecture of San'a is represented by tall tower houses built of stone and decorated with white plasterwork around the windows and coloured glass in the reception rooms (mafraj) at the top of the house.

**See also:** Yemen

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## Saqaqa



*Mosque, San'a, Yemen, © Charles Aithie*

*Islamic City, World of Islam Festival Trust, London 1983.*

## saqaqa

Water tank for ritual ablutions.

## sardivan

Fountain in the centre of a mosque courtyard.

## Sassanians

*Iranian dynasty which ruled from 226 CE to the Arab conquest in 651.*

The Sassanians controlled the eastern half of what became the Umayyad and Abbasid empires. Unlike their Byzantine rivals, the Sassanians were completely destroyed by the Arab invasions. Nevertheless, Sassanian traditions continued to have great importance, particularly during the Abbasid period in the eighth and ninth centuries. This influence is

symbolized by the great arched iwan (Taq i Khusrau) at Ctesiphon which, like the Hagia Sophia in Constantinople, provided an example for Islamic architects. The influence of the Sassanians on Islamic architecture can even be seen in Syria Palestine in the Umayyad period thus the mosaics of the Dome of the Rock are decorated with Sassanian symbols of royalty. More tangible evidence is found at Qasr Kharana which is purely Sassanian in design although it appears to date from the Islamic period. Other examples of Sassanian influence are the stepped merlons found at Umayyad palaces such as Khirbet al-Minya or the stucco work of Khirbet al-Mafjar.

The architecture of Iraq at this period is a continuation of Sassanian practice with baked brick and roughly coursed stone set in thick mortar as the main building materials. Buildings such as Khan 'Atshan and Ukhaidhir are very similar to Sassanian buildings in their design, although constructional details such as the development of the pointed arch and the use of machicolations indicates new developments. In eastern Iran the influence of Sassanian culture remained longer, thus some ninth-century buildings have inscriptions in Pahlavi (Sassanian script) and Arabic.

**See also:** Abbasids, 'Atshan, Byzantine architecture, Samarra, Ukhaidhir, Umayyads

## Saudi Arabia

*One of the largest countries in the Middle East occupying the greater part of the Arabian peninsula.*

To the north the country is bordered by the states of Jordan, Iraq and Kuwait, whilst to the south are Yemen and Oman. On the west side is the Red Sea and on the east the coast of the Arabian Gulf, with the Gulf states of Bahrain, Qatar and the United Arab Emirates. The country is divided into three provinces: Western Province comprising the Hijaz and the Tihama, Central Province comprising Najd and the Empty Quarter, and Eastern Province comprising the oasis of al-Hassa and the towns of the Arabian Gulf.

Before Islam the principal settlements were the trading cities of the Hijaz which included Yathrib (Medina), Medain Saleh and Mecca. The establishment of Islam guaranteed Mecca's position as both a trading city and centre of the Muslim world. For a period of approximately 300 years after the death of Muhammad Arabia enjoyed an unprec-

edented economic growth and settlements like al-Rabadah grew from small settlements into major towns. During this time Arabia had the largest area of settlement until modern times. During the Middle Ages (1000–1500) the lack of central authority meant that Arabia was again a marginal area, only enlivened by pilgrim routes and secondary trade routes. With the growth of the Ottoman Empire in the sixteenth century Arabia became strategically important both for religious reasons (Mecca and Medina) and strategic reasons (growing European presence in the Indian Ocean). The increasing involvement of the Turks in the area provoked a reaction both within Arabia and from outside. The reaction from within Arabia led to the creation of the first Saudi state by Muhammad ibn Saud and Muhammad ibn Abd al-Wahhab. The state began in Najd in the 1740s and gradually expanded so that by the beginning of the nineteenth century successful attacks had been mounted against Kerbala in Iraq and Mecca in the Hijaz. The growing power of the Saudis was viewed with alarm by the Ottomans, who launched a campaign which led to the execution of the Saudi ruler. During the nineteenth century the Saudis gradually reasserted themselves spreading over large areas of Arabia. With the defeat of the Turks in the First World War the Saudis were able to make great gains and in the 1920s were able to take control of the Hijaz. Oil wealth has added to the strength of the kingdom which is now one of the oldest monarchies in the Middle East.

A variety of materials are employed in the traditional architecture of Saudi Arabia, these may be divided into three groups, stone, wood and mud. Mud is the commonest building material and may either be used as mud brick, pisé or as mud plaster for stone walls. Mud brick is the principal construction material in central Arabia as well as in the oasis towns of the eastern and western provinces. In northern Najd mud brick has recently replaced stone as the principal material of construction; the reasons for this are not known, although mud brick may be more versatile.

Stone is predominantly used in the mountainous regions of the Hijaz and 'Asir province and formerly in the northern Najd. Dressed stonework and ashlar masonry are uncommon in most of Saudi Arabia with the exception of the older cities of the Hijaz. The usual method of stone construction in most of the country is stone slabs laid in

rough courses without mortar. True arches are rare in traditional stone architecture and the usual means of covering an opening are with a lintel or corbelled arch. Sometimes the outer surfaces are plastered with mud plaster or lime plaster where it is available. In the mountains of 'Asir layers of projecting flat stones are set into the walls to deflect rainfall away from their coating of mud plaster.

On the east and west coasts coral forms the principal building material. This may either be fossil or reef coral depending on preference and availability. Coral walls are usually coated with a hard white lime plaster, which is sometimes carved into elaborate stucco patterns.

Wood is an essential component of traditional architecture despite its natural scarcity in the arid desert environment. The date palm is the main source of wood in much of the country and is used for roofing and lintels. Tamarisk wood is also used but is more scarce and difficult to find in suitable lengths. On the coasts imported mangrove wood is used for roofs and strengthening in walls.

### *Hijaz*

Historically the cities of the Hijaz have been the main cultural centres of Arabia, but recently Riyadh has grown in significance. The principal towns of the Hijaz are Mecca, Medina and Jeddah, in addition there are a number of smaller towns such as Tabuk and al-'Ula. As religious cities Mecca and Medina are responsible for bringing a large number of pilgrims to the area and have a cosmopolitan population. However, Jeddah as the port of Mecca has grown to be the main city of the Hijaz and until recently has been the main commercial centre of Saudi Arabia. The architecture of the Hijaz is particularly subject to outside influences, thus settlements of al-'Ula, Tabuk and al-Wajh developed as a result of the pilgrim routes. The medieval khan of Qasr Zurayb near al-Wajh is a clear example of this external influence.

### *Tihama and 'Asir*

The Tihama is located in the south-west corner of Saudi Arabia and comprises two distinct regions, the hot humid coastal plain and the high mountains of 'Asir. The architecture of the coastal plain is of two types, town houses and rural houses. The

## Sawma'a

town houses are built of coral and are usually rectangular single-storey buildings with a courtyard. Rural houses are made of wood and thatch and are related to the architecture of nearby East Africa. The architecture of the mountains is built of stone and is related to the mountain architecture of Yemen.

### Najd

The Najd is a plateau in the centre of Arabia south of the Nafud desert. The principal areas of occupation are clustered around the Jabal Tuwayq and include Riyadh, the present capital of the country as well as Ha'il, the nineteenth-century capital. North of the Nafud desert is the oasis town of Dumat al-Jandal which has a mosque attributed to the second caliph, 'Umar ibn al-Khattab (634-44).

### Al-Hassa

The great oasis of al-Hassa stands about 60 km from the coast of the Arabian Gulf. The architecture of the area is predominantly stone and mud, although its position near the coast means that it is open to outside influences, the most obvious of which is the white plaster decoration used to create stucco panels and decorative arches. During the sixteenth century the oasis was occupied by the Ottoman Turks in an attempt to curb Saffavid or Portuguese ambitions in the area, and Ottoman influence may still be seen in Hufuf, the principal town of the oasis. The mosque of Ibrahim has a large central dome resting on four large squinches and a domed portico similar to classical Ottoman mosques. Nevertheless, the mosque is not Ottoman in details such as the muqarnas hood of the mihrab or the use of polylobed arches.

### The Gulf Coast

The Gulf coast includes the towns of al-Jubayl, al-Qatif and the modern city of Dhahran. As on the west coast coral is the traditional building material although it is used in a different form. One of the notable features of this architecture is the use of thin coral panels held between piers. Also the buildings of this region are distinguished by their use of decorative arches and ornamental plasterwork.

**See also:** Ka'ba, Mecca, Medina

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## Sawma'a

Minaret.

## sebil

Turkish term for a drinking fountain. Also used to refer to a small kiosk with attendant who dispenses water, or sherbet, from behind a grille.

## Selimiye

*Ottoman mosque at Edirne in European Turkey considered to be the culmination of Ottoman architecture.*

The mosque forms the centre of a complex which includes a madrassa (college), a Quran reading room and a huge covered market, the proceeds of which paid for the upkeep of the mosque. This complex, built by the famous architect Sinan, is generally considered to be his greatest work. The mosque consists of two rectangular areas of equal size placed side by side; the northern area is the courtyard and portico and the southern area comprises the prayer hall of the mosque covered by a huge dome, 32 m in diameter. The dome is the same size as that of the Hagia Sophia, thus achieving the Ottoman ambition of building a mosque of equal size and brilliance to the Ottoman masterpiece. Instead of using half-domes of the same radius placed at the sides of the central dome as was usual in earlier mosques, Sinan used smaller corner domes which function as giant squinches. The dome rests on an octagon formed by eight massive cylindrical fluted piers which project through the roof to act as stabilizing turrets for

the fenestrated drum. The significance of the design is that it breaks away from the square domed area which had remained the dominant principal in Ottoman mosque architecture.

Like the Süleymaniye and the Üç Şerefeli Mosque, the Selimiye has four minarets, but here they are placed at each corner of the mosque rather than at the corners of the courtyard as had happened previously. At 68 m these are the tallest Ottoman minarets and with their central positioning emphasize the pyramid-like mass of the dome.

The mosque is built mainly of yellow sandstone although red sandstone is also used for voussoirs in arches and for outlining architectural details. The interior of the building is provided with traditional mosque furniture, the most impressive of which is the tall marble minbar. The sides of the minbar are decorated with a carved geometric interlace pattern based on a twelve-pointed star and circle. Directly below the dome is the square muezzin's gallery resting on an arcade of wide-lobed arches, and below this is a small marble fountain emphasizing the central axis of the dome. The mihrab is contained within a square, apse-like area and covered by a small semi-dome which emphasizes its position. The royal prayer room is located on an upper gallery in the north-west corner of the mosque as was traditional in Ottoman architecture. The royal area is heavily decorated with Iznik tile panels and stained-glass windows, whilst the south window forms the mihrab niche.

**See also:** Edirne, Ottomans, Sinan, Süleymaniye

## Seljuks

*Turkish dynasty which ruled much of Anatolia, Syria, Iraq, Iran and Central Asia during the eleventh century.*

The Seljuks were a division of the Kınık clan of Öghuz Turks who originated in the steppes north of the Aral Sea. Originally they were hired as soldiers to take part in the internal feuding of Khurassan and eastern Iran. In 1038 the leader Tughril Beg gained control of all Khurassan and had himself proclaimed sultan at Nishapur. As Sunni Muslims the Seljuks wanted to restore orthodoxy to the central Islamic lands and in 1055 Tughril defeated the Sh'ia Buwaihids who ruled from Baghdad. Further victories followed with the defeat of the Byzantines at Manzikert in 1071 and

the defeat of the Qarakhanids in Central Asia in the late eleventh century. The unified Seljuk state did not last much beyond the beginning of the twelfth century, partly owing to its pattern of inheritance and partly because the areas covered were too diverse.

During the twelfth century the empire broke up into a number of independent principalities which can be classified into three main groups: a western group comprising Anatolia, a central group covering Syria and Iraq, and an eastern group including Iran and Central Asia.

Seljuk architecture is characterized by the rapid transmission of ideas and forms. During this period many of the characteristic forms of Islamic architecture become common everywhere, thus madrassas, memorial tombs and khans were built from Central Asia to western Anatolia. Iwans became one of the principal architectural units and were used both for religious and secular buildings. In Iran and the eastern areas decorative brickwork and elaborate stucco ornamentation are common, whilst in Anatolia these decorative themes were translated into stone.

The homeland of Seljuk architecture was Iran, where the first permanent Seljuk structures were built. Unfortunately the Mongol invasions destroyed most of these buildings and only a few remain. In 1063 Isfahan was established as capital of the Great Seljuk Empire under Alp Arslan and parts of the Great Mosque date to this period. The most significant alteration carried out in the early twelfth century was the conversion of the building into a four-iwan plan mosque. Another mosque-type introduced at this time was the kiosk mosque, consisting of a domed space with three open sides and wall containing a mihrab on the qibla side. The architecture of this period was also characterized by memorial tombs which were usually octagonal structures with domed roofs. The most impressive example of tomb architecture is the mausoleum of Sultan Sanjar at Merv, a massive building measuring 27 m square with a huge double dome resting on squinches and muqarnas pendentives.

In Syria and Iraq the surviving monuments are represented by madrassas and tombs. The madrassas such as the Mustansiriya in Baghdad or the Muristan in Damascus were built to a four-iwan plan, while the tombs were characterized by conical muqarnas domes.

The greatest number of surviving Seljuk monuments are in Anatolia. Characteristic features of

## semahane

Seljuk architecture in the region are elaborate stone portal façades carved in deep relief, small courtyards which are sometimes covered (to cope with the cold climate), and the introduction of tiles as architectural decoration.

The first mosques built in Anatolia copied the layout of Syrian mosques thus the mosques of Diyarbakir (1091), Dunaysir (1204) and Silvan (1152) have a design based in that of the Great Mosque in Damascus. Later on the design changes, so that in buildings such as the Great Mosque at Harout and the Kolluk Mosque at Kayseri the courtyard is reduced to a small area in the centre of a large prayer hall. Other mosques were built with an iwan on the qibla side of the courtyard which leads into a domed prayer hall. Another development of the period is the introduction of wooden mosques which may have been common in Central Asia at the time (no examples survive from there). These are large halls with flat roofs supported on wooden columns with muqarnas capitals. The Eshrefoglu Mosque at Beyshehir has this form but has a separate brick dome resting on columns in front of the mihrab and an open bay in the centre recalling the courtyard of earlier mosques.

Like the mosques, the Seljuk madrassas of Anatolia were built around small courtyards which were sometimes roofed with domes or vaults. The central court was often surrounded with arcades, with an iwan on the qibla side functioning as the prayer hall. The mausoleums were like those of Central Asia with an octagonal plan and conical roofs.

**See also:** Baghdad, Damascus, Iran, Iraq, Isfahan, Merv, Nishapur, Syria

## semahane

Literally 'dance hall'; an Ottoman Turkish term for a room used for dervishes to dance. The typical Ottoman semahane was an octagonal domed room often attached to a mosque. The most famous is the Mevlana dervish centre in Konya.

## serai

Turkish term for a palace.

## serdab

Sunken courtyard opening on to underground rooms used to escape the heat of the day. Serdabs

are of pre-Islamic Iranian origin but were rapidly incorporated into Islamic architecture. One of the earliest examples is in the palace of Khirbet al-Mafjar.

## şeref

Ottoman term for the balcony on a minaret. Most minarets only have one balcony, although some of the more important mosques have minarets with up to three, the most famous example being the Üç Şerefeli Mosque in Edirne.

## Seville (Arabic: Ishbiliyya)

*City in south-west Spain originally capital of the Muslim province of al-Andalus (Spain) and later one of main centres of Islamic culture in Spain.*

Before the coming of Islam, Seville was the first capital of the Visigoths until they moved to Toledo. It was captured by the Arabs in the eighth century and remained a Muslim city until the early thirteenth century when it was taken by the Christian armies of Ferdinand III. Despite this change Seville remained an important centre of Mudéjar architecture throughout the Middle Ages.

During the Islamic period the city was known for silk weaving and scholarship and was the home to the famous physician and philosopher Averroës. Unfortunately little remains of the early Islamic city, although traces of the Almohad and Almoravid city remain along with fine examples of Mudéjar craftsmanship.

Parts of the first Umayyad mosque founded in 859 can be found in the church of San Salvador. These remains include arcades resting on columns (now sunk deep into the ground) and the minaret which may be the oldest surviving Muslim building in Spain. The present cathedral of Santa Maria de la Sede is built on the site of the Almohad Great Mosque built in 1172. The mosque itself no longer exists but the minaret known as La Giralda still dominates the city's main square. The tower took fourteen years to build and is over 50 m high. The tower has a square base and shaft (like all minarets in Spain) and has ramps inside instead of staircases. The interior contains seven chambers, one on each storey, each with a different type of vault. Each face of the exterior is divided into three vertical strips or decorative panels. Each floor has a centrally placed pair of windows with a single column



in the middle and either side of the windows are paired niches of similar design. Above the windows and niches is a delicate net-like diamond pattern executed in elaborate brickwork. The tower bears a strong resemblance to the Kutubiyya minaret in Marakesh also built by the Almohads.

Little remains of the original defences of the city which contained twelve gates and 116 interval towers, although the remaining parts have been recently restored. The Torre del Oro, a twelve-sided tower, represents the latest phase of Muslim fortifications. The best example of Mudéjar architecture in Seville is the Alcazar which was rebuilt as the palace of Pedro the Cruel in the fourteenth century. Many of the masons and carpenters were hired from Granada thus explaining some of the similarity between the lavish decoration and intricate design of this palace and the Alhambra. The palace also re-used some of the columns and other building materials taken from Madinat al-Zahra' after its destruction in 1010. The palace contains a series of courtyards or patios which are decorated with intricate carved stonework arcades and polychrome tile dadoes. The most famous of these courtyards is the Patio de las Doncellas which has an arcade composed of multi-lobed arches resting on twin columns, above which is a diaper pattern similar to that of the Giralda Minaret. The highlight of the palace is the Salón de los Embajadores which is covered with an amazing wooden dome decorated with star patterns and supported on intricate wooden muqarnas squinches.

**See also:** Alhambra, Córdoba, Mudéjar, Spain

## Sfax

*Walled city located on the east coast of Tunisia.*

Sfax rose to prominence under the Aghlabids in the ninth century. The city walls, built in the late seventh century, were renewed in the ninth and provided with huge square and polygonal towers. The Great Mosque is similar to that of Qairawan and is the only mosque to have the same arrangement of a square minaret on the north side aligned with the mihrab.

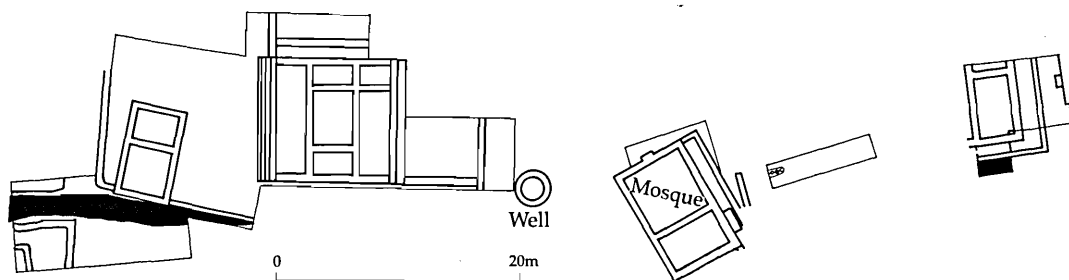
**See also:** Aghlabids, Tunisia

## Shanga

*Islamic trading city in the Lamu archipelago off the north Kenya coast, East Africa.*

Shanga is one of the most intensively investigated early Islamic sites in East Africa with an occupation stretching from the mid-eighth to the fourteenth century. It is not mentioned in any major historical sources except for a passing reference in the Pate Chronicle, so that all information comes from excavations carried out in recent years.

The earliest phase, dated to the eighth century, is represented by a large rectangular wooden enclosure containing a well and surrounded by roundhouses made of wattle and daub on timber frames. In the second period (ninth–tenth century) a rectangular wooden mosque was built in the central area. Whilst roundhouses continued to be built on the west, on the east side the houses were now rectangular. In the third phase (tenth–eleventh century) the enclosure and mosque were rebuilt in coral stone and a monumental stone building was erected in the centre. At this same time many of the houses outside were also built out of coral stone. The fourth and fifth periods, lasting from the eleventh to the end of the twelfth century, is marked by the decline of the settlement and the



*Plan of ninth-century monumental buildings, Shanga, Kenya (after Horton)*

## Shahr-i Sabz

reintroduction of wooden architecture in the centre of the site. The sixth phase of occupation (early fourteenth to fifteenth centuries) is represented by the reintroduction of stone buildings using a new technique of fossil coral instead of the previous reef coral. Many of the ruins of this period still survive, and consist of remains of over 200 houses, three mosques and a large number of tombs.

**See also:** coral, East Africa, Kenya, Manda

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## Shahr-i Sabz

*Town in Uzbekistan, Central Asia, which Timur tried to make his capital in the fourteenth century.*

The city or town forms a rectangular enclosure surrounded by a wall approximately 4 km in circumference and in places up to 5 m thick. The main ruins at the site are the monumental entrance to Timur's palace (the Ak Saray, 'White Palace') and the Dar al-Siyadat. Although incomplete it can be seen that the entrance arch would have been more than 50 m high and 22 m wide, making it one of the largest archways in the Islamic world. The interior of the iwan and the towers flanking it are decorated with light and dark blue-glazed bricks forming a geometric carpet-like pattern which includes the names Allah, Muhammad, Ali and Othman in large square calligraphy. An archaeological analysis of the site has shown that the portal would have been preceded by a huge open space 70–80 m long which would have emphasized the massive proportions of the building. Inside the entrance, the palace would have comprised a large courtyard with a central pool and audience hall on the same axis as the entrance. The royal cemetery known as the Dar al-Siyadat contained the tomb of Jahangir (with a tall domed roof) and the tomb intended for Timur himself (this had a conical roof on a cruciform plan). Other buildings preserved at the site include the baths and the bazar. The bazar comprises four main streets which converge on a central crossroads covered with a dome.

## shish mahal

Mughal term for a room decorated with mirror mosaics.

## Sicily

*Large island south of Italy, occupied by Muslim Arabs for 200 years.*

The first Arab conquest in Sicily was the capture of Mazara in 827 by the Aghlabid governors of Ifriqiyya (roughly equivalent to modern Tunisia). The conquest of the island was not complete until 75 years later, although immigration began immediately. In 1061 the island was captured by the Normans and became the centre of a flourishing Byzantine, Islamic and Norman culture.

There are few architectural remains of the Islamic period because most buildings were rebuilt or remodelled later under the Normans. Indeed, many of the most important Arab buildings were themselves converted Byzantine structures; thus the cathedral of the capital at Palermo was converted into the Great Mosque by the Arabs and subsequently became a Norman cathedral. There are only two entirely Muslim structures which have survived. These are La Favara Castle (Arabic al-Fawwara) and the eleventh-century baths of Cefala 30 km outside Palermo.

Probably the most significant traces of Islamic architecture are found in the buildings of the Norman kingdom, when Arab craftsmen and designs continued to be used. Probably the most striking example of this is the Cappella Palatina with its painted wooden ceiling. To the south of Palermo the Norman king built a royal park in the Islamic style, with palaces and hunting lodges. One of the best preserved palaces is the Ziza Palace built by William II (1166–89). This rectangular structure is built in the form of an Islamic reception hall with a central cruciform reception room flanked by smaller rooms. The building is decorated with muqarnas corbels, rows of blind niches and a fountain which runs in a narrow channel through the palace.

**See also:** Aghlabids

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## Sinan (Koca Sinan; 1491–1588)

*Famous Ottoman architect responsible for transforming Ottoman architecture from a traditional discipline into a conscious art form.*

Sinan was born a Christian in the Karaman region of south-east Anatolia and at the age of 21 was recruited into the Janissaries (special Ottoman force selected from subject Christian populations). As part of his training Sinan worked as a carpenter and engineer on building sites in Istanbul. As a soldier Sinan fought for the emperor in Rhodes, Belgrade, Baghdad and Moldavia, rising rapidly to the position of Commander of the Royal Guard. During this period Sinan may have worked as a military engineer converting churches into mosques and building bridges. Sinan's first recorded building is the Hüsrev Pasha Cami in Aleppo built between 1536 and 1537. This complex consists of a single-domed mosque with a small rectangular courtyard and two madrassas located on an irregular-shaped site. The mosque's tall dome is pierced by sixteen windows and supported by buttresses. In order to compensate for the height of the dome Sinan built the portico wider than the mosque adding an extra bay at each end. This solution causes problems for the positioning of the windows and the pendentives of the portico domes which clash.

In 1538 at the age of 47 Sinan was appointed as the chief architect of Istanbul by Suleyman the Magnificent. During the next fifty years Sinan built over 300 buildings, recorded by his friend and biographer Mustafa Sâ'i. Sinan's first task as chief architect was the construction of a women's hospital for Suleyman's Russian wife. The complex known as the Haseki Hürrem was built on an irregular site and consisted of a hospital, hostel, mosque and medical school (Tip medrese). Although the building may not have been started by Sinan and has been subsequently altered, it conveys an impression of his ability to manage a difficult site and produce an impressive, functioning building. This ability is more clearly expressed in the tomb of the Grand Admiral Hayrettin Barbaros built in 1541. This is a tall octagonal chamber covered with a dome and pierced by two sets of windows, an upper level and a lower level. The lower-level windows are rectangular, covered with lintels under relieving arches, whilst those of the upper level are covered with shallow four-pointed arches. The exterior of the building is very plain, except for the windows and two plain mouldings marking the transition from wall to drum and from drum to dome. The severe impression created is modified by the high

quality of workmanship and the harmonic proportions.

Sinan's first major work is the Şehzade Cami in Istanbul built in memory of Suleyman's son and the heir to the throne who died at the age of 22. The complex, begun in 1543 and completed five years later, contains a madrassa, an imaret (hospice) and a Quran school besides the mosque and the tomb of Şehzade. The mosque consists of two equal squares comprising a courtyard and domed prayer room. The most notable feature of the design is the use of four semi-domes to expand the interior space, for although this plan had been used earlier at Diyarbakir this was the first time it had been used in an imperial mosque. The arches carrying the large central dome rest on four giant piers which rise up above roof level to act as buttresses for the drum of the dome. This design later became a standard solution to the limitations imposed by the size of domes in Ottoman mosques. Another important innovation was the development of the façades at the side of the mosque and courtyard. This was achieved by placing doorways at the side of the building thus giving it a cross-axial arrangement. This was important in large complexes where the north façade was not necessarily the most important and certainly not the longest side of the building. The tomb of Şehzade stands alone in a garden to the south of the mosque. This tomb has the same basic form as the Admiral Barbaros tomb although here the austerity is replaced with intense beauty. The dome is composed of fluted ribs, whilst the top of the octagon is marked by ornate crenellations supported on muqarnas corbelling. The interior of the tomb is covered with yellow, blue and green Iznik tiles and light is filtered through stained-glass windows.

Sinan's next important commission was the mosque of Suleyman's daughter Mirimah at Üsküdar known as the Iskele Cami (Harbour Mosque). This was the first of three commissions for Mirimah and her husband Rüstem Pasha the Grand Vizier. The Iskele Cami is built on a raised platform to protect it from the water and has a double portico instead of a courtyard because of lack of space. The double portico is an idea which was also used at the Rüstem Pasha mosques at Tekirdag and Eminönü, both in Istanbul, and later became a standard format for lesser mosques.

## Singapore

Sinan's largest project at this time was the mosque complex of Suleyman which was to be the largest purpose-built mosque in Istanbul. This building known as the Süleymaniye established Sinan's reputation as the foremost of Ottoman architects and is the place which he chose for his own tomb. The complex covers a huge area (about 330 by 200 m) of sloping ground overlooking the Bosphorus with the mosque at the centre. Characteristically Sinan was able to turn the difficulties of the terrain to his advantage by building the complex on several levels. Thus the two madrassas on the east side of the complex are built in steps down the hillside, whilst the mosque itself is built on a huge artificial platform with vaulted substructures on the east side. The mosque itself uses many of the features of the Şehzade Cami such as the lateral entrances, but in place of the cruciform plan there is a central dome between two semi-domes. The mass of the central dome is emphasized by the four minarets, a feature only previously seen at the Üç Şerefeli Cami in Edirne.

Although the Süleymaniye was probably Sinan's largest building complex, it was not his greatest work; this was the Selimiye Cami in Edirne begun nearly twenty years later. The Selimiye built between 1569 and 1575 incorporates many of the features of the Süleymaniye but abandons the system of large semi-domes at the side of the dome in favour of giant squinches placed at the corners. Also the system of four central piers is replaced by eight piers arranged in an octagon with the result that the building has an airiness and space unparalleled in Islamic or Western architecture. The main dome has the same diameter as that of Hagia Sophia and thus achieves the Ottoman ambition of constructing a building equal to the highest achievement of the Byzantines.

Whilst working on the Selimiye Sinan continued to produce a variety of smaller buildings, for example the Sokollu Mehmet Pasha Cami in Istanbul which, like many of his other famous works, was built on a steep hillside. Again Sinan was able to exploit the site by building the courtyard out on to an artificial terrace with an entrance from below. This technique had been used before at the Iskele Cami and the Rüstem Pasha Cami, but not as effectively as here, where a wide staircase leads up into the middle of the courtyard facing the sardivan (fountain).

After the completion of the Selimiye in 1575

Sinan lived for a further thirteen years and continued to design buildings, though it is likely that many of these were not visited by him. When he died at the age of 97 Sinan was interred in the tomb he had built for himself next to the Süleymaniye. This is an open canopy covered by a vault set in a garden which originally contained his house. At the end of the garden is a small octagonal domed fountain which had earlier been the cause of a dispute. Sinan's epitaph was written by his friend Mustapha Sâ'i and only mentions one of his works, the four-humped bridge at Büyükçekmece.

Art historians have spent a considerable amount of time discussing Sinan's contribution to architecture and particular his relationship to the Renaissance. There was a considerable amount of contact between Italy and the Ottoman Empire at this stage, as can be seen from invitations to Leonardo da Vinci and later Michelangelo to build a bridge across the Golden Horn. Despite this contact and the similarities between the work of Alberti and Sinan it should be noted that their objectives were different. In Renaissance buildings there was a tension between humanity and God; in those of Sinan there was a single purpose – to mirror a single and infinite Divinity.

**See also:** Ottomans, Selimiye, Süleymaniye

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## Singapore

*City-state on southern tip of the Malay peninsula with a mixed population of Malays, Chinese and Indians, as well as a small Arab minority.*

The earliest mosques in Singapore were built of wood and thatch; during the nineteenth century these were replaced with brick structures. The most important mosque in Singapore is known as

the Sultan Mosque and was originally built between 1823 and 1824 with a grant of \$3,000 from the British East India Company. The original mosque was demolished in the 1920s to make way for the present structure built by the British firm Swan and Maclaren in 1928. The building has two large onion-shaped domes, a polygonal minaret and crenellations to enliven the façade. Either side of the prayer hall are separate areas for women.

The oldest surviving mosque in Singapore is the Jamae Mosque, which was built on the site of an earlier structure between 1826 and 1835. Its main feature is the façade, which is flanked by two square towers. Each tower is divided into seven mini-storeys linked by decorative crenellations in the form of a mini-gateway. Of similar design is the Nagore Durgha shrine built between 1828 and 1830 which also has two miniature towers either side of a miniaturized entrance façade located on top of the real entrance. It seems likely that these mosque façades may derive from the Char Minar in Hyderabad, south India. A simpler design is represented by the Tamil al Abrar Mosque built in the 1850s where the entrance is flanked by two pillars. Other early mosques include the Abdul Gafoor Mosque (1850s) and the Hajjah Fatimah Mosque (1930) both of which combine European (British) elements with Indian design.

**See also:** India, Indonesia, Malaysia

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## Siraf

*Major early Islamic port city located on the Iranian side of the Arabian/Persian Gulf.*

The city contains some of the earliest examples of Islamic architecture excavated in Iran. The most significant discovery is the congregational mosque, a huge rectangular structure with a central courtyard set on a raised podium. There is a single entrance reached by a set of steps on the east side opposite the qibla, next to which is the square base of a mihrab. The first phase of the mosque, dated to the early ninth century, has three arcades parallel to the qibla wall forming the prayer hall, and a single arcade on the other three sides. In the second phase (dated to 850) two more arcades

were added to the prayer hall and the single arcades on the other three sides were made double. In both phases the mihrab was a simple rectangular niche set into the middle of the qibla wall. Several smaller mosques were also discovered, each with a rectangular mihrab projecting on to the outside of the building.

**See also:** Abbasids, Iran, Iraq, Samarra

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## Somalia

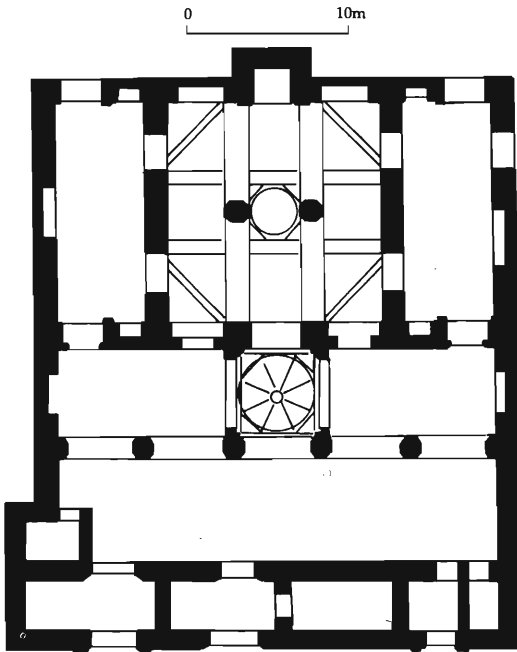
*Somalia is located on the coast of East Africa directly below the Arabian peninsula.*

The landscape of the country is predominantly semi-arid bush with mountains in the north near the border with Ethiopia. The coastal plain is similar to that of Kenya further south, with mangroves and coastal reefs.

Islam seems to have spread to Somalia through Muslim traders who established trading stations and urban centres along the coast between the seventh and the twelfth centuries CE. From the twelfth century the coastal towns had become independent Muslim sultanates fighting the Ethiopian Christians who controlled the interior. From the tenth century the Somalis of the interior gradually adopted Islam and became attached to the coastal towns. During the nineteenth and twentieth centuries Somalia was divided between Italian, British and French administrations before achieving independence in 1960.

The Islamic architecture of Somalia is similar to that of Kenya, with coral used as the main material for permanent buildings. The principal urban centre is Mogadishu which also has some of the oldest mosques, the most famous of which is the mosque of Fakhr al-Din built in the thirteenth century. Further south are a number of ancient urban settlements, the most important of which are Merka, Munghia, Barawa and Bur Gao. Most of the mosques of Merka are eighteenth century or later, although the tomb of Sheikh Uthman Hassan may date to the thirteenth century. Munghia consists of a large roughly square enclosure (about 200 m per side) built of earth with a facing of stone. Approximately in the centre there is a raised mound with the remains of a mosque on

## Songhay



*Mosque of Fakhr al-Din, Mogadishu, Somalia (after Garlake)*

top. Although the mosque is badly damaged, it seems to consist of a central rectangular hall flanked by two side aisles. The mihrab in the centre of the north wall has a fluted semi-dome and, together with the pottery found there, suggests a twelfth-century foundation for the site. Although Barawa was probably founded at a similar date, the earliest buildings in the town date from the eighteenth century. One of these, a mosque, has a square minaret with elaborate carved woodwork. Probably the largest early site on the coast is Bur Gao whose are contained within a huge enclosure similar to that of Munghia. The principal standing structure on the site is a square building covered with a low domical vault. The site also contains a number of pillar tombs similar to those of north Kenya.

**See also:** East Africa, Kenya

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## Songhay

*The people who inhabit the banks of the Niger river*

*between Gao and Dendi in West Africa.*

The Songhay people were the ruling population of the empire of Gao during the fifteenth and sixteenth centuries. Some of them were Muslim before the eleventh century but some have remained pagan to the present day. Little is known of early Songhay architecture, although ancestor-worship seems to have been expressed through earthen burial mounds. Elements of this tradition seem to have been incorporated in Islamic monuments where prominent people are buried within solid-earth pyramid-like constructions, the most famous of which is the tomb of Askiya Muhammad at Gao.

**See also:** Gao, West Africa

## South Africa

The Muslim community of South Africa seems to have originated from south-east Asia, mostly Malaysia. The Malays were mostly brought to South Africa as slaves in the eighteenth century, although some came freely as political exiles. Although they were allowed to remain Muslim they were not able to worship publicly until 1804. Before that time prayer was carried out within houses or in the open air. The first purpose-built mosque was the Auwal Mosque in Cape Town built at the beginning of the eighteenth century. In its earliest form the mosque lacked a minaret and resembled a chapel from the exterior. Inside, there were two courtyards, a kitchen and storage rooms as well as a prayer hall. For planning reasons the building was not oriented to face Mecca; instead the mihrab inside was built at an angle to the rest of the building to correct this.

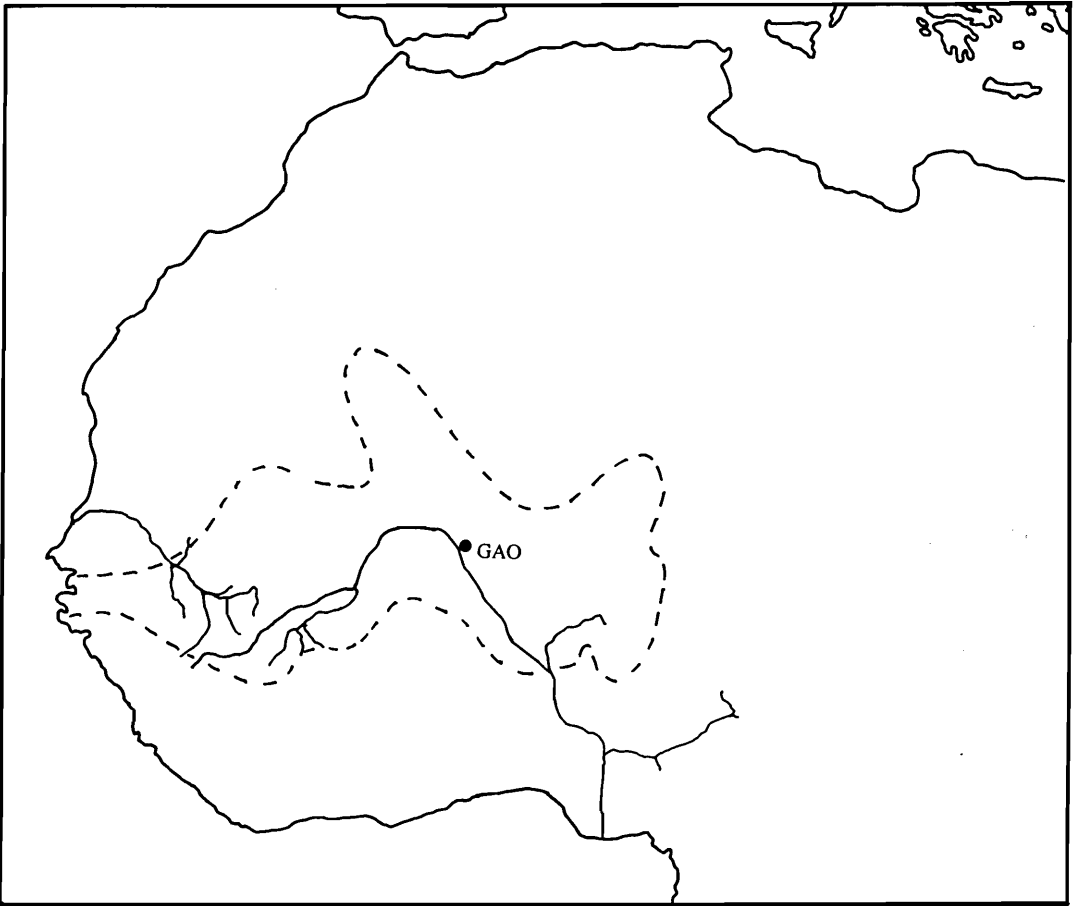
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## Spain (Arabic: al-Andalus)

*Large country in south-western Europe occupying the greater part of the Iberian peninsula and known in Arabic as al-Andalus.*

Large parts of this country were Muslim from the arrival of the Arab armies in 711 to the fall of the amirate of Granada in 1492. Before the arrival of the first Arab armies Spain was ruled by the



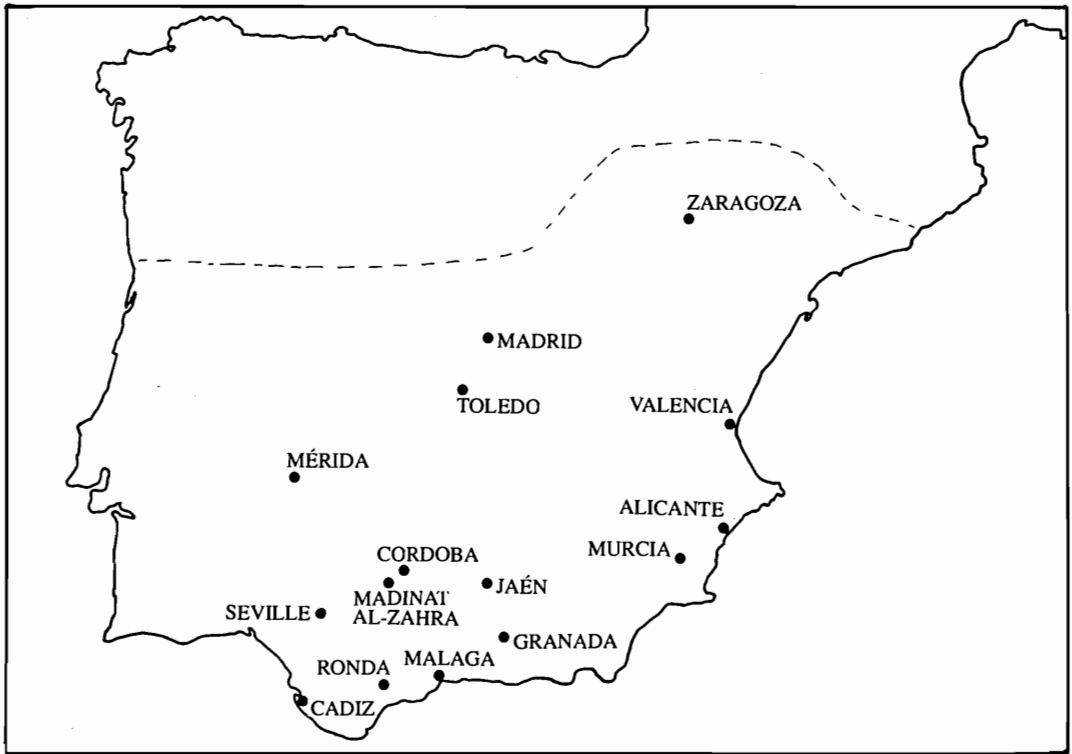
*West Africa showing extent of Songhay empire in the sixteenth century*

Visigoths, warrior nomads from east of Europe who had recently been converted to Christianity. They in turn had taken over the country after the collapse of the Byzantine rule which was a direct continuation of Roman suzerainty in the country. At the time of the Arab invasions the Visigothic kingdom was weak and their king Roderick was not universally acknowledged.

The Arab conquest was carried out by Musa the commander of North Africa and his semilegendary lieutenant Tariq. Within a year Toledo, the Visigothic capital, had been captured. The speed of the conquest alarmed the caliph who in 716 summoned the commander and his general to return. Nevertheless, the conquest continued northwards and by the 730s had reached central France where it was

finally checked by Charles Martel at a battle between Poitiers and Tours. The only area of Spain which withstood the invasion was the region of Asturias in the Cantabrian mountains of the north-west. Until the 750s the province was ruled by governors sent by the Umayyad caliphs. The Abbasid revolution had led to the killing of all members of the Umayyad dynasty with the exception of Abd al-Rahman who escaped via North Africa to Spain where he defeated the resident governor Yusuf in a battle near Toledo. For the next 270 years the country was ruled by the Umayyad descendants of Abd al-Rahman. The most famous member of this dynasty was Abd al-Rahman III who reigned for fifty years between 912 and 961. It was during this reign that the title of the ruler

## Spain (Arabic: al-Andalus)



*Islamic Spain in the eighth century*

was changed from amir to caliph and 'Commander of the Faithful' in order to counter the claims of the Fatimid caliphate. During this period the capital was Córdoba which became one of the brightest centres of culture in the Islamic world. Despite this high level of sophistication, the dynasty itself was prone to internal divisions and finally collapsed in 1031.

For the next half century Spain was divided into at least twenty-three independent principalities, known as the *Muluk al-Tawaiif*, each with its own court and ruler. The size of these principalities varied greatly, with some ruling a single city whilst others like the Aftasids in south-west Spain ruled large areas of the country. Despite political disunity the Islamic culture of Spain thrived during this period. Nevertheless, the Christians of the north-west were able to exploit divisions amongst the Muslims to conquer extensive territories. The capture of Toledo by Alfonso VI of Castile in 1085 showed the weakness of these principalities and encouraged the conquest of the Almoravids in 1090.

The Almoravids were a dynasty of fanatical fundamentalist Berbers from North Africa. Under their leader Yusuf, the Almoravids invaded Spain and stemmed the tide of Christian conquest. From their newly established capital of Marakesh the Almoravids now ruled a huge area from present-day Senegal to Spain.

In 1145 the Almoravids, weakened by disunity, were replaced by the Almohads, another fanatical Berber group who managed to challenge the Christian advance. By 1212, however, the Almohads were driven from Spain by a coalition of Christian rulers. This left Granada as the only Muslim province to survive the Christian invasions. Granada was ruled by the Nasirid dynasty which maintained the area as a centre of cultural and scientific excellence with the Alhambra at its centre. The Nasirids were finally ousted from their position in 1492 by the united forces of Castile and Aragon under Ferdinand and Isabella.

Despite the political defeat of Islam in Spain Muslims continued to live in the country until the



seventeenth century when they were all expelled. Nevertheless, traces of Islamic presence survive in the culture and architecture of Spain.

In many ways the landscape of Spain is similar to that of North Africa with its aridity, high mountains and endless desert-like plains. Communication from one part to another is hindered by precipitous valleys, high mountains and the three major rivers of the Ebro, Tagus and the Duero.

The building materials of Islamic Spain reflect the availability of natural resources and the diversity of cultural influences. The main materials used are wood, stone and baked brick, although mud brick was also used. Unlike many parts of the Middle East, Spain had plentiful supplies of timber suitable for building including both pine and oak. Wood was usually used for roofs which were normally gabled and covered with baked clay tiles, although occasionally wooden domes were also used. The pine roofs of the Great Mosque in Córdoba reflect the plentiful supplies of wood in medieval Spain. Stone was used for walls either in the form of ashlar masonry or in the form of coursed rubble. Often masonry was re-used from earlier Roman or Visigothic structures, although fine stone carving continued. One of the most distinctive features of Spanish Islamic architecture is the use of brick which, like ashlar masonry, was a direct continuation of Roman building methods. Sometimes stone was encased in brick in the same manner as Byzantine fortifications.

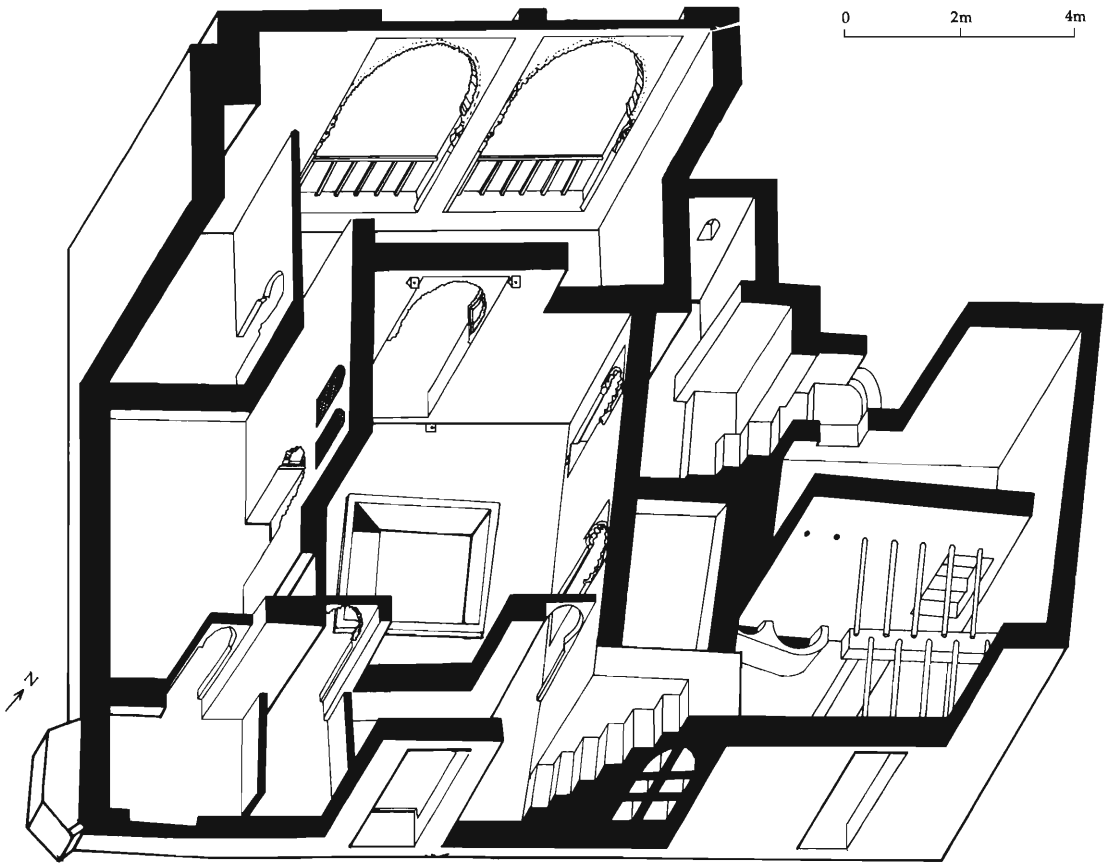
Notable features of Spanish Islamic architecture include horseshoe arches, paired windows with a central column, construction in brick and stone, polychrome tiles, intricate carved stucco work and overlapping arches. Several terms are used to describe Islamic-type architecture in Spain each of which has a particular meaning. The best-known term is 'Moorish' which is often used to refer to Islamic architecture in general although it more properly should be used to describe the architecture of the Moors or Berbers of North Africa. The less well-known term Mudéjar refers to architecture carried out for Christian patrons by Muslim craftsmen. Mudéjar architecture uses many of the most characteristic features of Islamic architecture including Arabic calligraphy and the horseshoe arch. Many of Christian Spain's most beautiful churches and palaces were built by Mudéjar craftsmen and the tradition was carried on into the new world. A related style is known as Mozarabic which refers

to the architecture of Christian buildings under Muslim rule. In addition to its influence on Christian buildings, Islamic architecture also influenced the substantial Jewish community in Spain so that many synagogues in Spain were built in an Islamic style (the best examples are in Toledo, see below).

The range of buildings surviving from the Islamic period in Spain is quite large and includes castles, fortifications, mosques, churches and synagogues, palaces, bridges, hammams, mills, villages and towns. The most numerous remains are castles and fortifications which can be found throughout the country and from all periods from the eighth to the fifteenth century. These are often difficult to date precisely and most were subsequently re-used after the Christian reconquest. One of the best examples of early fortification are the walls and square battered towers of the castle known as Baños de la Encina near Jaén in Andalusia. Here the gate is sandwiched between two towers and protected by machicolation and a portcullis. Later on fortifications were protected by bent entrances where the gateway was perpendicular to the walls, thus exposing attackers to fire from three sides. A later development of fortifications was the albarrani tower which was located outside the city walls but connected to it by a bridge so that defenders were able to outflank their attackers. Often albarrani towers were built to protect buildings outside the walls without the added expense and inconvenience of changing the line of the city wall; thus at Calatrava la Vieja the tower was built to protect a nearby watermill. In addition to the major fortifications hundreds of small towers and forts were built all over the peninsula to defend borders and coasts. These were often small isolated towers built of cheap local materials such as mud brick or coursed rubble, although sometimes they were sophisticated structures dominating the countryside like the castle of Belmez near Córdoba.

Most of the mosques of Spain were converted into churches after the reconquest, some with very little alteration and others where the architecture was profoundly damaged as in the case of the Great Mosque of Córdoba where a cathedral was built in the middle of the structure in the sixteenth century. Characteristic features of Spanish mosques are square minarets and large mihrabs which are sometimes like a separate room. Where decoration has survived intact it is usually very elaborate and includes carved plaster and woodwork.

## Spain (Arabic: al-Andalus)



*Thirteenth-century house at Siyasa (after Palazon)*

Palaces fared better after the reconquest and some of the finest examples of Islamic palaces can be found in Spain such as the Alhambra and the Generalife. The Islamic palatial tradition was continued after the reconquest with palaces which are almost entirely Islamic in conception, like that of Pedro the Cruel in the Alcazar at Seville. Another type of Islamic building often associated with palaces is the hammam. Few of these have survived in Spain although fine examples can be seen at Ronda and Granada. Bridges and mills are less easy to distinguish as Muslim work, although many examples survive. It is thought that some of the water mills near Córdoba may be related to the great water wheels of Syria. In addition to specific buildings and monuments many towns and villages retain the layout and appearance of Islamic times. Some of the more important cities with

substantial traces of Islamic architecture are Córdoba, Seville, Granada, Toledo and Zaragoza, but many other towns and cities contain traces of Islamic buildings including Madrid and Asturias (starting-point of the reconquest).

The area conquered by the Arabs in the eighth century still contained many remains of the Roman and Byzantine civilizations which preceded the Visigothic conquest, and many of the basic techniques of construction remained the same throughout the Islamic period. The contribution of the Visigoths to Islamic architecture is poorly documented although it is thought that the ubiquitous horseshoe arch may be derived from Visigothic architecture. The distinctive features of Islamic buildings in Spain may in part reflect its early incorporation into the Islamic caliphate and its distance from the centre of the empire. The most

notable influences from within Islam are from North Africa and Syria. The North African influence is easy to explain through its proximity and the successive invasions of Berber tribes under the Almohads and the Almoravids, the most famous example being the Giralda tower in Seville. Syrian architecture, however, influenced Spain through the Umayyad dynasty who sought to recall their homeland and assert their legitimacy through copying Syrian buildings and hiring Syrian architects. The most striking example of this is the city of Madinat al-Zahra' near Córdoba which is meant to recall the desert palaces of the Umayyads and in particular Rusafa.

Other notable influences were Byzantine architecture, both through remains of Byzantine structures in Spain and through the friendship between the Byzantine emperors and the Umayyad rulers, born out of a mutual dislike of the Fatimids.

**See also:** Alhambra, Córdoba, Córdoba Great Mosque, Granada, Seville, Toledo, Zaragoza

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**squinch**

Small arch in the corner of a building that converts a square space to an octagonal area which may then be covered with a dome.

**stucco**

*Decorative plasterwork used in architecture.*

Stucco is primarily an invention of the Iranian world where it was used in the absence of suitable

stone for carving. It has a long history which can be traced back as far as Parthian times, when it was used to cover rubble masonry. During the Sassanian period stucco continued to be used to enliven surfaces on buildings made of baked brick or mud brick. By the sixth century stucco was used in the eastern Mediterranean although it was mostly a characteristic of Iranian architecture. The advent of Islam led to an unparalleled growth in its use throughout the Middle East and North Africa. Many of the earliest Islamic monuments employ stucco as the main form of decoration, as dadoes, ceiling decoration or sculpture. Usually the stucco was carved or moulded, although it was often painted as well.

The most adventurous uses of stucco can be found in the Umayyad palaces of Syria and Palestine. At Khirbet al-Mafjar in the Jordan valley the lavish decoration includes painted stucco statues of semi-naked bathing girls and stucco representation of the caliph himself. However, usually stucco was



*Stucco in serdab of main palace at Samarra*

# Sudan

restricted to its original function of covering walls and ceilings with carved or moulded patterns. The largest corpus of stucco work from the early Islamic period has been found at the Abbasid capital of Samarra in Iraq. The stucco from this site has been divided into three groups or styles which may represent a chronological development. Style 'A' consists of vine leaves and vegetal forms derived from the Byzantine architecture of Syria–Palestine; style 'B' is a more abstract version of this; and style 'C' is entirely abstract with no recognizable representational forms. The first two styles appear to be carved, but the third style was produced by wooden moulds. The Samarra styles are significant as they reappear later in buildings such as the Ibn Tulun Mosque where the soffits of the arches are decorated with style 'B' ornament. After the collapse of the Abbasid caliphate stucco continued to be one of the main forms of decoration and spread throughout the Islamic world to India, Anatolia and Spain.

**See also:** Khirbet al-Mafjar, Samarra

## Sudan

*The Republic of Sudan is the largest country in Africa and spans the area between North Africa and sub-Saharan Africa.*

Like Egypt, Sudan owes its existence to the Nile, which flows through the country from Kenya in the south to Egypt in the north. The western part of the country forms part of the Sahara desert whilst the area east of the Nile is divided between the Ethiopian Highlands and the Red Sea.

Although Islam is the official religion, Muslims only make up two-thirds of the population, the rest of whom are either Christian (4 per cent) or have tribal religions. Historically northern Sudan has always been dominated by its Egyptian neighbour to the north, nevertheless, throughout the medieval period (seventh to sixteenth centuries) a number of Christian urban centres such as Meroe and Kush have flourished. Islam became the principal religion of north Sudan in the early nineteenth century after the invasions of the Egyptian ruler Muhammad Ali. In the late nineteenth century there was a revolt against Turkish Egyptian rule which led to the establishment of a quasi-religious state ruled by the Mahdi. This state lasted for sixteen years until 1898 when the country was incorporated into the British Empire.

The materials of construction used in the Sudan vary greatly depending on the region and the people. On the Red Sea coast in the north of the country coral is the traditional material for permanent buildings, whereas in those parts bordering on the Nile, including Khartoum, mud is principally used.

There are few Islamic buildings in Sudan which date from before the nineteenth century, except in the Red Sea port of Suakin. This city which lies to the south of Port Sudan flourished under the Ottomans from the sixteenth century. Now almost entirely abandoned, Suakin provides a useful indication of the historic urban architecture of the Red Sea coast which has elsewhere mostly disappeared. The houses, many of them up to three storeys high, are built of coral slabs taken from the coastal foreshore.

In the Nile valley houses are traditionally built around two or three sides of a large central courtyard or compound. The standard method of construction is horizontal courses of mud and dung mixed with small stones and later covered with a plaster of smooth mud (jalus). The most striking feature of traditional houses in the area is the painted decoration made of mud- and lime-based pigments. Usually the outer façades of the houses are decorated with particular emphasis on the doors, whilst inside a principal reception room is also decorated.

**See also:** East Africa, Egypt, Somalia

## Süleymaniye

*Ottoman mosque complex in Istanbul built for Suleyman the Magnificent between 1550 and 1557.*

The complex consisted of a hospital, medical school, hospice, soup kitchen, primary school, four madrassas (colleges), shops and coffee houses in addition to the mosque itself. The complex is built on an artificial platform on top of a hill that overlooks the Bosphorus; to the east the ground slopes away rapidly. The mosque precinct contains three main areas, the mosque itself in the centre, a courtyard to the north and a tomb garden to the south which contains the tomb of Suleyman and his wife. The mosque is covered with a large central dome (25 m diameter) with two large semi-domes of equal radius, one above the north entrance and one above the mihrab. The central area is flanked by side aisles covered by small domes of

alternating size. Like that of its predecessor the Şehzade Cami, the central dome rests on four huge central piers placed in a square. The whole building is illuminated with more than a hundred windows and grilles, many of which are filled with stained glass made by the celebrated Ottoman glass-maker İbrahim Şarhoş. Outside at each corner of the courtyard are four minarets with balconies supported on muqarnas corbels. This is the first Ottoman building in Istanbul to have four minarets, although previously the Üç Şerefeli in Edirne also had four. The sides of the building are enlivened with several entrances (three on each side) approached by steps and two-tier arcaded galleries placed between the outer corner buttresses.

The tomb garden behind the mosque contains a large cemetery which has grown up around the tombs of Suleyman and Roxelane. Both tombs are octagonal structures in the traditional Ottoman fashion, although Suleyman's tomb unusually faces east instead of north. Roxelane's tomb is smaller and placed to one side of Suleyman's tomb which stands in the middle of the garden. The interiors of both tombs are decorated with Iznik tiles, although Roxelane's tomb is significantly less grand. Suleyman's tomb is surrounded by a colonnaded veranda with a porch on the east side. This arrangement is echoed internally where Suleyman's sarcophagus is surrounded by a circular colonnade.

The arrangement of the complex outside the mosque precinct consists of an L-shaped arrangement of buildings on the north-west side and a smaller group to the east. The eastern complex is built on a steep hill so the madrassas are stepped into the hillside. On the north-west corner of the complex is the tomb of the architect Sinan.

**See also:** Istanbul, Ottomans, Sinan

## Sultan Hasan Mosque

*Large madrasa, mosque and tomb complex in Cairo built by the Mamluk sultan Hasan.*

This building was erected between 1356 and 1361 next to the Citadel of Cairo. The cost of the project was so high that it was never fully completed and Sultan Hasan himself was murdered and his body hidden, so that he was never buried in the mausoleum. It is a huge complex, measuring 65 by 140 m, and four storeys high, making it one of the largest mosques in Cairo. The main function of the building was as a madrasa with tomb

attached but its size and the beauty of its prayer hall meant that it was recognized as a congregational mosque as well.

The basic plan of the building consists of a central courtyard leading off into four large iwans. The largest iwan is the prayer hall and behind this is the domed mausoleum. As this was a madrasa for the four rites of Sunni law there were four separate courtyards, one for each of the rites. Around each of these courtyards were the students' rooms arranged in four tiers. Many of the rooms were equipped with latrines and those facing the street had large windows.

The arch of the main iwan, or prayer hall, is very large and certainly the largest of its kind in Cairo. An inscription runs around the three walls of the iwan in an ornate Kufic on a background of floral scrolls which includes Chinese lotus flowers. The mausoleum is entered through a doorway to one side of the mihrab and consists of a domed chamber 21 m square and 30 m high. The original dome was wooden and has not survived, although the muqarnas wooden pendentives which carried it remain.

One of the most important aspects of the Sultan Hasan complex is the treatment of the external façades. Given its prominent position next to the citadel and the size of the complex it was important that its exterior reflected this. Each of the three sides of the mausoleum which projects on the south-east side of the complex consists of a central medallion around which are ranged four sets of windows, two above and two below. The most famous façade of the structure is that containing the entrance on the north side. The entrance-way itself consists of a large recess covered with an extravagant muqarnas vault which is comparable with that of the Gök Madrasa in Turkey. The doorway is set at an angle to the rest of the façade so that it can be seen when approaching along the street. The façade to the right of the doorway consists of long rectangular recesses extending four storeys from the base of the building to the top, each recess containing windows from the students' rooms. The height of this arrangement and its simplicity give this façade a strangely modern appearance.

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# Sumatra

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## Sumatra

*Most westerly large Indonesian island located west of the Malay peninsula and east of Java.*

The first evidence for Islam in Indonesia comes from late thirteenth-century accounts of Marco Polo and Chinese documents which state that the region of Aceh on the northern tip of Sumatra was ruled by Muslim kingdoms. At this time the southern part of Sumatra was ruled by the Javanese kingdom of Majpahit which came to control most of the area of present-day Indonesia. Nevertheless, the Muslim states in the north of Sumatra began to spread, converting first the coastal peoples and only later the central area of Melayu. It was from Sumatra that Islam reached the Malay peninsula and gradually spread into Java itself. The Portuguese victory over Malacca in the early sixteenth century meant that Aceh once again became the main centre of Islam in the area. During the seventeenth century Sumatra was dominated by the ruler of Aceh, Iskandar Muda (1607–36) who had artillery, elephant and horse cavalry and a navy capable of carrying 700 men. The rule of Iskandar Muda's successor Iskandar Thani Alauddin Mughayat Syah (1636–41) was a period of cultural renaissance with several books written about the life of the court.

Unfortunately few early Islamic buildings survive in Sumatra probably because they were built of wood and frequently replaced. The earliest mosque of which records survive is the Masjid Agung Baiturrahman at Banda Aceh on the northern tip of Sumatra. It is likely that the present building stands on the site of one of the earliest mosques in Indonesia; however, the first records of the building (1612) describe an Indo-Islamic structure designed with the help of Dutch engineers. The building had three domes which were increased to five after a fire. However, it is likely that most early mosque forms were related to the traditional Sumatran house design. A recent example is the Rao-Rao Mosque in Batu Sangkar (west Sumatra) with an Indo-Islamic façade behind which is wooden mosque with a complex Sumatran roof-type known as rumah-adhat. This consists of a three-tiered pyramid roof construction with a small kiosk on top crowned with a tall finial.

The houses of Sumatra are one of the most distinctive features of the island and are world famous as examples of vernacular architecture. There are many regional house forms representing different cultural traditions, many of which predate Islam. The basic form of a Sumatran house consists of a building, set on upright piles driven into the ground, above which is a huge pitched roof. Wood is used for the piles and framework of the house, bamboo poles for the roof and the walls. Distinctively Islamic house types include the houses of Aceh, Minangkabu, Batak Mandailing and Lampung regions. The traditional Aceh house has a fairly basic design consisting of a rectangular platform resting on piles with a longitudinal gabled roof. Aceh houses are usually divided into three with the central area reserved for sleeping. The entrance is usually in the middle of one of the long sides and the gable ends are often decorated with geometric or other non-representational designs. The designs are either painted or carved, sometimes as fretwork panels. The most celebrated Sumatran house type is that of Minangkabu which has the entrance set in the middle of the long side. The roofs of the house are made up of a succession of pointed gables resembling the prow of a ship; the decoration is similar to that of the Aceh houses but may also include inset mirror work. The Batak Mandailing houses are similar to those of Minangkabu with roof ridges that sag in the middle and point upwards at the ends. The southern part of Sumatra, the Lampung area, is heavily influenced by neighbouring Java and Malaysia, and its houses are mostly of the coastal type.

Several palaces survive on Sumatra, the oldest of which is the seventeenth-century Aceh palace known as Dar al-Dunya. The building shares many characteristics with the Javanese palaces, or kratons, with many references to Hindu cosmology and little relationship to Islamic design. The Dar al-Dunya palace has the same north–south axis and three successive courtyards found in Java and, like the palaces of Yogyakarta and Surakarta, has a large formal garden. In the centre of the garden is a mountain-shaped structure with caves and ledges for meditation similar to the mountain representations of Java (e.g. Sunya Ragi). Nineteenth-century palaces show increasing Islamic and European influence, although there is still little relationship to the traditional wooden architecture of the island. The palace of Istana Maimun at Medan is laid out in a

formal European style enlivened with arcades of horseshoe arches and crenellations.

**See also:** Indonesia, Java

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**Susa**

*Tunisian coastal city noted for its ninth-century Aghlabid buildings.*

Under the Byzantines the city was known as Justinianopolis in honour of Justinian who rebuilt it after the Vandal destruction. In 689 CE it was captured by the Arabs and became one of the principal ports for the Aghlabid conquest of Sicily. In 827 the city was refortified with ramparts and walls built in the Byzantine style. Important Aghlabid buildings within the city include the ribat built or restored by Ziyadat Allah in 821, the Bu

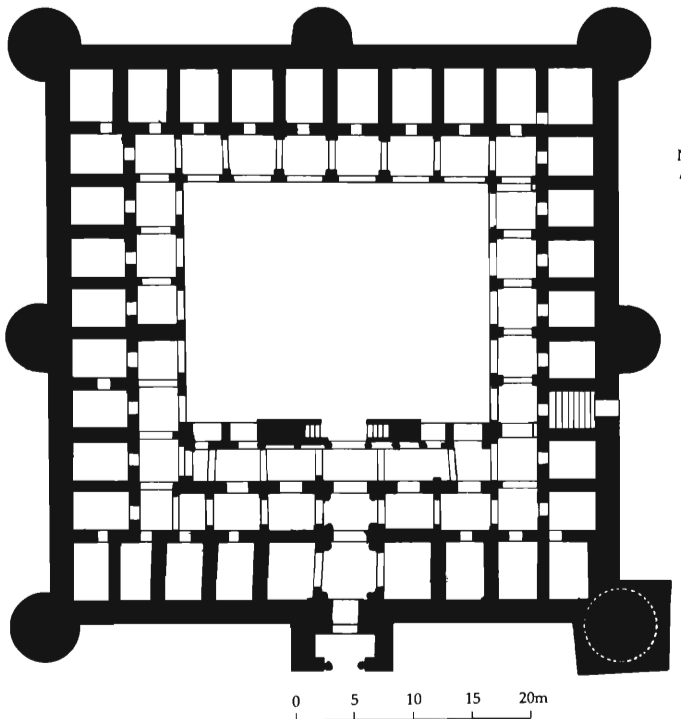
Fatata Mosque built in 840 and the Great Mosque established in 859.

**See also:** Aghlabids, Tunisia

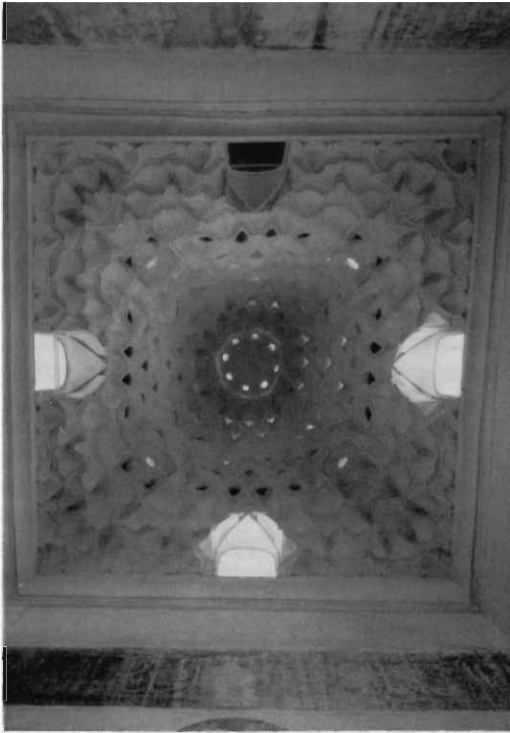
**Syria (Arabic: al-Sham)**

Geographically Syria may be defined as the northern part of Arabia between the Mediterranean and the Euphrates river. This area includes Lebanon, Palestine and Jordan as well as the modern state of Syria. Politically Syria refers to the modern state of Syria which roughly corresponds to the northern part of the geographical area of Syria excluding the mountains of Lebanon and including parts of the Jazira between the Euphrates and the Tigris. (Here the term Syria will be used to identify the area of the modern Arab Republic.) The majority of Syria's population lives within 100 km of the Mediterranean whilst there is lesser concentration of people along the Euphrates river valley. The area between the coastal strip and the Euphrates is sparsely populated semi-desert.

Syria was relatively densely populated in Roman and Byzantine times, with large cities such as



*Ribat at Susa, Tunisia (after Creswell)*



*Muqarnas dome, Hospital of Nur al-Din, Damascus, Syria,*  
© Rebecca Foote

Palmyra, Rusafa and Sergiopolis developing in the eastern part of the country. Traditionally it has been thought that the Arab conquest of the seventh century brought an end to this wealthy urbanization. Recent studies, however, have shown that there was a more complex sequence of events, which led to the growth of different parts of the country and different areas of cities. What is certain is that the eastern part of the country, in particular Damascus and Raqqa were developed in the Umayyad and early Abbasid periods. Damascus flourished under the Umayyads who established it as the capital of their vast empire. The topography of Damascus changed very little from late Byzantine times and the only major addition was the construction of the Great Mosque. Elsewhere cities such as Palmyra, Bostra and Raqqa continued to be inhabited with few changes from the Byzantine plan. However, a major change in the Umayyad period was the development of desert settlements such as Qasr al-Hayr (East and West). These

settlements relied on the increased trade and mobility offered by a situation where both eastern and western parts of the desert were united under Islamic rule. The Abbasid revolution in the mid-eighth century brought about a radical change in the orientation of the Islamic world, where the lands of the former Sassanian Empire became central and the west declined in importance. The result in Syria was a decline in wealth and urbanization exacerbated by the growth of a rival caliphate (the Fatimids) in Egypt. During the ninth and tenth centuries Syria was in the middle of a three-way conflict between the Abbasids and their successors, the Fatimids and the Byzantines.

During the eleventh century the Seljuk Turks established themselves in the north of the country. By the end of the eleventh century the Great Seljuk Empire had divided into a number of independent principalities, or Atabegs. The arrival of the Crusaders in the early twelfth century imposed a sense of unity on the Muslim principalities which made itself felt under Salah al-Din and his Ayyubid successors. During the thirteenth century Syria was subjected to a series of Mongol invasions which were repulsed by the Mamluks who had replaced the Ayyubids as rulers of Syria. There were further Mongol raids in the fifteenth century led by the Central Asian ruler Timur. Despite the successive waves of invaders Syria seems to have been prosperous in the Middle Ages and some of the finest artistic and architectural works were carried out during this period.

In 1516 the Mamluks were defeated and Syria was incorporated into the Ottoman Empire. The country thrived during the first century of Ottoman rule with many khans established in the major cities as well in the countryside. The Ottoman Hajj (pilgrimage) route to Mecca was of great importance during this period with Damascus established as the starting-point. During the eighteenth century Europeans seem to have become increasingly involved in the commerce of the region. Cotton was of particular importance and many Europeans established consulates in the coastal cities in order to control this trade. In the nineteenth century there seems to have been an economic decline with less European trade and increasing interference from Egypt, culminating in the invasion of 1831. Administrative reforms were introduced in the latter part of the nineteenth century which led to Syria being regarded as one



of the most advanced parts of the Ottoman Empire. The collapse of Turkish rule in 1918 led to the creation of a French protectorate which formed the basis of the modern independent republic.

The building materials used in Syria vary depending on the area and type of settlement. On the Mediterranean coast houses are generally stone built, often of ashlar masonry; their general appearance is that of Lebanese houses. In the mountains buildings are made out of rubble stone with mud mortar, their roofs made of wooden beams covered with matting and an exterior coating of earth. The region of the Hauran in the south-east is predominantly basalt desert with no trees. Basalt has been the main material of construction since ancient times and many traditional houses re-use ancient material because of its indestructibility and the difficulty of carving new basalt blocks. One of the principal forms of house construction is to have

transverse arches carrying short basalt beams which form the roof. Houses in the Aleppo region are built of mud brick with conical mud domes resembling beehives. Several buildings joined together within a courtyard form a single house. In central Syria the traditional house is a rectangular mud-brick building with a flat roof. These houses are usually surrounded by a courtyard wall which may also include animal pens. In addition to permanent settlements many people are traditionally nomadic or semi-nomadic. Black goat-hair tents are the principal form of bedouin tent used in the region. The main cities also have their own methods of construction which differ from those of the countryside.

**See also:** Aleppo, Basra, Damascus, Lebanon, Qasr al-Hayr East, Qasr al-Hayr West, Raqqa