

# **TopClass**

Version 1.2.2b

## **ADMINISTRATOR'S GUIDE**

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## **VERSION**

This Administrators' Guide was written for use with TopClass, Version 1.2.2b for Mac OS, Windows NT/95 & UNIX in October 1997.

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# About this Guide

## INTENDED AUDIENCE

Welcome to TopClass. This Administrators' Guide is intended to provide all the information System Administrators need to install, configure and maintain TopClass. It includes the following chapters:

<b>Chapter</b>	<b>Description</b>
1: TopClass: An Overview	An introduction to TopClass
2: Installation	Details of how to install TopClass
3: Getting Started	Getting started using TopClass
4: Administering a Server	How to administer TopClass
5: Creating Courses	A guide to creating courses
6: Users & Classes	A guide to creating Users and Classes
7: Database Maintenance	Advanced Database Reference guide
A: Authoring in HTML	Introduction to HTML & page creation
B: Glossary	Glossary of Terms

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## CONVENTIONS FOR DISPLAYING SCREENS

Throughout this documentation, the following conventions are followed:

- Screens shown are taken from a variety of platforms. However, other than minor differences, TopClass looks and works the same regardless of platform.
- Screens shown for Microsoft Windows NT are from Version 4.0. If you are using NT 3.51, TopClass will operate the same but look slightly different.

## ACCOMPANYING DOCUMENTATION

TopClass is provided with full documentation for all its users. In addition to this Administrators' Guide, the following are also supplied:

- **Release Notes**

For the latest information not included in this guide, and for platform specific technical requirements, refer to the Release Notes. You should read the release notes before attempting to install and use TopClass.

- **Instructors' Guide**

For instructors, a separate Instructors' Guide is provided which details the information they need to know. All of the material included in the Instructors' Guide is in this Administrators' Guide.

- **Student Guide**

For students, relevant documentation is supplied in HTML and Microsoft Word 6.0 format, which enables you to modify it as required.

For the latest information about TopClass for all types of users, refer to the WBT Systems home page at <http://www.wbt systems.com>.

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# Chapter 1: TopClass - An Overview

## INTRODUCTION

This chapter provides background information to help you understand how TopClass works, and gives an overview of its features. The following topics are covered:

- What is TopClass?
- TopClass Architecture
- TopClass Features
- Types of TopClass Users

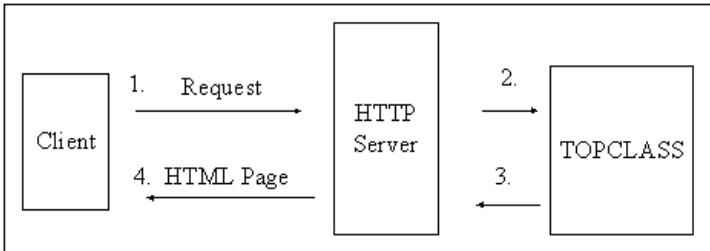
## WHAT IS TOPCLASS?

TopClass is an easy to use learning environment that distributes course materials for viewing on any PC compatible or Macintosh computer. It also provides comprehensive communications functions to enable instructors and students to keep in touch. TopClass runs over TCP/IP networks such as the Internet, or a corporate or campus LAN (local area network) using World Wide Web protocols, commonly referred to as an Intranet.

TopClass stores all information on users and courses on a central server. Students, Instructors and Administrators can access that server from anywhere on the network using a standard Web browser such as Netscape® Navigator™ or Microsoft® Internet Explorer™.

## TOPCLASS ARCHITECTURE

TopClass works with your existing World Wide Web HTTP Server to control the distribution of course materials to students over a network. The following sections describe the interaction between TopClass, the HTTP server and a client, as well as the TopClass database and Security issues.



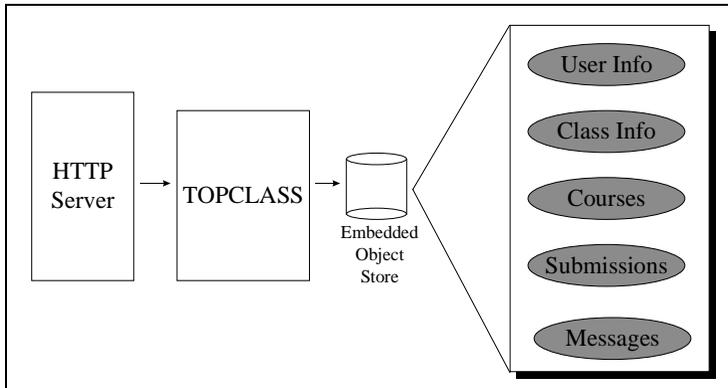
**Figure 1. TopClass, HTTP Server and Client**

1. The Client sends a TopClass HTTP request to the server.
2. The HTTP Server passes the request directly to TopClass.
3. TopClass generates the appropriate HTML page and returns it to the HTTP server.
4. The HTTP server sends the page and any associated media files to the client.

## The TopClass Database

A key part of the TopClass architecture is the Embedded Object Store. Essentially, this is a database which stores the information required by TopClass to provide its service.

The following diagram conceptually illustrates the information stored in the TopClass Embedded Object Store.



**Figure 2. The TopClass Database**

### **TopClass Security**

Security is an important issue for all TopClass users. It is crucial that each student can only access files to which they should have access. For every request sent to TopClass, before it fulfills the request, TopClass checks the User Information in the Embedded Object Store to see that the user has appropriate access rights to view the requested information.

While TopClass carefully controls access to information, the HTTP protocol used on the Internet is not secure. If you are using TopClass to distribute sensitive material, it is recommended that you use a secure (SSL-compliant) Web Server and compatible clients. Both Netscape Navigator and Microsoft Internet Explorer support SSL security.

## HOW IS TOPCLASS DIFFERENT?

There are two important ways in which TopClass is different from a standard Web server:

- **Dynamic page generation**

Normally when accessing a Web site, every visitor sees exactly the same information. With TopClass, however, each page is dynamically generated "on-the-fly." This means material can be provided as it is needed and can be custom tailored to a particular user.

- **Ease of administration**

TopClass provides a suite of easy-to-use tools allowing remote authoring and administration of courses. Everything in TopClass is performed using standard Web browser functionality. There is no complex management of HTML files on a server. If courses are altered or extended, TopClass can maintain all links automatically.

## WHAT TYPES OF USERS BENEFIT FROM TOPCLASS?

TopClass was developed to distribute course materials quickly at low cost. TopClass is also intended to allow on-line communication between instructors and students.

- **Students**

Students are users who are taking courses. They are assigned to one or more classes, each of which will have course material assigned to it. This course material can consist of many units or chapters and can include text, graphics, sound, movies and tests to be performed by the student. Each class can have one or more instructors assigned to assist students in that class and each student can have a particular instructor assigned to them.

- **Instructors**

An instructor is responsible for assisting students taking courses. Instructors may be assigned to one or more classes,

and to individual students in each of those classes. Instructors' responsibilities can include:

- Answering any queries submitted by their students
- Monitoring the discussion areas
- Correcting tests
- Creating or Editing classes, users and courses
- **Administrators**

Administrators manage students, instructors, and courses in TopClass. An Administrator always has full access to the entire TopClass server, allowing them to perform functions such as:

- Create and edit courses and classes
- Create and manage students and instructors
- Assign students and instructors to classes
- Assign course material to students
- Assign administration abilities to instructors

All users can avail of the TopClass messaging, announcement and discussion list facilities.

## **TOPCLASS FEATURES**

For each category of TopClass User, the system offers specific features and benefits:

### **Student Features**

For students or learners taking courses, TopClass provides:

- **Individual customized course pages**

Every student has their own individual course material for each of the classes they are assigned to. This means a student's instructor can add or remove material from a particular student's course page without affecting any of the other students in the class.

- **Built-in electronic mail**

TopClass features its own built-in messaging system allowing any TopClass users to send a mail message to any other user on the same TopClass server. In addition a "Mail Instructor" button is always available to a student from any page of course material. There is no need for the user to remember complex mail addresses.

- **Group discussion facilities**

Students are grouped into classes and each class has two conferencing or bulletin board areas. The first, "Class Announcement," is a read-only area to which administrators and instructors post messages of interest to the class, such as reading lists, last minute changes and other special announcements. The second bulletin board is an open area to which all students can post messages to discuss issues and collaborate on projects.

- **Submission and correction of tests**

These tests may be graded automatically by the server or be routed to the appropriate instructor for correction. Students can review their submissions and the comments generated by the server or submitted by their instructor. In addition, the automated testing facility can take actions based on how a student performs, such as assigning additional background material if a student has difficulty in a particular area, or allowing the student to proceed to the next unit if they score high enough.

## **Instructors and Administration Features**

In addition, for instructors and administrators, TopClass provides:

- Extensive administration tools
- Creation and authoring of courses

- Grouping of students into classes

## **TOPCLASS COURSES**

TopClass Courses have the following components:

### **Units of Learning Material (ULMs)**

The material for a course is divided into units. A unit is a collection of pages, tests and (optionally) sub-units. If an administrator assigns a unit to a class, then all the sub-units, pages and tests in the unit are assigned to that class.

### **Pages**

A page is a repository for course material. Students are expected to read all of the pages assigned to them in order to learn the course material.

### **Tests**

A test is a special page which poses questions for the student. The student is expected to be able to answer the tests based on the material in the course pages. The test may be corrected in one of two ways, either automatically by the server when the student submits it or by the student's instructor who corrects and comments on the test and returns it to the student. TopClass can also be configured to perform a specific action, such as notifying an instructor or assigning additional course material, in the event of a student achieving a particular result.

Refer to *Chapter 5, Creating Courses* for details of how to create and work with Courses.



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# Chapter 2: Installation

## INTRODUCTION

This chapter describes how to install TopClass. It includes information on the following:

- Prerequisites
- Licensing
- The Installation Process:
  - Windows NT/95
  - Mac OS
  - UNIX

## **PREREQUISITES**

Before installing TopClass you should ensure that your system meets the minimum requirements as specified in the Release Notes accompanying the product. If you will be installing TopClass on more than one platform, note that the requirements are platform-specific.

The key requirement prior to installing TopClass is that you have a functioning HTTP server installed. The relationship between TopClass and your existing HTTP server is explained in the previous chapter.

## **LICENSING**

The License Agreement at the start of this manual is binding on everyone intending to install TopClass. The License Agreement is repeated during the installation routine before any TopClass files are installed.

Every installation of TopClass requires a license key. This key will be supplied to you when you purchase TopClass. You must enter the key the first time you log in as an administrator. For more details on the log in procedure, refer to *Chapter 3, Getting Started*.

## **INSTALLING TOPCLASS**

Once you have a working HTTP server, installing TopClass is not difficult. The installation procedure varies slightly depending on the server platform you are using and media from which you are installing.

## **WINDOWS NT/95**

TopClass works with a number of leading Windows NT/95 Web servers, including Netscape FastTrack and Enterprise and Microsoft Internet Information Server and Personal Web Server. For optimum performance, TopClass can use NSAPI or ISAPI to communicate

with the server. For a list of compatible web servers, refer to the Release Notes which accompanied TopClass.

## Installation Media

TopClass can be installed from a number of media. Follow the appropriate instructions for starting the installation and then continue with the instructions below.

<b>Media</b>	<b>Instructions</b>
CD-ROM	<p>If you are using Windows 95 or Windows NT 4.0, insert the CD. Double click on tc-122b.exe within the Windows directory, and installation begins automatically.</p> <p>If you are using Windows NT 3.5, browse to the disk using File Manager and double-click on tc-122b.exe to start the installation process.</p>
If you downloaded TopClass from the Internet	<p>Double-click the executable file (.exe) to extract the files and start the Installation Wizard, which will guide you through the installation process. Follow the installation steps as described below.</p> <ol style="list-style-type: none"><li>1. When you begin the installation, the TopClass License Agreement will be displayed. Click Yes when you have read and accepted the terms of the License agreement.</li><li>2. The Select Server Type screen will be displayed. Choose the HTTP Server for which you wish to install TopClass. If you have no web server installed, or wish to configure a web server manually, choose Generic.</li><li>3. You must now choose the destination for the TopClass files. By default, TopClass will suggest the WWW root directory. If you choose another location, you must ensure that you have read and execute access for that directory.</li></ol>

4. Click Next to complete the installation. For details of how to get started using TopClass, refer to *Chapter 3, Getting Started*.

## Uninstalling TopClass for WINDOWS NT/95

You can easily remove TopClass from your server if you need to. Note that any files created or modified since the installation – for example, the TopClass database or log file – must be removed manually.

### ❖ To uninstall TopClass:

1. Select the Uninstall TopClass icon in the Program Folder.
2. Manually delete any files not automatically removed.

## MAC OS

Installing TopClass on a Macintosh Server requires that you have a working HTTP Server. For a list of known compatible servers, refer to the release notes which accompanied TopClass. On the Macintosh platform, TopClass uses a standard Apple Event CGI for communications with the HTTP server.

You can install TopClass from a number of different media. Follow the appropriate instructions for starting the installation and then continue with the instructions below.

<b>Media</b>	<b>Instructions</b>
CD-ROM	Insert the CD-ROM. Choose the Installer option to start the installation process.
If you downloaded TopClass from the Internet	Double-click the TopClass installer to start the installation process. Follow the installation steps as described below. <ol style="list-style-type: none"><li>1. When you begin the installation, details of how to obtain your license key will be displayed.</li></ol>

2. You must then choose the Macintosh platform for which you wish to install TopClass. You can choose to install TopClass for the 680x0 Macintosh, the Power PC, or a Universal version which will work on both platforms.
3. The next step is to choose the folder into which TopClass is to be installed. Select the folder and click the Install button. The recommended location is the root directory of your web server document tree. When the installation is finished, the Getting Started with TopClass folder will be opened on the desktop.

For details of how to get started using TopClass, refer to *Chapter 3, Getting Started*.

## UNIX

Follow these steps to install TopClass for UNIX. For this description, Solaris 2.5 is used. For a list of known compatible Web servers, refer to the release notes which accompanied TopClass. On UNIX platforms, TopClass uses standard CGI for communications with the HTTP server.

1. Create a user account under which the TOPCLASS daemon will run, for example, "topclass." This account will require read, write and execute privileges for the "topclass" directory which will be created in step 3.
2. Move the topclass-122b-solaris.tar.gz archive to the home directory (for example, ~topclass) of the new user account. (When you unpack the archive, a directory called "topclass-122" will be created into which all files will be extracted).
3. Unpack the archive with the following commands:

```
gzip -d topclass-122b-solaris.tar.gz
tar -xvf topclass-122b-solaris.tar
```
4. Modify the file "topclass.conf" in the "topclass" directory. This file contains:
  - The configuration information for the topclass install script
  - The username and groupname that the topclassd process will run under.

- The port TopClass will listen to - if this value is not zero it will listen to the port specified; otherwise it will expect a command line option. (See below for command line options)
- The Redirect option is a server dependent switch that should be enabled (set as 1) if you are using Apache or NCSA web servers, and must be disabled (set as 0) if you are using any of the Netscape family of web servers.
- The mode TopClass will run in - Daemon or Foreground

Modify the install information in the topclass.conf file.

Modify the topclass.conf file to use the username and groupname of the account you created in step 1. TopClass will use these values at startup unless options are specified on the command line.

**Note:** It is very important that topclass.conf is in the topclass directory and that it is owned by the root user. The permissions should be read/write for root and read only for all other users.

5. Run the install script. Note: this must be run by the root user.

In the topclass-122 directory, type `install`

If the script was unable to update your alias file (or you choose to do it manually), you must edit the file, remove all existing topclass aliases and add the new ones. The aliases output by the script can also be found in the file NewAliases.txt

6. "Hup" the http server (under Solaris, this is `kill -HUP process_id`) for the changes to take effect.
7. To have the topclassd process automatically start at boot time, you will need to modify the boot time script which starts your other Internet services to include the "topclassd" process.
8. Start topclassd:

In the topclass-122 directory, type `"topclassd"`

(After you complete the installation process, it will no longer be necessary to manually start the TopClass daemon, because it will be run at boot time).

### 9. Command line options:

You may enter a number of command line options at startup time:

- `-pPORT` where PORT is the port that TopClass is to listen to. **Note:** If this option is not specified and if the value for port in topclass.conf is zero, TopClass will exit because it will not know which port to listen to.
- `-fg` specifies to run TopClass in the foreground; on omission, TopClass will run as a Daemon process.
- `-allow` allows the user specified in topclass.conf to run TopClass themselves, otherwise TopClass may only run as root.
- `-v` displays the version of TopClass you are running. Note that this option will not start the server.

### 10. You should now be able to log on from a Web browser with the following URL:

<http://your.server.com/topclass/index.html>

TopClass requires an activation key to function. Once installed, you should log in using 'admin' as the username and 'admin' as the password. You will then be prompted to enter an application key which is e-mailed to you when you purchase and register your software. You can use the temporary key provided when you ordered TopClass until you receive your permanent key.

Two demonstration user accounts are provided to allow you to get started with TopClass. The demo student account has username "student" and password "student". The demo instructor account has username "instructor" and password "instructor"

Please mail any questions to [support@wbtsystems.com](mailto:support@wbtsystems.com)



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# Chapter 3: Getting Started

## INTRODUCTION

This chapter describes how to get started using TopClass. The following topics are covered:

- Connecting to TopClass
- Logging in
- Navigating using your home page

## CONNECTING TO TOPCLASS

### ❖ To connect to the TopClass server:

1. Start your web browser.
2. Enter the following:  
`http://your.server/topclass/`  
(where "your.server" is the host name or IP address of the Web server where TopClass is installed.)

The standard TopClass Welcome page is displayed. Below the TopClass logo you will see three buttons:



User Login    TopClass Home    Getting Started

Although they can be configured by your site administrator, by default these buttons perform the following actions:

---

Button	Meaning
User Login	The User Login button provides access to TopClass functions assigned to you by your TopClass administrator.
TopClass Home	Takes you to the TopClass home site at <a href="http://www.wbtsystems.com">www.wbtsystems.com</a> . Here you will find the latest information on installing and configuring TopClass as well as other technical support information. <b>Note:</b> You will need Internet access to view the TopClass web site.
Getting Started	Brings up a number of pages stored locally on your Web server which detail the basic requirements needed to use TopClass and some security recommendations; you should be sure to read this material before accessing TopClass for the first time.

---

## LOGGING IN TO TOPCLASS

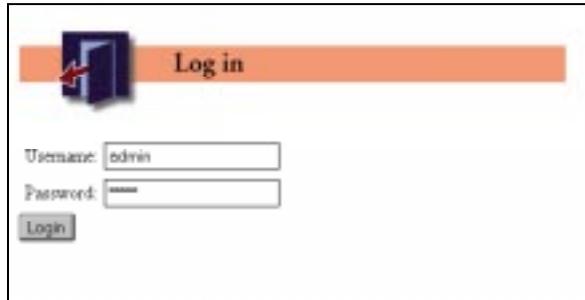
The first time you start TopClass after installation, you must log in using 'admin' as the user name and 'admin' as the password. You will then be prompted to enter your license key.

### User Login

To log in to TopClass, every user requires a valid username and password. Students should obtain a username and password from their instructors; instructors should obtain a username and password from their administrator.

#### ❖ To log in to TopClass:

1. Connect to TopClass server as described in the previous section.
2. Click the Login button. The Log in Screen will appear:



The screenshot shows a web-based login interface. At the top, there is an orange horizontal bar containing a blue folder icon with a red arrow pointing into it, and the text "Log in" in a serif font. Below this bar, there are two text input fields. The first is labeled "Username:" and contains the text "admin". The second is labeled "Password:" and contains seven asterisks "\*\*\*\*\*". Below the password field is a grey button with the text "Login" in a sans-serif font.

3. Enter username and password, and click "Login." Your Home Page will appear.

If you enter an invalid username and/or password, your login page will appear again and you can re-enter your password and username.

## USING TOPCLASS

Each TopClass User has their own Home Page which displays relevant options. The Administrator's Home Page is described in the next chapter.

Access to many of the most frequently required TopClass functions is provided using the TopClass Toolbar at the bottom of the screen. Some of the options are always available, while others appear only in certain areas.

The following table shows all of the toolbar buttons that may be displayed and explains their function:

Button	Name	Meaning
<b>Error! Error! Not a valid filena me.</b>	Home Page	Takes the user to their home page or top level of options.
	Coursework Page	Displays a student's coursework page, or a list of classes to choose from (if the student is assigned to more than one class).
	Send Message	Allows you to send a message to another TopClass user. By default the "To:" address will be the student's instructor for the course being worked on, but it can be changed to any other username.
<b>Error! Error! Not a valid filena me.</b>	Help	Displays the first page of the on-line help system.

Button	Name	Meaning
<b>Error! Error! Not a valid filena me.</b>	Utilities	Displays the Utility options available to a user, such as viewing their on-line picture or changing their password.
<b>Error! Error! Not a valid filena me.</b>	Previous	Goes back to the previous page.
	Next	Goes to the next page.
<b>Error! Error! Not a valid filena me.</b>	Up	Goes up one level in the coursework.
<b>Error! Error! Not a valid filena me.</b>	Delete	Deletes the current message or posting.
<b>Error! Error! Not a valid filena me.</b>	Delete All	Deletes all messages or postings listed on the screen.
	Post	Allows the user to post a new message to a Class Announcements or

<b>Button</b>	<b>Name</b>	<b>Meaning</b>
		Discussion List area.
<b>Error! Error! Not a valid filena me.</b>	Reply	Creates a reply to the current message or posting.

---

# Chapter 4: Administering a Server

## INTRODUCTION

The effective operation of the TopClass server requires one person (or several people) to administer the set-up and operation of TopClass at your site. This chapter provides information on:

- The Administrator's Role
- TopClass Preferences
- Administrator Home Page
- Console Window (Mac OS only)
- HTML Parser Preferences
- Choosing a language and editing screen messages
- Customizing TopClass graphics
- Administrator Commands - Change License Key

Before continuing with this chapter, make sure you have read *Chapter 1, TopClass - An Overview*.

## THE ADMINISTRATOR'S ROLE

Typically, the TopClass administrator will be responsible for both the computer-related and educational administrative tasks. Therefore the TopClass administrator should understand the following:

- Basic PC and Web operations, such as file operations, browser operations, your site communications network and the principles of HTML.
- Basic requirements of the instructor for generating and updating course material and communicating with the students.

The TopClass system specifies a default administrator with username "admin." This administrator has full privileges which cannot be revoked. This is designed to ensure that there is no possibility of an administrator of a TopClass system locking themselves out of the system by deleting all administrator accounts.

An administrator may create another administrator. All administrators have full privileges. An administrator may also create instructors and assign administrator privileges to them. In this case, though, the number of privileges assigned are at the discretion of the administrator.

### **THE ADMINISTRATOR'S RESPONSIBILITIES**

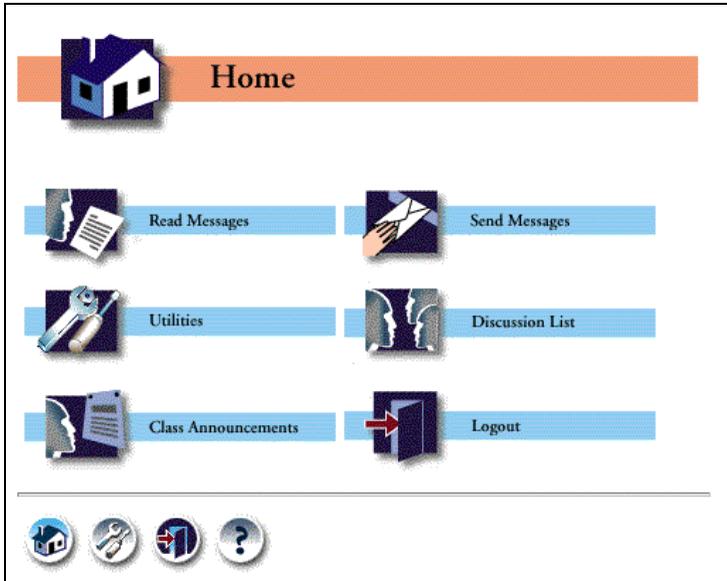
The TopClass administrator is responsible for the following activities:

- Creation of all users on the system; students, instructors and other administrators.
- Delegation of powers, if desired, to instructors.
- Making available course material to the students.
- Organization of students and instructors into classes.
- Overseeing of the maintenance of the system.

**Note:** these responsibilities can be shared with instructors and other administrators.

## ADMINISTRATOR'S HOME PAGE

The Administrator's Home Page provides access to a full range of TopClass functions. If you log in as an administrator, TopClass will display your Administrator Home Page:



### Incoming Messages for Administrator

#### ❖ To access incoming messages:

1. Select the Read Messages icon or anchor text on the administrator's home page. A list of messages appears.
2. To access a particular message, simply click on the message subject anchor text. This will display the Incoming Message page which displays the text body of the message.

It should be noted that not all messages received by the administrator are from other TopClass users. The administrator may receive messages from the TopClass system. These usually describe error or status information which occurs occasionally due to network traffic and interaction with other system software.

## Using TopClass Utilities

The administrator has a complete set of utilities. These are described individually below:

### ❖ To access TopClass utilities:

1. Select the Utilities icon or anchor text on the Administrator's home page. The Utilities Page is displayed.
2. To access a particular utility, click on one of the following buttons:

---

Button	Name
	Change your password - See Below
	View your on-line picture - See Below
	Edit Units - <i>See Chapter 5, Creating Courses</i>
	Edit Users - <i>See Chapter 6, Users &amp; Classes</i>
	Export Course - <i>See Chapter 5, Creating Courses</i>
	Import Course - <i>See Chapter 5, Creating Courses</i>

---

---

Button	Name
	Edit Classes - See <i>Chapter 6, Users &amp; Classes</i>
	Message Log - See Below
	Database Maintenance

**Warning:** "Database Maintenance" is a complex feature which provides access to the underlying databases used by TopClass. Extreme care must be taken when making modifications to your server using the Database Maintenance option. It is described in more detail in *Chapter 7, Database Maintenance*.

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## Changing your password

### ❖ To change your password:

1. From the Administrator Home Page, select Utilities.
2. From the Utilities Page, select Change Password.
3. Enter your Current Password and New Password.
4. Verify the new password by entering it again.
5. Select the Change Password Button.

For security reasons, neither your old nor new password will be displayed as you type them into your Web browser.

If you do enter a password incorrectly a page appears with the title "There was a problem changing your password." Return to the password entry page by clicking the "**Back**" button on your browser. Here you can attempt to enter a new password again.

## Security Consideration

The "Change Password" form provides some recommendations on passwords to avoid. You should choose your password with care. If another person knows or guesses your password they have full access to your TopClass account.

---

## Entering and Viewing your on-line picture

On-line pictures are an optional feature in TopClass used to overcome the anonymity of communications over networks.

Administrators are responsible for the installation of all users' on-line pictures.

On-line pictures are easily installed in the TopClass system. They must be stored in the "users" directory in the "topclass" directory on your Web server,

```
topclass/users/username.gif.
```

The files must of type GIF (Graphics Interchange Format) and the filename must be of the form <username>.gif, where <username> is the username of the particular user. For example, the filename for the Administrator must be "admin.gif."

### ❖ To view an on-line picture:

1. From the Administrator Home Page, select Utilities.
2. Select View Your Online Picture.

## MESSAGE LOG

This feature allows the review of all requests from TopClass to the server. This allows the administrator to monitor network activity and to trace network errors. The amount of information (if any) logged to the message.log file is controlled by the Logging Level option on the Preferences page.

### ❖ To view the message log:

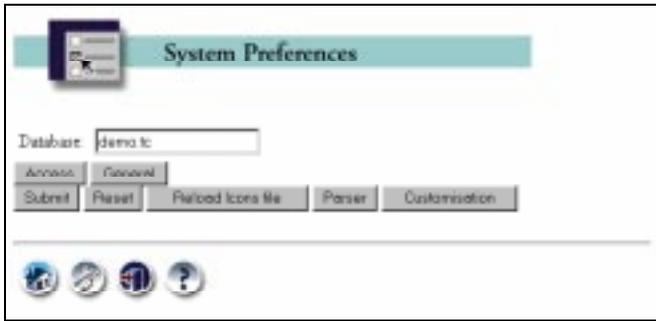
1. From the Administrator Home Page, select Utilities.
2. Select Message Log.

## SETTING TOPCLASS PREFERENCES

A number of global options which affect your TopClass server can be configured.

❖ **To set preferences:**

1. Log in as an Administrator.
2. Choose Utilities and then Preferences to display the preferences screen:



Note: If you wish to switch to a different database than the one displayed, enter the name of the database and click Submit before you select one of the Preference buttons. If you switch to a different database, you must log in again before you can continue.

3. Click the button to choose the category of preferences you wish to modify. The following table describes the options:

Item	Meaning
General	Allows you to specify miscellaneous system settings.
Access	Allows you to specify access rights to various areas of the system.
Parser	Allows you to set preferences for HTML Parser.
Customisation	Allows you to set custom language settings.

## General Preferences

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<b>Item</b>	<b>Meaning</b>
Language	Allows you to specify the default language for the server.
Logging Level	Controls the level of messaging recorded to the log file, "message.log". An explanation of the levels is given below.
Allow username as password	Controls whether users can set their password to be the same as their username.
Icons File	Specifies the file that controls system graphics.
Backup	Controls when and how often you want TopClass to automatically backup the database. Specify the frequency, start date (mm/dd/yy) and time for the backups.
User Timeout	Number of minutes of inactivity before the server will logout a user.
Authentication	Controls whether TopClass or Basic Authentication is used.
Realm	Specifies the realm to be used if Basic Authentication is selected.
Logout Message	Message to be displayed on logout screen.
Login Message	Message to be displayed on login screen.
Check IPs	Controls whether TopClass checks IP addresses against Connection IDs. While this security setting is recommended, it can cause problems with some proxy server configurations.
Allow URL Login	Specifies whether you can enter a login username and password as part of a URL.

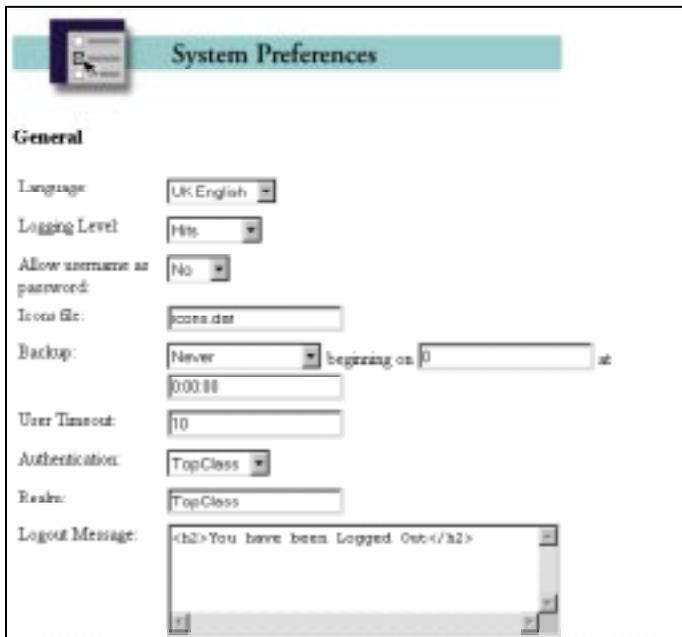
---

---

<b>Item</b>	<b>Meaning</b>
Cache Size	Specifies the size (in bytes) for the TopClass cache.
Anonymous Status	Specifies whether status checks can be carried out without logging in or require a person to be logged on as an administrator, or a user.
Tasking Mode	Select Single User to improve performance if there will only be a small number of concurrent users.
Allow Uploads	Specifies whether file uploads will be accepted by the server. Disable file uploads if most of your users' browsers do not support this feature.
Items per page	Specifies how many entries per page to display on a TopClass list view. Defaults to 20.
Set Message State	If system thread resources are exceeded, select the On Request option.
Borders	Specifies whether HTML borders are displayed on tables.
Background	Default background color.
Path Separator	Path separator to be used in Path to Page.
Path to Page	Location on the screen of Path to Page information.

---

---



**System Preferences**

**General**

Language:

Logging Level:

Allow username as password:

Icons file:

Backup:  beginning on  at

User Timeout:

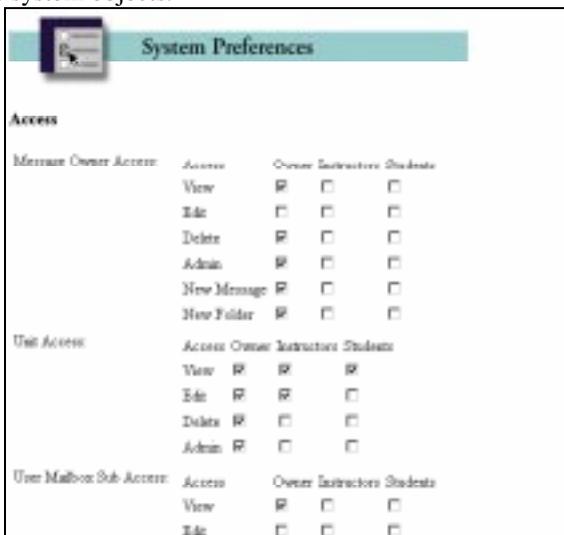
Authentication:

Realm:

Logout Message:

**Access Preferences**

Access preferences allows you to specify default access rights for various system objects.



**System Preferences**

**Access**

Message Owner Access:

Access	Owner	Instructors	Students
View	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Edit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Admin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New Message	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New Folder	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

User Access:

Access	Owner	Instructors	Students
View	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Edit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Delete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Admin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

User Mailbox Sub Access:

Access	Owner	Instructors	Students
View	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Edit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Setting Message and Logging Levels

The Message and Logging Level options control how much status and error information is reported to the screen and logged to the "message.log" file. As you move through the levels (by moving down the list), detail for all previous levels is included plus whatever additional information is added for that level. The levels are as follows:

Level	Status Code	Information logged
None	None	No logging is performed
Start/Stop	STRT STOP	Logging when TopClass is started up or shutdown
Assertions	AST!	Problems found with database integrity
Fatal Errors	FER!	Problems with application execution
Errors	ERR!	Problems with an attempted access, such as a missing piece of information or bad command
Hits	OK	Execution of a successful command
Info		
Calls	MSG!	Debug information; use only when requested by TopClass Technical Support.
Trace		

You may find performance is increased by using a lower logging level. Unless requested to by TopClass Technical Support, you should not use the levels *info*, *calls* or *trace*, because these levels will substantially slow down your TopClass server.

## HTML PARSER PREFERENCES

When you create or update courses, or post messages, TopClass converts your text to HTML so that it can be displayed. When you

click a Submit button, TopClass checks the validity of all text submissions for compliance with HTML standards (HTML Version 3.2). This process is referred to as 'parsing.' For more information about HTML authoring, refer to Appendix A.

Administrators can specify exactly which HTML errors will be reported by the TopClass parser.

### ❖ To edit HTML Parser Preferences:

1. From the Administrator Home Page, click Utilities.
2. From the Utilities Screen, click System Preferences.
3. From the bottom of the System Preferences screen, click the Parser button. The Edit HTML Error Preferences screen is displayed.



4. Select the errors you wish TopClass to note by selecting the appropriate check boxes. By default, all check boxes are selected. For a description of each error, click on the help link beside the name of the error.
5. When you have selected all the errors you wish to be checked, click the Set Preferences button.

## CUSTOMIZING TOPCLASS SCREENS

TopClass allows you to customize the text that appears in TopClass screens. For example, you can change one particular system message, or localize the entire interface into another language.

Each user has a default language setting which controls the TopClass interface that will be used.

Due to the large number of text strings (over 700), they are arranged into logical groups which can be edited individually.

There are two stages to customizing TopClass:

- Define a language name and file
- Edit the String groups

### ❖ To create a language file:

1. From the Administrator Home Page, click Utilities.
2. From the Utilities Screen, click System Preferences.
3. From the bottom of the System Preferences screen, click the Customize button. Select either an existing or a new language to edit. Click OK. The Edit Language screen is displayed:



4. Complete the details as follows:

Current Language	Select the language you wish to edit, and click Update
Language	Enter the name for the language
Filename	Enter the name for the language file
Language Number	Enter the reference number for the language. (Numbers 0 through 1024 are reserved by TopClass)
Comment	Enter a descriptive comment for this language (optional)

---

---

- Click Submit to register your changes
- Click Edit to edit the strings for this language (see below)

❖ **To customize strings:**

1. Access the Select Language to Edit screen as described above.
2. From the drop-down list, select the language for which you wish to edit strings and click Update. The details for the language file are displayed.
3. Click the Edit Strings button, followed by one of the String group buttons. The Edit Strings screen is displayed:



4. From this screen, select the group of strings you wish to edit. The strings for this group, along with any sub-groups are displayed.
5. Make any changes to the strings in the text boxes and click the Submit button to register your changes.

## CUSTOMIZING TOPCLASS GRAPHICS

You can insert your own graphics instead of the default TopClass icons by changing the 'icons.dat' file. This file, located in the TopClass directory, contains a list of icons used and the icon files they reference.

### ❖ To edit the graphics:

1. Open the icons.dat file in a text editor and enter the path and filename for the icons you wish to substitute (see below for more details).
2. Close the icons .dat file.
3. From the Administrator Home Page, click Utilities.
4. From the Utilities Page, click System Preferences.
5. Scroll to the bottom of the screen and click the Reload Icons button.

## Format of icons.dat

The icons.dat file contains the following information for each graphic used by TopClass:

---

---

Field	Description
TopClass Reference Number	Used by TopClass. Do not change this number.
Filename	The use of absolute paths allows you to point to a graphic on another server.
Dimensions	Width x height (in pixels).
Text icons and non-text icons (that is icons containing text and icons containing no text).	Flag to indicate if icon includes text or not. Use 1 to indicate that an icon contains text and 0 if not.
Alternative text	'Alt' text displayed if browser user has graphics turned off.

---

---

Each field is separated by a space. Comments should be preceded with a semi-colon (;).

An example icon entry would be:

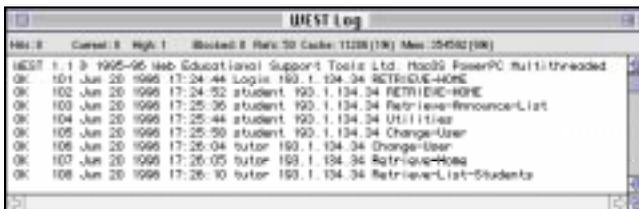
```
1 "icons/logo.gif" 42 42 0 "Alt text;" Comment
```

---

**Note:** It is recommended that you make a backup copy of the original icons.dat file before you make any changes to it.

---

## CONSOLE WINDOW - MAC OS ONLY



A console window is displayed on the server, and displays information regarding the TopClass system usage. You can open and close the window at any time using the "Open Window" and

"Close Window" options in the "File" menu. While the Console window is closed, no messages are written to it. Performance of your server will increase slightly with the window closed.

The window itself is divided into two sections. The upper sections contain a status line summarizing current and past activity. The information shown is as follows:

---

<b>Item</b>	<b>Meaning</b>
Hits	The total number of requests processed since TopClass was last started.
Current	The current number of requests being processed.
High	The maximum number of simultaneous requests since TopClass was last started.
Blocked	The number of blocked threads. This number should never remain above 0, although it will fluctuate up and down.
Refs	The current number of database objects in the cache.
Cache	The amount of memory in bytes the object cache is using and the percentage of the total cache size.
Mem	The amount in bytes of TopClass allocated memory that is in use and the percentage that represents of TopClass's total available memory.

---

The lower portion of the window contains a scrollable text area. Status and error messages generated by TopClass are reported here while the window is open. The level of reporting is determined by the option selected in the "Message Level" pop-up menu in the Preferences Page.

### **Checking Threads**

Selecting "Threads" in the console window will cause TopClass to output a count of the number of threads currently running. If the number is greater than zero, a one line status message will be given for each thread detailing what request it is processing.

## Checking Current Users

Select "Users" to output a list of users currently in the active list. Some of these users may be currently active while others may have been automatically logged out. For each user the following information will be given: username, the IP address they connected from, and the date and time they last accessed the server.

## ADMINISTRATOR COMMANDS - CHANGE LICENSE KEY

Certain TopClass commands are only available to a user logged in as 'admin.' These commands must be entered as a URL address.

### ❖ To change your License Key:

1. Log in as 'admin.'
2. On your Home Page, select Utilities.
3. In the address box of your browser, delete the word `utilities` and key in command `change-key` after the hyphen. Press Return. The change key screen will be displayed.
4. Enter your new key to continue.

---

# Chapter 5: Creating Courses

## INTRODUCTION

This chapter describes how to create course material for use with TopClass. The following topics are covered:

- Structuring a Course
- Creating Pages
- Creating Tests
- Adding Questions and Actions
- Importing and Exporting Courses

## CREATING COURSES: AN OVERVIEW

A course within TopClass is a collection of learning material, divided up into one or more units. Units themselves can contain more units, to create a hierarchy. Ultimately the lowest level units will be made up of any number of pages and tests.

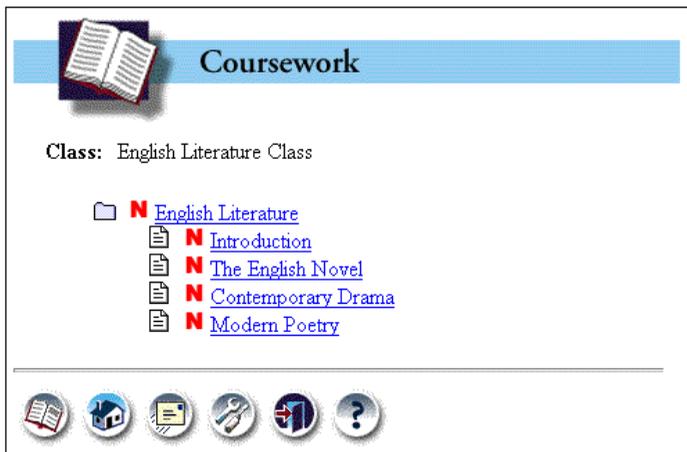
Pages are individual course pages. They equate to what would be considered a normal HTML/Web page. The exact content and length of a page is at the discretion of the author.

To create a course in TopClass, you carry out the following steps:

1. Structure your course material.
2. Create pages of course material in HTML format.
3. Create multiple choice or text-based tests and specify what actions follow from those tests.
4. Create your course by specifying the units, pages and tests.
5. Import other courses to the TopClass database, or export your course for use by other sites. (optional)

### Structuring a Course

A useful way to begin structuring a course is to create the unit hierarchy. Units are simply placeholders for other units, pages and tests. You might begin by creating the top level hierarchy. You can think of this top level as being similar to the list of chapters in a book. Then for each top level unit, you might create a number of sub-units. These would correspond to the main section headings in an individual chapter of a book. Proceed like this until you have sketched out the hierarchy as you understand it. Don't worry if you decided to change or re-order it later, as TopClass will help you to do that. The following screen illustrates a small course hierarchy:



When you have completed your hierarchy, you might like to add some basic pages to each of the bottom level units. Note that it is quite possible to mix pages and units at the same level. For example you might decided to put a "Goals" page and a "Conclusion" page at the beginning and end of each chapter to provide direction for your students. Most of your pages, however, will most likely be placed at the lowest level of your hierarchy.

You might begin by creating place holders for your content by inserting blank pages or tests with just the title, background and color information. You can then go back and fill in the content of each page. Using this kind of system, you can build up your course over time, gradually refining it as you go until you have completed the first draft of your course.

In the next sections we'll look at the functionality available through the "Edit Units" option on your Utilities page. It is from this option that you will create and edit all aspects of your courses.

### **Generating HTML Files**

All pages in TopClass courses must be in HTML file format to be displayed properly by the system. All the HTML that you should concerned about will be that information between the `<body>` tags. For more information on writing HTML, see Appendix A.

## **CREATING COURSES**

### **❖ To create a new course:**

1. On your Home Page, select Utilities.
2. Create/Edit Course. The New Course Screen will be displayed:

**Edit Course**

Context: Global  
PageID: 892  
Title:   
Access:   
  
Add:     
Created by admin on 03/25/97 at 19:26:17

For more information on filling in this page, read all of the following subsections.

---

---

<b>Name</b>	<b>Meaning</b>
Title	The title of a unit, page or test as displayed on the list of coursework for a student. It is also used as the title for the window when a student is on that page.
Edit Header	Allows you to specify page options as detailed below.

---

---

## Specifying the appearance of your course

Following the Title and Header options is a section which defines the various color and background pattern options for a page. The options are as follows:

---

---

<b>Name</b>	<b>Meaning</b>
Background	The background pattern or color to be used.
Text Color	The color for all ordinary text.
Link Color	The color for a hyperlink which has not yet been visited.
Active Link	The color a hyperlink changes to when the user selects it.
Visited Link	The color for a previously visited link.

For each of the options a standard color may be selected from the pop-up menus. If you are familiar with hexadecimal colors, you can also choose a different color by selecting the "Other..." option and entering a hexadecimal triplet in the text box.

## Specifying a background image

You can display an image as the default background for our TopClass course pages. This file must be a GIF image (such as a solid color or a logo) and it must be located in the "backgrounds" sub-directory of the "topclass" directory on your Web server. This image file will then be used as the background for a page and will be repeated or "tiled" across the window to fill the screen.

To specify the image, enter the filename in the background field. It is possible to create sub-directories in the backgrounds folder to specify different backgrounds for different courses. To specify a background image in a sub-directory of the backgrounds folder, use the directory name, followed by a forward slash, followed by the filename.

For example, to use an image called "logo.gif" which is in a directory called "corporate" in the backgrounds directory, you would enter the following text in the Background field:

`corporate/logo.gif`

Note that you do **not** precede the directory name with a forward slash.

## Submitting the course

When you have specified the name and appearance of the course, choose the submit button to create the course on the server. The Edit Course screen will be displayed. You can now start to add material to the course. See the section 'Add Options' below.

## ADDING MATERIAL TO YOUR COURSE

### ❖ To add material to a course:

1. On your Home Page, select Utilities.
2. Select Create/Edit Units. The New Course Screen will be displayed.
3. Select List to display a list of available courses.
4. Select the course you wish to edit.

Following the background and text color options, a list of any existing ULMs (units of learning material) for the current course will be displayed.

## Add Options

Below the list of ULMs are the **Add** options. The options enable you to develop the structure of the course by creating new units, pages and tests or appending existing material. The four options available are:

Button	Name	Meaning
	Add Unit	Create a new unit at this level. A unit is a placeholder for adding further units, pages or tests, and defines a new sub-level for your course.
	Add Page	Add a single page of course material. For more information, see "Creating & Editing Pages" on page 48.
	Add Test	Add a test page. Test pages are sets of one or more questions which a student must answer. These can be automatically corrected or routed to the appropriate instructor for review. For more information, see "Adding Tests" on page 51.
	Add Existing	This allows the user to add an existing unit (unit, page, or test) from the TopClass database.

At the bottom of the Create/Edit Unit page you will find a set of buttons with text labels. Five basic options are always available.

Button	Meaning
Submit	Save any changes made at this level (such as background or color selection) to the database
Delete	Permanently remove all items at this level and below.
	<b>Note:</b> It is always recommended that you back-up of your "default.tc" file before making major changes to your database.

<b>Button</b>	<b>Meaning</b>
Reorder	Reorder the ULMs listed. (Described below).
Preview	Display a preview of how this ULM structure will look.
List	Browse the database of courses to select a unit, page or test to edit.

---

---

In addition, when you are editing a course any, or all, of the following options will be available:

---

---

<b>Button</b>	<b>Meaning</b>
Previous	Go the previous unit
Next	Go to the next unit
Parent	Move up one level to the parent unit

---

---

## **CREATING & EDITING PAGES**

To create a page of information in a course, you can either import an existing HTML file or generate HTML files directly using TopClass.

### **❖ To create or edit a page:**

1. On your Home Page, select Utilities.
2. On Utilities page, select Create/Edit Course. The New Course screen appears. Select List and choose the Course for which you wish to add or edit a page.
3. To edit an existing page, select the associated edit button from the list of pages.

or

To create a new page, select the Add Page button. The Create/Edit Page screen will be displayed:

The screenshot shows the 'Create/Edit Page' interface in the TopClass system. At the top left is the TopClass logo. To its right is the title 'Create/Edit Page'. Below the logo, the text 'Custom: Global' is displayed. Underneath that is 'PageID: 893'. A 'Title' label is followed by an empty text input field. Below the title field is the text 'Access: read, write, ...'. A button labeled 'Edit Header' is positioned above a large, empty text area for entering HTML data. Below this text area is a row of buttons: 'Submit', 'Delete', 'Preview', 'Previous', 'Parent', 'Reset', 'List', 'Rights', and 'HTML Upload'. Below these buttons is a 'Check Links' button. At the bottom of the interface are four small circular icons.

A page which is a child page of a unit will use the settings for background and text colors specified for the unit as the defaults. These can be changed if necessary.

## Entering HTML

On the Create/Edit page screen, following the standard options is a text entry box. This is used to enter HTML data. This data is used to describe the layout and content of every page. For a description of HTML and appropriate examples, see Appendix A. You can cut and paste existing HTML into the text entry box, or type your text with appropriate tags directly in the box.

The HTML code that is entered here is essentially the code which would appear between the `<body>` and `</body>` tags of a normal HTML page. **Do not enter any of the header information (such as the `<head>`, `<title>` or `<body>` tags). These will be inserted dynamically by the TopClass Server when a page is requested by a user.**

You can use any HTML tags that you might use in a standard HTML page. This can include tables, images, QuickTime, Shockwave, RealAudio, Java and JavaScript.

There are several basic options which are always available below the HTML text entry box. They are:

---

---

<b>Button</b>	<b>Meaning</b>
Submit	Saves any changes made to this page to the database.
Delete	Permanently removes this page from the TopClass database. This operation can not be undone.
Preview	Displays the page as it will be seen by a student, without saving any changes to the database. To return from the previewed page to the Create/Edit page, it is necessary to press the " <b>Back</b> " button on your browser.
Previous	Goes to the previous page.
Parent	Goes to the parent unit.
Reset	All changes made since opening (or saving) text will be cleared and reset to last saved version.
List	Displays the top level of course available on your TopClass server, allowing you to navigate to a particular unit, page or test you wish to edit.
Rights	Allows access rights to be specified for the page.
HTML Upload	Allows you to select a HTML file for uploading to the TopClass database. Select the file you want to upload and click on the Upload icon.
Check Links	Checks all links on the page to see that they are all present.

---

---

**IMPORTANT:** Remember to submit any pages that you want to save (using the Submit button) before you log out of TopClass.

## TESTS - AN OVERVIEW

Tests are parts of courses where students are tested on the course material presented. Tests can be made up of several types of questions and can also be automatically corrected by TopClass.

To create a test you must specify the following information:

1. The appearance of the test.
2. The number of questions to be completed in the test.
3. Whether the test will be corrected by the instructor or automatically by TopClass.
4. The text and/or multiple choice questions in the test.
5. Any actions that are available to the student upon successful or unsuccessful completion of an auto-correct test.

### Adding Tests

❖ **To access the Add/Test page:**

1. On your Home Page, select Utilities.
2. On the Utilities Page, select Create/Edit Course.
3. On the Create/Edit Course page, click the List button to choose the course to which you wish to add a test.
4. To edit an existing test, select the associated edit button from the list of tests  
or  
To create a new test, select the Add Test button. The Create/Edit Test screen is displayed.

**TopClass** **Edit Test**

Context: Global  
PageID: 142  
Title:   
Access: wda ve--v--  
**Edit Header**  
Points: 0  
Number to be done:   
Auto Correct:   
Resubmit:   
Introduction:  
  
New Question:    
New Action:

This screen allows you to create a new Test or to edit an existing one. The usual five options for selecting background and text color are available via the Edit Header button. These options are identical to those described above for editing pages.

---

The following options are specific to the Edit Test page:

---

<b>Item</b>	<b>Meaning</b>
Points	The total amount of points available for the current test. This is calculated automatically by TopClass by adding up the maximum possible score for each question.
Number to be done	The number of questions required to be answered from the total number of questions posed in the current test. For example, to have the student "Answer 6 out of the following 10 questions," enter a 6 in this box. Note that the questions are chosen randomly at the time the student clicks on the test link in their coursework. By default this option is set to zero, which means the student must answer all available questions.
Auto Correct	If checked, the test will be corrected automatically by TopClass and the results returned to the student immediately. If unchecked, the test will be submitted by the student to the instructor for manual correction. The results will only be returned when the instructor has marked the review as complete.
Resubmit	If this box is checked, the student is allowed to resubmit the test any number of times. If unchecked, the student may submit the test only once. If the box is unchecked (and hence the student may only perform the test once) when the student clicks on the completed test, he or she is presented with the answers they submitted and their score (for auto-corrected tests).

---

## Adding Questions

From the Edit Test page you can create new questions and edit existing ones. In the same way that a unit can be made up of pages, a test is made up of questions. There are a number of question types available and you can mix any number of them together. The question types are broken down into three main categories: Text, Pick One and Upload. Buttons for adding each question type are provided on the form:

---

---

<b>Button</b>	<b>Meaning</b>
Text	Displays the Edit Text Question page. This is used to enter questions that require the student to respond with a type-written answer including "fill-in-the-blanks" type questions.
Pick One	Displays the Edit Pick One Question page. This is used to enter questions with multiple choice answers. The student responds by selecting an answer.
Upload	Displays the Edit Upload Question page. This is used when the student is required to submit a file as the answer.

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---

For more information, see the section on "Creating Questions".

## Entering Actions for Auto-Correct Tests

The New Action section allows the author to create any number of actions which will be associated with a particular test. When a student submits a test which will be auto-corrected, after the score has been calculated any actions are applied to it and those that are triggered (by the student scoring above or below the threshold as set by the author) are carried out. There are two basic actions available:

---

---

<b>Button</b>	<b>Meaning</b>
---------------	----------------

---

---

Add Coursework	Allows the author to select a unit, page or test to be appended in a specific location on the student's coursework page if the student scores above or below a certain level.
Notify Instructor	Sends a message to the instructor's In Box if the student scores above or below a certain level.

---

For more information, see the section "Creating Actions".

## Other Commands

Whenever questions have been added to the Edit Test page they will be listed followed by two function buttons:

---

Item	Meaning
Edit	Calls up the edit question page to enable you to make changes to the question.
Del	Permanently removes the question.

---

At the bottom of the Edit Test page are a number of buttons:

---

Button	Meaning
Submit	Save any changes that have been made.
Preview	View the test as it will appear to a student. To return from the previewed page to the Create/Edit page, press the <b>ReEdit</b> button at the bottom of the page.
Parent	Save any changes you have made and return to the parent unit.
List	Browse the units, pages and test on this TopClass Server and select one to edit.

---

## CREATING QUESTIONS

There are three types of questions available as part of tests in TopClass:

- **Text:** "Text" questions include both 'fill in the blanks' questions, and longer text response questions. Generally it is not efficient or practical to specify auto-correct for text question with a large text area. The instructor can grade their test questions and return a score and comments to the student.
- **Pick One:** "Pick One" questions allow you to construct a number of possible answers for the student and have these answers displayed using either radio buttons or pop-up menus.
- **Upload:** "Upload" questions require students to submit their answer in the form of a file which they upload to the server.

We'll describe creating each type of question in turn.

### Editing Text Questions

#### ❖ To create a text question:

1. On your Home Page, select Utilities.
2. On the Utilities Page, select Edit Units.
3. On the Create/Edit Course Page, select .
4. At the bottom of the screen, select Text Question. The Edit Text Question page will appear.

**TopClass** Edit Text Question

Title:

Points:

Before:

Width:

Height:

Answer	Points	Comments
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

This page displays various options for defining the question and the types of answers which may be given. These are:

Item	Meaning
Title	A title for this question.
Points	The total number of points allocated to this question. As the student may partially answer the question and hence gain some of the points allocated to the question, the number of points available is needed to calculate the student's percentage score.
Before	The text of your question.
Width	The number of characters wide the students' answer box will be.

<b>Item</b>	<b>Meaning</b>
Height	The number of characters high the students' answer box will be.

---

---

For autocorrect answers, you must also specify acceptable (and likely) responses to the question, by specifying the following.

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---

<b>Item</b>	<b>Meaning</b>
Answer	The anticipated response to the question.
Points	The numbers of points awarded for this particular answer.
Comments	Comments is a predetermined reply given if the response to the question matches one of the anticipated answers. These can be used to give praise or to point the student in a particular direction for further study, for example.

---

---

At the bottom of the Edit Text question page there are three option buttons as follows:

---

---

<b>Button</b>	<b>Meaning</b>
Submit	Saves a new question, or saves edits to an updated question.
Test	This is used to return to the Edit Test page.
Preview	This is used to view the question as it has been described on the Preview Text Question page. To return from the previewed question to the Edit Text Question page, press the " <b>Back</b> " button on the browser.

---

---

By default, TopClass will display a response table with scrolls. Key in your answer and press the "Submit" button.

## Editing Pick One Questions

### ❖ To create a Pick One Question:

1. On your Home Page, select Utilities.
2. On the Utilities Page, select Create/Edit Course.
3. On the Create/Edit Course Page, select .
4. Select Pick One Question. The Edit Pick One Question page will appear:



### Edit Pick One Question

Title:

Points:

Before:

Radios Across
  Radios Down
  Popups

Answer		Correct Comments
<input style="width: 100%;" type="text"/>	<input checked="" type="radio"/>	<div style="border: 1px solid gray; height: 30px;"></div>
<input style="width: 100%;" type="text"/>	<input type="radio"/>	<div style="border: 1px solid gray; height: 30px;"></div>
<input style="width: 100%;" type="text"/>	<input type="radio"/>	<div style="border: 1px solid gray; height: 30px;"></div>

This page displays various mechanisms for defining the question and the types of answers which may be given. These are:

---

---

<b>Item</b>	<b>Meaning</b>
Title	A title for this question.
Points	The total number of points allocated to this question. As the student may partially answer the question and hence gain some of the points allocated to the question, the number of points available is needed to calculate the student's percentage score.
Before	The text of your question.
Radio Buttons	Sets the question to display radio buttons beside each of the possible answers. A radio button is the sort of button appearing on the screen beside the word "Radio Button." The student simply has to select one of the radio buttons to pick an answer to the question.
Popups	Sets the question to display a popup menu.

---

---

After these items is a table consisting of three columns. This section defines the possible responses which will be displayed to the student as either a pop-up menu or list of radio buttons (depending on which you have selected above). The items displayed are:

---

---

<b>Item</b>	<b>Meaning</b>
Label	The answer which will be placed beside radio buttons or in a pop up menu.
Correct	Used to identify to TopClass which of the answers is correct. Select the radio button beside the correct answer to the question.
Comments	The comments to be returned to the student when that answer is selected and the test is corrected.

---

---

By default, TopClass will display a response table with scrolls. Key in your answer and press the "Submit" button.

## PICK ONE IMAGE QUESTIONS

It is possible to provide question where the student selects the correct image, rather than a text answer. You must select "Radios" rather than "Pop-up" as the question type. Then enter the HTML tag for the image in the "Label" field such as:

```

```

### Saving your Question

At the bottom of the Edit Pick One Question page there are three option buttons as follows:

Button	Meaning
Submit	Saves a new question, or saves edits to an updated question.
Test	This is used to return to the Edit Test page.
Preview	This is used to view the question as it has been described on the Preview Question page. To return from the previewed question to the Edit Question page, press the " <b>Back</b> " button on the browser.

## EDITING UPLOAD QUESTIONS

Upload Questions are questions which require students to submit their answers in the form of an external file.

Note: Certain browsers do not support file uploads.

### ❖ To Create an Upload Question:

1. On your Home Page select Utilities.
2. On the Utilities Page, select Create/Edit Course.
3. On the Create/Edit Course Page, select  .
4. Select Upload Question. The Edit Upload Question screen is displayed:

The screenshot shows the 'Edit Upload Question' interface. At the top left is the TopClass logo. The title 'Edit Upload Question' is centered at the top. Below the title are four input fields: 'Title' (a text box), 'Points' (a small text box with '0' entered), 'Before' (a large text area), and 'After' (another large text area). At the bottom of the form are three buttons: 'Submit', 'Parent', and 'Preview'. Below the buttons is a horizontal line with four small circular icons: a globe, a refresh symbol, a Facebook logo, and a question mark.

This page displays the options for this type of question These are:

---

<b>Item</b>	<b>Meaning</b>
Title	A Title for this question.
Points	The number of points allocated for this question.
Before	The text of the question.
After	Text to be displayed at the end of the question.

---

### **Saving Your Question**

At the bottom of the Edit Upload Question page there are three buttons, as follows:

---

<b>Button</b>	<b>Meaning</b>
Submit	Saves a new question, or saves edits to an updated question.
Parent	

---

**Preview** This is used to view the question as it has been described on the Preview Question page. To return from the previewed question to the Edit Question page, press the "**Back**" button on the browser.

---

---

## CREATING ACTIONS

You can specify two types of actions to be associated with autocorrect questions:

- **Coursework.** Actions provide a mechanism for automatically modifying a student's coursework on an individual basis without affecting other students in the same class
- **Notifications.** Actions can also notify an instructor if a student scores above or below a certain level.

### Adding a Coursework Action

The "Add Coursework" action provides the ability to add additional material from the database of available units, pages and tests automatically to a student's coursework page at a particular location.

**Note:** Before you can specify coursework that is to be added as an action, you must first add that coursework to the current top level course. Once you have added the coursework, to prevent the additional coursework appearing as part of the default coursework, you must then remove it from the course. This means that the coursework will be available as an action, but not displayed as part of the default material. For more information about deleting material from the default, refer to page 65.

#### ❖ To add coursework action:

1. On your Home Page, select Utilities.
2. On the Utilities Page, select Create/Edit Course.

3. On the Create/Edit Course Page, select



4. Select Add Coursework Action. This dialog will then appear:

**TopClass** **Edit Add Action**

**Title:**

**Test:**

Add this Unit :

To this Unit :

When student scores

The Edit Add Action form has a number of options:

<b>Button</b>	<b>Meaning</b>
Title	The title of the action. You can set this as a reminder of what the action does.
Test	The name of the test this action belongs to.
Add this Unit	Clicking the Select button allows you to browse the units, pages and tests available on your server. Selecting one will insert its name here. The named unit is the material which will be added to the student's page if the action is activated.
To this Unit	Identifies the unit to which the material will be added. The material selected in "Add This Unit" is appended <b>after</b> the unit.
When Student Scores	Enter the numerical value of the score in the text box and select whether the action is to be activated if the student scores either above or below this level.

At the bottom of the Edit Add Action page there are two option buttons:

<b>Button</b>	<b>Meaning</b>
Submit	Save any changes you have made.
Test	Save any changes and move up to the parent test.

### **Removing Default Material**

#### **❖ To remove material from the default coursework display:**

1. On your Home Page select Utilities.
2. On the Utilities Page, select Create/Edit Class.
3. On the Create/Edit Class screen, select the Class.
4. From the Default Course Material section, click Preview.

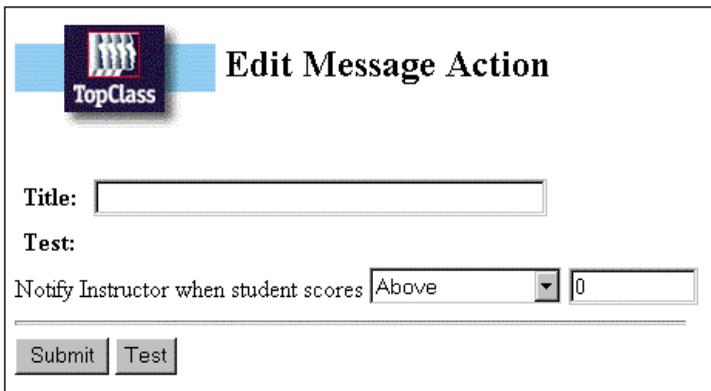
5. Select the top-level course link and then edit button in the toolbar.
6. Select the ULM to be hidden and click the Remove button.

### Notifying an Instructor of an Auto-corrected Score

The "Notify Instructor" action provides the ability to send a message informing the student's instructor when the student scores above or below a certain threshold on a particular test.

❖ **To specify that an instructor be notified:**

1. On your Home Page, select Utilities.
2. On the Utilities Page, select Create/Edit Course.
3. On the Create/Edit Course Page, select .
4. Select Notify Instructor, to display the Edit Message Action page.



The Edit Message Action page has a number of options:

---

Button	Meaning
Title	The title of the action. You can set this as a reminder of what the action does.
Test	The name of the test this action belongs to.

---

<b>Button</b>	<b>Meaning</b>
Notify Instructor When Student Scores	Enter the numerical value of the score in the text box and select whether the action is to be activated if the students scores either above or below this level.

At the bottom of the Edit Message Action page there are two option buttons:

<b>Button</b>	<b>Meaning</b>
Submit	Save any changes you have made.
Test	Save any changes and move up to the parent test.

## REORDERING A COURSE

If you wish to change the order of units within a course, TopClass allows you to do these easily.

### ❖ To reorder a course:

1. On your Home Page select Utilities.
2. On the Utilities Page, select Edit Units.
3. Select List and choose the course you wish to reorder.
4. Select the reorder button.
5. Enter the new order in the text boxes.

<b>Title English Literature</b>		
<b>ULM</b>	<b>Type</b>	
Introduction	Page	<input type="text"/>
The English Novel	Page	<input type="text"/>
Contemporary Drama	Page	<input type="text"/>
Modern Poetry	Page	<input type="text"/>
<hr/>		
<input type="button" value="Reorder"/>	<input type="button" value="Back to Course"/>	

The course's title is displayed at the top of the page. It is followed by three columns:

<b>Item</b>	<b>Meaning</b>
ULM	ULM describes the name of the unit of course material
Type	Type describes the type of each unit of course material
Text entry box	Enter numbers here to define the order in which the ULMs are to be placed

At the bottom of the Reorder Course page are two buttons:

<b>Button</b>	<b>Meaning</b>
Reorder	Rearranges the ULMs according to the numbers you have entered.
Back to Course	Returns you to the Edit Course page. If the order has changed, the new order appears on the Edit Course page.

## IMPORTING & EXPORTING COURSES

TopClass provides the ability to import and export entire courses or only parts of them to and from a file.

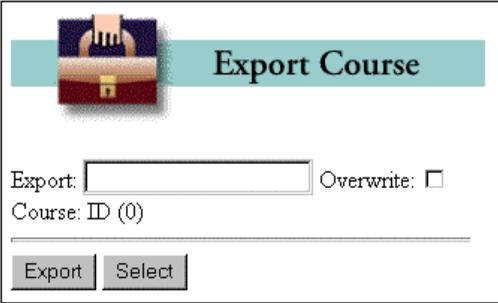
When a course is exported to a file, TopClass maintains the complete course structure exactly as you created it. All of the HTML data is also parsed for errors and to locate any locally referenced media files such as images, Shockwave, QuickTime, RealAudio, etc. files which are used in your course and are present on the same Web server. These files are automatically added to the export file. The export file will therefore contain everything needed to use a particular course.

A TopClass export file can be distributed across the Internet or on floppy disk or CD-ROM. Another TopClass user can then import that course into their own server. The course will be automatically unpacked and installed and the media files will be restored and put in the correct location on the destination TopClass server.

### Exporting a Course

#### ❖ To export a course:

1. From your home page, select Utilities.
2. From the Utilities page, select the "Export Course" option. The "Export Course" page is displayed:



Export Course

Export:  Overwrite:

Course: ID (0)

3. Click the "Select" button. This displays the top level listing of courses available on your TopClass server. Browse through the listing and select the course, unit, page or test

you wish to export. Note that for a given unit, all lower level units, pages and tests are automatically included; that is, TopClass works down from the unit you select.

4. In the Export text box, enter a name for the export file. The filename should not contain any spaces. TopClass will automatically append a ".plug" extension to the filename you give. for example if you type "demo\_course," then the file will be called "demo\_course.plug."
5. Click the "Export" button. If you have selected a course and typed a valid filename, TopClass will return a message that the course is being exported and you will be notified when it is completed.

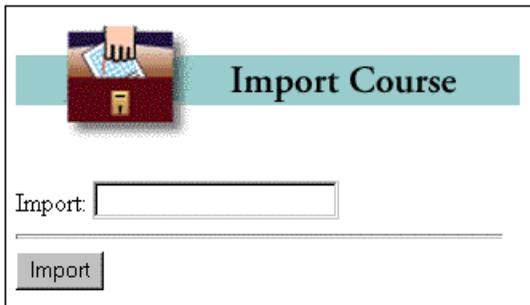
As soon as the export is finished you will receive a message in your In Box detailing exactly what was exported and listing any problems found during the export procedure.

The export file will be created in "topclass" directory on your Web server.

## Importing a Course

### ❖ To import a course:

1. Place the course file (with a ".plug" extension) in the "TopClass" directory on your Web server.
2. From your home page, select Utilities.
3. From the Utilities page, select the "Import Course" option. The "Import Course" page is displayed:



The screenshot shows a web interface for importing a course. At the top, there is a graphic of a red briefcase with a yellow keyhole, containing a blue folder and a yellow key. To the right of this graphic, the text "Import Course" is displayed in a serif font on a teal background. Below this header, there is a text input field with the label "Import:" to its left. Underneath the input field is a horizontal line, and below that is a button with the text "Import" inside it.

4. Type the name of the file **without** the ".plug" extension into the import box.
5. Click the "Import" button.

If the file can be found and is a valid file, TopClass will return a message stating that the course is being imported and you will be informed when it is completed.

When the course has been imported a message will be sent to your In Box informing you of any problems which may have occurred during the import procedure.



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# Chapter 6: Users & Classes

## INTRODUCTION

This chapter describes how to work with TopClass users and classes. The following topics are covered:

- TopClass users
- Creating and Editing TopClass users
- TopClass Classes
- Creating and Editing Classes
- Batch User Registration
- Batch Delete

## TOPCLASS USERS

There are three types of users for whom the TopClass server has been designed:

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Type	Description
Student	Students are learners taking course material. They are assigned to one or more classes, each with an instructor and a specific set of course material.
Instructor	Instructors are assigned to one or more classes. For each class they will have a number of students assigned to them. They are responsible for assisting the students through their courses.
Admin	Administrators have responsibility for creating, editing and managing users, classes and course material. All administrators always have access to the entire TopClass server.

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TopClass administrators, and any instructors granted privileges by the administrator, can create new users individually or using the batch registration feature. This section describes the following options:

- Create new users
- Assign passwords
- Assign users to classes
- Assign privileges to users
- Assign courses to classes
- Batch User Registration

## Creating and Editing Users

### ❖ To create or edit a TopClass user:

1. On your Home Page, select Utilities.
2. On the Utilities Page, select Edit Users.

The create/edit user page is broken up into three areas: User Information, Class Information and Security Privileges. We will look at each section in turn.

### User Information

The screenshot shows a web form titled "User Information". It contains the following fields and controls:

- First name:
- Middle name:
- Last name:
- Username:
- Type:
- Student ID:
- Password:
- Verify:
- Select Language:

Item	Meaning
Name	The name of a user. This will usually be their full name, that is, first name, initials and last name.
Username	A shortened name by which users are referenced within the TopClass system. For example, a name like "Joe Student" could be shortened to "student" or "joes." <b>This is the username the user must use in conjunction with their current password to log on to the TopClass server.</b>
Student ID	Can be used to enter an existing Student ID (optional).

<b>Item</b>	<b>Meaning</b>
Type	A pop-up menu from which you can select whether this user is a student, instructor or administrator.
Password	The password for the user.
Verify	The user's password must be entered a second time to ensure that the password was entered correctly.
Select Language	Select the language to be used for this student.

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Beside the Username field there are two buttons:

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<b>Button</b>	<b>Meaning</b>
Find	If a user with the username entered in the Username field exists, their details will be displayed. If the user does not exist, then the Create/Edit User page will display a title saying "User <username> could not be found."
List Users	The List Users button will display a list of all current users. Click on any username on this list to take you to the detailed information on that user, allowing you to edit it as necessary.

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**Note:** It may be convenient to create a guest account, for example, to allow a visitor or group of users to access some material as a student without creating an entire class and giving every user their own account. In this situation, set the privileges option to not allow the password to be changed. For more information, see "Instructor Privileges" on page 78.

## Class Information

The screenshot shows a 'Class Information' section. It contains two rows of controls. The first row is for enrolling in a class, with a dropdown menu for 'Enroll in Class:' and labels for 'Class', 'Instructor', and 'Remove From Class'. The second row shows the user is currently enrolled in 'English Literature Class', with a dropdown menu for 'Instructor' and a 'Remove' button.

The Class Information section of the User Information page displays a table showing the classes the student is enrolled in (if any) and an option to enroll the user in another class. The items displayed are:

Item	Meaning
Enroll in Class	A pop-up menu displaying a list of all classes available on this TopClass server. To enroll a student in a class, select a class from the list and click the "Modify" button at the bottom of the page.
Class	The name of the class.
Instructor	A pop-up menu displaying the instructors assigned to this class. The instructor selected is assigned to this particular student.  <b>Note:</b> This item is only displayed for student users.
Remove	Removes the student from the class.

Note that assigning users to classes only applies to students and instructors. The Class Information section for Administrators will always be blank.

## Privileges

<b>Privileges</b>	
Allow User To Change Password	Yes <input type="button" value="v"/>
Account	Enabled <input type="button" value="v"/>
Must change password <input type="button" value="v"/>	
<b>Instructors Only</b>	
Users	None <input type="button" value="v"/>
Classes	No <input type="button" value="v"/>
Units	No <input type="button" value="v"/>
Coursework Personalisation	None <input type="button" value="v"/>
Create/Edit Announcements	None <input type="button" value="v"/>
Delete Discussion Items	None <input type="button" value="v"/>
Allow Database Maintenance	No <input type="button" value="v"/>
Allow Import Export	No <input type="button" value="v"/>

The first privilege option controls whether or not a user is allowed to change their password. If this option is set to "No," then the Change Password option does not appear on that user's Utilities page. This option applies to all users irrespective of type.

## Instructor Privileges

The next section is labeled "Instructors Only." Students are not permitted any of these security privileges, and administrators have them all by default. Therefore the settings in this section affect only instructors. The options available are as follows:

Item	Meaning
Edit Users	<p><b>All:</b> This instructor can create and edit users without restriction.</p> <p><b>Own:</b> This instructor can only edit existing users who are assigned to one of their classes.</p> <p><b>None:</b> No creation and editing of users is permitted.</p>
Edit Classes	<p><b>Yes/No:</b> Controls whether this instructor is permitted to edit and create classes. If this privilege is set to "No" the "Edit Classes" option will not be displayed on the instructor's Utilities page.</p>
Edit Units	<p><b>Yes/Controlled/No:</b> Controls whether this instructor is permitted to edit and create units and courses. If this privilege is set to "No" the "Edit Units" option will not be displayed on the instructor's Utilities page. If it is set to "Yes," the instructor can edit all units. If set to "Controlled," the instructor can only edit units to which he has been assigned rights.</p>
Coursework Personalization	<p><b>All Students:</b> This instructor is permitted to modify the coursework of any student.</p> <p><b>Own Students:</b> This instructor is permitted to modify coursework only for students assigned to them.</p> <p><b>Classes:</b> This instructor is also allowed to modify coursework at the class level (that is, which will affect every student in the class).</p> <p><b>None:</b> This instructor is not permitted to change coursework assignment for any users or classes.</p>

<b>Item</b>	<b>Meaning</b>
Create/Edit Announcements	<p><b>All Classes:</b> This instructor is permitted to create and edit announcements for all classes.</p> <p><b>Own Classes:</b> This instructor is permitted to create and edit announcements only for classes to which they are assigned.</p> <p><b>None:</b> No announcements can be created or edited. The "Post Announcement" and "Edit Announcement" buttons will not be displayed in the toolbar when this instructor is in the Class Announcements area.</p>
Delete Discussion Items	<p><b>All Classes:</b> This instructor is permitted to delete any message posted to any discussion list.</p> <p><b>Own Classes:</b> This instructor is permitted to delete only messages posted to classes to which they are assigned.</p> <p><b>None:</b> No messages can be deleted by this instructor. The "Delete Message" button will not be displayed when this instructor is in the Discussion List area.</p>
Allow Database Maintenance	<p><b>Yes/No:</b> Controls whether this instructor is permitted to access the "Database Maintenance" facility as described in chapter 7. This is a powerful facility which provides access to all aspects of your server and should be assigned with caution. If this privileges is set to "No" the "Database Maintenance" option will not be displayed on the instructor's Utilities page.</p>

<b>Item</b>	<b>Meaning</b>
Allow Import/Export	<b>Yes/No:</b> Controls whether this instructor is permitted to export courses as files and to import files to the database. If this privileges is set to "No" the "Import Courses" and "Export Course" options will not be displayed on the instructor's Utilities page.

There are five buttons at the bottom of the page. These are:

<b>Item</b>	<b>Meaning</b>
Create	Create a new user as specified.
Modify	Change the specified settings of an existing user.
Delete	Permanently remove an existing user from the system.
Reset	If a new user is being created and Reset is pressed the contents of all text boxes are cleared. If an existing user is being edited then pressing Reset will roll back the current settings to their pre-edit values.
Blank	Erases all values in all fields.

## **WORKING WITH CLASSES**

Classes in TopClass are groupings of students and instructors. Both students and instructors can be assigned to more than one class. Each class has associated with it a set of course material which is automatically assigned to all students in the class. Any changes made to the class coursework page immediately affect all students.

For example, if you add an additional unit of material to the class coursework page, then it is immediately available to all students, even those currently logged on, and will be displayed when they next view the coursework page for that class.

Classes are provided to organize the large number of students and instructors you may have on one TopClass server into manageable units. Each class has associated with it:

- A set of instructors, including one default instructor
- A set of course material
- A Class Announcements area
- A Discussion List area

The following section discusses how you create and edit classes in TopClass.

### **Creating and Editing Classes**

#### **❖ To create/edit a class:**

1. On your Home Page, select Utilities.
2. On the Utilities Page, select Create/Edit Classes.



The screenshot shows a web form titled "Create/Edit Class" with a header image of a hand pointing at a screen. The form is divided into three main sections:

- Class Information:** Contains a "ClassId" input field, a "Find" button, and two buttons labeled "ListMembers" and "ListClasses". Below this is a "Name:" label followed by a text input field.
- Instructor Information:** Features an "Add Instructor" dropdown menu currently set to "None". Below the dropdown is the text "Name Default Remove From Class".
- Default Course Material:** Includes an "Add" button and a "Preview" button. At the bottom of this section are four buttons: "Create", "Modify", "Delete", and "Reset".

At the very bottom of the form, there are four circular icons: a globe, a hand, a person, and a question mark.

The Create/Edit Class page allows the creation of new classes within the TopClass system. The Create/Edit Class page is divided into three main areas: Class Information, Instructor Information and Default Course Material. We will look at each section in turn.

## Class Information

The Class Information section has two items:

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<b>Item</b>	<b>Meaning</b>
ClassId	TopClass's internal reference for a class. It is recommended that the administrator use a short acronym for a ClassId, for example, IF for The Irish Famine. The TopClass admin/Instructor generates this.
Name	The title given to the class. This title appears on all pages referencing this class.

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Three functions are available on buttons which reference the ClassId. These are:

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<b>Button</b>	<b>Meaning</b>
Find	Displays the information on the class with the specified ClassID, if it exists. Otherwise, a message "Class <classname> Does Not Exist" is displayed.
List Members	Displays a list of students and instructors assigned to the class with the specified ClassID, if it exists.
List Classes	Displays a list of all classes registered on this TopClass server. Selecting a class displays the Create/Edit Class page for that class.

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## Instructor Information

The Instructor Information section lists the instructors currently assigned to this class and provides a method for adding an additional instructor.

The first item is the Add Instructor section:

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<b>Item</b>	<b>Meaning</b>
Add Instructor	A pop-up menu displaying a list of all instructors available on this TopClass server. Selecting an instructor from the list and clicking the "Modify" button at the bottom of the page assigns this instructor to that class.

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The next section contains a table listing the instructors currently assigned to the class along with a number of options for each:

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<b>Item</b>	<b>Meaning</b>
Name	The name of the instructor, followed by their username in brackets.
Default	This can only be set for one of the instructors listed. The selected instructor is the instructor automatically assigned to any new students added to this class.
Remove	Clicking the Remove button removes this instructor from the class. Note that the instructor user is not deleted but merely removed from the current class.

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## Default Course Material

The default course material is the set of material which is automatically assigned to any students assigned to this class. Any changes made to the default course material immediately affect the material available to all students in the class.

An administrator or instructor with the appropriate privileges can still make individual changes to a student's coursework page, but the default course material section of the Create/Edit Class page affects all students.

Only the top level ULMs are listed. More than one top level ULM can be added.

The ULMs are listed in a table with the following headings:

<b>Item</b>	<b>Meaning</b>
Page No.	The internal reference for this ULM.
Title	The name of the ULM.
Type	Whether the selected ULM is a unit, page or test.
Remove	Clicking the Remove button removes this ULM from the default course material. Note that the ULM is not deleted from the database but merely removed from the current class.

In addition there are two buttons available in this section:

<b>Button</b>	<b>Meaning</b>
Add	Allows you to browse the database of course material and select a ULM to add to the default course material.
Preview	Displays a preview of how the default coursework page for any student assigned to this class will look.

At the bottom of the page there are four buttons. These are:

<b>Button</b>	<b>Meaning</b>
Create	Create a new class with the specified details.
Modify	Change the current settings of an existing class.
Delete	Permanently remove an existing class from the system.
Reset	If a new class is being created and Reset is selected, the contents of all text boxes are cleared. If an existing class is being edited, then pressing Reset will roll back the current settings to their pre-edit values.

## **BATCH USER REGISTRATION**

Everyone who uses TopClass must have a TopClass account. If you are adding a large number of users, you may wish to create TopClass users from existing data, such as a class database or list of instructors. Rather than creating TopClass user profiles individually, you can use Batch Registration to create TopClass accounts for multiple users. You can also use Batch registration to add a large number of existing users to a class without the need to create new accounts by selecting the "Enrollment names" option, described below.

Batch User Registration will create an account for a user, assign them a password, add them to a class and assign an instructor to them.

A basic source file will include a list of students, giving their first and last names. TopClass will then automatically generate a username and a password for each student. If you wish to control the usernames and passwords, your source file can include these additional fields.

The Batch User Registration feature allows you to create several user accounts quickly without a source file, by entering a list of the details for the accounts.

❖ **To register multiple users:**

1. From the Home Page, click Utilities.
2. From the Utilities screen, click Create/Edit Users.
3. From the Create/Edit Users screen, click the Batch Registration button. The Batch User Registration screen is displayed:



## Batch User Registration

### Class Information

Add users to:

User type:

Assign Instructor:

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### Source File Format

Format:

Additional Fields:

Name Separator:  Other...:

Field Separator:  Other...:

File:

Input Name List Text Area

4. Complete the details as follows:

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### Class Information

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Add users to	Select the Class to which you wish to add the new users.
User Type	Select whether the users are students or instructors.
Assign Instructor (List)	Click this button and choose an instructor to assign to the new users. Choose Rotate to distribute the new users between all instructors assigned to that

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class.

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### Source File Format

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Format	Specify the format of the names in the source file to be used to create the new users. For example: First name, last name; Last name, first name.  Use the Enrollment usernames option to batch register existing users for a class.
Additional Fields	Specify what other fields (if any) are included in the source file.
Name Separator	Specify the delimiter used in the source file to separate the first name from the last name.
Field Separator	Specify the delimiter used to separate the username and password (if supplied in the source file).
File	Enter the path to the list file to be used, or click the browse button and select the file.
Text Area (optional)	Enter the details for accounts you want to generate. The entries in this list should follow the format specified above.

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### Additional System Output Options

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If your source file does not include either user names or passwords, TopClass will automatically generate them according to the following settings:

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### Additional System Output Options

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User name scheme	Select how you want the user names to be composed.
Dealing with duplicate usernames	Select how you want TopClass to handle duplicate user names by choosing to append a letter or number to the names.
Password length	Enter the number of characters for the password. Passwords comprise of alphanumeric characters up to a maximum of 8 characters.
Password scheme	Select whether you want password to be composed of numbers, letters or both.

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- Click the Register button to begin the batch registration process.
- When the registration process is completed, TopClass will send a mail to the administrator with details of the accounts created.

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**Note:** You can also access the Batch Registration feature from the Create/Edit Class screen.

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### Troubleshooting Batch User Registration

If you encounter difficulties using the Batch User Registration feature, check the following list for answers to common problems:

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<b>Error Message</b>	<b>Description</b>
Instructors had to be revised as you changed the class in the last form	You clicked Register after changing the class from the last form so that the list of instructors is wrong. The correct instructor for the class needs to be assigned.
There are no names to be processed	You clicked Register with a form that had no source file specified and no names in the text area.

Cannot assign  
instructors to users  
specified as  
instructors

You clicked List Instructors after  
specifying the user type to be created as  
Instructor.

---

## BATCH DELETING

If you want to delete a large number of students or instructors for a class, you can use the Batch Delete feature. You can use this feature to remove students and instructors from individual classes or from the TopClass system.

### ❖ To delete multiple users:

1. From the Home Page, click Utilities.
2. From the Utilities screen, click Create/Edit Class.
3. Select the Class you wish to modify.
4. Click Batch Delete. The Batch Delete screen is displayed:

5. Enter the options you require and click Delete to continue. The options available are described below:

---

<b>Option</b>	<b>Description</b>
Classes	Select the class from which you wish to

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	delete students or instructors
Remove Students	Select whether to remove all students from this class
Remove Student Users	Select whether to remove the students from the system as well as the selected class. Choose Last Class to remove the user from the system if they are being removed from the only class they are assigned to.
Remove Instructors	Select whether to remove all instructors from this class.
Remove Instructor Users	Select whether to remove Instructors from the system as well as the selected class. Choose Last Class to delete the Instructor from the system when they are removed from their last remaining class.
Text Box	Enter a list of usernames to be deleted.

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# Chapter 7: Database Maintenance

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## Important Note

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**Be sure to make a backup of your  
"default.tc" file before proceeding.**

It should be noted that dealing with the TopClass database is a specialized task and should not be undertaken lightly. Any changes made can have serious implications.

**Use of the Database Maintenance function is not recommended and should not be required. Only experienced users should attempt to use this option.**

If you require any information or advice, other than that contained in these manuals, please contact Technical Support.

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This chapter provides technical information about the TopClass Database. The following topics are covered:

- Checking the Database
- Database objects

## CHECKING THE DATABASE

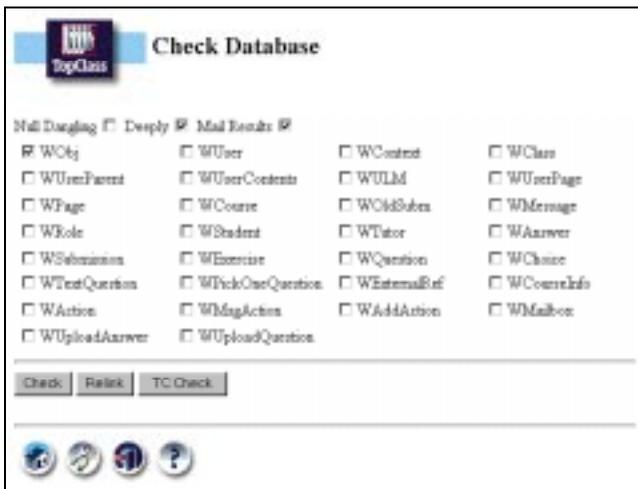
The check database feature allows you to perform two types of check on the database.

The following table describes the database checks available:

Check	Description
Check	Performs a low-level check of database integrity.
TC Check	Performs a

### ❖ To check your database:

1. From the Home Page, click Utilities
2. From the Utilities Screen, click Database Maintenance
3. Scroll to the bottom of the list and click Check Database. The Check Database screen is displayed:



4. Select the objects you wish to check and click the button for the check you wish to perform. A screen showing the results of the check is displayed. Select the Mail results

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check box if you want the results of the check to be mailed to the administrator.

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Note: Performing checks on a large database may take several minutes.

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## DATABASE OBJECTS

The Database Maintenance page is accessed by clicking on the Database Maintenance icon or anchor text on the Utilities page. This page allows direct access to the TopClass data stores.

Each list begins "List of" and is followed by a number. For example, the very first item is "List of WObj XX" where XX is the number of that object type in the database.

Each of these sections is discussed in detail in the following sections, with the exception of WObj which is a combined list of all other object types.

The lists available are:

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List of	Description
Wobj	A combined list of every object in the database.
Wuser	User information.
Wcontext	A set of WStudent, WInstructor and WClass objects.
Wclass	Class Information.
WuserParent	Stores the inverse of the WUserConents page and is used to move up through the TopClass hierarchy of courses.
WuserContents	Stores information on the context of a particular user.
WULM	Stores information on ULMs. Comprised of WCourse, WPage and WExercises objects.

---

<b>List of</b>	<b>Description</b>
WuserPage	Information relating the a number of users to a class.
Wpage	A TopClass Course page.
Wcourse	A TopClass Unit.
WoldSubm	Obsolete and is used for backwards compatibility.
Wmessage	Messages and postings.
Wrole	A set of WStudent and Winstructor objects.
Wstudent	Provides the additional information for a student over and above the standard Wuser information.
Winstructor	Provides the additional information for an instructor over and above the standard WUser information.
Wanswer	Stores answers given in response to tests by students.
Wsubmission	Stores information on submissions recorded by instructors.
Wexercise	A test page comprised of a series of questions.
Wquestion	Stores information on questions. Comprised of WTextQuestions, WPickONEQuestions and WChoice objects.
Wchoice	Possible responses for WTextQuestions and WPickOneQuestions objects.
WtextQuestion	Text questions.
WpickOneQuestion	Multiple choice questions.

<b>List of</b>	<b>Description</b>
WExternalRef	Stores information on externally referenced files. Used by the import and export course functions.
WcourseInfo	Stores general information on a course. Used by the import and export course functions.
Waction	A set of WMsgAction and WAddAction objects.
WMsgAction	Stores individual "Notify Instructor" actions.
WAddAction	Stores individual "Add Coursework" actions.

To edit any of the objects stored in its table simply click on the object's anchor text in the appropriate list.

## **WUSER <NUMBER>**

The WUser object has eight slots and four links. The <Number> is a key field and differentiates the separate invocations of WUser objects. These are held as records in the WUser table. The <Number> is a TopClass generated integer. It is not only unique within WUser records but throughout all records in any table. The items are:

<b>Item</b>	<b>Meaning</b>
UserName	The reference name for a user, e.g. joes.
RealName	The user's full name, e.g. Joe Student.
Type	The internal TopClass identifier for the user type.

<b>Item</b>	<b>Meaning</b>
NewMail	Used to indicate if the user has received any mail yet to be read.
NewSub	Used to represent new submissions. This can have two meanings depending on the type of user. If the user is a student this is used to represent the fact that a submission made has been corrected and returned from your instructor. If the user is an instructor it is used to indicate that a student has made a submission which will need to be corrected and returned. In both cases the new icon will be displayed.
Password	Used to store the user's password.
Admin	An internal TopClass number used to represent the administration options which have been assigned to a user and determines the types of pages which the user can access. If the current user is not an instructor this number will be 8190. If the current user is an instructor then the number will represent the administration options allocated to the instructor.
Lang	A number used to represent the current language setting for the current user. This is set to 0 for the default language.
Pages	Each of the WUserPages accessible for this user.
Students	The WStudent pages accessible to this user. If the user is a student then only one page, their own, can be accessed. For instructors and administrators the number listed will depend on the students which have been assigned.

<b>Item</b>	<b>Meaning</b>
Instructors	The WInstructor pages accessible to this user. Each student should have at least one instructor assigned to at least one class. Students can be members of many classes and can have many instructors.
Submissions	The WSubmission pages accessible to this user. Students are assigned tests by their instructors and are required to submit them when complete.

## **WCONTEXT**

A base class comprised of WStudent, WInstructor and WClass objects.

## **WCLASS <NUMBER>**

This page is used to store information necessary to represent classes in TopClass.

<b>Item</b>	<b>Meaning</b>
SubContexts	Pages in the TopClass hierarchy below this class, i.e. pages which are a dependent on the class. For example, instructor and student pages are dependent on the class.
SuperContext	Pages in the TopClass hierarchy above this class.
ShortName	The name used to identify this class in TopClass, for example, KIN1 for the class Chemical Kinetics I.
LongName	The full name of the class, for example, "Chemical Kinetics I."

<b>Item</b>	<b>Meaning</b>
Pages	A pointer to a WUserPage and is used to indicate the number of users assigned to this class.
Students	A list of the student pages assigned to this class.
Instructors	A list of the instructors pages assigned to this class.

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## **WUSERPARENT**

This is the inverse of the WUserConents page and is used to move up through the TopClass hierarchy of courses. The WUserContents page has the following attributes:

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<b>Item</b>	<b>Meaning</b>
Context	A list of the course contents as redirected to take into account the current user. This is essentially a pairing of the course material with the people receiving the material. A context can be NULL, a class reference or a student reference. If null then students will automatically receive all the pages which have been assigned to others in their class. As a student can be part of more than one class a class reference can be given to indicate which class members will automatically inherit what material. Finally, students can receive material not available to other members of their class and as such their context is unique.
Parent	A reference to the ULM which acts as an owner of this context.

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## **WUSERCONTENTS**

This page is used to store the context of the current user and has two attributes:

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<b>Item</b>	<b>Meaning</b>
Context	A list of the course contents as redirected to take into account the current user. This is essentially a pairing of the course material with the people receiving the material. A context can be NULL, a class reference or a student reference. If null then students will automatically receive all the pages which have been assigned to others in their class. As a student can be part of more than one class a class reference can be given to indicate which class members will automatically inherit what material. Finally, students can receive material not available to other members of their class and as such their context is unique.
Units	A link to the pages referenced by this context.

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## **WULM <NUMBER>**

This page is used to store information on each of the units of learning material which exist in TopClass. These are WCourse, WPage and WExercise.

## WUSERPAGE

This page is accessed from the WClass page and is used to store information relating to the number of users allocated to this class. Its attributes are as follows:

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<b>Item</b>	<b>Meaning</b>
Number	The number of users allocated to this class.
Newly	A flag used to indicate that a new user has been allocated.

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## WPAGE <NUMBER>

This page represents a unit of course material in the TopClass system. It has the following attributes:

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<b>Item</b>	<b>Meaning</b>
PageNo	The system id number assigned to this page by TopClass. It is used as a unique reference to this page.
Title	The name given to this page as its title.
Type	Obsolete and is used for backwards compatibility with TopClass 1.0.2 courses. It will be removed in the next release.
Background	The background color of image file for this page.
TextColor	The text color for this page.
ActiveLink	The active link color for this page.
VisitedLink	The visited link color for this page.
Parents	A link to the pages which are a parent to this page in the TopClass hierarchy.

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Parent	Obsolete and is used for backwards compatibility with TopClass 1.0.2 courses. It will be removed in the next release.
Text	The HTML data used to represent the contents of this page when displayed.

---

## **WCOURSE <NUMBER>**

This page is used to store information about course pages in the TopClass system. The pages have the follow properties:

---

<b>Item</b>	<b>Meaning</b>
PageNo	The system id number assigned to this page by TopClass. It is used as a unique reference to this page.
Title	The name given to this page as its title.
Type	Obsolete and is used for backwards compatibility with TopClass 1.0.2 courses. It will be removed in the next release.
Background	The background color of image file for this page.
TextColor	The text color for this page.
ActiveLink	The active link color for this page.
VisitedLink	The visited link color for this page.
Parents	A link to the pages which are a parent to this page in the TopClass hierarchy.
Parent	Obsolete and is used for backwards compatibility with TopClass 1.0.2 courses. It will be removed in the next release.
Ucontents	A reference to the WUserContents page.
Units	Obsolete and is used for backwards compatibility with TopClass 1.0.2 courses. It will be removed in the next release.

---

## WOLDSUBMS

**WoldSubms** is obsolete and is used for backwards compatibility with TopClass 1.0.2 courses. Its original inclusion was as an upgrade facility from TopClass 1.0.2 to TopClass 1.1. It will be removed in the next release.

## WMESSAGE <NUMBER>

This page is used to access the stored information relating to messages which TopClass passes from one page to another. These are usually created through some user interaction, such as, pressing the 'Submit' button to create or change a page of course material. Each of these messages will be stored in the **Message Log** and can be used for system use, performance and diagnostic purposes. A message has the following attributes:

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Item	Meaning
Reference	A unique system id created by TopClass to identify this message.
Sender	The short name of the user who sent the message.
Type	The type of message and is used to differentiate between announcements and postings to the discussion lists.
Receiver	The user name of the user to whom the message was sent.
SenderName	The long name of the user who sent the message.
ReceiverName	The long name of the user to whom the message was sent.
Subject	The subject of the message.
Body	The text body of the message and is in HTML.
Date	The date the message was issued.

<b>Item</b>	<b>Meaning</b>
Time	The time on the date at which the message was issued.
URL	A cross-reference to the page the user was on before the message was created.
Status	A flag used for the auto purging of messages. A message may be marked for deletion and removed from the message lists but its data has not yet been deleted. This flag indicates that the message is marked for deletion and on the next purge it will be deleted.

## **WROLE**

A parent class comprised of WStudent and WInstructor objects.

## **WSTUDENT**

This page is accessed from WClass page and is used to store information relating to the student in the TopClass hierarchy. It does not provide any information pertaining to the identity of the student but provides the context for the student within TopClass.

<b>Item</b>	<b>Meaning</b>
SubContexts	The pages in the TopClass hierarchy which are dependent on the student.
SuperContext	The pages in the TopClass hierarchy of which the student is a dependent.
Instructor	A list of the instructors who instructor this student. There should only be one instructor per class in which the student is a member.
User	A reference to the WUserPage which identifies the student.
Class	A list of all the classes in which the student is a

<b>Item</b>	<b>Meaning</b>
	member.

---

---

## **WINSTRUCTOR**

This page is accessed from WClass page and is used to store information relating to the instructor in the TopClass hierarchy. It does not provide any information pertaining to the identity of the instructor but provides the context for the instructor within TopClass.

---

---

<b>Item</b>	<b>Meaning</b>
SubContexts	The pages in the TopClass hierarchy which are dependent on the instructor.
SuperContext	The pages in the TopClass hierarchy of which the instructor is a dependent.
Students	A list of the students assigned to the instructor.
User	A reference to the WUserPage which identifies the instructor.
Class	A list of all the classes instructed by this instructor.

---

---

## **WANSWERS**

This page is used to store information on each of the answers given in response to questions which exist in TopClass. The page contains the following attributes:

---

---

<b>Item</b>	<b>Meaning</b>
Response	The answer text as entered by the student and is stored in a text entry box.
Score	The number of points allocated to the student for the given response.

---

Comments	The body of text issued to the student in response to the answer given when the question has been auto corrected.
Question	A pointer to the list of questions for which this is an answer.
Submission	A pointer to the list of submissions upon which this is an answer to a question posed.

---

## WSUBMISSIONS

This page is used to store information on each of the submissions made by students in response to tests set by their instructors. The page contains the following attributes:

---

Item	Meaning
Score	The actual score achieved by the student as a result of the answers given to the posed questions.
Username	The name of the student who made the submission.
Reviewer	The name of the instructor who corrected the submission or Auto Correct indicating the fact that TopClass automatically corrected the test.
Status	A flag indicating whether the submission has been corrected and/or returned to the student.
Date	The day, month and year the submission was made by the student.
Time	The hours, minutes and seconds of the date on which the submission was made by the student.
ReviewDate	The day, month and year the submission was corrected and returned to the student.

<b>Item</b>	<b>Meaning</b>
ReviewTime	The hours, minutes and seconds of the date on which the submission was corrected and returned to the student.
Answers	A list of pointers to answers that have been made to the questions posed in the submission.
Test	A pointer to the test page upon which this submission is dependent.
User	Obsolete and is used for backwards compatibility with TopClass 1.0.2 courses. It will be removed in the next release.

---

---

**WEXERCISE <NUMBER>**

This page represents a test page in the TopClass system. It has the following attributes:

<b>Item</b>	<b>Meaning</b>
PageNo	The system id number assigned to this page by TopClass. It is used as a unique reference to this page.
Title	The name given to this page as its title.
Type	Obsolete and is used for backwards compatibility with TopClass 1.0.2 courses. It will be removed in the next release.
Background	The background color of image file for this page.
TextColor	The text color for this page.
ActiveLink	The active link color for this page.
VisitedLink	The visited link color for this page.
Parents	A link to the pages which are a parent to this page in the TopClass hierarchy.
Parent	Obsolete and is used for backwards compatibility with TopClass 1.0.2 courses. It will be removed in the next release.
Points	The total number of points attainable on this test.
Number	The required number of questions to be answered from the set supplied in this test.
Resubmit	The number of times that this test can be resubmitted by a student.
AutoCorrect	The value of the toggle button which determines if the questions are to be answered automatically by TopClass.

<b>Item</b>	<b>Meaning</b>
Questions	Links to the question pages which have been created as children to the test page in the TopClass hierarchy.
Submissions	A link to the submissions of this test page to the instructors or to the TopClass system for automatic correction.

---

---

## **WQUESTIONS**

This page is used to store information on each of the questions which exist in TopClass. These are WTextQuestion, WPickOneQuestion and WChoice.

## **WCHOICE**

This page is used to store information relating to the possible responses which can be made to a WTextQuestion. The page's attributes are:

---

---

<b>Item</b>	<b>Meaning</b>
Label	A possible answer which may be given.
Points	The number of points allotted for this answer .
Comments	A reply which is given to the student, when the submission is returned, as a response to this particular answer.

---

---

---

**WTEXTQUESTION**

---

<b>Item</b>	<b>Meaning</b>
Title	The name of the question which has been assigned to the question by its creator. It is this title which will appear as anchor text in any lists which reference this question.
Points	The number of points which have been assigned to this question. It is the maximum number of points which can be attained if the answer is 100% correct.
Before	The body of text used to construct the question.
After	Obsolete and is maintained for compatibility with TopClass 1.0.2 where separate text sequences could appear before and after the HTML text body of the question. This will be removed in the next release.
Choices	A list of pointers to WChoice pages which are used to store the possible choices of answer which may be given to the text question.
Test	A list of pointers to WExercise pages upon which this question resides.
Answers	A list of pointers to WAnswer pages. These are a store of the answers submitted as a response to the question posed.
Width	The width of the text entry box as it is displayed on the test page and into which the answers to the posed question will be entered.
Height	The height of the text entry box as it is displayed on the test page and into which the answers to the posed question will be entered.

---

## WPICKONEQUESTION

---

---

<b>Item</b>	<b>Meaning</b>
Title	The name of the question which has been assigned by its creator. It is this title which will appear as anchor text in any lists which reference this question.
Points	The number of points which have been assigned to this question. It is the maximum number of points which can be attained if the answer is 100% correct.
Before	The body of text used to construct the question.
After	Obsolete and is maintained for compatibility with TopClass 1.0.2 where separate text sequences could appear before and after the HTML text body of the question. This will be removed in the next release.
Choices	A list of pointers to WChoice pages which are used to store the possible answers which may be given to the posed question.
Test	A list of pointers to WExercise pages upon which this question resides.
Answers	A list of pointers to WAnswer pages. These are a store of the answers submitted as a response to the question posed.
Correct	A number used to indicate the index of the correct answer in the supplied list.
PresType	A flag used to indicate the presentation style for the pop-up question. This can be either radio buttons or pop-down menu.

---

---

**WEXTERNALREF**

This object type is reserved for use by plug'n'play course files and should not be created or edited using Database Maintenance.

**WCOURSEINFO**

This object type is reserved for future use.

**WACTION**

Used to store objects related to actions performed in response to tests which are automatically graded. Comprised of WMsgAction and WAddAction objects.

**WMSGACTION**

---

---

<b>Item</b>	<b>Meaning</b>
Title	The name of the action
Compare	Whether the threshold value is to be greater or less than the student's score.
Threshold	The value the student score is compared to.
Test	A pointer to the test to which this action belongs.

---

---

## **WADDACTION**

---

---

<b>Item</b>	<b>Meaning</b>
Title	The name of the action
Compare	Whether the threshold value is to be greater or less than the student's score.
Threshold	The value the student score is compared to.
Test	A pointer to the test to which this action belongs.
What	A pointer to the material to be appended to the student's coursework.
Where	A pointer to the ULM to which the additional material will be appended.

---

---

---

# Appendix A: Authoring in HTML

## INTRODUCTION

This chapter covers the following topics:

- Overview
- History
- Basic Tags
- HTML Documents
- HTML Design Packages
- HTML Resources

### Overview

This section is not intended to teach you everything you'll ever need to know on HTML for two reasons. Firstly, there are many books on the market devoted entirely to HTML and secondly because one section is enough to introduce the basics of how to write HTML but it would take an encyclopedia of books to begin to scratch the surface of good HTML page design. Creating HTML pages is like any other form of graphic design - a learned skill. Like most skills the best way to learn is by doing and by watching an expert.

You are encouraged to take the fundamentals outlined here and begin creating your own pages immediately. This will give you a great sense of satisfaction and you'll discover that the basics really are quite simple to master. You'll also discover however, that

building an informative and aesthetically pleasing page is not easy. Indeed these two goals often conflict and the sign of a genius is a page designer who can effectively do both.

Here the Internet provides another great advantage though. Not only can you surf the Web and get great exposure to some of the best and worst page design around (sometimes on the same site!) but you can also use the "View Source" command in your Web browser to see just how these pages were created. Do remember however that items such as graphics and background patterns are almost certainly the copyright of someone - so if you plan to use anything you come across, be sure to get permission first.

## **HTML HISTORY**

One of the biggest problem areas on the Web today is the notion of HTML "standards." Due to increased proliferation and commercialization of the Internet (which is not in itself a bad thing) browser companies have attempted to differentiate themselves by implementing their own custom tags. Ostensibly this was done to address some of the shortcomings of HTML in terms of giving page designers more control over the formatting of documents and what the end user sees. In practice it can make life for the page designer quite difficult because if your document relies on tags implemented by one particular browser but not another, users not using the browser your pages were designed for will not see the page as you intended and in fact may not see anything at all. From the browser manufacturers point of view, this encourages users to use one browser over another but the reality is that the market is simply too big for one browser to dominate completely. We are now beginning to see this with the Netscape/Microsoft wars.

On the other hand, a sufficient number of Browsers implement a sufficient cross section of these new tags that it no longer as big an issue as it was - though it is bound to resurface again in the future. Bearing all this in mind then, it is helpful to take a brief tour of the history of HTML to understand how we got to where we are today.

The first official specification of HTML was actually called 2.0. This was designed to supersede a number of informal version that we're floating around and consolidate everything into one document, as HTML has actually been in use by the World Wide

Web project since 1990. HTML 2.0 was the basis on which all the initial Browsers were built and corresponds with approximately the middle of 1994.

HTML is an application of the Standard Generalized Mark-up Language, an international standard for formally structuring documents based on a defined document type definition or DTD. The DTD for HTML in fact formally defines valid HTML syntax. In practice today very few HTML authoring packages or tools strictly adhere to this DTD (in no small part due to the proliferation of new tags not in the standard).

HTML is actually a subset or specific instance of SGML, the Standard Generalized Mark-up Language. SGML is a powerful delivery-independent mark-up language for structuring documents in a verifiable but delivery independent way. SGML uses DTD or document type definitions which define rules for how a document should be structured. Strict HTML is actually an implementation of SGML with a specific DTD.

The HyperText Mark-up Language was designed as a simple cross-platform method for marking or tagging documents in a display-independent fashion. The standard is well defined (though it sometimes appears otherwise) and open. This means that any browser, or more generally any piece of software, can be written which understands the tags and can display the document in some fashion. This is in contrast to the proprietary formats used by most desktop applications such as Microsoft Word or Adobe Pagemaker, where the format is specific to the application and generally unreadable by other applications (though of course some translators do exist which work to some extent).

Given that HTML was designed with both openness and cross-platform delivery in mind, it is no real surprise that the tagging structure is quite simple. Essentially elements of a document are either enclosed in HTML tags or a particular tag appears where an element is to be inserted.

### Structure of a Tag

All HTML tags occur in angle brackets like this: <some tag>. The first important thing to note is that there should not be any white space between the opening bracket and the tag itself or it will not be recognized by the HTML interpreter in your browser.

The next thing to note is that some tags have additional parameters or pieces of information. Sometimes specifying this additional information is voluntary, while in other cases it is required.

For example, the tag <br> stands for line break and forces the following text down onto the next line. It does not require any additional parameters. The tag <img> specifies the placement of an inline image and though there are a number of optional tags, the "src" tag is required as it tells the browser where the image file is located. For example:

```

```

is a valid HTML tag indicating that an image which can be found at the path given in the "src" parameter should be inserted into the document. There are additional tags which we could optionally use such as specifying the height and width of the image (which speeds up formatting of the document in the browser) or some text which should be displayed if the image could not be loaded for some reason or the user had switched off auto-loading of image (which you might do if you are using a slow connection).

Another important point to note is that when a resource is embedded in a HTML document such as an image or hyperlink, no guarantee is implied by the tag i.e. there is no guarantee that the specified image or link actually exists. This can create problems with persistency of objects such as if someone moves or deletes a referenced image or even changes its name. There are some recommended procedures to help void this as well as tools to help find and fix these kinds of problems and we'll look at them a little later.

## Paired and Single Tags

Many, though not all, HTML tags occur in pairs like this:

```
<title>My Sample Title</title>
```

You'll notice that the end tag uses the keyword of the start tag but is preceded by a forward slash (/). Most tags associated with document formatting and basic structure occur in this way. Tags associated with embedded elements such as horizontal lines, images and so forth typically occur in isolation. For example:

```

```

The above tag places an image at the point in the document in which it occurs. (We'll look at the specifics of the tag later in this chapter so don't worry about it for now). The important point for now is that this tag does not have a corresponding end tag i.e. there is no `</img>` tag.

## A TYPICAL PAGE

There are a number of required tags, a basic template if you like, that every HTML document should have.

For the sake of completeness this section will explain what each of these tags does. However TopClass automatically generates a HTML wrapper for your pages up to and including the `<body></body>` tags. You should therefore **not** attempt to add these tags yourself. You can safely assume that TopClass will add them and in fact you may disrupt some functions of TopClass or generate unexpected results if you do.

The very first tag used in our template is actually a comment tag. It means that what follows, up to the closing `"-->"` should not be interpreted by the browser and simply ignored. It usually contains information of interest only to people (as opposed to Browsers). In this case it indicates the version of HTML this document conforms to.

## Document Head

The first and last tags in a document should be `<html>` and `</html>` which identify the document as a HTML one. The `<head>` and `</head>` tags indicate the header portion of the document. Within

this section are the <title> and </title> tags. The text between these tags is used as the title of the window when it is displayed in a Web browser. You should not use any other tags within the Title tags. Even if you do, they will be ignored.

## Document Body

The main bulk of your page should be placed between the <body> and </body> tags. The <body> tag has a number of optional parameters, the first of which determines the background color or pattern used:

```
<body bgcolor="#rrggbb">
```

or

```
<body background="/path_to_file/custom_background.gif">
```

You can optionally specify bgcolor or background but not both. bgcolor="#rrggbb" specifies a color to use as the background on the page. rrggbb is a hexadecimal color triplet. Hexadecimal as opposed to decimal is a numbering system that goes from 0 to f i.e. 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, a, b, c, d, e, f. The hexadecimal digit f is equivalent to the number 16 in decimal notation.

Each element of the triplet can be a number from 00 to FF inclusive or 0 to 255 in decimal. rr refers to the shade of red, gg of green and bb of blue. You may remember from your high school physics that any color can be represented by some combination of these three primary colors. In this case, there are 256 possibilities for each part of the triple or a total of  $256^3$  or 1,677,721 colors. Here are some of the most common color and their corresponding pairs:

Color	RGB Triplet
White	FFFFFF
Black	000000
Blue	0000FF
Green	00FF00
Red	FF0000

To look at an example, the following <body> tag causes the page to be drawn with a white background:

```
<body bgcolor="#FFFFFF">
```

The other form of the tag:

```
<body background="/path_to_file/custombackground.gif">
```

causes the browser to use the file found at the specified URL as the background pattern. The image will be tiled or repeated cross the page as necessary to fill it. This means you can use a very small image file (which will load quickly) and still achieve a very effective result. The image file can be any kind of image the browser is capable of displaying. In practice this means it should be a GIF file or perhaps a JPEG file.

The file could contain one solid color, though you only need a small sample. Why would you do this rather than specify the RGB triplet? If its a standard color such as white or black, you are better off specifying the triplet but for other colors the exact shade which will be drawn can be very dependent on the client's computer and the number of colors it can display. Therefore if it is important that people see a color exactly as it was intended, you may find it better to use a solid background pattern.

Given that we are changing the background pattern from the standard light gray, we also need a facility to alter the color of any text drawn on the page. It would be pointless changing the background to black only to have the browser draw all of the pages text in black. Fortunately there are a number of other parameters you can add to the <body> tag to alter these colors also:

---

---

<b>Parameter</b>	<b>Affects the color of</b>	<b>Standard Color</b>
TextColor	All normal text	Black
Link	Any unvisited hypertext links before the user clicks on them	Blue
ALink	Any hypertext link as the user clicks on them	Blue
VLink	Any previously visited link	Purple

---

---

All of these tags are used in the same way as the bgcolor tag i.e. with an RGB triplet such as TextColor="#ff0000" within a <body> tag will cause all normal text on that page to be drawn in red.

Here is a complete example:

```
<body bgcolor="#FFFFFF" TextColor="#000000"
Link="#00FF00" ALink="#00FF00" VLink="#0000FF">
```

This rather hideous example would give us a white background, with black text. Any unvisited links would be colored green, as would any link when we click on it. Finally any links we've visited before would be red.

Note that there was not really any need to specify the TextColor here as black is the default color for text and if you leave out any of the parameters, then the default or browser setting will be used.

After the opening <body> tag comes the main section of the page itself. Within this section there are very few formal rules as to how you use tags. The following sections look at some of the most common formatting tags you will use.

---

### **Note: Background & Colors in TopClass Pages**

To use a background color or pattern with a TopClass page you select the color from the pop-up menu or specify the hexadecimal triplet or file to use in the "Background" field. For text color you select the color

from the pop-up menu or select the "Other" option and enter the hexadecimal triplet in the text box for each of the Text Color, Link Color, Visited Link and Active Link items.

---

## Headers

The header tags allow us to break up document into sections and subsections. The tags are paired (i.e. there must be both an opening and a corresponding closing tag) and numbered. The numbers run from 1 to 6, with 1 being the most important header. More emphasis is given to the smaller number headers when displayed by a browser usually with a combination of bold face and a larger font size. For example

```
<h1>Chapter 1</h1>
  <h2>Section 1.1: Introduction</h2>
    In this section we'll examine the origins of life on this planet.
  <h2>Section 1.2: In The Beginning</h2>
    <h3>Section 1.2.1: Primordial Soup</h3>
      Before the existence of any complex organisms on the
      surface of the Earth...
    <h3>Section 1.2.2: The First Bacteria</h3>
      After approximately 45 million year...
```

Note that the indenting is my own and has no effect on the formatted document. It does make it easier for the author to see the structure when viewing or editing HTML directly. The above HTML might be displayed something like this:

### **Section 1.1: Introduction**

### **Section 1.2: In The Beginning**

#### **Section 1.2.1: Primordial Soup**

Before the existence of any complex organisms on the surface of the Earth...

#### **Section 1.2.2: The First Bacteria**

After approximately 45 million year...

Headers also automatically insert line breaks before and after them so there is no need to put <BR> or <P> tags around them.

---

**Note: Headers on TopClass Pages**

---

On TopClass pages you can use the "Header" option to use the page title as a header at any one of the 6 available sizes. You can also set this option to "None" and add a different header yourself or indeed as many headers as you like per page.

---

## Paragraphs and Line Breaks

Unlike the word processor you might be used to, HTML ignores carriage return and line feed characters. This is advantageous as the method used to indicate a new line varies from platform to platform. On the Macintosh it is a carriage return followed by a line feed, under DOS it is a linefeed only and under UNIX it is a carriage return only.

This means that if you take a document you have created in a text processor such as BBEdit or SimpleText and display it in a Browser, you will see it as one long paragraph without any line breaks.

The practical upshot of this from the point of view of formatting a document is that you must use special tags to indicate a new line or the end of a paragraph. The tags you will use are `<BR>` and `<P>`.

The `<BR>` tag forces the following text down onto the next line, but does not leave any line spacing. For example, here is some HTML and how it would be displayed:

```
Mary had a little lamb,<BR>Its fleece was white as snow
```

Mary had a little lamb

Its fleece was white as snow

The `<P>` tag is actually defined to occur as a paired tag i.e. with an opening and closing tag like this:

```
<P>Mary had a little lamb</P>
```

In practice, very few people hand writing HTML use it in this form, as it works quite well with just a `<P>` tag at the point where the new paragraph is required, like this:

```
Mary had a little lamb<P>Its fleece was white as snow
```

which would be displayed as:

Mary had a little lamb

Its fleece was white as snow

You can see that the difference between `<BR>` and `<P>` is that the `<P>` tag leaves additional line spacing between the paragraphs. Another difference is that no matter how many `<P>` tags you put in succession, the browser will treat it as only one, so even the following text:

```
Mary had a little lamb<P><P><P>Its fleece was white as snow
```

will be displayed exactly the same as the previous example.

Successive `<BR>` tags are treated individually, so if you need to leave more than a one line gap, you need to use the `<BR>` tag.

## Centering Text

By default all elements displayed are left justified i.e. lined up flush against the left side of the window. It is frequently necessary or desirable to center some items of a page. To turn centering on, you use the `<CENTER>` tag. To switch centering off and return to left justifying items, you use the `</CENTER>` tag.

The `<CENTER>` tags affects the display of all elements of a page from headers to text to images. For example:

```
<H1>Famous Nursery Rhymes</H1>
<CENTER>
Mary had a little lamb<BR>
Its fleece was white as snow<BR>
</CENTER>
```

might be displayed as follows:

Famous Nursery Rhymes

Mary had a little lamb

Its fleece was white as snow

Only the HTML code within the `<CENTER>` and `</CENTER>` tags will be centered when displayed in a browser.

## Horizontal Rules

In addition to breaking up documents with headers and line spacing, it can be useful to literally draw a line between the sections. The `<HR>` tag inserts a horizontal rule across the page. For example:

Mary had a little lamb<HR>Its fleece was white as snow  
would be displayed as:

Mary had a little lamb

---

Its fleece was white as snow

By default on most browsers, the line is drawn with a shaded 3D effect and with no extra space above or below it. You will need to use `<BR>` or `<P>` tags to add spacing around the rule if required.

There are some additional parameters you can add to the HR tag to give you a little more control over how it is displayed.

`<HR WIDTH=XX>` will display a horizontal rule that is XX pixels wide

`<HR WIDTH=XX%>` will display a rule that is the width of XX percent of the window

The `NOSHADE` parameter displays the rule without any shading effect.

For example:

`<HR WIDTH=50% NOSHADE>`

will display a rule that is half as wide as the window containing it and without any shading effect.

You can of course use the `<CENTER></CENTER>` tags around a `<HR>` tag to center your rule.

## Finishing Up

You should be sure to include corresponding closing tags for any paired tags which you use. Otherwise you will get unexpected results when you view the text in your browser. Examples include all of your text being displayed in the Header 1 format because you forgot to include a `</H1>` tag or all of the text being centered because you forgot to include a `</CENTER>` tag. It can be a very frustrating experience, especially for the neophyte HTML author to see some of the bizarre results that seemingly well structured HTML can cause. In the next section we look at some tools which can assist you in this kind of checking.

## HTML AUTHORING TOOLS

While it is quite possible to write all of your HTML using only a text editor such as SimpleText or directly in TopClass, there are an increasing number of tools available from freeware and shareware to commercial products to assist you in the authoring process.

### Adobe PageMill

<http://www.adobe.com/PageMill/>

PageMill was one of the earliest commercial Macintosh products to provide HTML authoring and checking tools and received quite a bit of publicity when they were first announced. Its greatest strength is that it manages to abstract the HTML away from the document creation. It is very similar to creating a document in a word processor in that you type text or drag and drop it onto the page and then format it using the formatting tools provided. The author sees the page as it will look in a typical browser. Its browsing is based on Netscape Navigator so this makes it quite useful.

You can also drag and drop images onto a page and not only will PageMill allow you to position and resize them but it also automatically converts the image to a GIF file and saves the converted image out to a file, automatically inserting the correct tag in the HTML source (which the user never sees within PageMill).

You can take your completed documents and upload them to any Web server. You can also of course open the HTML documents in any text or word processor and tweak them if necessary.

Unfortunately this is something you frequently need to do with documents created with PageMill as it supports only the most basic set of tags. It does not have any tools for building documents which use tables or frames for example. In addition PageMill does not provide any features for checking your HTML and in fact the HTML generated by early versions was not particularly clean, although this was corrected in maintenance releases.

The drag and drop interface does make it very easy to create documents including form elements in a very Macintosh like and intuitive way and as support for newer and more advanced tags are added, PageMill has the potential to be one of the easiest to use authoring tools.

### **Claris Home Page**

<http://www.claris.com/>

One of the newest products on the block and set to give PageMill a run for its money. Home Page is available for both Macintosh and Windows and supports advanced features such as frames and tables.

### **SoftQuad HotMetal Pro**

<http://www.sq.com/>

HotMetal Pro does not attempt to display the HTML exactly as it will appear in a Web browser. It does have facilities to enforce very strict HTML integrity and tools for checking existing HTML and flagging it for problems.

### **World-Wide Web Weaver**

<http://www.miracleinc.com/~??/>

Originally written using HyperCard and released as shareware today WWWeaver is a full commercial project. In similar fashion to HotMetal Pro it does not attempt to display the HTML exactly as it will appear in a browser.

### **Golive**

<http://www.golive.com/>

Another relatively new application in the PageMill killer category, Golive supports frames but not tables in its current incarnation.

## **BEdit**

<http://www.barebones.com/>

BEdit has been around for a good number of years now and it is really a very sophisticated text editor, with a definite slant towards programmers. Version 3.5 and later come with a set of HTML tools in the form of a floating palette of tools which will insert pre-formatted tag and help you construct them correctly. It also has the ability to open the document you are currently editing in your preferred Web browser. It also feature a spell checker which automatically ignores HTML tags. Unfortunately the HTML support is more of an afterthought as it was not Bedit's primary design goal and most notable there is no support for checking the syntax of HTML.

## **Browser and Platform Independence**

One of the strengths and weakness of HTML is its device independent nature. This means that outside of the general descriptions given above, it is not possible to know exactly how a given Web browser will interpret and display a particular tag. Some browsers even allow the user to redefine particular styles.

It is therefore a good idea to test any pages you create on several of the most popular browsers to see how they appear. You should also not rely too heavily on how your pages look on any particular browser. HTML was designed to be independent of such things after all.

A few things to note:

- HTML tags are not case sensitive so <h1> and <H1> are equivalent
- Most HTML tags have start and end tags. The first switches the formatting on and second switches it off. End tags are usually use the same base keyword preceded by a forward slash. For example, <b> and </b> switch bold formatting on and off respectively.
- There cannot be a space between the angle brackets and the tag itself. For example, a Web browser will not recognize < h1> as a tag because there is a space between the < and the h1.
- You can mix certain tags together to combine effects. To make some text centered and to add emphasis you can use the following: <center><i>This text will be centered and emphasized with italics</i></center>. This will be displayed like this:

*This text will be centered and emphasized using italics*

- Though some tags have optional parameters which can be applied, you cannot have multiple tags within the same angle bracket pair. For example you cannot combine Header 1 and Bold tags like this: <h1 b>The Webmaster's Revenge</b /h1>. This would cause nothing to be displayed because web browsers ignore any tags they do not understand, including the text given between them. Instead you must specify them separately like this: <h1><b>The Webmaster's Revenge</b></h1>, which will be displayed as:

**The Webmaster's Revenge**

## Embedding Images

To specify an inline image, se the following tag:

```

```

The items in square brackets are optional. The URL specified in the src= parameter identifies the image file to be displayed. Like all URLs, it can be specified as an absolute or relative one.

## Creating Hyperlinks

TopClass automatically handles creating the hyperlinks which allow users to navigate courses. You may however want to embed hyperlinks to external sites or other pages within your course material. A hyperlink in HTML is constructed of the form:

```
<a href="URL">Anchor Text</a>
```

Again as in the case of images, the URL specified can be relative (if located on the same server) or absolute. Examples include:

```
<a href="http://www.wbtsystems.com/index.html">TopClass Home Site</a>
```

```
<a href="readme.html">Read Me file</a>
```

The first example fully specified the path to the document, including the server it is on. The second example specifies neither the server nor the path, so the file must be located in the same directory as the file which contains this link.

More detailed information on creating hyperlinks can be found at any of the sites listed at the end of this chapter.

## Embedding Other Media Types

Each media type typically has its own syntax and it is not possible to cover them all here. Most make use of the new `<EMBED SRC="">` tag which is supported by current versions of browsers such as Netscape Navigator and Microsoft Internet Explorer. Refer to the documentation which accompanied your Web authoring tools or use a search engine such as Lycos ([www.lycos.com](http://www.lycos.com)), InfoSeek ([www.infoseek.com](http://www.infoseek.com)) or Yahoo! ([www.yahoo.com](http://www.yahoo.com)).

## On-Line HTML Courses & Guides

There are a number of excellent beginner's 'instructorials' available on-line on the Web. Here are just some of them:

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Site	URL
A Beginner's Guide to HTML	<a href="http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html">http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html</a>
Hypertext Madness	<a href="http://www.phoenix.net/~lsimon/tricks/default.html">http://www.phoenix.net/~lsimon/tricks/default.html</a>
Bare Bones Guide to HTML	<a href="http://werbach.com/barebones/">http://werbach.com/barebones/</a>

---

More sites can be found by browsing the following category on Yahoo! ([www.yahoo.com](http://www.yahoo.com)):

[http://www.yahoo.com/Computers\\_and\\_Internet/Software/Data\\_Formats/HTML/Guides\\_and\\_Instructorials](http://www.yahoo.com/Computers_and_Internet/Software/Data_Formats/HTML/Guides_and_Instructorials)

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## Appendix B: Glossary

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Name	Definition
Anchor Text	This is a piece of text underlined and in a color different to the normal text body of a HTML document which allows direct access to another URL, via a hyperlink, simply by clicking on the text.
Test	A collection of questions and optionally their associated answers. Tests can be automatically corrected by TopClass or routed to an instructor for correction.
GIF	Graphic Interchange Format. A compressed file format designed for storing graphic images. The most common format for images on the World-Wide Web.
Hyperlink	This is a reference to another resource on the World-Wide Web and is usually represented by a piece of anchor text or an icon. Clicking on the anchor text or icon will cause a Web browser to attempt to retrieve the URL referenced by the hyperlink.
Page	The smallest unit of material in TopClass. A page is displayed as one complete HTML page.
SSL	Security Sockets Layer - A security protocol for secure web-based data transfer.
ULM	Unit of Learning Material. A unit, page or test in TopClass.
Unit	A collection of ULMs which may comprise any

number of pages, tests and other units. The use of units imposes a hierarchical structure on course and material in TopClass.

URL

Universal Resource Locator. A reference to a particular resource on the World-Wide Web such as a particular page or file on a Web site.

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