



Multimedia MasterClass 2.0 Help

Welcome to MasterClass, the computer program designed for trainers who don't have time to program computers, yet who still want to create training courses and presentations which are as eye-catching and effective as the latest multi-media technology will allow. MasterClass records results too, giving feedback to both student and trainer.

Menus

Tool Bar

Icon Objects

Support Services

Support Services

We are determined to give our users the best possible support when using our products - we're glad you're using them and want to make sure you carry on doing so. If you have any problems either telephone our offices between 09:00 and 17:30 UK time Monday to Friday or fax your query to us anytime. In doing so you will be talking communicating directly with the people who build the software, so we should be able to sort your problem out quickly.

ISC can also provide MasterClass and multi-media training, either at our offices or at your site. This can be tailored to your individual requirements - if you want to learn about making the most of Photo CD , but not video tape, for example, that's fine.

If you really don't have time to build your own training courses, we can provide a full range of services using as much or as little of your in-house expertise as you wish to use. Contact us for details.

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Tool Bar

The **Tool bar** is a short cut way of getting at some of the menu options, for example to test a course. By *double-clicking* the mouse on the tool bar background or select the Utilities/Customize Toolbar menu, you can configure it to show only the ones you find most useful.



Menus

This section provides a detailed description of each of the menu options in the MasterClass Development Environment. Each menu item is listed under its heading in the menu bar.

File

Edit

Course

Run

View

Settings

Utilities

Window

Help

File Menu

The menu options under this heading deal with the saving, loading and printing of courses.

New

Open...

Save

Save As...

Save Protected...

Save All

Page Setup...


Print...

Print Setup...

Exit


Note: Beneath the Exit option a list of the 5 most recently used courses will be shown. Selecting one of these will load the appropriate course into a Course Window.

File - New

Tool Bar Equivalent : 


Creates a new course in a Course Window. Several courses can be open at one time. The new course has no name until it is saved for the first time.

File - Open...

Tool Bar Equivalent : 

Loads a previously saved course. The standard *File Open* dialog box is displayed for choosing which MasterClass course to load. The *Status Bar* at the bottom of the main MasterClass window indicates the progress of the course loading.

File - Save

Tool Bar Equivalent : 

Saves the course in the currently active course window to disk. If this is the first time the course has been saved then the standard *Save File* dialog box will be displayed allowing a drive, directory and file name to be chosen. The *Status Bar* at the bottom of the main MasterClass window indicates the progress of the course being saved.

File - Save As...

Allows the course in the currently active Course Window to be saved under a different file name. The *Status Bar* at the bottom of the main MasterClass window indicates the progress of the course saving.

File - Save Protected...

Similar to *Save As...* except that the course is saved in such a way that it cannot be opened again by the MasterClass Development Environment. Any attempt to open it will give the error message: "*<course> is a protected MasterClass course and cannot be opened*". It can still be run with the run-time system, but, as a security measure, it is not possible to see or alter the actual course structure itself. **Warning: the course should also be saved in an unprotected format using the *Save As...* option for later editing.**

File - Save All

Saves the courses in all the Course Windows, starting with the first course created. If any of them do not already have a file name, the usual File Save dialog box will appear.

File - Page Setup...

Allows the page margins for the printed course to be altered. Inches or centimetres can be selected as the units. The paper size is determined by the *Print Setup* option.

File - Print...

Select this option to print out the course in the currently active Course Window. A dialog box will appear giving options for how the course structure is to be printed:

The *Task Range* determines which tasks are to be printed.

All prints all the tasks in the course.

Current just prints the currently highlighted task.

Tasks prints all the tasks *From* a given task number *To* another.

The *Task State* specifies how those printed tasks are to appear on the paper:

Current shows them as they appear in the Course Window - expanded to show actions and responses or collapsed showing only the task itself.

Collapsed prints all tasks as icons with no further detail about actions, etc.

Expanded prints all tasks with all the detail about their structure.

File - Print Setup...

Displays the standard Windows Print Setup dialog box from which the printer to be used can be selected, as well as the paper size, orientation and any other features specific to the chosen printer.

File - Exit

Closes down MasterClass. If any changes to courses remain unsaved, a dialog box will appear asking if changes should be saved for each course which has changed.

Edit

The options in this menu are for copying and pasting tasks and their components, both within the same course and between courses.

Add

Tool Bar Equivalent : 


Adds a new task to the *end* of the current course.

Insert

Tool Bar Equivalent : 

Inserts a new task in the current course *before* the currently highlighted task.

Cut

Tool Bar Equivalent : 

Removes the currently highlighted task, event, action or response. It can then be pasted elsewhere within any open course (see below).

Copy

Tool Bar Equivalent : 

Copies the currently highlighted task, event, action or response. It can then be pasted elsewhere within any open course (see below).

Paste

Tool Bar Equivalent : 

Inserts a previously cut or copied task, event, action or response (see above), before the currently highlighted one. If a *task* is highlighted and an *action* is pasted onto it, the action will appear at the end of the task's list of actions. The same rules apply to events and responses.

Course Menu

This menu deals with settings and functions which are specific to the current course (i.e. the one in the currently active Course Window).

Variables

Font Defaults

Validate


Strip Paths

Renumber tasks

Frame Offset

Log File

Course - Variables Menu

Tool Bar Equivalent : 

Variables are an advanced feature used to store information needed by the course, to carry out student scoring, for example. MasterClass has several commonly used variables already built in. Some, such as *PercentageCorrect*, are automatically updated by the system as the course is run. Others, such as the ones you create yourself, can be manipulated and used within the course.

To add a new variable to the course, such as *JobTitle*, which can then be used with an Editor Input response to prompt the student to type in a job title, do the following:

1. Type the variable name *JobTitle* in to the *Name* box.
2. From the *Type* 'combo box', select the type of the variable by clicking the down arrow and selecting from the list shown. *Strings* are used for text, *Numerics* for numbers, which can be used later in calculations, and the *Date/Time* type for storing today's date in various formats.
3. If the course uses other MasterClass courses as it runs, (see *Actions - Run Another Course*), click on the *Global* check box, so that the variable can be used by all of them.
4. If the variable is numeric, then choose how many decimal places should be used. For example, 2 decimal places would show the value as 3.00, 0 places would show it as 3 alone.

To add this newly created variable to the list of available variables, click on the *>>Add>>* button. To remove a variable from the list on the right, highlight it and click the *<<Delete<<* button. If any changes are made to the properties of a variable, click the *Update* button for the changes to take effect.

See also: [Actions - Variables](#)
 and all [Responses](#)


Course - Font Defaults Menu

Tool Bar Equivalent : 

Use this option to set the default fonts used by the course (i.e. the ones used if no font is chosen in actions and responses).

Select which action or response is to be changed from the *Item* combo box. Text Actions, Push Buttons, Check Boxes and Editor Responses can all be changed. Choose the font from the standard Font dialog box which appears when the *Font...* button is clicked. If you want to apply the changes throughout the current course, so that even those fonts you have chosen for buttons and text will be modified, press the *Apply* button. This can be a useful way of ensuring that all buttons conform to the same style in a course.

Course - Validate Menu

Tool Bar Equivalent : 

This feature checks a course for inconsistencies which could cause problems when the course is run. There are two types of message given by the Validate option. One is just a warning that you may have overlooked something. For instance, in the example below, there is a warning because a task has been added to a course, but no actions or responses have been added to it. The task will thus do nothing in the course, but neither will it cause any harm, so it is flagged as a warning.

The second type, errors, are obviously more serious. In the example, a picture file specified in a Graphics Image action couldn't be found. This could occur for a number of reasons:

1. the file has been deleted or moved,
2. the directory path of the file has been removed from the course through the use of the *Strip path names from objects* feature (see below) but the file hasn't been moved into the current directory.

This facility provides a useful, though not exhaustive, check on a course before it is distributed or published for student use.

Course - Strip paths Menu

It is sometimes useful when building a course to include picture, sound and video files stored on different parts of a disk or network. When the course is ready for use or distribution, these files ideally need to reside in one directory on the hard disk or on a floppy disk. However, even after the files are gathered together in one place, the course might still contain explicit references to where the files originated. This will cause problems when the course is run on a different machine. The *Strip paths* options remove just the drive or both the drive and directory references, but both leave the actual file name itself intact.

Remove Path Names from Objects

All references to drives and directories are removed. MasterClass will assume that all objects reside in the same directory as the course itself.

Remove Drive Letter from Objects

Only references to drive letters will be removed, the directory paths will be left. In this way a course which uses separate directories for pictures, sound and digital video, for example, can be transferred to another drive with this structure intact.

See also : [Settings/Preferences](#)

[Course/Validate](#)

Course - Renumber Tasks Menu

After much editing of a course the task numbers can become untidy. The *Renumber tasks* option goes through the whole course, renumbering the tasks from top to bottom and re-assigning the branches in responses accordingly. The starting number and step increment can be specified in the dialog box for this option.

Course - Frame Offset Menu

If using a controllable video tape or video disk player, this option can be used to offset all references to frame locations in the course for synchronisation purposes. A course ID can also be stored with the course for comparing with the ID stored on the tape or disk.

See also:

Actions - [Tape Control](#)/Get Tape Data

Course - Log File Menu

If a response, such as a button, is set-up to be logged as right or wrong (see Responses - Push Button), then MasterClass automatically adds the student performance data to the file specified in the Log File dialog box as long as the *Log Responses* option is selected. This data file can then be examined using the optional MasterClass Analysis Module, purchased separately.

Run Menu

This menu allows the course to be run in convenient ways from within the development environment.

From Start


Tool Bar Equivalent : 

Runs the course from the first task onwards. This is how the student would experience the course from the run-time system.

From Current

Runs the course from the currently highlighted task (click once on a task to make it the current task).

Current

Tool Bar Equivalent : 

This executes the currently highlighted task and only that task.

On Setting Focus


By viewing the Presentation Window in one part of the screen and the Course Window in another, this option can be used to step through the course and see how it appears on the screen at any given point. Click on a task to highlight it and the corresponding actions and responses will be shown in the Presentation Window.

See also: View menu.

View

This menu deals with making parts of the MasterClass development environment visible.

Show Presentation Window

Tool Bar Equivalent : 

Reveals the Presentation Window (showing how the course will look to the student) by placing it on top of whatever windows are already on the screen.

Hide Presentation Window

Removes the Presentation Window from the screen.

Tape/Video Controls

Tool Bar Equivalent : 

If a controllable VCR or videodisk player is being used, this option shows the control panel, giving direct control of the device.

See also: *Tape/Video Control Panel* description

Tool Bar

When a tick is shown beside this option, the Tool Bar will be shown beneath the MasterClass menu bar. Click on the menu option to toggle between on and off.

Status Bar

When a tick is shown beside this option, the Status Bar will be shown at the bottom of the main MasterClass window. This provides a brief description of each menu item as the cursor moves through the menus and also the progress of the saving and loading of courses. Click on the menu option to toggle between on and off.

Settings

This menu deals with the general setup of MasterClass and the hardware it controls. All these settings are stored with the MasterClass Development Environment and *not* the courses created with it; so the courses are independent of the particular hardware used to create the course.

Video Overlay

Video Control

System Font

Snap to Grid

Customize Toolbar

Customize Icon Window

Utilities Menu

Preferences

Settings - Video Overlay Menu

MasterClass' *Video* action can control the display of live video signals on the screen if a suitable video overlay card is installed in the computer. Choose which device you are using from the dialog box:

If the particular card you are using is not listed, choose the MCI Overlay option and check that you have an MCI driver for your card using the Drivers option in Control Panel (found in the Main group in Program Manager). Contact your hardware supplier if you do not have the required driver software.

The *Transparent Colour* option allows you to choose which colour will be transparent to the video signal. The default is black, meaning that any picture or drawing with areas of black, shown in conjunction with a video action, will show the video through the black parts of the picture, but nowhere else. Any colour other than the transparent colour appears on top of the video.

Use the *Save Settings button* to save any changes you make in this dialog box.

Settings - Video Control Menu

Use this option if you are using a controllable VCR or video disk player. *Tape Control* actions can then be used within courses to incorporate video material in conjunction with *Video* actions which show the picture on the screen

If you are using VideoLogic's DOS based MIC System I, you can control the wide range of video disk players supported by MIC.

MasterClass has direct support built-in for the Panasonic 7350 VCR which, when fitted with the AGIA232TC board, can be controlled via the computer's serial port with single frame accuracy using its time-coding facilities. The serial port settings can be made to match those of the player by choosing the options shown when the *Comms>>* button is clicked.

If the VCR or video disk player has an MCI driver (not to be confused with VideoLogic's MIC software!), it can be controlled from MasterClass by selecting the *MCI Controllable Device* option in this dialog box. The device itself can be selected from the *MCI Device* drop-down combo-box. The MCI drivers can be installed and configured through the Drivers section of Control Panel in the Main group of Program Manager.

The number of frames per second used by the device can be selected via the *Frame Speed* radio buttons.

Use the *Save Settings* button when you have finished making changes.

Settings - System Font Menu

This allows a font to be chosen which the MasterClass development environment will use to label the icons. It has no effect on the course itself, but can help readability both on the screen and on paper when the course is printed out. The standard Windows font dialog box is used, although the font colour is set to black.

Settings - Snap to Grid Menu

When positioning text, buttons, etc. in the Presentation Window, it can be useful to turn on the *Snap to Grid* option to ease the task of lining objects up on the screen. Check the *Snap to Grid* check box in the dialog box to activate this option and then change the coarseness of the grid with the *Grid Size* box.

Settings - Customize Toolbar Menu

Tool Bar Equivalent : Double click on tool bar background.

The tool bar gives a short-cut route to some more commonly used menu options. The buttons to appear on the tool bar can be chosen from using the dialog box shown below:

The list on the right hand side shows which buttons are currently displayed on the tool bar. The list on the left shows which others are available for inserting into the tool bar. The Add and Remove buttons move them from one list to the other. The *Add* button will take an item highlighted in the *Available Buttons* list and insert it into the *Toolbar Buttons* just above the item currently highlighted in that list . Use the *Remove* button to remove the currently highlighted item from the *Toolbar Buttons* list.

Use the *Move Up* and *Move Down* buttons to change the position of the currently highlighted item in the *Toolbar Buttons* list.

Settings - Customize Icon Window Menu

If you use some events, actions and responses infrequently, you can remove them from the Icon Window to avoid clutter.

The *Selected* list on the right hand side shows which icons are currently displayed in the Icon Window. The *Available* list on the left shows which others are available for inserting into the Icon Window. The Add and Remove buttons move them from one list to the other:

The *Add* button will take an item highlighted in the *Available* list and insert it into the *Selected* list, just above the item currently highlighted in that list.

Use the *Remove* button to remove the currently highlighted item from the Selected list.

Settings - Utilities Menu

The Utilities menu is used to launch other applications which may be of use when creating a MasterClass course, for instance a paint program. The items which appear on the Utilities menu can be chosen using the *Utilities Menu* option dialog box:

Click the *Add* button to browse for which application to add to the menu. The standard Windows file browse dialog box is used. When the .exe file has been found (for example PBRUSH.EXE in the Windows directory for Paintbrush). The path and file name will automatically be put in the *Command Line* box. The text which appears in the Utilities menu can be changed using the *Menu Text* box. The '&' character in front of any letter in the menu text will indicate a keyboard shortcut for that menu item.

Any item can be removed from the menu by highlighting it in the *Menu Contents* list and clicking the *Delete* button

Settings - Preferences Menu

This option shows choices about how the MasterClass Development Environment will behave. This dialog box appears:

Save application window/size position on exit

Select this check box so that when MasterClass is next started, its main window will appear the same size and in the same place on the screen.

Backup courses

Whenever a course is saved, and this check box is active, the previous version is stored with the file extension *.bak*. Only one backup file for a course is used. In this way, if you make a mistake when creating a course and then accidentally save it, the backup file can be used to step backwards to the last saved version of the course.

Include path specification with object file names

When you choose a picture, drawing, sound or video file in an action, if this option is not checked only the file name and not its full path will be stored. Thus the course and its associated file can be moved from one directory to another or to a floppy disk without having to go through each action and change its path reference. With no reference to path names, MasterClass will assume that all the files are to be found in the same directory in which the course itself is stored.

See also: Course/Strip path names from objects

Show tool bar

This determines whether the tool bar will automatically be shown underneath the menu of the main MasterClass window the next time MasterClass is loaded.

See also: View/Tool Bar

Show status bar

This determines whether the status bar will automatically be shown at the bottom of the main MasterClass window the next time MasterClass is loaded.

See also: View/Tool Bar

Show icon window

This determines whether the Icon Window will be shown in the main MasterClass window by default next time MasterClass is loaded.

Show other regions when adding/modifying new ones

If this option is checked, when new buttons, regions, etc. are added to the Presentation Window, the others defined for that task will be shown outlined in the window as well, making the task of positioning responses easier.

Show response branching

When this option is checked, the branching from the current task (the one highlighted by clicking once on it) will be shown as lines of different colours drawn from each response to the task it links to.

Self document objects

Check this option to allow MasterClass to create labelling for each Event, Action and Response automatically as the course is created. For instance, if a Graphics Image Action is configured to show a picture called TEST.BMP after first clearing the Presentation Window, the action would be labelled as:

Picture - TEST.BMP

Auto save every xx minutes

This allows you to specify how often the courses being worked-on should be saved back to disk. The courses are saved to their original filenames, not to backup files (see *Backup courses* above). If a course has no filename (i.e. it has not yet been saved), you will be prompted for a filename for the course as if you had chosen the *File/Save* menu option.

Utilities

This menu consists of one standard item plus whatever other items have been added from the *Settings/Utilities Menu* option.

Size Video to Window

If a video overlay card is being used to incorporate video from a VCR or video disk into a course (see *Settings/Video Overlay*), this utility can be used to view the video picture in other applications. For instance, if you wanted to view the video so that a graphic image could be created and lined up on top of it, the following steps could be used;

1. Load Paintbrush and fill the main window with the colour defined as transparent in MasterClass (see *Settings/Video Overlay*).
2. Select *Size Video to Window* from MasterClass. The main MasterClass window will disappear and the cursor will change shape.
3. Move the cursor over to the main Paintbrush window and click once inside the window.
4. The video picture should now be seen filling the Paintbrush window. As the window is resized, so is the video picture. Picture files can now be created on top using Paintbrush's drawing tools, as long as the colours used do not include the transparent one. The picture can then be saved and used within a Graphics Action in a MasterClass course, in conjunction with the Tape Control and Video actions, to show the picture on top of that section of the video during the course.

This option can be used with any other windows application.

Window

Tile

Arranges all the course and icon windows on the screen so that each can be seen - the more windows present, the less of the contents of each window will be displayed.

Cascade

This will stack all the course and icon windows from top left towards bottom right.

Arrange Icons

If any windows have been minimized, and hence are shown as icons in the main MasterClass window, this option will tidy them up, arranging them from bottom left of the window.

Close All

Closes all open courses, prompting you to save any courses that have changed since they were last saved.

The other items listed beneath these menu items are the currently open Course Windows in MasterClass. Click on the name of the course to bring it to the top.

Help Menu

Index

Displays an index of *Help Topics* available. These exist in the form of *hypertext* links which allow you to view help text by clicking with the mouse on green areas of text within the index.

Keyboard

Provides *Help* on using the keyboard.

Using Help

Provides *Help* on using the *Help* system.

About MasterClass

Provides details of the latest version of the system.

Icon Objects

This section describes in detail the options available for each of the objects in the Icon Window used to build a course.



Tasks



Events




Actions



Responses



Tasks

A *Course* (represented by the  icon in a Course Window) consists of a series of *Tasks* - things which will happen during the course. Each Task in turn has three components - Events, Actions and Responses, described in the following sections.

Objects are added to a course by clicking and dragging them from the Icon Window to the Course Window.

Click once on a *Task* icon in a course to hide or reveal its structure - it acts like a push-button.

Double-click on the name next to a *Task* icon in a course to bring up the following dialog box:

Type in a name for the task in the edit box to the right of *Icon Text for Task Tag*. This is used to label the task in the course. It is not seen by the student, but can help the trainer enormously in making the course structure easier to understand.

The *Show Events* check box is used to hide or reveal the *Events* associated with a task (see below). The default state is not to show events, since they are used infrequently in a course.



Events



Actions



Responses



Events

Events are used when it is necessary for part of the course to be activated by some occurrence - a message from another windows application or a variable defined in the course reaching a certain value, or a menu option being selected by a student. Events deliberately interrupt the flow of the course.

Since events are used infrequently, they do not automatically appear in the structure of the task. However, dragging and dropping an event icon onto the task will add it to the structure. Alternatively, choose the *Show Events* in the Task set-up box.



Contents



Exit



Demon



DDE



Contents



Exit

If a task has a Contents event, then when the student selects the Contents menu option in a course, this task is carried out. Similarly with the Exit task for the Exit menu option. In this way the general flow of the course can be interrupted and the user given the chance to jump to another part of the course, or shown a score summary.

Only one *Contents* and one *Exit* event can be used in a course.



Demon

A task with an active demon event will be activated when the variable expression in the demon becomes true. It interrupts the normal flow of a course, allowing the course to react to scores rising above a certain level.

Dialog Box Options:

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Active

Check this box to make the demon active - uncheck it to make it inactive and play no part in the course. In this way the behaviour of the demon within a course can be monitored. Since demons interrupt the flow of the course, it can be useful to switch them off for testing purposes.

Execute when the following expression is TRUE

Enter the expression to test for in this edit box. Variable names can be typed in directly or inserted from the **Insert Variable** list: Click on the down arrow to reveal the list of all the variables available within the course, both the built-in ones and those added using the Course/Variables menu.

The following logical operators can be used in expressions:

and	and
or	or
equal to	=
not equal to	<>
greater than	>
greater than or equal to	>=
less than	<
less than or equal to	<=

Note that there is an implicit 'if' in all Conditional Branch responses, so it is not necessary to type it in the expression.

An example expression would look like this:

StudentScore > 50 and QuestionsRepeated <= 10

(See also Responses - Conditional Branch)



DDE

DDE events, like Demons, are an advanced feature. DDE events trigger their associated tasks when a particular message is received from another Windows application. In this way training courses can be integrated into spreadsheets and word processors.

Dialog Box Options:

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Wait for DDE

Choose this option to make MasterClass react to a general DDE **EVENT** data message from another application (see below). If this task is active, the course will not continue until a DDE message is received.

Set Demon DDE String

Choose this option to make MasterClass react to a particular DDE **EVENT** data message from another application (see below).

MasterClass DDE Specification

When sending DDE messages to MasterClass from another application (either for use by DDE Events, or generally to control the loading and running of MasterClass courses), the following information will be needed:

The Service Name is "**MasterClass**"

Topic Name is "**System**"

The following Data Items are recognised:

"[OPEN(<filename>)]"	Opens a course with a given <filename>
"[START(<filename>)]"	Start the course referenced by <filename>
"[CLOSE(<filename>)]"	Closes the course named <filename>
"[QUIT]"	Closes MasterClass
"[EVENT]"	Executes an event if waiting for any DDE string
"[EVENT(<demon text>)]"	Executes the event referenced by the <demon text>



Actions

Actions are the most visible part of MasterClass. They show things in the Presentation Window, from simple text to digital video. Despite the range of actions available, they are all set-up in the same way - drag an action from the icon window and drop it onto the appropriate task. Then double click on the action icon in the course and a dialog box appears showing the unique characteristics of that action - the position of the picture, its file name etc. You can have several actions in one task. They will be performed in the order in which they are shown in the Course Window, top to bottom. They will all be carried out before any responses attached to the task are performed.



User Info



Clear



Window



Graphics Image



Text



Graphics Shape



Movie File



Animation



Sound



Video



Tape Control



Print



Run Another Course



MCI Command



Launch Another Application



DDE



Write to File



Variables



Simulator



User Info

This will display the following dialog box to the student, asking for name and ID:

The action is set-up from the following dialog box, shown when you double click on the *User Info* icon:

Dialog Box Options:

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Must Enter Name

If this option is checked, the student will not be able to proceed until something has been typed into the *Name* field of the dialog box. The check is carried out when the Continue button is clicked or the ENTER key is pressed. The name given will be the one used when automatically logging answers as right or wrong. If this option is not selected and no name is entered by the student, a warning message saying, "Name not specified, data will be logged as ANON" will be shown in a dialog box.

Must Enter ID

If this option is checked, the student will not be able to proceed until something has been typed into the *ID number* field of the dialog box. Both numbers and letters can be used in the ID. The check is carried out when the Continue button is clicked or the ENTER key is pressed. The ID given will be the one used when automatically logging answers as right or wrong.



Clear

This action clears all, or part of, the Presentation Window.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Area

Specifies how much of the Presentation Window will be cleared by this action

Entire Window

Everything in the Presentation Window will be wiped-out, including animations and movies.

Rectangle

Any object completely enclosed by the area specified from the *Define* button will be wiped-out. Any animations or movies playing in this area will be stopped and removed. Turn the *Clear Background* check box off for smoother removal of objects from a background. For example, if you want to clear some text drawn on top of a picture background, turning this option off will prevent flicker on the screen occurring when the part of the picture falling within the defined rectangle is redrawn.



Window

Use this action to define the size of the window the presentation will use, whether it runs full screen, has a menu bar and so on.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Window Title

The text entered here will appear in the title bar of the Presentation Window, if one has been defined (see *Attributes* below).

The value of a variable may also be used (for example *{StudentName}*). See the [Course/Variables](#) menu item and the [Variables action](#).

Location

These options determine how the Presentation Window will appear on the screen:

Maximized (default)

The window will fill the screen with the title bar and menu at the top.

Full Screen

The course will take over the entire screen with no menu or title bar. Thus all the student will see on the screen is determined by the course content.

Rectangle

Clicking the Define button will enable the size of the window to be specified by clicking and dragging the Presentation Window. After the size has been specified for the first time, the button text will change to Modify.

Attributes

These check boxes specify the features of the Presentation Window

Hide Window

The Presentation Window is hidden if this is checked. This feature can be used to hide the course for a period of time while another program is running.

Title Bar

When this is checked the Presentation Window will have a title bar containing the text specified in the Window Title box.

Menu Bar

When this is checked the Presentation Window will have a menu bar containing the items selected from the *Define* set-up (see below).

Minimize Box

When this is checked, the Presentation Window will have a Minimize Box in the top right hand corner, allowing the student to minimize or iconize the Presentation Window.

Maximize Box

When this is checked the Presentation Window will have a Maximize Box in the top right hand corner, allowing the student to maximize the Presentation Window.

Sizeable Border

When this is checked, the Presentation Window will have a border which the student can use to resize the window.

Bk Colour

Checking this option and clicking the Define button will allow the background colour of the Presentation Window to be chosen.

Rescale window contents

When this is checked, any buttons, regions or rectangles in the course will automatically rescale themselves to maintain their relative positioning within the window as its size is altered. This can be very useful if the same course is to be viewed at different resolutions (e.g. VGA (640x480) and Super-VGA (800x600 etc.)).

Menu Bar/Define

Menu Bar/Define

Allows the menu items visible in the Presentation Window menu to be specified. The list box on the left shows all the possible options. Each has a specific action within MasterClass (for example, *Print* will automatically print whatever is displayed in the Presentation Window when the student selects it from the menu bar).

Highlight an item on the left and click the *Add>>* button. The item will be added to the Menu list on the right. These are the items which will appear in the menu. Highlight an item on the right and click the *<<Delete* button to remove it from the menu list. *Insert>>* will add an item highlighted on the left above the one highlighted on the right.

The full options are:

File

Shows a standard Windows File menu with the following items:

Open

Allows another MasterClass course to be run.

Exit

Closes the current course and the MasterClass run-time system.

About MasterClass

Displays information about MasterClass and system details about the computer it is running on.

Help

Not implemented in v2.0.

Print

Prints whatever is displayed in the Presentation Window to the currently selected printer.

Start

Runs the course from the beginning.

Contents

Causes the course to branch to the task which has a Contents event specified (if any). See [Events](#).

Stop/Continue

Causes the course to pause until the Continue menu item is selected.

Audio Up/Audio Dn

Controls the volume of the sound from a video tape or disk player. It does not affect the digital audio volume from a sound card.

End

Causes the course to branch to the task which has an *Exit* event specified (if any). If no task has an *Exit* event set, the course will branch to the last task in the course and execute that instead. See [Events](#).



Graphics Image

This action is used for displaying pictures and drawings, stored in a variety of formats, such as bitmaps on the computer's disk or Kodak PhotoCD from a compact disk. You can define where in the Presentation Window the picture will appear and also any effects, such as wipes, dissolves, and so on, to be used.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Display

This list box allows the selection of different types of graphics images. The best format to use for storing a given image will depend on several factors - what kind of image it is (line drawing, photograph etc.) and how much space is available for storing it.

Picture

Selects raster format images of the following formats:

BMP

Windows bitmap created by Paintbrush and most other paint packages. Images stored in this format are not compressed in any way, so they can take up more space, but can also be displayed more quickly than some compressed images, since no work has to be done by the computer in decompressing them. Again, the benefits will depend on the type of image. High colour photographs which need to be displayed quickly benefit the most from this format.

RLE

This is a compressed format (Run Length Encoded) used by some Windows paint packages. It is best used on simple 16-colour pictures.

PCX

This is a compressed format, widely used by paint packages such as Windows Paintbrush. It provides good compression, particularly on simple images, but can take a while to decompress, especially for high-colour photographs saved in this format.

TGA

This TARGA format is also a compressed and can be found in several paint and photo-processing packages. It is used mainly for storing 24-bit (16.7 million colour) images.

GIF

This is the Graphics InterChange Format developed by CompuServe for compression and distribution of images electronically over telephone lines. A large number of pictures in this format can be found in the Graphics Forum of CompuServe itself.

Drawing

Drawings differ from pictures in the way that the images are stored. Drawings are in vector format. They contain instructions about how to draw the image rather than simply storing a snapshot of the image itself. For this reason, drawing files tend to be far smaller than picture files. They can also be drawn at any size without loss of quality. They are particularly suited to diagrams and line drawings. Only WMF (Windows Metafile) format is supported in VERSION 2.0: diagrams can be saved in this format from most drawing packages such as Micrografx Designer and Lotus Freelance for Windows.

Log Summary

This is a special type which shows a summary of the student's performance in a course. The student's name and ID, the name of the course, the date and score are shown.

Fractal Image

MultiMedia MasterClass v2.0 has support for Iterated Systems' FIF files. Pictures stored in this format can have remarkably small file sizes. Large, high-colour photographs, such as those from Kodak's Photo CDs, are the most suitable for this format. Pictures can be compressed with the Images Inc. fractal processing software package, or any paint package which supports FIF file compression. The greater the compression of the images, the smaller the file size, but also the more work the computer has to do in de-compressing the images. If speed of display, rather than file-size, is the most important consideration, then BMP is probably more suitable.

Photo CD Image

MultiMedia MasterClass v2.0 has support for images stored on Kodak Photo CDs. Up to 100 photographs derived from slides, negatives or undeveloped film can be put onto one CD at low cost, making it an attractive way for trainers and designers to be able to incorporate photographs into MasterClass courses and presentations. You can select which photograph is to be used and at what size from the Browse button in the dialog box. Images can also be saved as bitmaps on the hard disk as well.

Location

The radio buttons in this part of the dialog box determine where the graphics image is to be displayed in the Presentation Window.

Fill Window

When a drawing (metafile) is shown, this option will make it fill the Presentation Window. A picture (bitmap) will not, however, be stretched unless specified in the *Advanced* options.

Rectangle

This allows a rectangle to be created in the Presentation Window, using the mouse, which will contain a picture or drawing. Clicking the *Define* button will show the Presentation Window and the 'define rectangle' cursor which is used throughout MasterClass. Once a rectangle has been defined, the text of the button will change to *Modify*.

Advanced (available only for Pictures)

Clicking the *Effects* button will show a dialog box used for specifying how pictures will appear.

Advanced Graphics Action

Method

Determines the way the picture will be shown in the window or defined rectangle:

Clip

If the picture is bigger than the window or rectangle, it will be clipped at the edges.

Stretch to fit

The picture will be stretched horizontally and vertically to fit the window or rectangle defined. This option is best used with simple 16 colour bitmaps - high colour photographs may appear severely distorted using this option.

Resize Window

The window will be resized to fit the picture exactly.

Display Effects

The list box shows the effects which can be chosen - they will be used at the start of the display of a picture - e.g. the new picture will be wiped in from the left, covering whatever was on the screen before. The time taken to achieve the effect is determined by two settings:

Steps

Specifies how many pixels will be jumped at each increment of the effect - a higher figure will make the effect more rapid, but less smooth.

Speed

Specifies how long each step will take in milli-seconds. The smaller the value, the faster the effect will happen. Set the value to 0 to execute the effect as fast as the computer can achieve.

Set Transparent Colour

When the box is checked, a colour can be selected from the drop-down combo box. If this colour is present in the picture being shown, it will become transparent and whatever is behind the picture at that point will show through.

Draw Direct to Screen

Select this option to speed up the display of pictures, especially those with 24 bit colour. No effects can be used when this is switched on.



Text

This action displays text in any available font, colour and size. The text can either be entered into the action itself, or read from a file.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Text

Type in the text which will appear in the Presentation Window here. Values of variables can also be included by typing in the name of the variable in parentheses {...} e.g. *Your name is {StudentName}*, or by selecting a variable from the drop-down *Insert Variable* list at the bottom of the dialog box.

Browse

Rather than typing text directly into the text action, click on the *Browse* button to select a text file which will be read from disk when the course runs. This can be particularly useful for updating text documents without having to change the course itself.

Font

Click on this button to bring up the standard Windows font selection dialog box, giving a choice of face, size, style and colour for all the text in the current text action. To mix fonts in the Presentation Window, use multiple text actions.

Use Bk Colour

Checking this box will allow a colour to be chosen by clicking the *Bk Colour* button. The defined area for the text action (window or rectangle - see below) will appear in this colour, with the text appearing on top in the font selected with the *Font* button.

Location

These radio buttons define where the text will appear in the Presentation Window:

Fill Window

The text will start at the top left corner of the Presentation Window. Its maximum limit will be the bottom right of the window.

Rectangle

Select this option to draw a boundary in the Presentation Window for the text to appear in. Click the *Define* button and click and drag the cursor. The text will start at the top left of the rectangle and may extend beyond the limits of the rectangle depending on the font size and amount of text.

Justify

These radio buttons determine how the text will be placed within the defined area.

Left

The text will be aligned along the left hand edge of the rectangle or window.

Centre

The text will be centred in the rectangle or window.

Right

The text will be aligned along the right hand edge of the rectangle or window.



Graphics Shape

Sometimes it is useful to be able to add a box, line or border to a screen without having to create a picture file for it.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Shape

Select the shape to be drawn from this list box. The options are:

Line

Rectangle

Rounded Rectangle

Rectangle with rounded corners

Ellipse

Ellipse drawn within boundaries of defined rectangle

Polygon

Click the mouse to define each point in the polygon. Double-click to complete it.

Line Style

Drop down combo box allows selection of solid or dotted line or shape boundary.

Line Colour

Drop down combo box allows selection of colour of line or shape boundary.

Line Width

Specifies width in pixels of line or shape boundary

Fill Style

Specifies the pattern to be used for filling the shape. Has no effect for *Line*.

Fill Colour

Specifies the colour to be used for filling the shape. Has no effect for *Line* or *Polyline*.

Location

Radio buttons determine where the shape is to appear:

Fill Window

The Presentation Window will be used as the boundary for the shape. A line will appear drawn from top left to bottom right.

Rectangle

The Define button allows a boundary rectangle to be defined in the Presentation Window by clicking and dragging the cursor.



Print

Anything displayed in the Presentation Window via actions can be printed during the course using this command. The same print facility is available to the student via the 'Print' menu option, if the course designer has included this in the course.

Dialog Box Options

Method

Use these radio buttons to determine how the Presentation Window will fit onto the printed page:

Best Fit

The window image will be printed as it appears on the screen with no stretching. The maximum width of the page will be used.

Stretch to Page

The window image will be stretched so that it fills the whole printed page in both width and height.

Scale

The window image will be reduced proportionally from 100%, which is equivalent to Best Fit, downwards.

Units

These radio buttons choose which units are used for margin measurements. The options are:

Inches

cm

Margins

The interactive diagram gives a view of where the window image will appear on the page. Increasing the size of the top margin will move the printed image downwards and so on.



Video

If a video overlay card is installed to display the signal from a video recorder, video disk player or camera on the computer screen, then this action can be used to position the video in the Presentation Window. It does not handle digital video from the hard disk or compact disc (see [Actions - Movies](#))

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Video Output

Level

Scroll slider bar determines the brightness of the video in the Presentation Window - the most usual settings are 0% (default) for video off and 100% for video on.

n.b. Fade time can also be set from this dialog box for overlay cards which support this feature.

Location

These radio buttons determine where the video picture will appear in the Presentation Window:

Fill Window

The video picture will be stretched to fill the whole of the window.

Rectangle

The Define button allows a rectangle to be specified by clicking and dragging the cursor. The video picture will be stretched to fit this rectangle exactly.

Attributes

Freeze Image

Check this box to freeze the image at the point at which this action is carried out. This can be particularly useful for preventing 'jitter' when a video tape is paused. The next Video Action without this option selected will unfreeze the image again.

Audio Output

Volume

Scroll slider bar determines the volume of the audio channel of the VCR or video disk. It does not control the level of digital sound played back through a sound card (see *Sound* action).

n.b. Fade time can also be set from this dialog box for overlay cards which support this feature.



Sound

With a Windows-compatible sound card (see System Requirements above) sound files can be played back from the computer's disk. In addition, you can select tracks from an audio CD in a CD-ROM drive or play MIDI music files with a compatible device (the SoundBlaster card has MIDI support built-in).

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Play

Selects the kind of audio format to be used:

Waveform file

This is the standard windows '.WAV' file format for digital sound. Applications such as the Windows Sound Recorder in the Accessories group can be used for creating such files.

MIDI file

MIDI files contain instructions for electronic instruments about tunes, rhythms and type of sounds to be played. Many sound cards have built-in music synthesizers which can replay these files. They can be created using a MIDI sequencing package, again often supplied with the sound board.

Compact Disc

A CD-ROM player connected to the computer, usually via a SCSI interface can play back audio compact discs.

Attributes

These check boxes determine how the audio will behave during the action:

Wait until complete

The next action will not be started until the current audio action has been completed - the audio device has complete control if this option is chosen.

Stop current

If any sound file is already playing when this action is activated, this option will stop it.

Loop

The sound file or CD tracks will be repeated indefinitely unless interrupted by another action with a Stop Current set.

CD Attributes

If Compact Disc is chosen as the *Play* source, then the start and end tracks can be specified to whatever accuracy is required.

Browse

If you choose Waveform or MIDI files as the *Play* source, this button allows you to browse for the required file using the standard Windows file open dialog box.



Tape Control

If you have a video tape recorder or video disk player which has MCI software support, you can control it through this action. For instance, searching to a particular part of the tape and going to 'play'. In conjunction with the Video action the video picture can then be shown to the student.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Tape Action

The list box displays all the possible actions which can be carried out:

No Action

Play Fwd

Pause

Eject

Goto and Pause

The tape or disk will be searched until the requested point is found and the tape will 'pause' (or disk will 'still').

Goto and Play

The tape or disk will be searched until the requested point is found and then it will be played forward at normal speed.

Stop

Slow Play Fwd

Slow Play Rev

Fast Play Fwd

Fast Play Rev

Fast Fwd

Fast Rev

Play Rev

Get Tape Data

This can be used when a Panasonic 7350 VCR is used as the controllable video source. In addition to writing a frame-accurate time-code to the tape, additional information about the tape ID and any frame offset required can also be recorded at the same time. The Get Tape Data option in this action can be used to read this data and automatically incorporate it into a course. If the ID retrieved from the tape does not match the ID stored with the course (see Menus/Course/Frame Offset above), an error message to that effect will be displayed and the course will terminate. This is used to make sure that the student has inserted the right tape for the course chosen.



DDE

Dynamic Data Exchange is a powerful way for Windows programs to communicate with each other. With this command an application such as Microsoft Excel can be requested to load a particular spreadsheet and carry out certain actions. Usually the whole 'macro' language of the package being controlled can be used in DDE commands. Refer to the specific application's reference manual for details of its DDE command set, including the Server and Topic names.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Connection

Select which application the DDE 'conversation' refers to:

Connect

Start a new DDE conversation.

Disconnect

End a current DDE conversation.

Current

Continue with a DDE conversation which has been started earlier.

Server Name

The DDE name of the other application in the conversation (e.g. "**WINWORD**"). Check the Reference Manual of the other application for this information.

Topic Name

The DDE name of the type of conversation being held with the other application (e.g. "**SYSTEM**"). Check the Reference Manual of the other application for this information.

Send Data

Once a DDE conversation has been opened between MasterClass and the other application, data can be sent to the other application, for example to open a file or to run a particular command.

Select the *Send Data* check box, choose the type of data to be sent (only *TEXT* is supported in MasterClass v2.0) and enter the command in the edit box. For example:

[FileOpen.Name = "C:\CONFIG.SYS"] .

n.b. Variables can also be used in data commands e.g. {*StudentName*}. See the [Course/Variables](#) menu and the [Variables](#) action.

Request Data

Since DDE conversations are two way, MasterClass can ask the other application to supply data, for example the value of a particular cell in a spreadsheet.

Item Name

Enter the request for the data to be passed back. Check the Reference Manual of the other application for this information.

Assign To

The data passed back can be assigned to a MasterClass variable. Use the popup list to select the variable to be used to store the data .



Launch Another Application

This allows another application to be run at certain points in the course. For example the Windows calculator could be invoked when the student has calculations to perform during the course. DOS programs can be also be run.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Command Line

Type in the command to activate the program - for example "C:\WINDOWS\CALC.EXE", or use the **Browse** button to find the program using the standard Windows file dialog box.

Show

Determines how the application will appear when it is run:

Maximized

The application window will fill the whole screen.

Normal

The application window will appear the size it would if started from its own icon.

Minimized

The application will appear as an icon at the bottom of the screen as if it had been started and the minimise button selected from its title bar.

Bring forward if already active

If the application is already running when this action is activated, the application will be moved forward to appear on top of all other active windows, including the Presentation Window.



Animation

This allows bitmap pictures to be moved along paths in the Presentation Window.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Path

The pictures chosen for the animation all move along the same path created using the **Define** button. When pressed, the Presentation Window appears and the cursor changes shape. Click once on all the points you want to be included in the path of the animation. When all the points have been specified, double-click the mouse button. The cursor will change to a cross, allowing points on the path to be clicked and dragged to change its shape. When the animation path is complete, click on the OK button. The dialog box reappears. The button changes to **Modify** once a path has been defined.

Frames

The total number of points in the animation path is shown here. The number of frames can be changed, either by typing a new number in the edit box or by using the up & down arrows next to it. MasterClass will automatically adjust the number of steps in the animation path accordingly. For example, if the movement of the pictures in the animation looks a bit jerky, increase the number of frames. Increasing the number of frames without altering the *Speed* value will slow down the animation.

Speed

This specifies how many frames (i.e. points along the path) the picture being animated will move through in one second. The greater the speed, the sooner the animation will finish.

Loop

Check this box if you want the animation to repeat indefinitely. (Refer to the *Clear* Action for removing looping animations from the Presentation Window).

Actor

This group specifies the pictures to be moved in the animation and how they will appear on the screen.

Sequence

Click the *Browse* button to select the bitmap files to be animated. Remember that all the pictures in the sequence move along the same defined path. However, they are shown in turn as MasterClass steps through each frame. In this way, cartoon-type animations can be created. (n.b. Bitmaps can be created in Windows Paintbrush - for small pictures, capture an area and select *Edit/Copy To* to save them as bitmaps).

Set Transparent Colour

If a bitmap picture is drawn with a background of a particular colour, but the background part itself isn't to appear in the animation, click on this box and select the colour which matches the background colour from the drop-down list. In this way, the picture will appear in the animation without being surrounded with areas of background colour. The background seen will be that of the Presentation Window at that point.

Set Origin

Choose one of the options from this drop-down list to tell MasterClass which part of the bitmap being animated should line up with the actual points on the animation path. The default is *Centre*, meaning that the centre of the bitmap picture will follow the animation path.



Movie File

Digital video and animations stored on computer disk can be played back using this option.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Type

Choose the type of digital video file to be played

The options in MasterClass 2.0 are:

Video for Windows

Digital Video Interactive (DVI)

Autodesk Animator

Animation Works Interactive

VideoLogic MediaSpace

Location

Specifies where the video or animation is to appear in the Presentation Window.

Fill Window

The whole Presentation Window will be filled with the movie.

Rectangle

Click the *Define* button to define a rectangle for the movie to appear in.

Attributes

Wait Until Complete

Check this box if MasterClass should wait until the movie has finished before moving on to wait for a Response or activate a new task

Loop

If the movie should repeat indefinitely, check this box. (Refer to the Clear Action for removing looping movies from the Presentation Window).

Use Optimum Size

Video for Windows files usually have an optimum size (often the size at which it was recorded) which will give the best quality playback without stretching and distortion.

Filename

Click the *Browse* button to select the movie file to be played.

Advanced Play

Click this button to specify various additional options for digital video files.

Dialog Box Options

Total Number of Frames

MasterClass calculates the total number of frames in the video file chosen and displays it here.

Play

From frame

Sets the start point for the playback of the movie.

To frame

Sets the end point for stopping the playback of the movie.

Speed

For some types of movie files the speed of playback can be set. The higher the number of frames per second the faster the movie will run. The maximum speed achievable will depend on the performance of your computer system.



MCI Command

Microsoft's MultiMedia Control Interface is a general way of issuing commands to perform multimedia functions. Usually, MasterClass does all the work of using these commands for you - the Actions take care of it. However, this action is available if you want to issue MCI instructions directly from the course yourself.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

MCI Command String

Enter the text of the MCI commands in this edit box. Refer to the relevant manufacturer's reference manual for the actual MCI commands required to control a particular piece of hardware or software. Several commands can be used within the same action - simply type them on different lines in the edit box.

MasterClass Variable values can also be used in the scripts e.g. *{WindowHandle}*.



Run Another Course

Courses can be built as a series of modules stored as individual MasterClass courses. They can then be linked together by this action. This helps in the construction and maintenance of large courses.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Attributes

Preload

Not implemented in version 2.0

Return when complete

Check this box to resume the current course when the one being called has finished. The course will continue with the next action or task in the course.

Course Filename

Click the *Browse* button to select the MasterClass course to be run from this action.

Variables

As an advanced feature, variables can store information during a course and can be used in a variety of ways. Sophisticated scoring schemes can be created by assigning different values to variables depending on which answer the student selects.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Set Variables

This edit box is used to enter the variable calculation. Variable names can be typed in directly or inserted from the **Insert Variable** list. Click on the down arrow to reveal the list of all the variables available within the course, both the built-in ones and those added using the Course/Variables menu. Several variables can be set within the same action by putting each calculation on a different line.

Arithmetic can be carried out on the variables. The operators supported in MultiMedia MasterClass 2.0 are as follows:

Addition	+
Subtraction	-
Multiplication	*
Division	/
Exponential	^

Precedence is from left to right although expressions can be associated using (.....)

An example of a variable equation would be :

PercentageWrong = (QuestionsWrong / NoOfQuestions) * 100

Equations can be validated using the Course/Validate menu option.

Write to File

MasterClass keeps track of basic scoring automatically. This can then be used by the MasterClass Analysis Module, purchased separately. However, variable values can also be written out to a text file using this action for use in other applications, such as spreadsheets.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Write

This edit box is used to enter the variable values to be written to the file and the format they will appear in. Variable names can be typed in directly, enclosed by {...}, or inserted from the ***Insert Variables*** list (click on the down arrow to reveal the list of all the variables available within the course, both the built-in ones and those added using the Course/[Variables](#) menu). More than one line can be entered. The variable values can be separated by any characters: commas are useful for reading the text file produced into spreadsheets and databases. This format is known as CSV (comma-separated-variables).

Example:

```
{StudentName},{StudentID},{StudentScore}.
```

File name

Type in a file name or click the ***Browse*** button to specify the file to be written to by the action.

Create New

If this radio button is selected, any existing data in a file with this name will be overwritten.

Append

If this radio button is selected, any existing data in this file will be retained and the new data added after it. In this way, scores for different parts of a course could be written to the same file.



Simulator

If you have the TQC Process Simulator Link Module, purchased separately, you can set-up process control parameters and goals from this action and run the simulations themselves.

See the Process Simulator Link User's Guide supplied with the Process Simulator Link software.



Responses

Having let the actions build the screen to show to the student (for example, a picture with some text on it), the responses are then used to specify how the student is to respond to those actions. This can range from pressing a button on the screen to move to the next picture, through to typing answers to questions displayed. Each response is linked to another task which will be carried out when that response is activated. Buttons and hyper-regions can also be assigned 'right' and 'wrong' for logging student results.

A task can have several responses. The one which is carried out is the one whose conditions are met first. For example, if there is a Pause response and a User Input response attached to the same task, if the time period defined in the Pause expires before the user has pressed the correct keys, the course will branch to the task specified in the Pause response rather than the one specified in the User Input one.



Branch



Pause



User Input



Frame Location



Hyper Region



Grid



Push Button



Editor Input



Check Button



Conditional Branch



Action Complete

Resulting Action

Most of the Response dialog boxes contain a section labelled *Resulting Action* - in other words, what should happen next. Here is a general description for all the dialog boxes:

Next Task

Go to the task immediately following this one.

Branch to Task Tag Number

Go to the task with a particular task number. This can be selected from a list of task numbers and their description displayed by pressing the *Select...* button.

Set Variables

Before the course branches to the task specified, variable values can be set in the same way as they can by using the Variables action.

Dialog Box Options

This edit box is used to enter the variable calculation. Variable names can be typed in directly or inserted from the **Insert Variable** list. Click on the down arrow to reveal the list of all the variables available within the course, both the built-in ones and those added using the Course/Variables menu.

Several variables can be set within the same response by putting each calculation on a different line.

You can carry out arithmetic on the variables. The operators supported in MultiMedia MasterClass 2.0 are as follows:

Addition	+
Subtraction	-
Multiplication	*
Division	/
Exponential	^

Precedence is from left to right, although expressions can be associated using parentheses ()

An example of a variable equation would be :

NumberOfAttempts = NumberOfAttempts + 1

You can validate equations using the Course/Validate menu option.



Branch

Use this to go immediately to another part of the course without waiting for a response from the student.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Resulting Action



Pause

Wait for a period of time, defined in seconds, before moving on to another task.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Time

Type in the amount of time to wait before moving on to the task specified in Resulting Action. The shortest time which can be specified is 0.1 seconds.

Resulting Action



User Input

Wait for the student to press any, or a particular, key or click the mouse button.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Response

Choose whether both key presses and mouse clicks will be monitored by this response.

Key Press

Check this to catch key presses.

Left Button Click

Check this to catch the left button of the mouse being pressed.

Mouse Action

If Left Button Click option has been selected, choose one of these options to specify what kind of mouse click to look out for:

Single Click (Default)

Activate the response if the student clicks the mouse button once.

Double Click

Activate the response if the student double-clicks on the mouse-button in the usual 'Windows' way (for example when starting an application from an icon in Program Manager).

Keyboard

If the Key Press option has been selected, choose one of these options to specify what kind of key press to look out for:

Any Key (Default)

The response will be activated if the student presses any key on the keyboard.

Specific Keys

The response will only be activated if a specific key is pressed. Type a keyboard letter or number into the edit box, or press the *Define* button to bring up a list of special keys which can be used, such as function keys. Click on the name in the list to choose one.

Note: Push Button responses have their own keyboard processing - for example, short cut keys can be assigned to them. In general, User Input responses should not be mixed with Push Button responses within the same task.

Resulting Action



Frame Location

This response is used in conjunction with the Tape Control action to wait for the tape or disk to reach a particular point.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Wait for Frame

Use this box to specify at which point on the tape or disk the action should activate, moving on to the task specified by Resulting Action.

Location by

The units used to specify the location can be chosen by these radio buttons.

Frame Number

Choose this radio button to enter locations in frames. The current location of the tape or disk is checked several times a second by MasterClass. There are 25 video frames per second generally in European video systems and 30 frames in the U.S.

Seconds

It may be easier, though less accurate, to specify locations in whole seconds. Choose this radio button for locations in seconds.

Resulting Action



Hyper Region

Use this response to create rectangular 'hot-spots' in the Presentation Window. If the student clicks the mouse on this spot, or presses a key assigned to that region, the course will move on to the task defined in the response. This is how photographs can be made interactive, for example. Clicks in a region can be logged as 'right' or 'wrong' for student scoring.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Region Response

Choose whether both key presses and mouse clicks will be monitored by this response.

Key Press

Check this to catch key presses.

Left Button Click

Check this to catch the left button of the mouse being pressed.

Mouse Action

If Left Button Click option has been selected, choose one of these options to specify what kind of mouse click to look out for:

Single Click (Default)

Activate the response if the student clicks the mouse button once.

Double Click

Activate the response if the student double-clicks on the mouse-button in the usual Window way (for example when starting an application from an icon in Program Manager).

Keyboard

If the Key Press option has been selected, choose one of these options to specify what kind of key press to look out for:

Any Key (Default)

The response will be activated if the student presses any key on the keyboard.

Specific Keys

The response will only be activated if a specific key is pressed. Type in a keyboard letter or number into the edit box, or press the *Define* button to bring up a list of special keys which can be used, such as function keys. Click on the name in the list to choose one.

Log Response As

If student logging is being used (see Course/Log File menu option), the result to be logged can be chosen here. The options are:

Right

Wrong

N/A (Default)

Rectangle

Click the *Define* button to draw a region in the Presentation Window. Once a region has been defined, the button text changes to *Modify*, allowing the region's size and position to be changed.

Show Region Rectangle

Check this option, once a region has been defined, to show the boundary of the region as a dotted line in the Presentation Window.

Show Hand Cursor

Check this option, once a region has been defined, to change the cursor to a pointing hand whenever it is moved over the region. In this way students can be given an indication of where they can click in the Presentation Window.

Resulting Action



Grid

If many hyper-regions are needed, for instance on top of a map, the grid response provides an easy way to do this. A rectangle can be defined and divided into a number of rows and columns. Each element of the grid, when clicked, can lead to a different task in the course.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Grid

The options under this heading apply to the grid as a whole:

Rows

The number of rows in the grid.

Columns

The number of columns in the grid.

Rectangle

Click the *Define* button to draw a region in the Presentation Window to contain the grid. The rows and columns will be automatically scaled to fit the grid defined.

Show Grid

Check this option, once a bounding rectangle has been defined, to show the grid as a series of dotted lines in the Presentation Window.

Show Hand Cursor

Check this option, once a bounding rectangle has been defined, to change the cursor to a pointing hand whenever it is moved into the grid. In this way students can be given an indication of where they can click in the Presentation Window.

Cell

The options under this heading refer to specific cells in the grid. The top left cell is at row 1, column 1.

Row

Select the row of a particular cell by typing in its row number or by using the up and down arrows by the side.

Column

Select the column of a particular cell by typing in its row number or by using the up and down arrows by the side.

Log As

If student logging is being used (see Course/Log File menu option), the result to be logged if this cell is clicked can be chosen here. The options are:

Right

Wrong

N/A (Default)

Resulting Action



Push Button

This is one of the most commonly used responses. It places a button with text at a point on the screen. When the student presses it the course moves on to the specified task. Button pushes can also be logged as 'right' or 'wrong' for student scoring.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Button Text

Type in the text to appear on the button here. Put the '&' character before any letter to be used as a shortcut key. For example, the default is "&Continue", meaning that the button will have 'Continue' written on it with the 'C' underlined, indicating that the student can press the C key (upper or lower case) to activate the button as if it had been clicked with the mouse.

Location Define/Modify

Click the Modify button to change the shape and position of the button. The default 'Continue' button is positioned at the bottom centre of the Presentation Window.

Font

Click this button to specify in what font (size, face etc.) the text of the button will be shown. The colour of the text of all buttons is specified in the Windows configuration itself, and can be changed using the Colours option in Control Panel.

Attributes

This might be used to label a particular button as the **Default** one (i.e. the one activated when the student presses the *Enter* key).

Log As

If student logging is being used (see Course/Log File menu option), the result to be logged can be chosen here. The options are:

Right

Wrong

N/A (Default)

Resulting Action



Editor Input

This displays a standard Windows edit box on the screen so that the student can type in answers which can be assigned to variables for later use.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Location

Click the *Define* button to draw a rectangle in the Presentation Window for the edit box.

Font

Click this button to specify the font (size, colour etc.) to be used to show text typed into the edit box.

Bk Colour...

Click this button to choose a fill-colour for the edit box.

Type

The options in this group specify how the edit box will appear and behave:

Single Line / Multiple Line

Choose one of these options to specify whether the student is allowed to enter more than one line of text into the box.

Border

Check this option if the edit box is to appear with a border around it.

Read Only

Select this if you want to display the value of a variable in the edit box, but you don't want the student to be able to alter it or type anything else in.

Vertical Scroll Bar

If a multiple line edit box is chosen, check this option to show a scroll bar allowing more lines of text than can fit into the box to be entered and viewed.

Style

The options in this group specify how the typed-in text is to be shown:

Case insensitive

Any letters typed-in will appear as a combination of upper & lower case.

Password

As letters and numbers are typed in they will just be shown as a series of '*' characters in the edit box. The full text can still be assigned to a variable, for password checking, for example.

Upper Case

Any letters typed in will automatically be converted to UPPER CASE .

Lower Case

Any letters typed in will automatically be converted to lower case

Justify

These options specify in which way the text will appear in the edit box - from the left, right or centre.

Left
Centre
Right

Assign to variable

Choose a variable from the list which will be used to store the text entered into the edit box. Both built-in variables and those created through the *Course/Variables* menu item can be used.

Initially displayed

Check this option if the edit box is to be filled with the current value of the variable with which it has been associated, when it is first displayed.



Check Button

Check boxes and radio buttons can be used to allow the student to select one or more possible answers.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Title

Type in here the text which will appear next to the radio button or check box.

Location

Click the *Define* button to specify the size and position of the check box or radio button and its associated title in the Presentation Window.

Font

Click this button to specify the font (size, colour etc.) to be used for the object.

Bk Colour...

Click this button to choose a fill-colour for the rectangle defined for the object.

Type

Choose how the object will appear and behave:

Check Box

A cross is drawn when the student clicks on the box, indicating that it is set. It is removed when clicked on again. Each check box acts independently of any others on the screen.

Radio Button

A circle is filled when the student clicks on it, indicating that it is set. It is unfilled when another radio button in the group is clicked on (see *Start of Group* below).

Justify

Choose which side of the object the *Title* will appear:

Right

The title appears to the right of the radio button or check box.

Left

The title appears to the left of the radio button or check box.

Start of Group

Select this option to begin a new radio button group, which causes all the button responses defined in the task from this point on, until the next *Start of Group*, to act together - when one is selected, all the others are deselected.

Initially Checked

The radio button or check box can be set to its 'on' state when first displayed in the Presentation Window, (although only one button in a group of radio buttons can be on at any one time). The options are:

Always

The check box or button will be on when first shown.

If expression true

The check box or button will only be set when first shown if the given variable expression is true.

Enter the expression to test for in the edit box. Variable names can be typed in directly or inserted from the ***Insert Variables*** list - click on the down arrow to reveal the list of all the variables available within the course, both the built-in ones and those added using the *Course/Variables* menu.

The following logical operators can be used in expressions:

and	and	
or	or	
equal to	=	
not equal to	<>	
greater than	>	
greater than or equal to	>=	
less than		<
less than or equal to	<=	

An example expression would look like this:

StudentScore > 50 and QuestionsRepeated <= 10

If Checked

If the check box or radio button is set when the task is completed, variable values can be altered from the *Set Variables* button - see Resulting Action.



Conditional Branch

This response checks the value of variables, such as student scores, and will branch to a different part of the course if a particular expression is true. It is always checked first in a task with several responses, even if on the screen it is not shown as the first response icon.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Branch if

Enter the expression to test for in this edit box. Variable names can be typed in directly or inserted from the **Insert Variable** list - click on the down arrow to reveal the list of all the variables available within the course, both the built-in ones and those added using the *Course/Variables* menu.

The following logical operators can be used in expressions:

and	and
or	or
equal to	=
not equal to	<>
greater than	>
greater than or equal to	>=
less than	<
less than or equal to	<=

Note that there is an implicit 'if' in all Conditional Branch responses so it's not necessary to type it in the expression.

An example expression would look like this:

StudentScore > 50 and QuestionsRepeated <= 10

Resulting Action



Action Complete

This is used in conjunction with certain Actions to wait for them to be completed.

Movies (both digital video clips and animations), Sound and MCI actions can be used with this response - the next task will not be activated until the action has finished what it is doing. This response can also be combined with other responses, so the student can interrupt a video clip with a button or key rather than having to wait for it to play all the way through.

Dialog Box Options

Icon Text

The text which will be used to label the icon in the course. It will not be seen by the student.

Resulting Action

Windows Keys

The keyboard topics below come from Help for Windows. You can create similar keyboard topics for your application's Help. Choose from the following list to review the keys used in Windows:

[Cursor Movement Keys](#)

[Dialog Box Keys](#)

[Editing Keys](#)

[Help Keys](#)

[Menu Keys](#)

[System Keys](#)

[Text Selection Keys](#)

[Window Keys](#)

Cursor Movement Keys

Key(s)	Function
DIRECTION key	Moves the cursor left, right, up, or down in a field.
End or Ctrl+Right Arrow	Moves to the end of a field.
Home or CTRL+Left Arrow	Moves to the beginning of a field.
PAGE UP or PAGE DOWN	Moves up or down in a field, one screen at a time.


Dialog Box Keys

Key(s)	Function
TAB	Moves from field to field (left to right and top to bottom).
SHIFT+TAB	Moves from field to field in reverse order.
ALT+letter	Moves to the option or group whose underlined letter matches the one you type.
DIRECTION key	Moves from option to option within a group of options.
ENTER	Executes a command button. Or, chooses the selected item in a list box and executes the command.
ESC	Closes a dialog box without completing the command. (Same as Cancel)
ALT+DOWN ARROW	Opens a drop-down list box.
ALT+UP or DOWN ARROW	Selects item in a drop-down list box.
SPACEBAR	Cancels a selection in a list box. Selects or clears a check box.
CTRL+SLASH	Selects all the items in a list box.
CTRL+BACKSLASH	Cancels all selections except the current selection.
SHIFT+ DIRECTION key	Extends selection in a text box.
SHIFT+ HOME	Extends selection to first character in a text box.
SHIFT+ END	Extends selection to last character in a text box

Editing Keys

Key(s)	Function
Backspace	Deletes the character to the left of the cursor. Or, deletes selected text.
Delete	Deletes the character to the right of the cursor. Or, deletes selected text.

Help Keys

Key(s)	Function
F1	<p>Gets Help and displays the Help Index for the application. If the Help window is already open, pressing F1 displays the "Using Windows Help" topics.</p> <p>In some Windows applications, pressing F1 displays a Help topic on the selected command, dialog box option, or system message.</p>
SHIFT+F1	<p>Changes the pointer to  so you can get Help on a specific command, screen region, or key. You can then choose a command, click the screen region, or press a key or key combination you want to know more about.</p> <p>(This feature is not available in all Windows applications.)</p>

Menu Keys

Key(s)	Function
Alt	Selects the first menu on the menu bar.
Letter key	Chooses the menu, or menu item, whose underlined letter matches the one you type.
Alt+letter key	Pulls down the menu whose underlined letter matches the one you type.
LEFT or RIGHT ARROW	Moves among menus.
UP or DOWN ARROW	Moves among menu items.
Enter	Chooses the selected menu item.

System Keys

The following keys can be used from any window, regardless of the application you are using.

Key(s)	Function
Ctrl+Esc	Switches to the Task List.
Alt+Esc	Switches to the next application window or minimized icon, including full-screen programs.
Alt+TAB	Switches to the next application window, restoring applications that are running as icons.
Alt+PrtSc	Copies the entire screen to Clipboard.
Ctrl+F4	Closes the active window.
F1	Gets Help and displays the Help Index for the application. (See Help Keys)

Text Selection Keys

Key(s)	Function
SHIFT+LEFT or RIGHT ARROW	Selects text one character at a time to the left or right.
SHIFT+DOWN or UP	Selects one line of text up or down.
SHIFT+END	Selects text to the end of the line.
SHIFT+HOME	Selects text to the beginning of the line.
SHIFT+PAGE DOWN	Selects text down one window. Or, cancels the selection if the next window is already selected.
SHIFT+PAGE UP	Selects text up one window. Or, cancels the selection if the previous window is already selected.
CTRL+SHIFT+LEFT or RIGHT ARROW	Selects text to the next or previous word.
CTRL+SHIFT+UP or DOWN ARROW	Selects text to the beginning (UP ARROW) or end (DOWN ARROW) of the paragraph.
CTRL+SHIFT+END	Selects text to the end of the document.
CTRL+SHIFT+HOME	Selects text to the beginning of the document.

Window Keys

Key(s)	Function
ALT+SPACEBAR	Opens the Control menu for an application window.
ALT+Hyphen	Opens the Control menu for a document window.
Alt+F4	Closes a window.
Alt+Esc	Switches to the next application window or minimized icon, including full-screen programs.
Alt+TAB	Switches to the next application window, restoring applications that are running as icons.
Alt+ENTER	Switches a non-Windows application between running in a window and running full screen.
DIRECTION key	Moves a window when you have chosen Move from the Control menu. Or, changes the size of a window when you have chosen Size from the Control menu.

