

# Miscellaneous Helper Classes

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Not only the core classes are available for those who create modules. I have developed some other useful things. . .

When reading this document you should already have read about the core classes and the room list, and have access to the source code of MathMoon.

## 1 Button

The `Button` class derives from `wxButton` and adds no methods that are not already defined by that class (see the `wxWidgets` documentation). It differs only in that the help text is displayed in the window status bar when the mouse hovers over the button.

## 2 CommandProcessor

A `CommandProcessor` is really only a function like object (should I change the name?), i.e. an object that supports “`void operator()()`”. You can’t instantiate this class, it is abstract.

There are two derived classes, “`Function`” and “`GoThroughDoor`”. A `Function` is passed a pointer to a `void` function at construction time, and enables the use of traditional callbacks when an object wants a `CommandProcessor`.

`GoThroughDoor` is passed a pointer to a `WindowContents` object and the name of a door, and when activated it tells the `WindowContents` object to go through that door. It is used by the `Intro WindowContents`, which passes such an object to `HtmlPanel`. It is then activated when the button of the `HtmlPanel` is clicked.

### 3 HtmlPanel

The `HtmlPanel` is a `wxPanel` that can be used to display an HTML file and a button. When the button is clicked, a `CommandProcessor` is activated. You should pass an `HtmlPanel` a pointer to the current `WindowContents` object, the name of the HTML file to display, the text and the help text of the button, and a `CommandProcessor` to the constructor.

### 4 IntroWC

The (abstract) `IntroWC` class is for those classes that display some intro message and then go on. Derived classes should override the `EnterRoom()` method, which is called when the intro panel (managed entirely by `IntroWC`; currently we use `HtmlPanel` for this) says it's time to enter the room for real.

If you derive from `IntroWC` your `WindowContents` object will require the attributes “`html_file`”, “`button_text`” and “`button_help`” to be present in the room list clause.

### 5 Theme

Objects of this class are created by `WindowContents` objects. The constructor should be passed the functor (name) of a theme clause in the room list file. The panel responsible for the window should ask for the `Theme` object, and tell it to `Draw()` onto a `wxDC` of a given size, whenever the window needs to be repainted. You can see how this is done by looking at the `MultiSimPanel` definition of `OnPaint()` and `Draw()`.