SDL Tutorial 3

SDL Events

These tutorials are made to be followed in order. Ensure that you have followed all previous tutorials in the series otherwise the code implemented below will not function correctly.

This tutorial implements event driven programming to our SDL program. So far we have had to rely on the SDL\_Delay() function to enable us to see our window. Obviously when making a game you wouldn’t want the screen to close after 5 seconds, and this is where events come in.

SDL supplies a good range of events for us to deal with. The ones we are interested in are:

SDL\_QUIT,

SDL\_KEYDOWN,

SDL\_KEYUP,

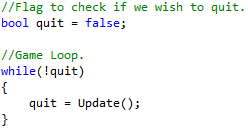
SDL\_MOUSEMOTION,

SDL\_MOUSEBUTTONDOWN,

SDL\_MOUSEBUTTONUP.

The following tutorial will demonstrate how to use events to close the window when the user clicks the X at the top right of the window.

1. Open your SDL project in Visual Studio.
2. We will be using an Update function to deal with the events, so add an Update() function prototype to your code that returns a bool and accepts no parameters.
3. In the body of the *main()* function we need to alter it a little. First we need to remove the code to add a delay and replace it with the following code:



The *CloseSDL()* function call should remain. Do not delete this. It should come after the above code.

This while loop will continually loop until the *Update()* function returns true. Whether the *Update()* function returns true or false is all dependant on an event check.

1. Create an *Update()* function.
   1. Add the following event declaration:



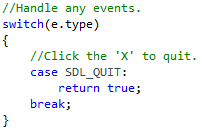
This SDL\_Event is local and will go out of scope at the end of the *Update()* function. We will use this variable to store any event that has taken place.

* 1. Next, poll SDL for any event that has taken place.



By passing through the address of *e* we allow it to be adjusted in the SDL\_PollEvent() function.

* 1. Once we have the event we need to determine what action should be taken. This will be done using a switch statement.



SDL\_QUIT is the event type returned when the X is clicked. As the user has decided to close the application, we should return true, which will in turn set the flag in our main function to stop the while loop.

* 1. Finally, if we have not exited the Update() function the user has obviously not clicked the X to exit, so we should return false.



1. Build and run the application. Try clicking on the X.

**Additional Work**

As a further example of events and for you to have a play, try and make the screen close on a qey press of ‘Q’ or by clicking the right mouse button anywhere.

To determine the key press you will need to use the following format:



The following link will give you a complete list of all the keys and there SDL values: <http://www.libsdl.org/release/SDL-1.2.15/docs/html/sdlkey.html>

To determine mouse clicks, try this within your switch statement:



In the next tutorial we will be looking at getting images drawn to the screen.