

Designing Interactive Systems II - Assignment 04

Group 12

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3. Testing Your Understanding

Compare and contrast the use of event listeners to standard callbacks in C.

Callback: Callback functions are functions which is called using a function pointer in C. It separates the calling function (by application developer) and the called function (callback function).

Listener: Event listener listens for a particular event to occur and if it occurs then triggers the event code. This event must be handled by the application developer appropriately. The event handler here acts as a callback.

Design decisions:

- `RATwidget` extends the `SimpleWindow` class, so that all the widgets will be an instance of `SimpleWindow`
- `RATmouseAdaptor` class implements the `RATmouseListener`. It also stores the instance that uses the listener. The advantage is that application developer can now define only necessary event listener (like Mouse click) and can ignore the definition of other events to `RATmouseAdaptor`. This reduces the code.

ExpertApp

RATulator - *Really Awesome Calculator which performs simple arithmetic in style!*

We implemented the calculator app using `RATbutton`, `RATlabel` and `RATmouseAdaptor`. We chose the adaptor instead of listener in it as we had to implement only the clicked action of each button.