CS1013
Exercise 6

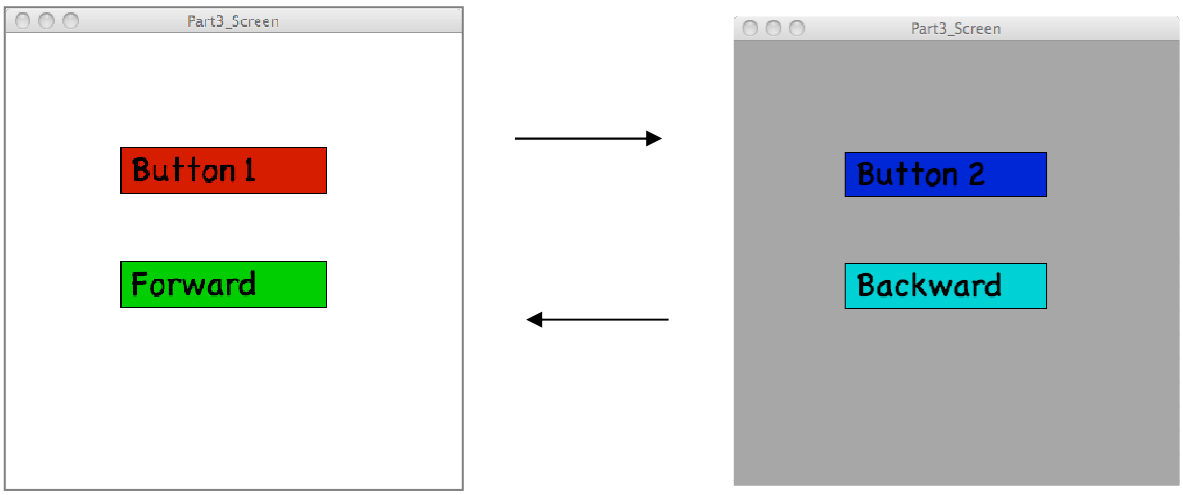
1. Using the **widgetList** program and **`Widget`** class covered at the lecture, write a program containing three widgets/buttons labelled "red", "green" and "blue". Alter the ***`mousePressed`*** method so that a square displayed on the screen changes colour (to the named colour) as each button is pressed. (3 marks)

2. Alter your program so that the border colour of a widget changes (to white) when the mouse pointer is over it but reverts to normal (black) when the mouse pointer is not over it. This must work independently for each of your widgets (i.e. only the widget the mouse over is highlighted like this). Processing will call the ***`mouseMoved`*** method (if you define it) whenever the mouse is moved. The ***`stroke()`*** method allows you to define the border color. (3 marks)

3. Define a **`Screen`** class which contains an **ArrayList** of Widgets. Each screen should have it's own background colour. Give **`Screen`** a ***`getEvent`*** method which returns an event (the Widget pressed), and define a ***draw*** method in **`Screen`** which draws the screen's widgets. Each screen has it's own background color.

Create an ***`addWidget`*** method to add a widget to the ArrayList of the screen. Use your **`Screen`** class to write a program where there are two screens, and two buttons on each screen, one of the buttons on each screen should move you forward and back through the different screens as illustrated below. You can do this by creating two instances of `Screen`. Pressing the other button should result in some text output from `println` to report which button has been pressed. *Hint: you can create an extra Screen variable currentScreen which keeps track of the current screen – i.e. one of the existing instances.*

Your mousePressed method in the main program will no longer require a loop, but should still deal with the different events. (4 marks)



Extra Credit 6: implement checkbox and "radio button" widgets as subclasses of Widget.
Extra Credit 7: implement a slider that allows the user to select a number between 1 and 100 by sliding a rectangle along a bar.