

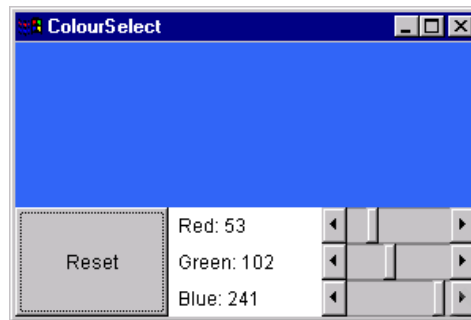
## Exercise: ColourSelect

This exercise will give you a good appreciation of Java's Abstract Windowing Toolkit. You will make use of

- Buttons
- Scrollbars
- Canvases
- Panels
- Labels
- GridLayout and BorderLayout layout managers (or GridBagLayout, if you are feeling exceptionally lucky!)

### 1. The Exercise

In this exercise you will produce a simple Java application that acts as a colour selector. You should (try and!) duplicate the layout shown here:



### 2. Hint

To get you started, here is the main method from the class ColourSelect:

```
public static void main (String [] args)
{
    ColourSelect cs = new ColourSelect ();
    cs.setSize (new Dimension (300, 200));
    cs.setVisible (true);
}
```

Your ColourSelect class should extend the AWT's Frame class.

### 3. Further Work

- Create a LabelledScrollbar (consisting of a Label and a Scrollbar) and use an instance of this new object for each of the red, green and blue sliders. You should be able to see that your main class becomes considerably less complicated as a result of this change, since it will be possible to move all the event handling associated with the Scrollbar within the new class.
- Create an RGBColourSelector class that groups the three LabelledScrollbars together and which notifies another class whenever it wants to report a change in its settings. You can look at the Observer/Observable Java library mechanism for inspiration.
- Reduce the size of the "Reset" button to a more normal size and place it centred within its enclosing space.