

# Java Programming for Beginners

## Lab Exercise 10

1) Components in our GUIs can interact with each other very actively. Try creating a GUI that contains both a **Text Field** and a **Progress Bar**. Now, link the components so that the **Progress Bar** fills up after the user has placed 100 characters in the **Text Field**.

(Hint: To update the **ProgressBar** each time a character was added/removed, I used the **KeyTyped** event.)

2) A common task that GUI designers must perform is providing a list of options that the user may only select one of. To do this, they often employ the **Radio Button** GUI element in conjunction with the **Button Group** element. Create a new Swing GUI and add three **Radio Buttons**. Run the GUI and observe their functionality. Now, add a **Button Group** to the GUI and set the “Button Group” of each **Radio Button** to this new group. How has their functionality changed?

(Hint: After you’ve created the GUI object, you will still need to call the method `setVisible(true)`)

3) A Swing GUI is wrapped up in a class, just like any other Java object. Write a “normal” Java class with a main method and let users launch the GUI from this location by providing some form of input.

