

Solve the following questions using Java as programming language. You are not to use any GUI tools.

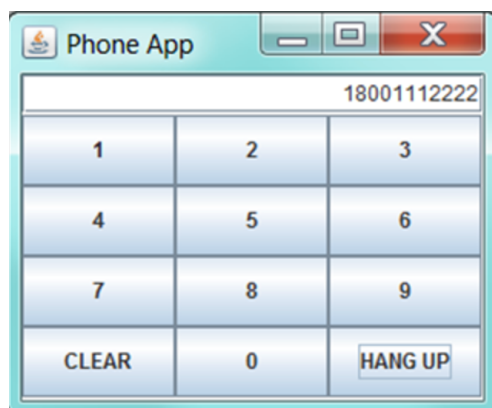
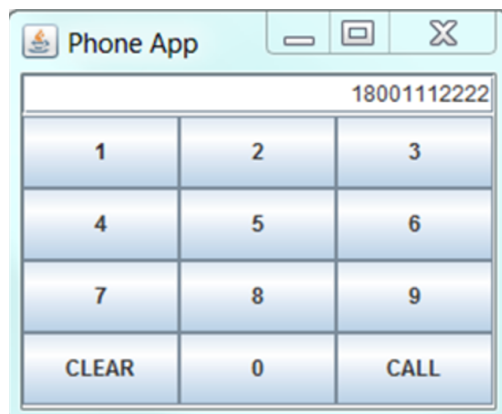
### Questions

1. Create a phone app using Java Swing as illustrated in the figure below. The user will enter phone number and press “Call” button to make a call. Once the call is started, the label of the call button changes to “Hang up”. When the user ends the call the display area is cleared.

Assume the following two functions are available for handling phone calls:

`public void call (String phoneNumber) // to make phone call with phoneNumber`

`public void hangup () // to terminate on going call`



2. Create a class RandomPanel (extends JPanel) containing two panels. One of the panels should contain a button with the text New Random. When the button is pressed, a random number in the interval 1-100 is generated and shown in the other panel. Try to change the size of the text so that the number fills the entire panel. Also write a test program RandomMain.java starting a frame containing the RandomPanel.
3. Write a GUI program ColorDisplay.java. When the button “Display color” is pressed, three integer (red, green, blue) values are read and the color of the upper panel is changed according to the values of the integers. The picture below shows how the execution of the program can look.

<h1>Color Display</h1>		
Red <input type="text" value="128"/>	Green <input type="text" value="234"/>	Blue <input type="text" value="178"/>
<input type="button" value="Display Color"/>		

For any color values ranging beyond 0 to 255, show error message in the display area without changing the color.