

## Object Oriented Programming Lab

Topic: GUI using Swings

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Given the java files to you already which are **STDrawingArea.java** and **STTestMain.java**

Execute the following tasks:

1. Add an additional button between “Green Pen” and “Clear”. The text written on it is “Blue Pen”.

(3 MARKS)

2. For any given Pen button (Red, Green or Blue), implement the **Toggle** functionality by changing their text color. (Use *foreground()* method)
  - a. On pressing a button, the button text should change into the corresponding color and the drawing should be in the particular color. When the same button is pressed again, the text on the button and the pen color should both turn to black.
  - b. The same functionality has to be implemented when you press other buttons. Thus, if RED is pressed and then BLUE is pressed, the text color of RED button should become black and text color of BLUE button and drawing pen should become blue in color.
  - c. When Clear is pressed, all buttons should have text in black color and the drawing pen also in black color.

(3 MARKS)

3. Add a keyboard based Color setting option as follows:
  - a. Press **r** to set the drawing color to **RED**.
  - b. Press **g** to set the drawing color to **GREEN**.
  - c. Press **b** to set the drawing color to **BLUE**.
  - d. Press **c** to simulate pressing Clear Button.

PS: Do not Implement Toggle Functionality.

To explain this, a use case is given

Step 1: r is pressed,	drawing color is <b>RED</b> .
Step 2: g is pressed,	drawing color is <b>RED + GREEN</b>
Step 3: b is pressed,	drawing color is <b>RED + GREEN + BLUE</b>
Step 4: g is pressed,	drawing color is <b>RED + BLUE</b>
Step 5: r is pressed,	drawing color is <b>BLUE</b>

(4 MARKS)