

# Programming in Java

## Assignment – 2



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## Problem statement:

Design a Java GUI applet that allows users to enter text in a text field. Upon clicking a button, the entered text should be displayed in a centred label.

## Description:

The Java GUI applet is a simple program that provides a graphical user interface for users to enter text and see the entered text displayed in a label. The applet consists of a text field, a button, and a label. When the button is clicked, the text entered in the text field is captured, and the label is updated to display the entered text in the centre-aligned position.

## Concepts used:

1. **Java Applet:** The program is implemented as a Java applet, allowing the graphical user interface to be displayed within a web browser.
2. **GUI Components:** The applet utilizes various GUI components such as text field, button, and label to provide an interactive interface for user input and output.
3. **Event Handling:** The applet handles the button click event using an ActionListener to capture user actions and respond accordingly.
4. **Layout Management:** The Flow Layout manager is used to arrange the GUI components in a horizontal flow.
5. **Alignment:** The Label component's `setAlignment ()` method is used to centre-align the text within the label.
6. **Font Styling:** The `setFont()` method is used to set the font style, size, and type for the label text.
7. **Action Listener:** An ActionListener is implemented to handle button click events and perform the desired action of displaying the entered text in the label.
8. **String Manipulation:** The entered text is retrieved from the text field and manipulated as a String to update the label's text.

## Program Code:

```
import java.applet.Applet;

import java.awt.Button;

import java.awt.Color;

import java.awt.FlowLayout;

import java.awt.Font;

import java.awt.Label;

import java.awt.TextField;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

/*

<Applet code=JavaGUIApplet width=500 height=200>

</Applet>

*/

public class JavaGUIApplet extends Applet {

    private TextField textField;

    private Label label;

    public void init() {

        setBackground(Color.WHITE);

        setLayout(new FlowLayout());

        textField = new TextField(20);

        label = new Label("You entered:");

        label.setAlignment(Label.CENTER);

        label.setFont(new Font("Arial", Font.BOLD, 16));

        Button button = new Button("Click Me!");

        button.addActionListener(new ActionListener() {
```

```
public void actionPerformed(ActionEvent e) {  
  
    String input = textField.getText();  
  
    label.setText("You entered: " + input);  
  
}  
});  
  
add(textField);  
  
add(button);  
  
add(label);  
  
}  
}
```

## Screenshots:

