

“JP Practical 11: Write AWT/Swing program in Java to create students’ registration form”

A] Code:

```
package graphical.ui.apps;

import javax.swing.*;
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

public class K_StudentRegistrationForm extends JFrame implements ActionListener {
//  Components
    private JLabel nameLabel, ageLabel, courseLabel;
    private JTextField nameTextField, ageTextField;
    private JComboBox<String> courseComboBox;
    private JButton submitButton;

//  Constructor
    public K_StudentRegistrationForm(){
//      Frame Setup
        setTitle("Student Registration form by Krishna");
        setSize(400,300);
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setLayout(new GridLayout(4,2));

//      Initialize components
        nameLabel = new JLabel("Name:");
        ageLabel = new JLabel("Age:");
        courseLabel = new JLabel("Course:");

        nameTextField = new JTextField();
        ageTextField = new JTextField();

        String[] courses = {"Select Course", "Computer Science", "History", "Astronomy", "Physics", "Chemistry",
"Biology"};
        courseComboBox = new JComboBox<>(courses);

        submitButton = new JButton("Submit");
        submitButton.addActionListener(this);
    }
}
```

```

//    Add components to the frame
add(nameLabel);
add(nameTextField);
add(ageLabel);
add(ageTextField);
add(courseLabel);
add(courseComboBox);
add(new JLabel()); // Empty label for layout purposes
add(submitButton);

//    Display the frame
setVisible(true);
}

//    ActionListener implementation
@Override
public void actionPerformed(ActionEvent e){
    if (e.getSource() == submitButton){
//        Handle submit button click
        String name = nameTextField.getText(), age = ageTextField.getText(), course = (String)
courseComboBox.getSelectedItem();

//        Validating and displaying information
        if (name.isEmpty() || age.isEmpty() || course.equals("Select Course")){
            JOptionPane.showMessageDialog(this, "Please fill in all fields.", "Error",
JOptionPane.ERROR_MESSAGE);
        } else {
            String message = "Registration Successful!\nName: " + name + "\nAge: " + age + "\nCourse: " + course;
            JOptionPane.showMessageDialog(this, message, "Success", JOptionPane.INFORMATION_MESSAGE);

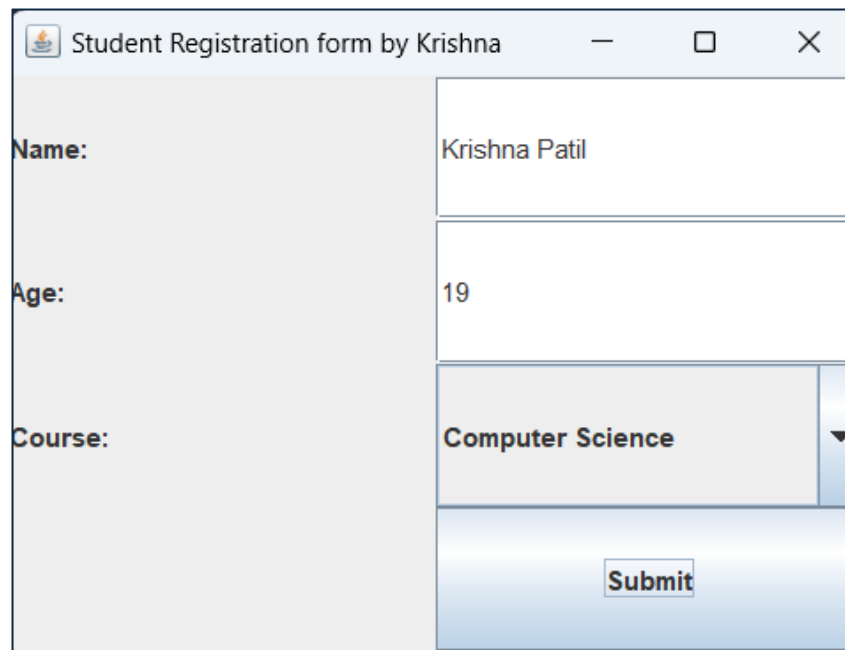
        }
    }
}

public static void main(String[] args) {
    SwingUtilities.invokeLater(() -> new K_StudentRegistrationForm());
}
}

```

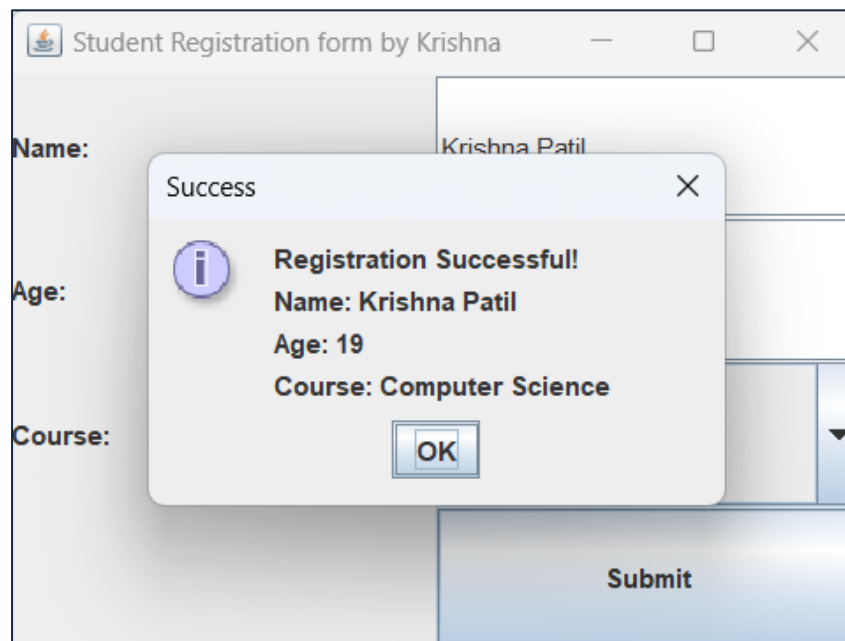
B] O/P:

a] Before submission:



The screenshot shows a web browser window with the title "Student Registration form by Krishna". The form contains three input fields: "Name:" with the value "Krishna Patil", "Age:" with the value "19", and "Course:" with a dropdown menu showing "Computer Science". A "Submit" button is located at the bottom right of the form.

b] After submission:



The screenshot shows the same web browser window as before, but with a "Success" dialog box overlaid in the center. The dialog box has a title bar "Success" and a close button (X). It contains an information icon (i) and the following text: "Registration Successful!", "Name: Krishna Patil", "Age: 19", and "Course: Computer Science". An "OK" button is at the bottom of the dialog box. The background form is partially visible and slightly dimmed.