

# JAVA ASSIGNMENT 6

1. Create two menu-bars, Menu-A and Menu-B. Menu-A contains 2 menu-items (Up and Down). Menu-B has 1 menu-item (Reset).

```
import javax.swing.*;

public class main{

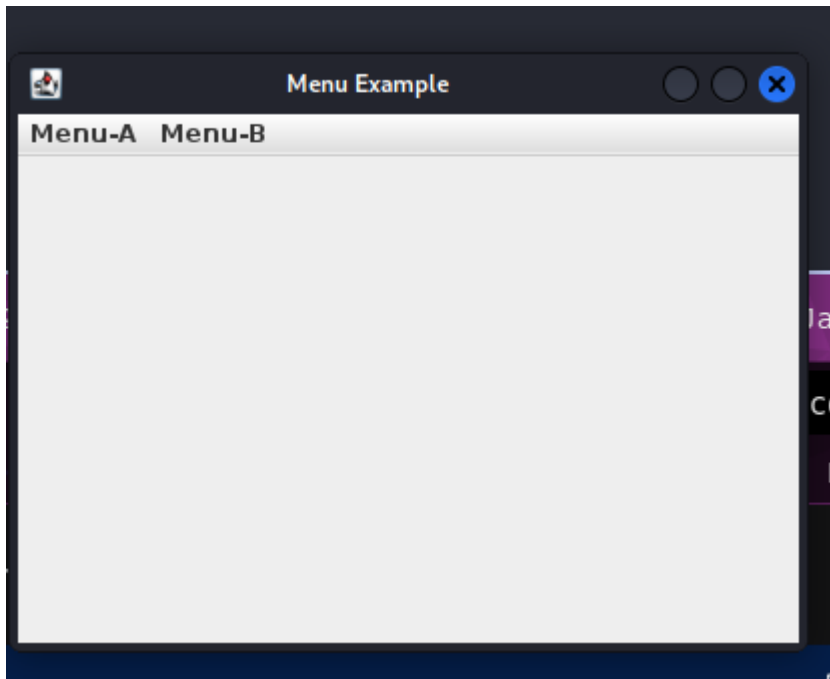
    public static void main(String[] args) {
        // Create the menu bar
        JMenuBar menuBar = new JMenuBar();

        // Create Menu-A
        JMenu menuA = new JMenu("Menu-A");
        JMenuItem menuItemUp = new JMenuItem("Up");
        JMenuItem menuItemDown = new JMenuItem("Down");
        menuA.add(menuItemUp);
        menuA.add(menuItemDown);

        // Create Menu-B
        JMenu menuB = new JMenu("Menu-B");
        JMenuItem menuItemReset = new JMenuItem("Reset");
        menuB.add(menuItemReset);

        // Add menus to the menu bar
        menuBar.add(menuA);
        menuBar.add(menuB);

        // Create a frame to hold the menu bar
        JFrame frame = new JFrame("Menu Example");
        frame.setJMenuBar(menuBar);
        frame.setSize(400, 300);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setVisible(true);
    }
}
```



2. Design a simple admission form using java gui.

```
import javax.swing.*;
import java.awt.*;

public class main extends JFrame {

    public main() {
        super("Admission Form");

        // Create labels and text fields
        JLabel nameLabel = new JLabel("Name:");
        JTextField nameField = new JTextField(20);

        JLabel emailLabel = new JLabel("Email:");
        JTextField emailField = new JTextField(20);

        JLabel programLabel = new JLabel("Program:");
        JComboBox<String> programComboBox = new JComboBox<>(new
String[]{"Select Program", "Computer Science", "Mathematics",
"Engineering"});

        // Create a text area for additional information
        JLabel additionalInfoLabel = new JLabel("Additional Information:");
        JTextArea additionalInfoArea = new JTextArea(5, 20);

        // Create a submit button
```

```
JButton submitButton = new JButton("Submit");

// Use a GridBagLayout for layout management
JPanel formPanel = new JPanel();
formPanel.setLayout(new GridBagLayout());
GridBagConstraints constraints = new GridBagConstraints();

constraints.fill = GridBagConstraints.HORIZONTAL;
constraints.insets = new Insets(5, 5, 5, 5);

constraints.gridx = 0;
constraints.gridy = 0;
formPanel.add(nameLabel, constraints);

constraints.gridx = 1;
constraints.gridy = 0;
formPanel.add(nameField, constraints);

constraints.gridy = 1;
formPanel.add(emailLabel, constraints);

constraints.gridx = 1;
constraints.gridy = 1;
formPanel.add(emailField, constraints);

constraints.gridy = 2;
formPanel.add(programLabel, constraints);

constraints.gridx = 1;
constraints.gridy = 2;
formPanel.add(programComboBox, constraints);

constraints.gridy = 3;
formPanel.add(additionalInfoLabel, constraints);

constraints.gridy = 4;
constraints.gridwidth = 2; // Span two columns
formPanel.add(additionalInfoArea, constraints);

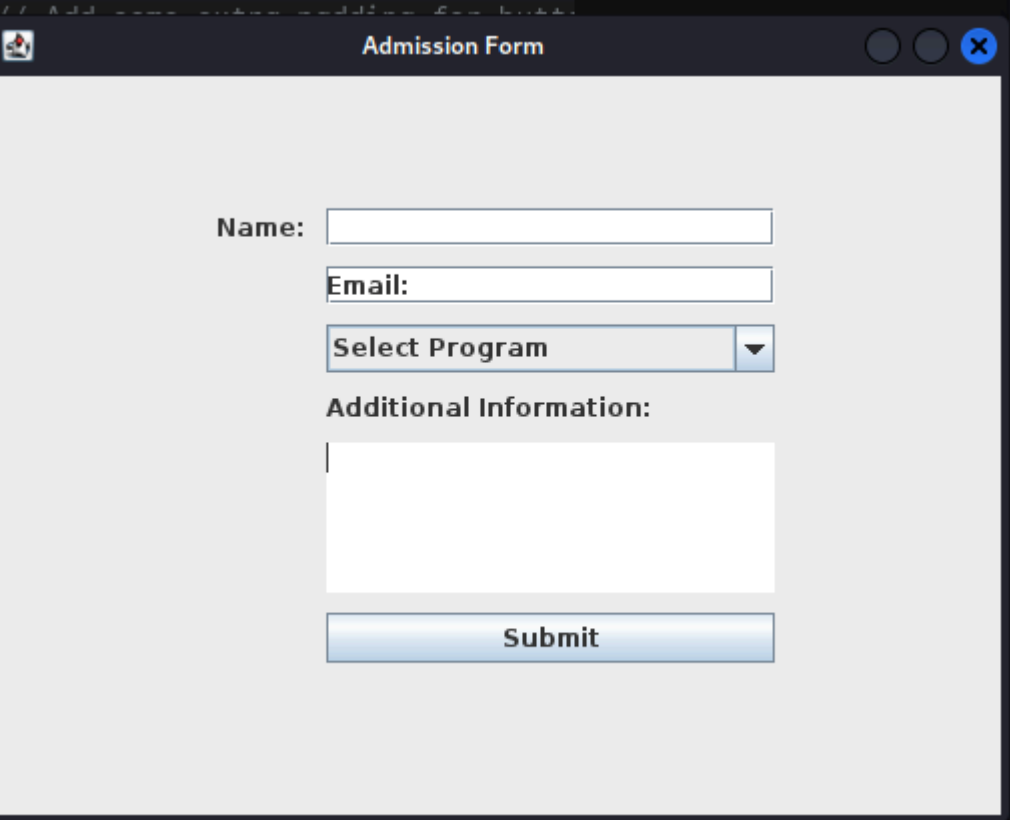
constraints.gridy = 5;
constraints.gridwidth = 1; // Back to single column
constraints.gridy = 5;
```

```
constraints.insets.bottom = 15; // Add some extra padding for
button
formPanel.add(submitButton, constraints);

// Add the form panel to the frame
getContentPane().add(formPanel);

// Pack the frame to fit the components
pack();
setLocationRelativeTo(null); // Center the window on screen
}

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



The screenshot shows a Java Swing window titled "Admission Form". The window has a standard macOS-style title bar with a red close button, a yellow minimize button, and a green maximize button. The main content area is light gray and contains the following elements:

- A label "Name:" followed by a text input field.
- A label "Email:" followed by a text input field.
- A label "Select Program" followed by a dropdown menu with a downward arrow.
- A label "Additional Information:" followed by a large text area.
- A "Submit" button at the bottom.

3. Write a JAVA program to create login application(GUI). If login is successful then display user information else display message as “wrong username or password”.

```
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;

public class main extends JFrame implements ActionListener {
    private JTextField usernameField;
    private JPasswordField passwordField;
    private JLabel usernameLabel, passwordLabel, infoLabel;
    private JButton loginButton;

    // User information for demonstration
    private final String validUsername = "user";
    private final String validPassword = "password";
    private final String userInfo = "Name: John Doe\nAge: 30\nOccupation: Developer";

    public main() {
        setTitle("Login Application");
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setSize(300, 200);
        setLocationRelativeTo(null); // Center the window

        JPanel panel = new JPanel();
        panel.setLayout(new GridLayout(4, 2)); // Increased the row count to accommodate infoLabel

        usernameLabel = new JLabel("Username:");
        panel.add(usernameLabel);
        usernameField = new JTextField();
        panel.add(usernameField);

        passwordLabel = new JLabel("Password:");
        panel.add(passwordLabel);
        passwordField = new JPasswordField();
        panel.add(passwordField);

        loginButton = new JButton("Login");
        panel.add(loginButton);
    }
}
```

```

        infoLabel = new JLabel();
        panel.add(infoLabel);

        loginButton.addActionListener(this);

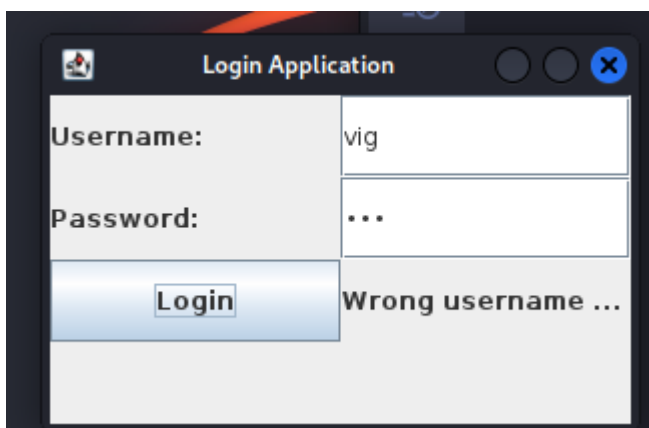
        add(panel);
        setVisible(true);
    }

    @Override
    public void actionPerformed(ActionEvent e) {
        String username = usernameField.getText();
        String password = new String(passwordField.getPassword());

        if (username.equals(validUsername) &&
password.equals(validPassword)) {
            // If login successful, display user information
            infoLabel.setText(userInfo);
        } else {
            // If login failed, display error message
            infoLabel.setText("Wrong username or password.");
        }
    }

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

```



4. Design a java application with various layout managers.

```

import javax.swing.*.*;
import java.awt.*.*;

```

```
public class Main extends JFrame {
    public Main() {
        setTitle("Layout Manager Example");
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setSize(600, 400);

        // BorderLayout Example
        JPanel borderPanel = new JPanel(new BorderLayout());
        borderPanel.add(new JButton("North"), BorderLayout.NORTH);
        borderPanel.add(new JButton("South"), BorderLayout.SOUTH);
        borderPanel.add(new JButton("East"), BorderLayout.EAST);
        borderPanel.add(new JButton("West"), BorderLayout.WEST);
        borderPanel.add(new JButton("Center"), BorderLayout.CENTER);

        // FlowLayout Example
        JPanel flowPanel = new JPanel(new FlowLayout());
        for (int i = 1; i <= 5; i++) {
            flowPanel.add(new JButton("Button " + i));
        }

        // GridLayout Example
        JPanel gridPanel = new JPanel(new GridLayout(3, 2));
        for (int i = 1; i <= 6; i++) {
            gridPanel.add(new JButton("Button " + i));
        }

        // BoxLayout Example
        JPanel boxPanel = new JPanel();
        boxPanel.setLayout(new BoxLayout(boxPanel, BoxLayout.Y_AXIS));
        for (int i = 1; i <= 3; i++) {
            boxPanel.add(Box.createVerticalGlue());
            boxPanel.add(new JButton("Button " + i));
        }
        boxPanel.add(Box.createVerticalGlue());

        // Adding panels to the frame
        Container contentPane = getContentPane();
        contentPane.setLayout(new GridLayout(2, 2));
        contentPane.add(borderPanel);
        contentPane.add(flowPanel);
        contentPane.add(gridPanel);
        contentPane.add(boxPanel);
    }
}
```

```

        setVisible(true);
    }

    public static void main(String[] args) {
        SwingUtilities.invokeLater(Main::new);
    }
}

```

