

# Assignment-6

22610011-Anuja Suntnur

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 Menus {
    public Menus() {
        JFrame frame = new JFrame("Menu Example");
        JMenuBar menuBar = new JMenuBar();

        JMenu menuA = new JMenu("Menu-A");
        JMenuItem upMenuItem = new JMenuItem("Up");
        JMenuItem downMenuItem = new JMenuItem("Down");
        menuA.add(upMenuItem);
        menuA.add(downMenuItem);

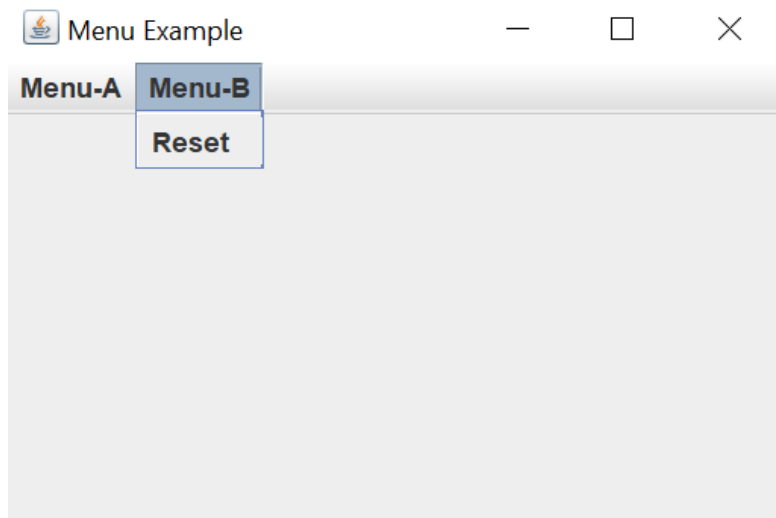
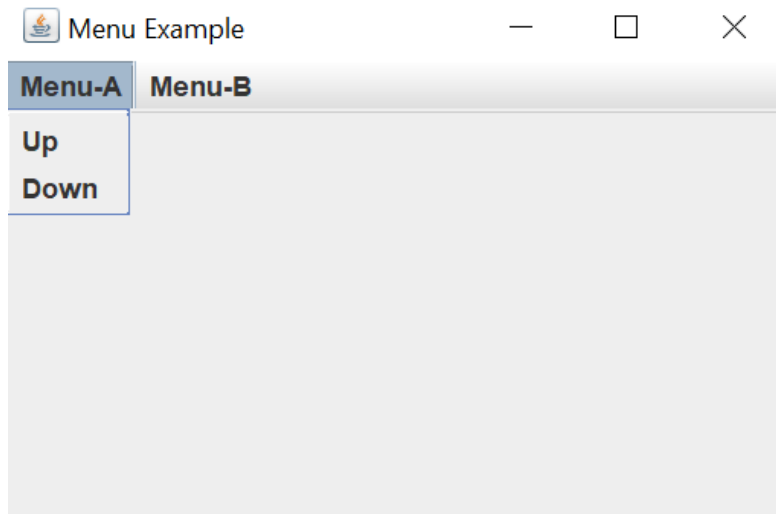
        JMenu menuB = new JMenu("Menu-B");
        JMenuItem resetMenuItem = new JMenuItem("Reset");
        menuB.add(resetMenuItem);

        menuBar.add(menuA);
        menuBar.add(menuB);

        frame.setJMenuBar(menuBar);
        frame.setSize(300, 200);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setVisible(true);
    }

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

Output -:



## 2. Design a simple admission form using java GUI.

```
import javax.swing.*;

public class AdmissionForm {
    public AdmissionForm() {
        JFrame frame = new JFrame("Admission Form");

        JLabel nameLabel = new JLabel("Name:");
        JLabel ageLabel = new JLabel("Age:");
        JLabel genderLabel = new JLabel("Gender:");
        JLabel courseLabel = new JLabel("Course:");

        JTextField nameField = new JTextField(20);
        JTextField ageField = new JTextField(5);

        JRadioButton maleRadioButton = new JRadioButton("Male");
        JRadioButton femaleRadioButton = new JRadioButton("Female");
        ButtonGroup genderGroup = new ButtonGroup();
        genderGroup.add(maleRadioButton);
        genderGroup.add(femaleRadioButton);

        String[] courses = {"Information Technology", "Computer Science",
"Electrical", "Electronics"};
        JComboBox<String> courseComboBox = new JComboBox<>(courses);

        JButton submitButton = new JButton("Submit");

        JPanel panel = new JPanel();
        panel.setLayout(new BoxLayout(panel, BoxLayout.Y_AXIS));
        panel.add(nameLabel);
        panel.add(nameField);
        panel.add(ageLabel);
        panel.add(ageField);
        panel.add(genderLabel);
        panel.add(maleRadioButton);
        panel.add(femaleRadioButton);
        panel.add(courseLabel);
        panel.add(courseComboBox);
```

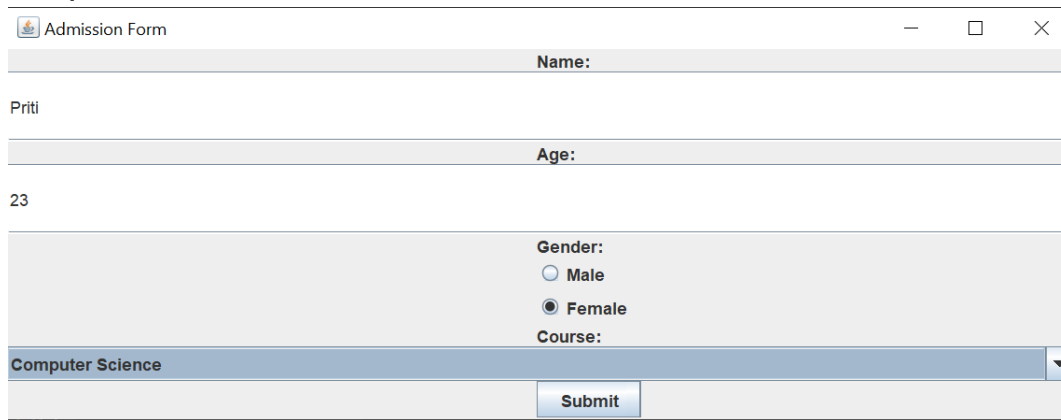
```
        panel.add(submitButton);

        frame.add(panel);

        frame.setSize(300, 250);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setVisible(true);
    }

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

## Output -:



The screenshot shows a Java Swing window titled "Admission Form". The window contains several input fields and a submit button. The "Name:" field is filled with "Priti". The "Age:" field is filled with "23". The "Gender:" section has two radio buttons: "Male" and "Female", with "Female" selected. The "Course:" section is a dropdown menu currently showing "Computer Science". At the bottom right is a "Submit" button.

Name:	
Priti	
Age:	
23	
Gender:	
<input type="radio"/> Male	
<input checked="" type="radio"/> Female	
Course:	
Computer Science	
Submit	

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.event.*;

public class LoginApplication {
    private static final String VALID_USERNAME = "Anuja";
    private static final String VALID_PASSWORD = "1234";

    public static void main(String[] args) {
        JFrame frame = new JFrame("Login Application");
        frame.setSize(300, 150);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        JPanel panel = new JPanel();
        frame.add(panel);
        placeComponents(panel);

        frame.setVisible(true);
    }

    private static void placeComponents(JPanel panel) {
        panel.setLayout(null);

        JLabel userLabel = new JLabel("User:");
        userLabel.setBounds(10, 20, 80, 25);
        panel.add(userLabel);

        JTextField userText = new JTextField(20);
        userText.setBounds(100, 20, 165, 25);
        panel.add(userText);

        JLabel passwordLabel = new JLabel("Password:");
        passwordLabel.setBounds(10, 50, 80, 25);
        panel.add(passwordLabel);

        JPasswordField passwordText = new JPasswordField(20);
        passwordText.setBounds(100, 50, 165, 25);
        panel.add(passwordText);

        JButton loginButton = new JButton("Login");
        loginButton.setBounds(10, 80, 80, 25);
```

```

panel.add(loginButton);

JLabel messageLabel = new JLabel("");
messageLabel.setBounds(100, 80, 300, 25);
panel.add(messageLabel);

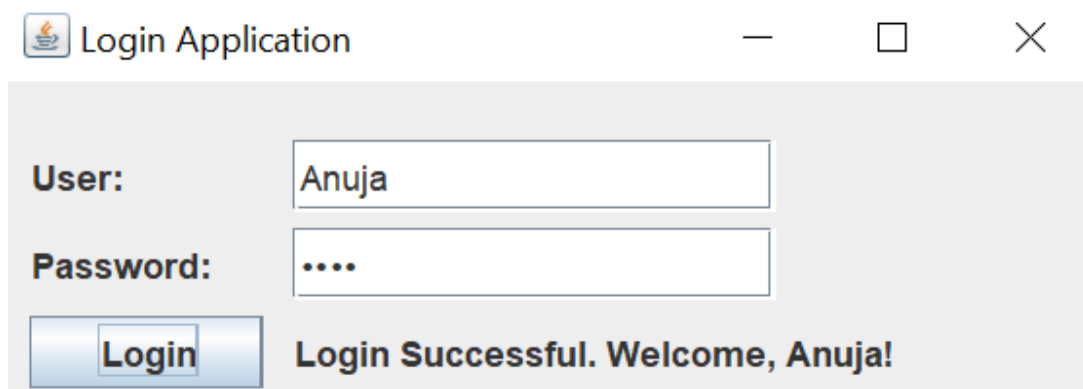
loginButton.addActionListener(new ActionListener() {
    public void actionPerformed(ActionEvent e) {
        String username = userText.getText();
        String password = new String(passwordText.getPassword());

        if (isValidLogin(username, password)) {
            messageLabel.setText("Login Successful. Welcome, " + username
+ "!");
        } else {
            messageLabel.setText("Wrong username or password.");
        }
    }
});
}

private static boolean isValidLogin(String username, String password) {
    return username.equals(VALID_USERNAME) &&
password.equals(VALID_PASSWORD);
}
}

```

Output -:



The screenshot shows a Java Swing window titled "Login Application". Inside the window, there are two text input fields. The first field is labeled "User:" and contains the text "Anuja". The second field is labeled "Password:" and contains four dots "....". Below these fields is a "Login" button. To the right of the button, a message "Login Successful. Welcome, Anuja!" is displayed.

#### 4. Design a java application with various layout managers.

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

public class Layouts {
    public Layouts() {
        JFrame frame = new JFrame("Layout Manager Example");
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        // BorderLayout
        JPanel borderPanel = new JPanel(new BorderLayout());
        borderPanel.setBorder(BorderFactory.createTitledBorder("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
        JPanel flowPanel = new JPanel(new FlowLayout());
        flowPanel.setBorder(BorderFactory.createTitledBorder("FlowLayout"));
        flowPanel.add(new JButton("Button 1"));
        flowPanel.add(new JButton("Button 2"));
        flowPanel.add(new JButton("Button 3"));

        // GridLayout
        JPanel gridPanel = new JPanel(new GridLayout(3, 3, 5, 5));
        gridPanel.setBorder(BorderFactory.createTitledBorder("GridLayout"));
        for (int i = 1; i <= 9; i++) {
            gridPanel.add(new JButton("Button " + i));
        }

        // BoxLayout
        JPanel boxPanel = new JPanel();
        boxPanel.setLayout(new BoxLayout(boxPanel, BoxLayout.Y_AXIS));
        boxPanel.setBorder(BorderFactory.createTitledBorder("BoxLayout"));
        boxPanel.add(new JButton("Button 1"));
        boxPanel.add(new JButton("Button 2"));
        boxPanel.add(new JButton("Button 3"));

        // Adding panels to the frame
        frame.setLayout(new GridLayout(2, 2, 5, 5));
        frame.add(borderPanel);
```

```

        frame.add(flowPanel);
        frame.add(gridPanel);
        frame.add(boxPanel);

        frame.setSize(600, 400);
        frame.setVisible(true);
    }

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

```

Output -:

