

## **TASK 4 Santhosh R**

### **1. DatabaseConnection.java**

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;

public class DatabaseConnection {

    private static final String URL =
"jdbc:mysql://localhost:3306/your_database_name";
    private static final String USER = "root";
    private static final String PASSWORD = "";

    public static Connection getConnection() {
        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection conn = DriverManager.getConnection(URL, USER,
PASSWORD);
            System.out.println("Connected to MySQL database!");
            return conn;
        } catch (Exception e) {
            e.printStackTrace();
            return null;
        }
    }
}
```

### **2. LoginForm.java**

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

public class LoginForm extends JFrame {

    public LoginForm() {
        setTitle("Login");
        setSize(350, 280);
        setLocationRelativeTo(null);
        setDefaultCloseOperation(EXIT_ON_CLOSE);
    }
}
```

```

JPanel panel = new JPanel();
panel.setBackground(new Color(30, 136, 229));
panel.setLayout(new GridBagLayout());

JLabel title = new JLabel("User Login");
title.setForeground(Color.WHITE);
title.setFont(new Font("Segoe UI", Font.BOLD, 18));

JTextField userField = new JTextField(15);
JPasswordField passField = new JPasswordField(15);
JButton loginBtn = new JButton("Login");

loginBtn.addActionListener(e -> {
    new Homepage("User").setVisible(true);
    dispose();
});

GridBagConstraints gbc = new GridBagConstraints();
gbc.insets = new Insets(8, 8, 8, 8);

gbc.gridx = 0; panel.add(title, gbc);
gbc.gridx = 1; panel.add(userField, gbc);
gbc.gridx = 2; panel.add(passField, gbc);
gbc.gridx = 3; panel.add(loginBtn, gbc);

add(panel);
}

public static void main(String[] args) {
    new LoginForm().setVisible(true);
}
}

```

### **3. Homepage.java**

```

import javax.swing.*;
import java.awt.*;
import java.time.LocalTime;
import java.time.format.DateTimeFormatter;
import javax.swing.Timer;

```

```
public class Homepage extends JFrame {  
  
    private JLabel greetingLabel;  
    private JLabel timeLabel;  
  
    public Homepage(String username) {  
        setTitle("Smart Dashboard");  
        setSize(600, 420);  
        setLocationRelativeTo(null);  
        setDefaultCloseOperation(EXIT_ON_CLOSE);  
        setLayout(new BorderLayout());  
  
        // ===== Header Panel =====  
        JPanel header = new JPanel(new BorderLayout());  
        header.setBackground(new Color(25, 118, 210));  
        header.setPreferredSize(new Dimension(600, 80));  
  
        greetingLabel = new JLabel(getGreeting() + ", " + username + "!");  
        greetingLabel.setForeground(Color.WHITE);  
        greetingLabel.setFont(new Font("Segoe UI", Font.BOLD, 20));  
        greetingLabel.setBorder(BorderFactory.createEmptyBorder(10, 20, 0, 0));  
  
        timeLabel = new JLabel();  
        timeLabel.setForeground(Color.WHITE);  
        timeLabel.setBorder(BorderFactory.createEmptyBorder(0, 20, 10, 0));  
  
        header.add(greetingLabel, BorderLayout.NORTH);  
        header.add(timeLabel, BorderLayout.SOUTH);  
  
        // ===== Center Cards =====  
        JPanel center = new JPanel(new GridLayout(1, 3, 15, 15));  
        center.setBorder(BorderFactory.createEmptyBorder(30, 20, 30, 20));  
        center.setBackground(Color.WHITE);  
  
        center.add(createCard("👤", "Profile"));  
        center.add(createCard("⚙️", "Settings"));  
        center.add(createCard("🚪", "Logout", true));  
  
        // ===== Footer =====  
        JPanel footer = new JPanel();
```

```
        footer.setBackground(new Color(245, 245, 245));
        footer.add(new JLabel("Status: Connected"));

        add(header, BorderLayout.NORTH);
        add(center, BorderLayout.CENTER);
        add(footer, BorderLayout.SOUTH);

        startClock();
    }

private JPanel createCard(String icon, String text) {
    return createCard(icon, text, false);
}

private JPanel createCard(String icon, String text, boolean logout) {
    JPanel card = new JPanel(new BorderLayout());
    card.setBackground(new Color(227, 242, 253));
    card.setBorder(BorderFactory.createLineBorder(new Color(30, 136, 229)));

    JLabel iconLabel = new JLabel(icon, SwingConstants.CENTER);
    iconLabel.setFont(new Font("Segoe UI Emoji", Font.PLAIN, 40));

    JLabel textLabel = new JLabel(text, SwingConstants.CENTER);
    textLabel.setFont(new Font("Segoe UI", Font.BOLD, 16));

    card.add(iconLabel, BorderLayout.CENTER);
    card.add(textLabel, BorderLayout.SOUTH);

    card.setCursor(new Cursor(Cursor.HAND_CURSOR));

    card.addMouseListener(new java.awt.event.MouseAdapter() {
        public void mouseClicked(java.awt.event.MouseEvent evt) {
            if (logout) {
                dispose();
                new LoginForm().setVisible(true);
            }
        }
    });
}

return card;
}
```

```
private String getGreeting() {
    int hour = LocalTime.now().getHour();
    if (hour < 12) return "Good Morning";
    if (hour < 18) return "Good Afternoon";
    return "Good Evening";
}

private void startClock() {
    Timer timer = new Timer(1000, e -> {
        timeLabel.setText(
            LocalTime.now().format(DateTimeFormatter.ofPattern("HH:mm:ss"))
        );
    });
    timer.start();
}
```