JAVA MINI PROJECT

```
import javafx.application.Application;
import javafx.collections.FXCollections;
import javafx.scene.Scene;
import javafx.scene.control.*;
import javafx.scene.layout.*;
import javafx.scene.paint.Color;
import javafx.scene.text.Font;
import javafx.stage.Stage;
import java.sql.*;
import java.util.ArrayList;
import java.util.List;
public class NoteRegister extends Application {

  private TextField userIdField;
   private PasswordField passwordField;
   private Button loginButton, signupButton;
   private VBox loginLayout;
   private String currentUser;
   private Stage primaryStage;
   private int selectedNoteId;
   private ListView<String> noteListView;
   private Button viewNoteButton;
   private String selectedNoteTitle;
   private static final String DB_URL = "jdbc:mysql://localhost:3306/notes_register";
   private static final String DB_USERNAME = "root";
   private static final String DB_PASSWORD = "Amithul@1234";

   public static void main(String[] args) {
        launch(args);
    }

    @Override
    public void start(Stage primaryStage) {
        this.primaryStage = primaryStage;
        primaryStage.setTitle("Notes Application");
        loginLayout = createLoginPage();
        Scene loginScene = new Scene(loginLayout, 400, 300);
        loginScene.setFill(Color.web("#f5f5dc"));
        primaryStage.setScene(loginScene);
        primaryStage.show();
    }


    private VBox createLoginPage() {
        VBox layout = new VBox(10);
        layout.setStyle("-fx-background-color: #f5f5dc; -fx-padding: 20;");
        Label userIdLabel = new Label("UserID:");
        userIdLabel.setFont(new Font("Arial", 16));
        userIdField = new TextField();
        userIdField.setFont(new Font("Arial", 14));

        Label passwordLabel = new Label("Password:");
        passwordLabel.setFont(new Font("Arial", 16));
        passwordField = new PasswordField();
        passwordField.setFont(new Font("Arial", 14));

        loginButton = new Button("Login");
        loginButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
        loginButton.setFont(new Font("Arial", 16));
        loginButton.setOnAction(e -> loginUser());

        signupButton = new Button("Sign Up");
        signupButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
        signupButton.setFont(new Font("Arial", 16));
        signupButton.setOnAction(e -> signupUser());

        layout.getChildren().addAll(userIdLabel, userIdField, passwordLabel,
passwordField, loginButton, signupButton);
        return layout;
    }

    private void loginUser() {
        String userId = userIdField.getText();
        String password = passwordField.getText();

        try (Connection conn = DriverManager.getConnection(DB_URL,
DB_USERNAME, DB_PASSWORD)) {
            String sql = "SELECT * FROM users WHERE user = ? AND password = ?";
            PreparedStatement stmt = conn.prepareStatement(sql);
            stmt.setString(1, userId);
            stmt.setString(2, password);
            ResultSet rs = stmt.executeQuery();
            if (rs.next()) {
                currentUser = userId;
                showNotesPage();
            } else {
                showAlert("Login Failed", "Invalid UserID or Password");
            }
        } catch (SQLException ex) {
            ex.printStackTrace();
        }
    }

    private void showNotesPage() {
        VBox layout = new VBox(10);
        layout.setStyle("-fx-background-color: #f5f5dc; -fx-padding: 20;");

        Label titleLabel = new Label("Welcome, " + currentUser);
        titleLabel.setFont(new Font("Arial", 20));

        noteListView = new ListView<>();
        List<String> noteTitles = getNoteTitles();
        noteListView.setItems(FXCollections.observableArrayList(noteTitles));
        noteListView.setOnMouseClicked(e -> selectNoteForViewing());

        viewNoteButton = new Button("View Selected Note");
        viewNoteButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
        viewNoteButton.setFont(new Font("Arial", 16));
        viewNoteButton.setOnAction(e -> openNotePage());

        Button addNoteButton = new Button("Add Note");
        addNoteButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
        addNoteButton.setFont(new Font("Arial", 16));
        addNoteButton.setOnAction(e -> showAddNotePage());

        Button logoutButton = new Button("Logout");
        logoutButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
        logoutButton.setFont(new Font("Arial", 16));
        logoutButton.setOnAction(e -> logoutUser());

        Button viewProfileButton = new Button("View Profile");
        viewProfileButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
        viewProfileButton.setFont(new Font("Arial", 16));
        viewProfileButton.setOnAction(e -> showUserProfilePage());

        layout.getChildren().addAll(titleLabel, noteListView, viewNoteButton,
addNoteButton, viewProfileButton, logoutButton);
        Scene notesScene = new Scene(layout, 400, 400);
        primaryStage.setScene(notesScene);
    }



    private void selectNoteForViewing() {
        selectedNoteTitle = noteListView.getSelectionModel().getSelectedItem();
        viewNoteButton.setDisable(false);
    }

    private List<String> getNoteTitles() {
        List<String> titles = new ArrayList<>();
        try (Connection conn = DriverManager.getConnection(DB_URL,
DB_USERNAME, DB_PASSWORD)) {
            String sql = "SELECT title FROM notes WHERE user = ?";
            PreparedStatement stmt = conn.prepareStatement(sql);
            stmt.setString(1, currentUser);
            ResultSet rs = stmt.executeQuery();
            while (rs.next()) {
                titles.add(rs.getString("title"));
            }
        } catch (SQLException e) {
            e.printStackTrace();
        }
        return titles;
    }

    private void openNotePage() {
        String content = getNoteContent(selectedNoteTitle);

        VBox layout = new VBox(10);
        layout.setStyle("-fx-background-color: #f5f5dc; -fx-padding: 20;");

        Label titleLabel = new Label("Title: " + selectedNoteTitle);
        titleLabel.setStyle("-fx-font-size: 18px; -fx-font-weight: bold;");

        TextArea contentArea = new TextArea(content);
        contentArea.setWrapText(true);
        contentArea.setEditable(false);

        Button editButton = new Button("Edit Note");
        editButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
        editButton.setOnAction(e -> showEditNotePage());

        Button backButton = new Button("Back");
        backButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
        backButton.setOnAction(e -> showNotesPage());
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        layout.getChildren().addAll(titleLabel, contentArea, editButton, backButton);

        Scene notePageScene = new Scene(layout, 400, 400);
        primaryStage.setScene(notePageScene);
    }

    private String getNoteContent(String title) {
        String content = "";
        try (Connection conn = DriverManager.getConnection(DB_URL,
DB_USERNAME, DB_PASSWORD)) {
            String sql = "SELECT content FROM notes WHERE user = ? AND title = ?";
            PreparedStatement stmt = conn.prepareStatement(sql);
            stmt.setString(1, currentUser);
            stmt.setString(2, title);
            ResultSet rs = stmt.executeQuery();

            if (rs.next()) {
                content = rs.getString("content");
            }
        } catch (SQLException e) {
            e.printStackTrace();
        }
        return content;
    }

    private void showEditNotePage() {
        VBox layout = new VBox(10);
        layout.setStyle("-fx-background-color: #f5f5dc; -fx-padding: 20;");
        String currentContent = getNoteContent(selectedNoteTitle);

        Label titleLabel = new Label("Edit Note: " + selectedNoteTitle);
        titleLabel.setStyle("-fx-font-size: 18px; -fx-font-weight: bold;");

        TextArea contentArea = new TextArea(currentContent);
        contentArea.setWrapText(true);

        Button saveButton = new Button("Save Edit");
        saveButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
        saveButton.setOnAction(e -> saveEditedNote(contentArea.getText()));

        Button backButton = new Button("Back");
        backButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
        backButton.setOnAction(e -> openNotePage());

        layout.getChildren().addAll(titleLabel, contentArea, saveButton, backButton);
        Scene editNoteScene = new Scene(layout, 400, 400);
        primaryStage.setScene(editNoteScene);
    }

    private void saveEditedNote(String newContent) {
        try (Connection conn = DriverManager.getConnection(DB_URL,
DB_USERNAME, DB_PASSWORD)) {
            String sql = "UPDATE notes SET content = ? WHERE user = ? AND title = ?";
            PreparedStatement stmt = conn.prepareStatement(sql);
            stmt.setString(1, newContent);
            stmt.setString(2, currentUser);
            stmt.setString(3, selectedNoteTitle);
            stmt.executeUpdate();
            showAlert("Success", "Note updated successfully!");
            openNotePage();
        }
        catch (SQLException e) {
            e.printStackTrace();
            showAlert("Error", "An error occurred while updating the note.");
        }



    }

private void showAddNotePage() {
    VBox layout = new VBox(10);
    layout.setStyle("-fx-background-color: #f5f5dc; -fx-padding: 20;");

    Label titleLabel = new Label("Add a New Note");
    titleLabel.setStyle("-fx-font-size: 18px; -fx-font-weight: bold;");

    TextField titleField = new TextField();
    titleField.setPromptText("Enter note title");

    TextArea contentArea = new TextArea();
    contentArea.setPromptText("Enter note content");

    Button saveButton = new Button("Save Note");
    saveButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
    saveButton.setOnAction(e -> saveNewNote(titleField.getText(),
contentArea.getText()));
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    Button backButton = new Button("Back");
    backButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
    backButton.setOnAction(e -> showNotesPage());

    layout.getChildren().addAll(titleLabel, titleField, contentArea, saveButton,
backButton);

    Scene addNoteScene = new Scene(layout, 400, 400);
    primaryStage.setScene(addNoteScene);
}

private void saveNewNote(String title, String content) {
    try (Connection conn = DriverManager.getConnection(DB_URL, DB_USERNAME,
DB_PASSWORD)) {
        String sql = "INSERT INTO notes (user, title, content) VALUES (?, ?, ?)";
        PreparedStatement stmt = conn.prepareStatement(sql);
        stmt.setString(1, currentUser);
        stmt.setString(2, title);
        stmt.setString(3, content);
        stmt.executeUpdate();
        showAlert("Success", "Note added successfully!");
        showNotesPage();
    } catch (SQLException e) {
        e.printStackTrace();
        showAlert("Error", "An error occurred while adding the note.");
    }
}

private void logoutUser() {
    currentUser = null;
    userIdField.clear();
    passwordField.clear();
    primaryStage.setScene(new Scene(createLoginPage(), 400, 300));
}

private void showAlert(String title, String message) {
    Alert alert = new Alert(Alert.AlertType.INFORMATION);
    alert.setTitle(title);
    alert.setHeaderText(null);
    alert.setContentText(message);
    alert.showAndWait();
}

private void signupUser() {
    VBox layout = new VBox(10);
    layout.setStyle("-fx-background-color: #f5f5dc; -fx-padding: 20;");

    Label userIdLabel = new Label("UserID:");
    userIdLabel.setFont(new Font("Arial", 16));
    TextField userIdField = new TextField();
    userIdField.setFont(new Font("Arial", 14));

    Label passwordLabel = new Label("Password:");
    passwordLabel.setFont(new Font("Arial", 16));
    PasswordField passwordField = new PasswordField();
    passwordField.setFont(new Font("Arial", 14));

    Button signupButton = new Button("Sign Up");
    signupButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
    signupButton.setFont(new Font("Arial", 16));
    signupButton.setOnAction(e -> registerUser(userIdField.getText(), passwordField.getText()));

    layout.getChildren().addAll(userIdLabel, userIdField, passwordLabel, passwordField, signupButton);
    Scene signupScene = new Scene(layout, 400, 300);
    primaryStage.setScene(signupScene);
}

private void registerUser(String userId, String password) {
    try (Connection conn = DriverManager.getConnection(DB_URL, DB_USERNAME, DB_PASSWORD)) {
        String sql = "INSERT INTO users (user, password) VALUES (?, ?)";
        PreparedStatement stmt = conn.prepareStatement(sql);
        stmt.setString(1, userId);
        stmt.setString(2, password);
        stmt.executeUpdate();
        showAlert("Registration Success", "User registered successfully!");
        primaryStage.setScene(new Scene(createLoginPage(), 400, 300));
    } catch (SQLException e) {
        e.printStackTrace();
        showAlert("Error", "An error occurred while registering the user.");
    }
}
private void showUserProfilePage() {
    VBox layout = new VBox(10);
    layout.setStyle("-fx-background-color: #f5f5dc; -fx-padding: 20;");
    Label titleLabel = new Label("User Profile");
    titleLabel.setFont(new Font("Arial", 20));

    Label userIdLabel = new Label("UserID: " + currentUser);
    userIdLabel.setFont(new Font("Arial", 16));



    String email = getUserEmail(currentUser);
    Label emailLabel = new Label("Email: " + email);
    emailLabel.setFont(new Font("Arial", 16));

    Button editProfileButton = new Button("Edit Profile");
    editProfileButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
    editProfileButton.setFont(new Font("Arial", 16));
    editProfileButton.setOnAction(e -> showEditProfilePage());

    Button backButton = new Button("Back");
    backButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
    backButton.setFont(new Font("Arial", 16));
    backButton.setOnAction(e -> showNotesPage());

    layout.getChildren().addAll(titleLabel, userIdLabel, emailLabel, editProfileButton, backButton);
    Scene profileScene = new Scene(layout, 400, 400);
    primaryStage.setScene(profileScene);
}

    public String getUserEmail(String userId) {
        String email = "No email found";
        try (Connection conn = DriverManager.getConnection(DB_URL, DB_USERNAME, DB_PASSWORD)) {
            String sql = "SELECT email FROM useremails WHERE user = ?";
            PreparedStatement stmt = conn.prepareStatement(sql);
            stmt.setString(1, userId);
            ResultSet rs = stmt.executeQuery();

            if (rs.next()) {
                email = rs.getString("email");
            }
        } catch (SQLException e) {
            e.printStackTrace();
        }
        return email;
    }



public void saveProfileChanges(String email) {

    System.out.println("Profile changes saved for email: " + email);

}

private void showEditProfilePage() {
    VBox layout = new VBox(10);
    layout.setStyle("-fx-background-color: #f5f5dc; -fx-padding: 20;");

    Label titleLabel = new Label("Edit Profile");
    titleLabel.setFont(new Font("Arial", 20));
    Label userIdLabel = new Label("UserID: " + currentUser);
    userIdLabel.setFont(new Font("Arial", 16));

    TextField emailField = new TextField();
    emailField.setPromptText("Enter new email");
    emailField.setText(getUserEmail(currentUser));

    Button saveButton = new Button("Save Changes");
    saveButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
    saveButton.setFont(new Font("Arial", 16));
    saveButton.setOnAction(e -> saveProfileChanges(emailField.getText()));

    Button backButton = new Button("Back");
    backButton.setStyle("-fx-background-color: #8b4513; -fx-text-fill: white;");
    backButton.setFont(new Font("Arial", 16));
    backButton.setOnAction(e -> showUserProfilePage());

    layout.getChildren().addAll(titleLabel, userIdLabel, emailField, saveButton,
backButton);
    Scene editProfileScene = new Scene(layout, 400, 400);
    primaryStage.setScene(editProfileScene);
}

public boolean updateEmail(String userId, String newEmail) {
    boolean isUpdated = false;
    try (Connection conn = DriverManager.getConnection(DB_URL, DB_USERNAME,
DB_PASSWORD)) {
        String sql = "UPDATE useremails SET email = ? WHERE user= ?";
        PreparedStatement stmt = conn.prepareStatement(sql);
        stmt.setString(1, newEmail);
        stmt.setString(2, userId);

        int rowsAffected = stmt.executeUpdate();
        if (rowsAffected > 0) {
            isUpdated = true;
        }
    } catch (SQLException e) {
        e.printStackTrace();
    }
    return isUpdated;
}
}
```
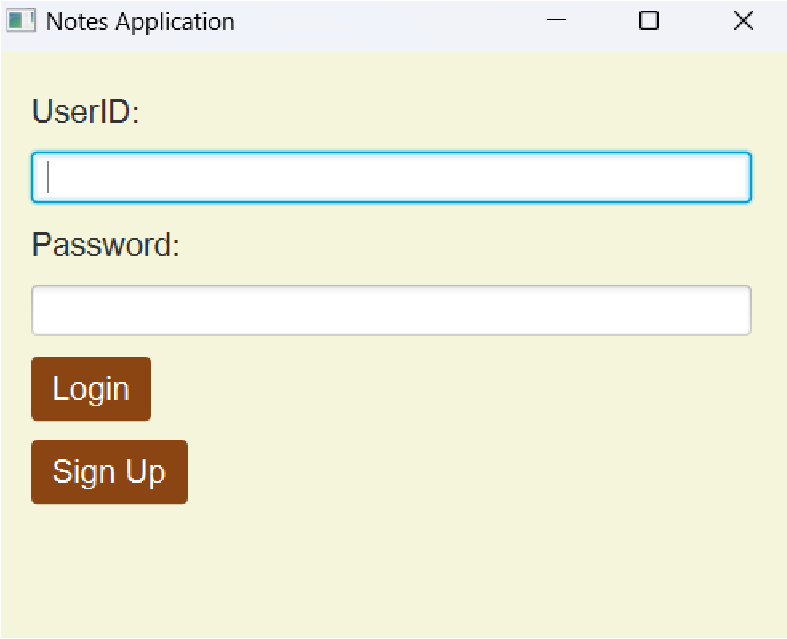
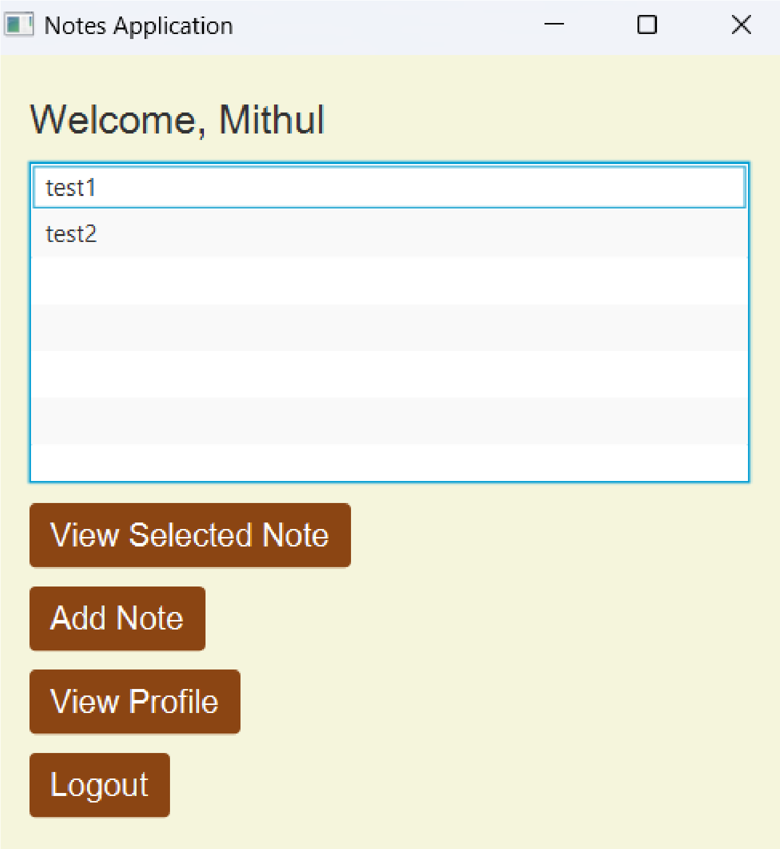

Output:

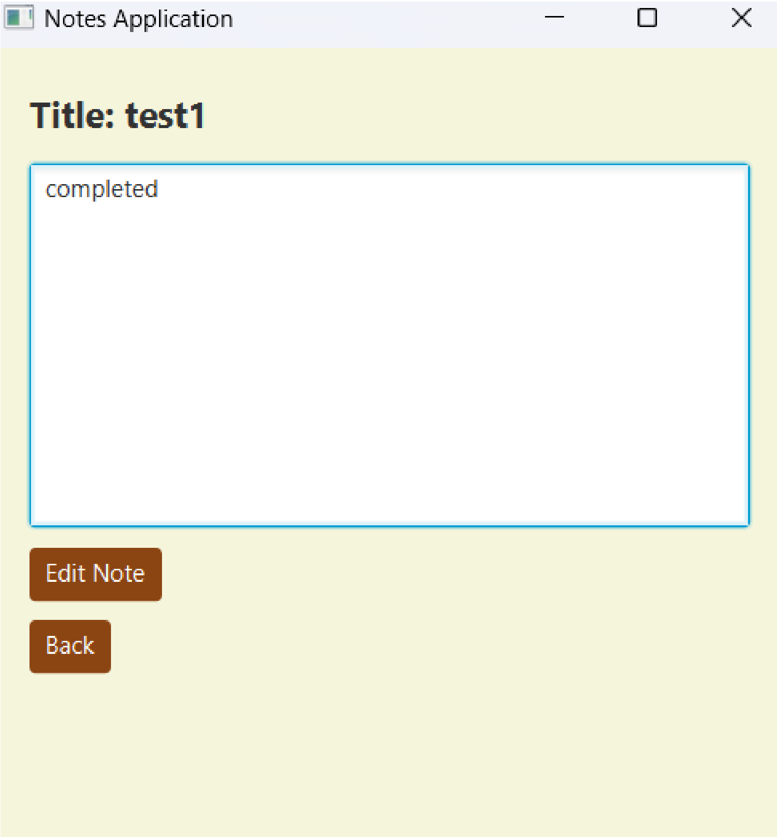




Welcome, Mithul

test1

test2



Title: test1

completed