**Parmjeet Singh**

**Part A**

import javafx.application.Application;

import javafx.collections.FXCollections;

import javafx.collections.ObservableList;

import javafx.scene.Scene;

import javafx.scene.control.Label;

import javafx.scene.control.TableColumn;

import javafx.scene.control.TableView;

import javafx.scene.control.cell.PropertyValueFactory;

import javafx.scene.layout.BorderPane;

import javafx.scene.layout.HBox;

import javafx.stage.Stage;

import java.time.LocalDate;

import java.time.format.DateTimeFormatter;

public class Main extends Application {

@Override

public void start(Stage primaryStage) {

// Labels for your info

Label nameLabel = new Label("Name: Parmjeet Singh");

Label idLabel = new Label("Student ID: 230999");

// Current date in format YYYY-MM-DD

String date = LocalDate.now().format(DateTimeFormatter.ofPattern("yyyy-MM-dd"));

Label dateLabel = new Label("Date: " + date);

// HBox to hold name, ID, and date horizontally

HBox infoBox = new HBox(20, nameLabel, idLabel, dateLabel);

infoBox.setStyle("-fx-padding: 10; -fx-background-color: #d3d3d3;");

// TableView setup

TableView<Person> tableView = new TableView<>();

// Define columns

TableColumn<Person, String> firstNameCol = new TableColumn<>("First Name");

firstNameCol.setCellValueFactory(new PropertyValueFactory<>("firstName"));

TableColumn<Person, String> lastNameCol = new TableColumn<>("Last Name");

lastNameCol.setCellValueFactory(new PropertyValueFactory<>("lastName"));

TableColumn<Person, Integer> ageCol = new TableColumn<>("Age");

ageCol.setCellValueFactory(new PropertyValueFactory<>("age"));

tableView.getColumns().addAll(firstNameCol, lastNameCol, ageCol);

// Add sample data

ObservableList<Person> data = FXCollections.observableArrayList(

new Person("Rana", "Banj", 34),

new Person("Pala", "Jalalpur", 24),

new Person("Khushi", "Duggan", 22),

new Person("Bitu", "Dugal", 40)

);

// Set data in table

tableView.setItems(data);

// Layout

BorderPane root = new BorderPane();

root.setTop(infoBox);

root.setCenter(tableView);

Scene scene = new Scene(root, 600, 400);

primaryStage.setTitle("Parmjeet Singh - JavaFX Lab");

primaryStage.setScene(scene);

primaryStage.show();

}

// Simple Person class for demo purpose

public static class Person {

private final String firstName;

private final String lastName;

private final int age;

public Person(String firstName, String lastName, int age) {

this.firstName = firstName;

this.lastName = lastName;

this.age = age;

}

public String getFirstName() { return firstName; }

public String getLastName() { return lastName; }

public int getAge() { return age; }

}

public static void main(String[] args) {

launch(args);

}

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**Part B**

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.SQLException;

public class DatabaseConnection {

// Replace with your actual database info

private static final String URL = "jdbc:mysql://localhost:3306/your\_database\_name";

private static final String USER = "your\_username";

private static final String PASSWORD = "your\_password";

public static Connection connect() {

Connection connection = null;

try {

// Load MySQL JDBC Driver

Class.forName("com.mysql.cj.jdbc.Driver");

// Connect to database

connection = DriverManager.getConnection(URL, USER, PASSWORD);

System.out.println("✅ Connected to MySQL database successfully.");

} catch (ClassNotFoundException e) {

System.out.println("❌ MySQL JDBC Driver not found.");

e.printStackTrace();

} catch (SQLException e) {

System.out.println("❌ Failed to connect to database.");

e.printStackTrace();

}

return connection;

    }

}

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**Part C**

public class person {

private String firstName;

private String lastName;

private int age;

public person(String firstName, String lastName, int age) {

this.firstName = firstName;

this.lastName = lastName;

this.age = age;

}

public String getFirstName() { return firstName; }

public String getLastName() { return lastName; }

public int getAge() { return age; }

}

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