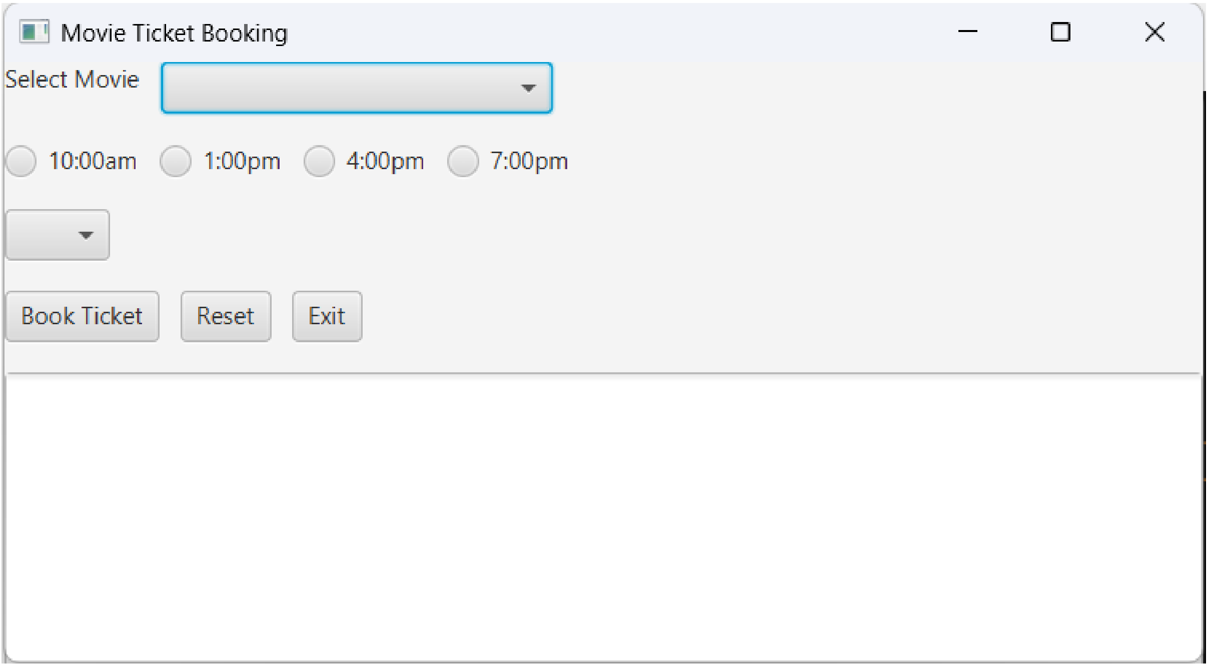
Practical No. 25: Design a JavaFX-based movie ticket booking system where users can select a movie, choose a showtime, and specify the number of tickets they wish to purchase.

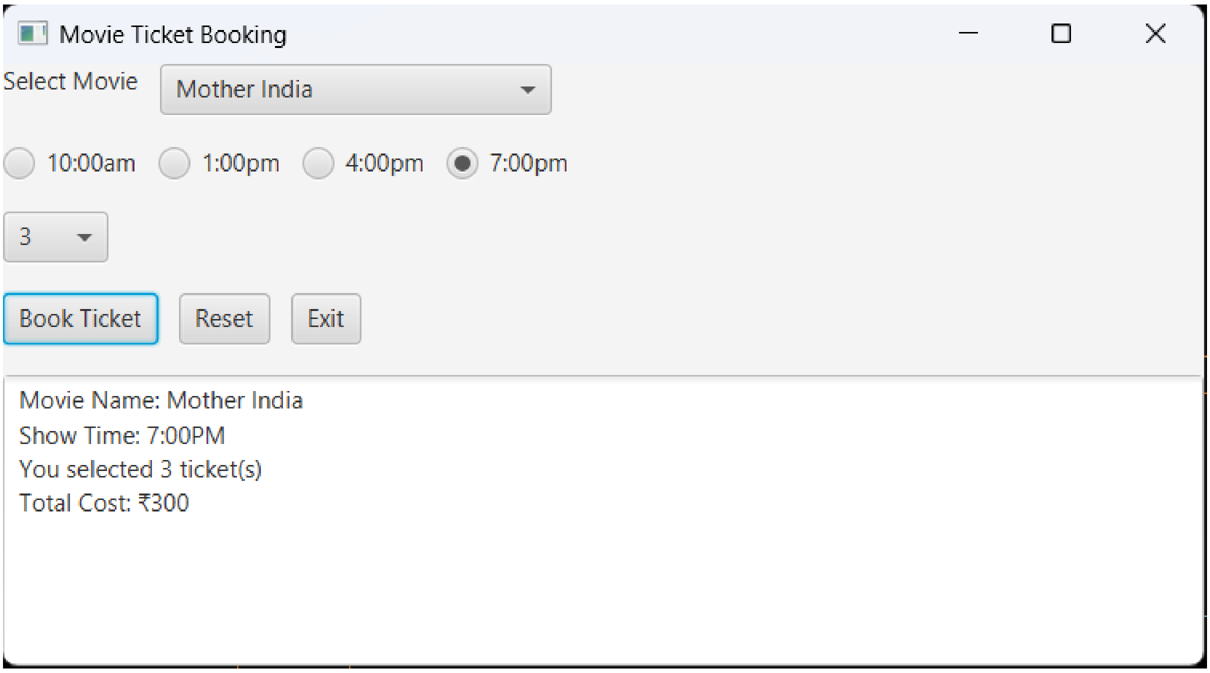
(a) The system should calculate the total cost based on the movie and the number of tickets, and display it in the UI.
(b) Users can confirm their booking with a button, which will show a confirmation message
(c) Additionally, a reset button should allow users to clear all selections and start over.
(d) Provide an exit button to close the application.

Source Code:

```
import javafx.application.Application;

import javafx.event.ActionEvent;

import javafx.event.EventHandler;

import javafx.scene.Scene;

import javafx.scene.control.Button;

import javafx.scene.control.ComboBox;

import javafx.scene.control.Label;

import javafx.scene.control.RadioButton;

import javafx.scene.control.TextArea;

import javafx.scene.control.ToggleGroup;

import javafx.scene.layout.HBox;

import javafx.scene.layout.VBox;

import javafx.stage.Stage;

public class Q25 extends Application {

    private ComboBox<String> movies;

    private ComboBox<String> tickets;

    private ToggleGroup group;

    private TextArea ta;

    private Stage primaryStage;

    public static void main(String[] args) {

        launch(args);

    }
    public void start(Stage stage) throws Exception {
        primaryStage = stage;
        ta = new TextArea();
        Label l1 = new Label("Select Movie");
        Button b1 = new Button("Book Ticket");
        Button resetBtn = new Button("Reset");
        Button exitBtn = new Button("Exit");
        movies = new ComboBox<>();
        movies.getItems().addAll("The Shawshank Redemption", "The Godfather", "Astitva",
"Mother India");
        tickets = new ComboBox<>();
        tickets.getItems().addAll("1", "2", "3", "4");
        group = new ToggleGroup();
        RadioButton r1 = new RadioButton("10:00am");
        RadioButton r2 = new RadioButton("1:00pm");
        RadioButton r3 = new RadioButton("4:00pm");
        RadioButton r4 = new RadioButton("7:00pm");
        r1.setToggleGroup(group);
        r2.setToggleGroup(group);
        r3.setToggleGroup(group);
        r4.setToggleGroup(group);
        HBox movieSelection = new HBox(10, l1, movies);
        HBox timeSelection = new HBox(10, r1, r2, r3, r4);
        HBox ticketSelection = new HBox(10, tickets);
        HBox buttons = new HBox(10, b1, resetBtn, exitBtn);
        VBox root = new VBox(15, movieSelection, timeSelection, ticketSelection, buttons, ta);
        Scene sc = new Scene(root, 600, 300);
        stage.setScene(sc);
        stage.setTitle("Movie Ticket Booking");
        stage.show();
        b1.setOnAction(this::bookTicket);
        resetBtn.setOnAction(this::resetForm);
        exitBtn.setOnAction(this::exitApp);
    }
    private void bookTicket(ActionEvent e) {
        String s = null;
        if (((RadioButton) group.getSelectedToggle()) != null) {
          s = ((RadioButton) group.getSelectedToggle()).getText();
        }try {
          int tt = Integer.parseInt(tickets.getValue());
          int charges = 100 * tt;
          ta.setText("Movie Name: " + movies.getValue()
              + "\nShow Time: " + s
              + "\nYou selected " + tickets.getValue() + " ticket(s)"
              + "\nTotal Cost: ₹" + charges);
        } catch (Exception ex) {
          ta.setText("Please make sure all fields are selected correctly.");
        }}
    private void resetForm(ActionEvent e) {
        movies.getSelectionModel().clearSelection();
        tickets.getSelectionModel().clearSelection();
        group.selectToggle(null);
        ta.clear();
    }
    private void exitApp(ActionEvent e) {
        primaryStage.close();
    }}
```

Output:





```
Movie Name: Mother India
Show Time: 7:00PM
You selected 3 ticket(s)
Total Cost: ₹300
```

Practical No. 26: Create a database of employee with the following fields: Name, Code, Designation ,Salary.

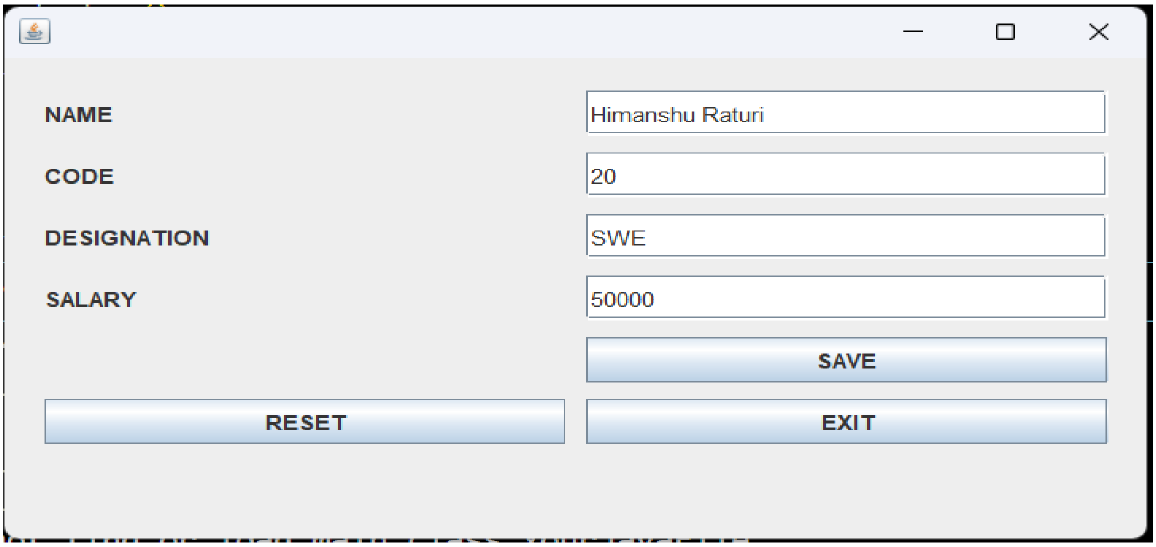
(a) Write a java program to create GUI java application to take employee data from the TextFields and store in database using JDBC connectivity.
(b) Write a JDBC Program to retrieves all the records from employee database.

Source Code:

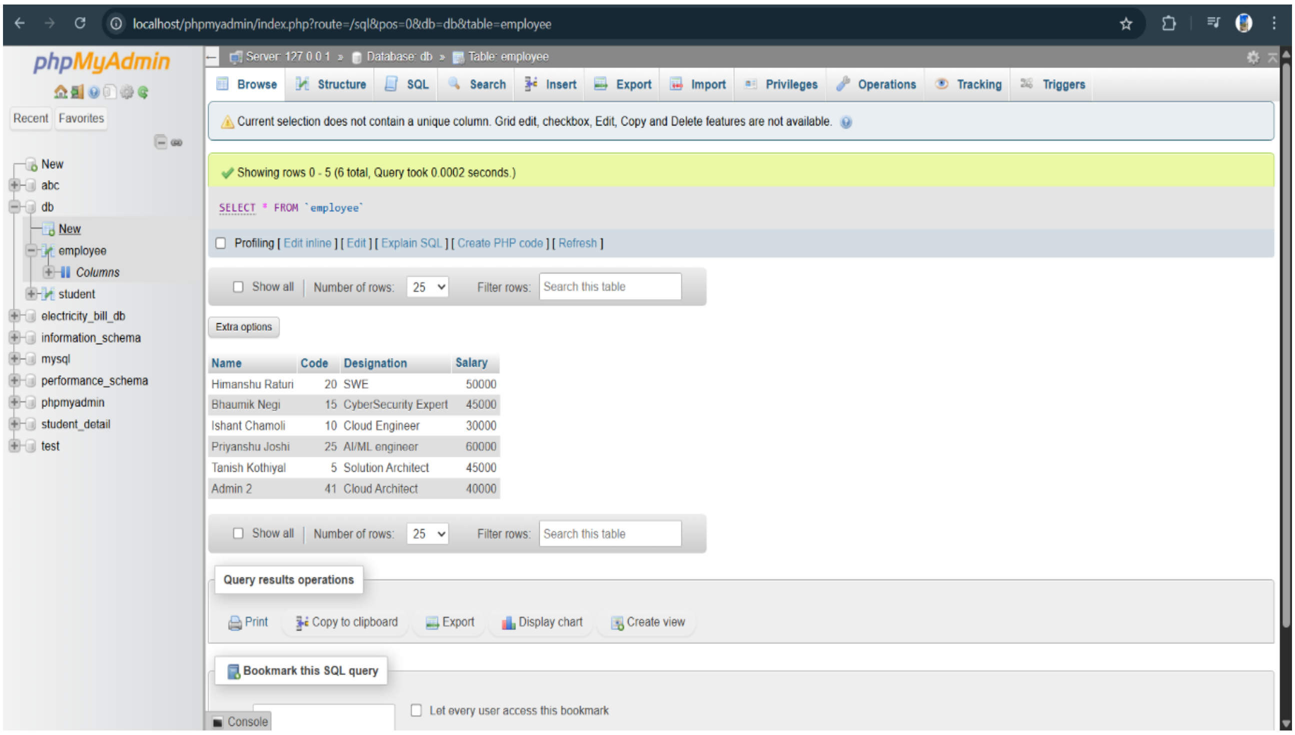
```
import java.awt.*;

import java.awt.event.*;

import javax.swing.*;

import java.sql.*;

class MyFrame extends JFrame implements ActionListener

{   JTextField name , code, designation , salary;

   MyFrame()

   {

      this.setSize(300,400);

      this.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

      this.setLayout(new BorderLayout());

      JPanel panel = new JPanel(new GridLayout(6,3,10,10));

      panel.setBorder(BorderFactory.createEmptyBorder(20,20,20,20));

      name = new JTextField();

      code = new JTextField();

      designation = new JTextField();

      salary = new JTextField();

      panel.add(new JLabel("NAME")); panel.add(name);

      panel.add(new JLabel("CODE")); panel.add(code);

      panel.add(new JLabel("DESIGNATION")); panel.add(designation);

      panel.add(new JLabel("SALARY")); panel.add(salary);

      JButton save = new JButton("SAVE");

      JButton reset = new JButton("RESET");

      JButton exit = new JButton("EXIT");
```

```
        save.addActionListener(this);
        reset.addActionListener(this);
        exit.addActionListener(this);
        panel.add(new JLabel());
        panel.add(save);
        panel.add(reset);
        panel.add(exit);
        this.add(panel , BorderLayout.NORTH);
        this.setVisible(true);
    }
    public void saveOperation()
    {
        try
        {
            Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/db" ,
"root" , "");
            String query = "INSERT  INTO employee (`Name` , `Code` , `Designation` ,
`Salary`) VALUES (?,?,?,?)";
            PreparedStatement st = con.prepareStatement(query);
            String vName = name.getText();
            int vCode = Integer.parseInt(code.getText());
            String vDesignation = designation.getText();
            float vSalary = Float.parseFloat(salary.getText());
            st.setString(1,vName);
            st.setInt(2,vCode);
            st.setString(3,vDesignation);
            st.setFloat(4,vSalary);
            int row = st.executeUpdate();
            if(row > 0)
                System.out.println("Saved data successfully.");
            else
                System.out.println("Data Could'nt be saved.");
            st.close();
            con.close();
        }catch(SQLException e)
        {
            System.out.println("Exception Occurs: " + e);
        }
    }
    public void actionPerformed(ActionEvent e)
    {
        String command = e.getActionCommand();
        if(command.equals("SAVE"))
        {
            saveOperation();
        }else if(command.equals("RESET"))
        {
            name.setText("");
            code.setText("");
            salary.setText("");
            designation.setText("");
        }else if(command.equals("EXIT"))
        {
            System.exit(0);
        }
    }
}
public class Q26 {
    public static void retrieveAllRecords()
    {
        try
        {
            Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/db" , "root" , "");
            String query = "SELECT * FROM employee";
            PreparedStatement st = con.prepareStatement(query);
            ResultSet rs = st.executeQuery();
            int i = 1;
            while(rs.next())
            {
                System.out.print("Employee " + i++ + ":");
                System.out.println(rs.getString(1) + " " + rs.getInt(2) + "  " + rs.getString(3) + "  " + rs.getFloat(4));
            }
            rs.close();
            st.close();
            con.close();
        }catch(SQLException e)
        {
            System.out.println("Exception Occurs: " + e);
        }
    }
    public static void main(String[] args) {
        new MyFrame();
        retrieveAllRecords();
    }
}
```

Output:



NAME	Himanshu Raturi
CODE	20
DESIGNATION	SWE
SALARY	50000



localhost/phpmyadmin/index.php?route=/sql&pos=0&db=db&table=employee

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

✓ Showing rows 0 - 5 (6 total, Query took 0.0002 seconds.)

```
SELECT * FROM `employee`
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

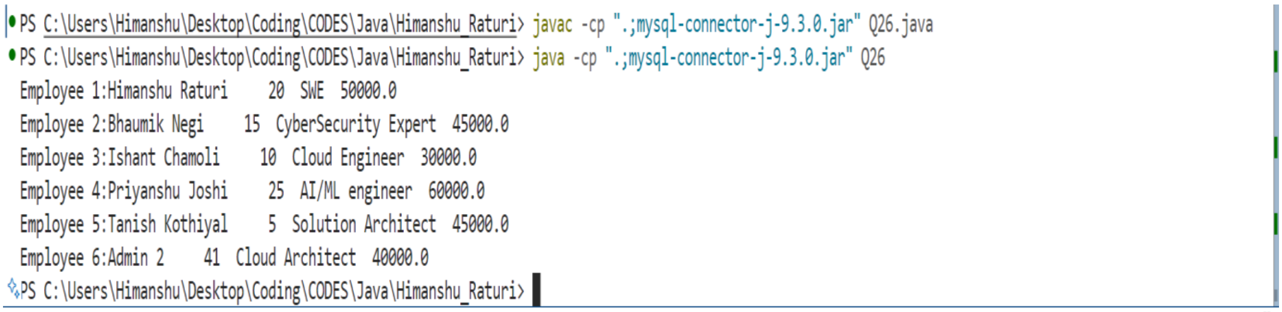
□ Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

Name	Code	Designation	Salary
Himanshu Raturi	20	SWE	50000
Bhaumik Negi	15	CyberSecurity Expert	45000
Ishant Chamoli	10	Cloud Engineer	30000
Priyanshu Joshi	25	AI/ML engineer	60000
Tanish Kothiyal	5	Solution Architect	45000
Admin 2	41	Cloud Architect	40000

□ Show all | Number of rows: 25 | Filter rows: Search this table

□ Let every user access this bookmark



```
PS C:\Users\Himanshu\Desktop\Coding\CODES\Java\Himanshu_Raturi> javac -cp ".;mysql-connector-j-9.3.0.jar" Q26.java
PS C:\Users\Himanshu\Desktop\Coding\CODES\Java\Himanshu_Raturi> java -cp ".;mysql-connector-j-9.3.0.jar" Q26
Employee 1:Himanshu Raturi     20  SWE  50000.0
Employee 2:Bhaumik Negi    15  CyberSecurity Expert  45000.0
Employee 3:Ishant Chamoli     10  Cloud Engineer  30000.0
Employee 4:Priyanshu Joshi     25  AI/ML engineer  60000.0
Employee 5:Tanish Kothiyal     5  Solution Architect  45000.0
Employee 6:Admin 2     41  Cloud Architect  40000.0
PS C:\Users\Himanshu\Desktop\Coding\CODES\Java\Himanshu_Raturi>
```