



Adv Java Lab | SEE 2022-23

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v1.3



1. Write a java program that connects to the Employee (ID, FName, LName, Project, Salary) database using JDBC and perform the following operations.

- i. Display details of all the Employees.
- ii. Display details of all the employees who work for project "Web Development".
- iii. Display the IDs of all those employee who have salary above 75,000/- and are in "Web Development".
- iv. Display the total Number of employees who have salary less than 50,000/-.

```
import java.sql.*;

public class ProgramOne {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        try {
            Class.forName("com.mysql.jdbc.Driver").newInstance();
            Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/jdbcdemo", "root", "");

            Statement st = con.createStatement();
            ResultSet rs = st.executeQuery("SELECT * FROM employee");

            while(rs.next()) {
                System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getString(3)+" "+rs.getString(4)+" "+rs.getInt(5));
            }
            System.out.println();

            String query = "SELECT * FROM employee where Project = 'Web Development' ";
            rs = st.executeQuery(query);
            while(rs.next()) {
                System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getString(3)+" "+rs.getString(4)+" "+rs.getInt(5));
            }
            System.out.println();

            String query1 = "SELECT * FROM employee where Project = 'Web Development' and Salary >= '75000'";
            rs = st.executeQuery(query1);
            System.out.println("Employee IDs: ");
            while(rs.next()) {
                System.out.println(rs.getInt(1));
            }
            System.out.println();

            String query2 = "SELECT count(*) FROM employee where Salary < 50000";
            rs = st.executeQuery(query2);
            rs.next();
            System.out.println("Count of Employees having Salary < 50000: " +rs.getInt(1));

            // String query3 = "SELECT * FROM employee where Salary < 50000";
            // rs = st.executeQuery(query3);
            // int count = 0;
            // while(rs.next()) {
            //     count++;
            // }
            // System.out.println(count);
            //

            con.close();
        } catch (ClassNotFoundException e) {
            e.printStackTrace();
        }
    }
}
```

```

    }catch (SQLException e) {
        e.printStackTrace();
    }catch (Exception e) {
        e.printStackTrace();
    }
}
}
}

```



2. Write a java program that connects to a Department (Dept_ID, Name, Year_Established, Head_Name, No_of_Employees) database using JDBC and perform the following.
- Display details of all the Departments using Statement Object.
 - Display details of all the Departments which are established in the year 2000 using PreparedStatement object. Read the value from the user and display appropriate messages.
 - Display details of all the Departments by reading Dept_ID and Department Name from the user using PreparedStatement object.
 - Insert a new row using PreparedStatement object. Display the details.

```

import java.sql.*;
import java.util.*;

public class ProgramTwo {
    public static void main(String[] args) {
        Connection con = null;
        try {
            Class.forName("com.mysql.jdbc.Driver").newInstance();
            con = DriverManager.getConnection("jdbc:mysql://localhost:3306/jdbcdemo", "root", "");
            Statement st = con.createStatement();
            String query = "SELECT * FROM department";
            ResultSet rs = st.executeQuery(query);
            while(rs.next()) {
                System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getInt(3)+" "+rs.getString(4)+" "+rs.getInt(5));
            }

            Scanner sc = new Scanner(System.in);
            System.out.println("Enter Year: ");
            int x = sc.nextInt();

            query = "SELECT * from department where Year_Est = ?";
            PreparedStatement ps = con.prepareStatement(query);
            ps.setInt(1, x);
            rs = ps.executeQuery();
            while(rs.next()) {
                System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getInt(3)+" "+rs.getString(4)+" "+rs.getInt(5));
            }

            System.out.println("Enter Department ID: ");
            int id = sc.nextInt();
            System.out.println("Enter Department Name: ");
            String name = sc.next();

            query = "SELECT * FROM department where Dept_ID = ? and Name = ?";
            ps = con.prepareStatement(query);
            ps.setInt(1, id);
            ps.setString(2, name);
            rs = ps.executeQuery();
            while(rs.next()) {
                System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getInt(3)+" "+rs.getString(4)+" "+rs.getInt(5));
            }

            System.out.println("Enter Department ID, Name, Year Est, Head Name, No of Emp");
            id = sc.nextInt();
            name = sc.next();
            int year = sc.nextInt();
            String hname = sc.next();
            int noe = sc.nextInt();

```

```

        query = "INSERT into department values(?, ?, ?, ?, ?)";
        ps = con.prepareStatement(query);
        ps.setInt(1, id);
        ps.setString(2, name);
        ps.setInt(3, year);
        ps.setString(4, hname);
        ps.setInt(5, noe);
        ps.executeUpdate();

        ps = con.prepareStatement("SELECT * from department");
        rs = ps.executeQuery();
        while(rs.next()) {
            System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getInt(3)+" "+rs.getString(4)+" "+rs.getInt(5));
        }
        con.close();
    } catch (ClassNotFoundException e) {
        e.printStackTrace();
    } catch (SQLException e) {
        e.printStackTrace();
    } catch (Exception e) {
        e.printStackTrace();
    }
}
}
}

```



3. Write a java program that connects to the Movies (ID, Movie_Name, Genre, IMDB_Rating, Year) database using JDBC. Create an Updatable ResultSet and perform the following operations.

- i. Display details of all the Movies from the table.
- ii. Display details of 5th Movie from the table.
- iii. Insert a new row into the table using PreparedStatement and display all the details.
- iv. Delete a row from the table where the IMDB_Rating is less than 5.
- v. Update the Genre of a movie with ID as 10 to "Sci-fi".

```

import java.sql.*;

public class ProgramThree {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Connection con = null;
        try {
            Class.forName("com.mysql.jdbc.Driver").newInstance();
            con = DriverManager.getConnection("jdbc:mysql://localhost:3306/jdbcdemo", "root", "");

            String query = "SELECT * from movies";
            PreparedStatement ps = con.prepareStatement(query);
            ResultSet rs = ps.executeQuery();
            while(rs.next()) {
                System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getString(3)+" "+rs.getString(4)+" "+rs.getInt(5));
            }
            System.out.println();
            //5th movie
            query="SELECT * from movies limit 1 offset 4";

            ps = con.prepareStatement(query);
            rs=ps.executeQuery();
            while(rs.next()){
                System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getString(3)+" "+rs.getString(4)+" "+rs.getInt(5))
            }
            System.out.println();

            //insert
            query = "INSERT INTO movies values(?, ?, ?, ?, ?)";
            ps=con.prepareStatement(query);
            ps.setInt(1, 3);
            ps.setString(2, "Amazing Spider-Man");

```

```

        ps.setString(3, "Marvel");
        ps.setInt(4, 8);
        ps.setInt(5, 2022);
        ps.executeUpdate();

        query = "SELECT * from movies";
        ps=con.prepareStatement(query);
        rs = ps.executeQuery();
        while(rs.next()) {
            System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getString(3)+" "+rs.getString(4)+" "+rs.getInt(5));
        }
        System.out.println();

        //Delete a row
        ps = con.prepareStatement("DELETE FROM movies where IMDB < 5");
        int i = ps.executeUpdate();
        System.out.println(i+ "Rows deleted");
        System.out.println();

        //update id = 10 to Sci-Fi
        ps = con.prepareStatement("UPDATE movies set Genre = 'Sci-Fi' where ID = 10");
        ps.executeUpdate();

        query = "SELECT * from movies";
        ps=con.prepareStatement(query);
        rs = ps.executeQuery();
        while(rs.next()) {
            System.out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getString(3)+" "+rs.getString(4)+" "+rs.getInt(5));
        }
    }catch(ClassNotFoundException e) {
        e.printStackTrace();
    }catch(SQLException e) {
        e.printStackTrace();
    }catch(Exception e) {
        e.printStackTrace();
    }
}
}

```



4. Write a java program that connects to a Bank_Account (Account_No, Account_Name, Type_of_Account, Balance) table using JDBC and perform the following.

- i. Insert rows using PreparedStatement.
- ii. Display details of all the Accounts.
- iii. Demonstrate the Working of Rollback and Commit.
- iv. Demonstrate the Working of SavePoints.

```

import java.util.*;
import java.sql.*;
public class p4 {
    public static void main(String[] args) {
        Connection conn=null;
        PreparedStatement ps=null;
        Scanner sc=new Scanner(System.in);

        try {
            Class.forName("com.mysql.jdbc.Driver");
            conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/cs051", "root", "");
            System.out.println("connected");
            conn.setAutoCommit(false);

            Statement stmt=conn.createStatement();
            System.out.println("insert bank details(no,name,type,balance)");
            String query="insert into bank values (?, ?, ?, ?)";
            ps=conn.prepareStatement(query);
            ps.setString(1, sc.next());
            ps.setString(2, sc.next());
            ps.setString(3, sc.next());
            ps.setString(4, sc.next());

```

```

        ps.executeUpdate();

        ResultSet rs=stmt.executeQuery("select * from bank");
        System.out.println("details of bank");
        while(rs.next()) {
            System.out.println(rs.getString(1)+" "+rs.getString(2)+" "+rs.getString(3)+" "+rs.getString(4));
        }

        System.out.println("Commit and Rollback");
        String s1="update bank set no='10' where name='a'";
        String s2="update bank set no='12' where name='b'";
        int count=stmt.executeUpdate(s1);
        System.out.println("no.of updates"+count);
        count=stmt.executeUpdate(s2);
        System.out.println("no.of updates"+count);
        conn.commit();
        rs=stmt.executeQuery("select * from bank");
        while(rs.next()) {
            System.out.println(rs.getString(1)+" "+rs.getString(2)+" "+rs.getString(3)+" "+rs.getString(4));
        }
        String s3="update bank set no='14' where name='c'";
        String s4="update bank set no='16' where name='d'";
        count=stmt.executeUpdate(s3);
        System.out.println("no.of updates"+count);
        Savepoint sp=conn.setSavepoint();
        count=stmt.executeUpdate(s4);
        System.out.println("no.of updates"+count);
        conn.rollback(sp);
        conn.commit();
        rs=stmt.executeQuery("select * from bank");
        while(rs.next()) {
            System.out.println(rs.getString(1)+" "+rs.getString(2)+" "+rs.getString(3)+" "+rs.getString(4));
        }
        conn.close();
        sc.close();
        System.out.println("Disconnected");
    }
    catch(ClassNotFoundException e) {
        e.printStackTrace();
    }
    catch(SQLException e) {
        e.printStackTrace();
    }
    catch(Exception e) {
        e.printStackTrace();
    }
}
}
}

```



5. Write a java servlet program to implement a webpage to check if the voter is eligible or not. User will enter his first name, last name, email id and date of birth. Check if he is eligible to vote or not. Validate the page before displaying the details.

Voting Page

First Name:

Last Name:

E-Mail ID:

Date of Birth:

```

import java.io.*;
import java.time.LocalDate;
import java.time.Period;

import javax.servlet.ServletException;

```

```

import javax.servlet.annotation.WebServlet;
import javax.servlet.http.*;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/vote")
public class ProgramFour extends HttpServlet {

    public void doPost(HttpServletRequest req, HttpServletResponse res)
    throws ServletException, IOException {
        // TODO Auto-generated method stub
        String fname = req.getParameter("fname");
        String lname = req.getParameter("lname");
        String email = req.getParameter("mail");
        String date = req.getParameter("date");

        PrintWriter out = res.getWriter();

        LocalDate dob = LocalDate.parse(date);
        LocalDate today = LocalDate.now();
        int k = Period.between(dob, today).getYears();
        if(k < 18) {
            out.println("Not Eligible to vote");
        }
        else {
            out.println("You are Eligible to vote");
        }
    }
}

vote.html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Voting Page</title>
</head>
<body>
<h1>Voting Page</h1>
<form action = "vote" method = "post">
First Name: <br><input type="text" name ="fname"><br>
Last Name: <br><input type = "text" name = "lname"><br>
E-Mail ID: <br><input type = "text" name = "mail"><br>
Date of Birth: <br><input type = "date" name = "date"><br>
<input type= "submit" value = "submit"><br>
</form>

</body>
</html>

```



6. Write a java servlet program to calculate the CGPA. Read the USN, Name, SGPA of previous 4 semesters from user in an HTML page. Calculate the CGPA and display the details using a Servlet class.

```

import java.io.IOException;
import java.io.PrintWriter;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/cgpa")
public class ProgramFive extends HttpServlet {
    public void doGet(HttpServletRequest req, HttpServletResponse res)
    throws ServletException, IOException {
        String usn = req.getParameter("usn");
        String name = req.getParameter("name");
    }
}

```

```

        double s1 = Double.parseDouble(req.getParameter("s1"));
        double s2 = Double.parseDouble(req.getParameter("s2"));
        double s3 = Double.parseDouble(req.getParameter("s3"));
        double s4 = Double.parseDouble(req.getParameter("s4"));

        double s = s1+s2+s3+s4;
        double cg = s / 4;
        PrintWriter out = res.getWriter();
        out.println("USN:"+usn+"Name:"+name);
        out.println("The CGPA of previos 4 semesters is: " +cg);
    }
}

cgpa.html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>CPGA Calculator</title>
</head>
<body>
<form action="cgpa" method = "get">
USN:<br> <input type= "text" name="usn"><br>
Name:<br> <input type= "text" name="name"><br>
S1:<br> <input type= "text" name="s1"><br>
S2:<br> <input type= "text" name="s2"><br>
S3:<br> <input type= "text" name="s3"><br>
S4:<br> <input type= "text" name="s4"><br>
<input type="submit" name = "submit">
</form>

</body>
</html>

```



7. Write a java servlet program to implement a simple calculator. Validate the input data and display appropriate messages.

```

import java.io.IOException;
import java.io.PrintWriter;
import java.math.*;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/calc")
public class ProgramSix extends HttpServlet {

    public void doGet(HttpServletRequest req, HttpServletResponse res)
    throws ServletException, IOException {

        PrintWriter out = res.getWriter();
    }
}

```

```

double n1 = Double.parseDouble(req.getParameter("fnum"));
double n2 = Double.parseDouble(req.getParameter("snum"));

String op = req.getParameter("op");

switch(op) {
    case "add":
        out.println(n1 + n2);
        break;
    case "sub":
        out.println(n1 - n2);
        break;
    case "mul":
        out.println(n1 * n2);
        break;
    case "exp":
        out.println(Math.exp(n1));
        break;
    case "div":
        if(n2 == 0)
            out.println("Second number cannot be zero");
        else
            out.println(n1 / n2);
        break;

    default:
        out.println("Invalid");
}

}

}

calc.html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Calculator</title>
</head>
<body>
<h1>CALCULATOR PROGRAM</h1>
<form action="calc" method = "get">
First Number: <input type="text" name = "fnum"><br><br>
Second Number: <input type="text" name = "snum"><br><br>
Addition <input type="radio" value="add" name ="op"><br>
Multiplication <input type="radio" value="mul" name ="op"><br>
Subtraction <input type="radio" value="sub" name ="op"><br>
Division <input type="radio" value="div" name ="op"><br>
e^x <input type="radio" value="exp" name ="op"><br>
<input type="submit" name="submit">
</form>
</body>
</html>

```



8. Write a java servlet program to create 4 cookies. Set 2 cookies with 1 minute of expiry date. Display all the cookies when the servlet is loaded for the first time. Refresh the page and display the remaining 2 cookies.

```

import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.Cookie;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
/**
 * Servlet implementation class prog8
 */
@WebServlet("/prog8")

```



```

public class prog8 extends HttpServlet {
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
        PrintWriter out= response.getWriter();
        response.setContentType("text/html");
        Cookie c1= new Cookie("c1", "a");
        Cookie c2= new Cookie("c2", "b");
        Cookie c3= new Cookie("c3", "c");
        Cookie c4= new Cookie("c4", "d");
        c1.setMaxAge(20);
        c2.setMaxAge(20);
        response.addCookie(c1);
        response.addCookie(c2);
        response.addCookie(c3);
        response.addCookie(c4);
        Cookie[] c= request.getCookies();
        for(int i=0; i<c.length; i++) {
            out.println("<html><body>" +c[i].getName()+c[i].getValue()+"</body></html>");
        }
    }
    /**
     * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse
     response)
     */
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
        // TODO Auto-generated method stub
        doGet(request, response);
    }
}

HTML:
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Cookies</title>
</head>
<body>
<form action="prog8" method="get">
Cookie info <br>
<input type= "submit" value= "Click me">
</form>
</body>
</html>

```



9. Write a java servlet program that reads either area name or phone no. of police station of and displays details of the police station. Use a HTML file to read the input and display the output using a Servlet class. Create police_station table with appropriate fields like Station_ID, Area_Name, Phone_Number and Address.

```

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

import java.sql.*;

@WebServlet("/police")
public class ProgramSeven extends HttpServlet {

    public void doGet(HttpServletRequest req, HttpServletResponse res)
    throws ServletException, IOException {
        String area = req.getParameter("area");
        String phnno = req.getParameter("phnno");
    }
}

```

```

String query;
Connection con = null;
Statement st = null;
ResultSet rs = null;
PrintWriter out = res.getWriter();

try {
    Class.forName("com.mysql.jdbc.Driver").newInstance();
    con = DriverManager.getConnection("jdbc:mysql://localhost:3306/police_station_db", "root", "");
    query = "SELECT * FROM police_station where Area_Name='"+area+"' and Phone_Number='"+phnno+"' ";
    st = con.createStatement();
    rs = st.executeQuery(query);
    while(rs.next()) {
        out.println(rs.getInt(1)+" "+rs.getString(2)+" "+rs.getInt(3)+" "+rs.getString(4));
    }
} catch(ClassNotFoundException e) {
    System.out.println(e);
} catch(SQLException e) {
    System.out.println(e);
} catch(Exception e) {
    out.println(e);
}

}
}

police.html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Police Station Details</title>
</head>
<body>
<form action = "police" method = "get">
Area Name: <input type="text" name="area"><br>
Phone Number: <input type="text" name="phnno"><br>
<input type="submit" name = "submit">
</form>
</body>
</html>

```



10. Write a java servlet program to insert Employee details like Emp_ID, Employee_Name, Address, Date_of_Birth in Employee table. Create a HTML page to read the appropriate inputs and insert the data in the table. Provide a button to display the details in table format in a new page.

```

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.*;

import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

/**
 * Servlet implementation class prog10
 */
@WebServlet("/prog10")
public class prog10 extends HttpServlet {

    protected void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
        // TODO Auto-generated method stub
        PrintWriter out= response.getWriter();
        response.setContentType("text/html");
        String name= request.getParameter("name");
        String id= request.getParameter("id");
        String add= request.getParameter("add");
    }
}

```

```

String dob= request.getParameter("dob");
Connection con= null;
PreparedStatement ps= null;
Statement st= null;
String query, f1, f2, f3, f4;
ResultSet rs= null;
try {
    Class.forName("com.mysql.jdbc.Driver").newInstance();
    con= DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb", "root", "");
    st= con.createStatement();
    query= "insert into deet values (?, ?, ?, ?)";
    ps= con.prepareStatement(query);
    ps.setString(1, name);
    ps.setString(2, id);
    ps.setString(3, add);
    ps.setString(4, dob);
    ps.executeUpdate();
    rs= st.executeQuery("select * from deet");
    out.println("<html><body>");
    out.println("<table border=1 <tr><th>name</th><th>id</th><th>address</th><th>dob</th></tr>");
    while(rs.next()) {
        f1= rs.getString(1);
        f2= rs.getString(2);
        f3= rs.getString(3);
        f4= rs.getString(4);

        out.println("<tr><td>"+ f1+ "</td><td>"+ f2+ "</td><td>"+ f3+ "</td><td>"+ f4+ "</td></tr>");
    }
    out.println("</table></body></html>");
} catch (Exception e) {
    e.printStackTrace();
}
}

/**
 * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
 */
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
    // TODO Auto-generated method stub
    doGet(request, response);
}

}

HTML:
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<form action = "prog10" method = get >
Enter Employee Id : <input type ="text" name = "id" > <br>
Enter Employee Name : <input type ="text" name = "name" > <br>
Enter Address : <input type ="text" name = "add" > <br>
Enter DOB (yyyy-mm-dd): <input type ="text" name = "dob" > <br>
<button type = "Submit"> Submit </button>
<button type = "Reset"> Cancel </button>
</form>
</body>
</html>

```



11. Write a JSP program to accept the 5 subject marks entered and display his/her grade to the browser. Department has set the grade for the subject Java as follows: Above 90 = S, 80-89 = A, 70-79 = B, 60-69 = C, 50-59 = D, and Below 50 = FAIL.

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<!DOCTYPE html>

```

```

<html>
<head>
<meta charset="ISO-8859-1">
<title>Program Nine</title>
</head>
<body>
<% int m[] = new int[5];
  m[0] = Integer.parseInt(request.getParameter("s1"));
  m[1] = Integer.parseInt(request.getParameter("s2"));
  m[2] = Integer.parseInt(request.getParameter("s3"));
  m[3] = Integer.parseInt(request.getParameter("s4"));
  m[4] = Integer.parseInt(request.getParameter("s5"));

  double res=0.0;
  for(int i=0;i<m.length;i++)
    res=res+m[i];
  res=res/m.length;
  if(res>=90.0)
    out.println("A");
  else if(res>=80.0 && res<=89.0)
    out.println("B");
  else if(res>=70.0 && res<=79.0)
    out.println("C");
  else if(res>=60.0 && res<=69.0)
    out.println("D");
  else if(res>=50.0 && res<=59.0)
    out.println("E");
  else
    out.println("Fail");
%>
</body>
</html>

HTML
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
  <form action="Proj11.jsp" method="post">
    s1:<input type="text" name="s1">
    s2:<input type="text" name="s2">
    s3:<input type="text" name="s3">
    s4:<input type="text" name="s4">
    s5:<input type="text" name="s5">
    <input type="submit" value="calculate">
  </form>
</body>
</html>

```



12. Write a JSP program that takes the user's name and age from a form. Echo back the name and age along with a message stating the price of movie tickets. The price is determined by the age passed to the JSP.

1. If the age is greater than 62, the movie ticket price is Rs. 50.
2. If the user is less than 10 years old, the price is Rs. 30.
3. For everyone else, the price is Rs. 80.

```

<%@ page language="java" contentType="text/html; charset=UTF-8"
  pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<%

```

```

        out.println(request.getParameter("name"));
        out.println(request.getParameter("age"));
        int age=Integer.parseInt(request.getParameter("age"));

        if(age>62) out.println("Rs:50");
        else if(age<10) out.println("Rs : 30");
        else out.println("Rs: 80");

    %>

HTML
</body>
</html>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
    <form method="post" action="Proj12.jsp">
        name:<input type="text" name="name" >
        age:<input type="number" name="age">
        <input type="submit" value="submit">
    </form>
</body>
</html>

```



13. Write a JSP program to connect to the Student database and display the details. The Student table has USN, Name & CGPA. Create an index.html page to collect USN from the User. Connect to database from display Data.jsp and display the USN & Name if the USN is present in the table. Else display Invalid USN.

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@page import= "java.sql.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<%
String usn= request.getParameter("usn");
Connection con= null;
boolean flag= false;
String f1, f2, f3, f4, query;
try{
    Class.forName("com.mysql.jdbc.Driver").newInstance();
    con= DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb", "root", "");
    Statement st= con.createStatement();
    query= "select * from student";
    ResultSet rs= st.executeQuery(query);
    out.println("<html><body>");
    out.println("<table border=1 <tr><th>USN</th><th>Name</th><th>Sem</th><th>CGPA</th></tr>");
    while(rs.next()){
        f1= rs.getString(1);
        f2= rs.getString(2);
        f3= rs.getString(3);
        f4= rs.getString(4);
        if(f1.equals(usn)){
            out.println("<tr><td>"+ f1+ "</td><td>"+ f2+ "</td><td>"+ f3+ "</td><td>"+ f4+ "</td></tr>");
            flag=true;
        }
    }
    out.println("</table></body></html>");
    if (flag==false)
        out.println("invalid usn");
}catch (Exception e){
    out.println("error");
}

```

```

}
%>
</body>
</html>

<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
<form action="prog13.jsp" method= "post">
USN: <input type= "text" name= "usn"><br>
<input type="submit" value= "submit">
</form>
</body>
</html>

```



14. Write a JSP program to connect to the database and display the following details. The Employee table has ID, FName, LName, Project and Salary.

- i. Create an index page to insert the data into the table.
- ii. Create a second JSP page to display the details using Employee ID.

```

<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ page import="java.sql.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<%
String id=request.getParameter("id");
String fname=request.getParameter("fname");
String lname=request.getParameter("lname");
String project=request.getParameter("project");
String salary=request.getParameter("salary");
Connection conn=null;
String f1,f2,f3,f4,f5;
PreparedStatement ps=null;
try
{
    Class.forName("com.mysql.jdbc.Driver");
    conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb","root","");
    Statement stmt=conn.createStatement();
    String query="insert into emp values(?,?,?,?,?)";
    ps=conn.prepareStatement(query);
    ps.setString(1,id);
    ps.setString(2,fname);
    ps.setString(3,lname);
    ps.setString(4,project);
    ps.setString(5,salary);
    ps.executeUpdate();
    out.println("inserted successfully");
    ResultSet rs=stmt.executeQuery("select * from emp");
    out.println("<table border=1><tr><th>ID</th><th>FName</th><th>LName</th><th>Project</th><th>Salary</th></tr>");
    while(rs.next())
    {
        f1=rs.getString(1);
        f2=rs.getString(2);
        f3=rs.getString(3);
        f4=rs.getString(4);
        f5=rs.getString(5);
        out.println("<tr><td>"+f1+"</td><td>"+f2+"</td><td>"+f3+"</td><td>"+f4+"</td><td>"+f5+"</td></tr>");
    }
    out.println("</table>");
}
catch(Exception e)

```

```

{
    out.println("error");
}
%>
<form action="p14.jsp" method="get">
id <input type="text" name="id"><br>
<input type="submit" value="display the details"><br>
</form>
</body>
</html>

<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ page import="java.sql.*" %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<%
Connection conn=null;
String id=request.getParameter("id");
String f1,f2,f3,f4,f5;
boolean flag=false;
try
{
    Class.forName("com.mysql.jdbc.Driver");
    conn=DriverManager.getConnection("jdbc:mysql://localhost:3306/mydb","root","");
    Statement stmt=conn.createStatement();
    String query="select * from emp";
    ResultSet rs=stmt.executeQuery(query);
    out.println("<table border=1><tr><th>ID</th><th>FName</th><th>LName</th><th>Project</th><th>Salary</th></tr>");
    while(rs.next())
    {
        f1=rs.getString(1);
        f2=rs.getString(2);
        f3=rs.getString(3);
        f4=rs.getString(4);
        f5=rs.getString(5);
        if(f1.equals(id)){
            out.println("<tr><td>"+f1+"</td><td>"+f2+"</td><td>"+f3+"</td><td>"+f4+"</td><td>"+f5+"</td></tr>");
            flag=true;
        }
    }
    out.println("</table>");
    if(flag==false)
        out.println("invalid usn");
}
catch(Exception e)
{
    out.println("error");
}
%>
</body>
</html>

HTML:
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
<form action="prog14.jsp" method="get">
id <input type="text" name="id"><br>
fname <input type="text" name="fname"><br>
lname <input type="text" name="lname"><br>
project <input type="text" name="project"><br>
salary <input type="text" name="salary"><br>
<input type="submit" value="submit"><br>
</form>
</body>
</html>

```