**Lab Sheet4**

Problem Statement : MVC design pattern with database

AIM:

To implement a web application based on the MVC design pattern with data base.

ALGORITHM

Step 1 : create a database named "employee" in MySQL. Let's create an *employee1* table using below DDL script:

CREATE TABLE employee1 (id int,first\_name varchar(20),last\_name varchar(20),username varchar(250),password varchar(20) ,address varchar(45),contact varchar(45));

Step 2: Create the *Employee* class which will act as our **Model** class.

Step 3: *EmployeeDao* class that contains JDBC code to connect with the MySQL database.

Step 4: create an *EmployeeServlet* class to process HTTP request parameters and redirect to the appropriate JSP page after request data stored in the database.(Controller)

## Step 5: design an employee registration HTML form *employeeregister.jsp(View)*

## Step 6: After an employee successfully registered then *employeedetails.jsp* show a successful message on screen(View)

.

PROGRAM:

Employee.java

**package** com.pu;

**import** java.io.Serializable;

**public** **class** Employee **implements** Serializable{

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

**private** **int** id;

**private** String firstName;

**private** String lastName;

**private** String username;

**private** String password;

**private** String address;

**private** String contact;

**public** **int** getId() {

**return** id;

}

**public** **void** setId(**int** id) {

**this**.id = id;

}

**public** String getFirstName() {

**return** firstName;

}

**public** **void** setFirstName(String firstName) {

**this**.firstName = firstName;

}

**public** String getLastName() {

**return** lastName;

}

**public** **void** setLastName(String lastName) {

**this**.lastName = lastName;

}

**public** String getUsername() {

**return** username;

}

**public** **void** setUsername(String username) {

**this**.username = username;

}

**public** String getPassword() {

**return** password;

}

**public** **void** setPassword(String password) {

**this**.password = password;

}

**public** String getAddress() {

**return** address;

}

**public** **void** setAddress(String address) {

**this**.address = address;

}

**public** String getContact() {

**return** contact;

}

**public** **void** setContact(String contact) {

**this**.contact = contact;

}

}

EmployeeDao.java

**package** com.pu;

**import** java.sql.\*;

**public** **class** EmployeeDao {

**public** **int** registerEmployee(Employee employee) **throws** Exception {

String query = "INSERT INTO employee1" +

" (id, first\_name, last\_name, username, password, address, contact) VALUES " +

" (?, ?, ?, ?, ?,?,?);";

**int** result = 0;

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

**try** (Connection connection = DriverManager

.*getConnection*("jdbc:mysql://localhost:3306/god?characterEncoding=latin1","root","admin123");

// Step 2:Create a statement using connection object

PreparedStatement preparedStatement = connection.prepareStatement(query)) {

preparedStatement.setInt(1, employee.getId());

preparedStatement.setString(2, employee.getFirstName());

preparedStatement.setString(3, employee.getLastName());

preparedStatement.setString(4, employee.getUsername());

preparedStatement.setString(5, employee.getPassword());

preparedStatement.setString(6, employee.getAddress());

preparedStatement.setString(7, employee.getContact());

System.***out***.println(preparedStatement);

// Step 3: Execute the query or update query

result = preparedStatement.executeUpdate();

} **catch** (SQLException e) {

// process sql exception

System.***err***.println(e);

}

**return** result;

}

}

employeeregister.jsp

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<h1>Employee Register Form</h1>

<form action=*"employeedetail.jsp"* method=*"post"*>

<table style="with: *50%*">

<tr>

<td>Registration Id</td>

<td><input type=*"text"* name=*"id"* /></td>

</tr>

<tr>

<td>First Name</td>

<td><input type=*"text"* name=*"firstName"* /></td>

</tr>

<tr>

<td>Last Name</td>

<td><input type=*"text"* name=*"lastName"* /></td>

</tr>

<tr>

<td>UserName</td>

<td><input type=*"text"* name=*"username"* /></td>

</tr>

<tr>

<td>Password</td>

<td><input type=*"password"* name=*"password"* /></td>

</tr>

<tr>

<td>Address</td>

<td><input type=*"text"* name=*"address"* /></td>

</tr>

<tr>

<td>Contact No</td>

<td><input type=*"text"* name=*"contact"* /></td>

</tr>

</table>

<input type=*"submit"* value=*"Submit"* /></form>

</body>

</html>

employeedetail.jsp

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<%@page import=*"com.pu.\*"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<jsp:useBean id=*"employee"* class=*"com.pu.Employee"* />

<jsp:setProperty property=*"\*"* name=*"employee"* />

<%

EmployeeDao employeeDao = **new** EmployeeDao();

**int** status = employeeDao.registerEmployee(employee);

**if** (status > 0) {

out.print("You are successfully registered");

}

%>

</body>

</html>

RESULT:

Thus ,to implement a simple MVC web application using JSP and Servlet.