## What is MVC Architecture || Login & Registration using MVC Design Pattern in Servlet & JSP

Register.java

```java
package in.sp.controllers;

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

import in.sp.dbcon.DBConnection;
import jakarta.servlet.RequestDispatcher;
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;

@WebServlet("/regfrom")
public class Register  extends HttpServlet
{
	protected void doPost(HttpServletRequest req,HttpServletResponse res)throws ServletException,IOException
	{
		PrintWriter out=res.getWriter();
		res.setContentType("text/html");

		String myname=req.getParameter("name1");
		String myemail=req.getParameter("email1");
		String mypass=req.getParameter("pass1");
		String mycity=req.getParameter("city1");

		 try
		 {
			Connection con=DBConnection.getConnection();

			String insert_sql_query="insert into register values(?,?,?,?)";
			PreparedStatement ps=con.prepareStatement("insert_sql_query");
			ps.setString(1,myname);
			ps.setString(2,myemail);
			ps.setString(3,mypass);
			ps.setString(4,mycity);
```

```java
                        int count= ps.executeUpdate();
                        if(count>0)
                        {
                                out.println("<h3 style='color:green'>Registered
Successfully..!!</h3>");

                                RequestDispatcher
rd=req.getRequestDispatcher("/login.html");
                                rd.include(req,res);
                        }
                        else
                        {
                    out.println("<h3 style='color:red'>User not registered dut to some
error..!!</h3>");

                                RequestDispatcher
rd=req.getRequestDispatcher("/register.html");
                                rd.include(req,res);
                        }

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

        }

}
```

Login.java

```java
package in.sp.controllers;

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

import in.sp.model.User;
import jakarta.servlet.RequestDispatcher;
import jakarta.servlet.ServletException;
```

```java
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import jakarta.servlet.http.HttpSession;

@WebServlet("/loginFrom")
public class Login extends HttpServlet
{
        protected void doPost(HttpServletRequest req,HttpServletResponse res)throws
ServletException,IOException
        {
                PrintWriter out=res.getWriter();
                res.setContentType("text/html");


                String myemail=req.getParameter("email1");
                String mypass=req.getParameter("pass1");

                try
                {
                        Connection con=DbConnection.getConnection();

                        String select_sql_Query="select *from register where email=? and
password=?";

                        PreparedStatement ps=con.prepareStatement(select_sql_Query);
                        ps.setString(1,myemail);
                        ps.setString(2,mypass);

                        ResultSet rs=ps.executeQuery();
                        if(rs.next())
                        {
                                User user=new User();
                                user.setName(rs.getString("name"));
                                user.setEmail(rs.getString("email"));
                                user.setCity(rs.getString("city"));

                                HttpSession session=req.getSession();
                                session.setAttribute("session_user",user);

                                RequestDispatcher
rd=req.getRequestDispatcher("/profile.jsp");
                                rd.forward(req,res);
                        }
```

```
                        else
                        {
                                out.println("<h3 style='color:red'>Emai ID and Password didnt
matched</h3>");

                                RequestDispatcher
rd=req.getRequestDispatcher("/login.html");
                                rd.include(req,res);
                        }
                }
                catch(Exception e)
                {
                        e.printStackTrace();
                }
        }

}
```

DBConnection.java

```
package in.sp.dbcon;

import java.sql.Connection;
import java.sql.DriverManager;

public class DBConnection
{
        public static Connection getConnection()
        {
                Connection con=null;
                try
                {
                        Class.forName("com.mysql.cj.jdbc.Driver");

        con=DriverManager.getConnection("jdbc:mysql://localhost:3306/yt_demo","root","r
oot");
                }
                catch(Exception e)
                {
                        e.printStackTrace();
                }
                return null;
        }
```

```
        }
```

**User.java**

```java
package in.sp.model;

public class User
{
        private String name;
        private String email;
        private String city;

        public String getName() {
                return name;
        }
        public void setName(String name) {
                this.name = name;
        }
        public String getEmail() {
                return email;
        }
        public void setEmail(String email) {
                this.email = email;
        }
        public String getCity() {
                return city;
        }
        public void setCity(String city) {
                this.city = city;
        }

}
```

**Logout.java**

```java
package in.sp.controllers;

import java.io.IOException;

import jakarta.servlet.RequestDispatcher;
import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
```

```java
import jakarta.servlet.http.HttpServletResponse;
import jakarta.servlet.http.HttpSession;

@WebServlet("/logout")
public class Logout extends HttpServlet
{
        protected void doGet(HttpServletRequest req,HttpServletResponse res)throws ServletException,IOException
        {
                HttpSession session=req.getSession();
                session.invalidate();

                RequestDispatcher rd=req.getRequestDispatcher("/login.html");
                rd.forward(req,res);
        }
}
```

**Index.html**

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
        <h3>Welcome to Karan Academy</h3>
        <a href="register.html">Register Here</a><br><br>
        <a href="login.html">Login Here</a><br><br>
</body>
</html>
```

**Register.html**

```html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
        <h3>Register Here</h3>
        <form action="regfrom" method="post">
                    Name:<input type="text" name="name1"><br><br>
```

```
                        Email ID:<input type="text" name="email1"><br><br>
                        Password:<input type="password" name="pass1"><br><br>
                        City:<input type="text" name="city1"><br><br>
                        <input type="submit" value="Register">

        </form>
</body>
</html>
```

Login.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
</head>
<body>
        <h3>Login Here</h3>
        <form action="loginFrom" method="post">
                        Email ID:<input type="text" name="email1"><br><br>
                        Password:<input type="password" name="pass1"><br><br>
                        <input type="submit" value="login">
        </form>
</body>
</html>
```

Profile.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>

        <%
                User user=(User)session.getAttribute("session_user");
        %>
        <h2>Welcome</h2>
```

```html
        <h3>Name :<%=user.getName() %></h3>
        <h3>Email :<%=user.getEmail() %></h3>
        <h3>City :<%=user.getCity() %></h3>

        <a href="logout">Logout</a>
</body>
</html>
```