**Lab Sheet4**

Problem Statement : MVC design pattern

AIM:

To demonstrate the web development by using MVC design pattern.

ALGORITHM

Step 1 : Create a LoginBeanclass acting as a model which defines the business logic of the system and also represents the state of the application.

Step 2: Create index.jsp will be a view class which can accept the user login credentials.

Step 3: Create ControllerServlet.java Class which acts as a controller is like an interface between Model and View. It receives the user requests from the view layer and processes them, including the necessary validations. The requests are then sent to model for data processing. Once they are processed, the data is again sent back to the controller and then displayed on the view.

Step 4: Create login-success.jsp and login-error.jsp pages  represents the output of the application or the user interface. It displays the data fetched from the model layer by the controller and presents the data to the user whenever asked for. It receives all the information it needs from the controller.

PROGRAM:

index.jsp(View)

<form action=*"ControllerServlet"* method=*"post"*>

Name:<input type=*"text"* name=*"name"*><br>

Password:<input type=*"password"* name=*"password"*><br>

<input type=*"submit"* value=*"login"*>

</form>

LoginBean.java(Model)

**package** com.pu;

**import** java.lang.\*;

**public** **class** LoginBean {

**private** String name,password;

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

**public** String getPassword() {

**return** password;

}

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

**this**.password = password;

}

**public** **boolean** validate(){

**if**(password.equals("admin")){

**return** **true**;

}

**else**{

**return** **false**;

}

}

}

login-success.jsp(view)

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

<p>You are successfully logged in!</p>

<%

LoginBean bean=(LoginBean)request.getAttribute("bean");

out.print("Welcome, "+bean.getName());

%>

login-error.jsp(View)

<p>Sorry! username or password error</p>

<%@ include file=*"index.jsp"* %>

ControllerServlet.java(Controller)

response.setContentType("text/html");

PrintWriter out=response.getWriter();

String name=request.getParameter("name");

String password=request.getParameter("password");

LoginBean bean=**new** LoginBean();

bean.setName(name);

bean.setPassword(password);

request.setAttribute("bean",bean);

**boolean** status=bean.validate();

**if**(status){

RequestDispatcher rd=request.getRequestDispatcher("login-success.jsp");

rd.forward(request,response);

}

**else**{

RequestDispatcher rd=request.getRequestDispatcher("login-error.jsp");

rd.forward(request,response);

}

RESULT:

Thus the dynamic web pages were developed and demonstrated by using MVC design pattern.