**PHASE2-THIRD-PROJECT-WriteUp**

DESCRIPTION

**Project objective:**

Create a servlet-based web application that shows a form to add new products. A MySQL database will be created to store product data. The form data will be validated, and a row will be added to the database. All database processing will be done using Hibernate.

**Background of the problem statement:**

As a part of developing an e-commerce web application, you have to create a database table for storing product information. A form is needed to add new products. The form submission is validated, and a new record is created in the product table.

**You must use the following:**

●    Eclipse as the IDE  
●    Apache Tomcat as the web server  
●    JSP pages for the front end  
●    Servlets for backend processing  
●    Hibernate to store data into the database

**Following requirements should be met:**

●    Show an add product form in JSP  
●    Handle the form submission in a servlet. Validate it for any missing information  
●    Add the product information into the database using Hibernate  
●    Set up Hibernate configuration files using XML for the product table  
●    A class has to be created to store product data. This class will be linked to Hibernate via an hbm.xml file  
●    The servlet will put the form data into the product class and then pass the product class into Hibernate to add into the database  
●    The step-by-step process involved in completing this task should be documented

**index.jsp**

<%@ 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>

<form action=*""* method=*"get"*>

Enter ProductID:<input type=*"text"* name=*"pid"*/><br/>

Enter ProductName:<input type=*"text"* name=*"pname"*/><br/>

Enter ProductPrice:<input type=*"text"* name=*"price"*/><br/>

<input type=*"submit"* name=*"Product"* value=*"Product Details"*/>

<% **if**(request.getParameter("Product")!=**null**) {%>

<jsp:useBean id=*"product"* class=*"com.simplilearn.tp.Product"* scope=*"request"*></jsp:useBean>

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

<jsp:forward page=*"Productvalues"*></jsp:forward>

<%}%>

</form>

</body>

</html>

**Class: Product**

**package** com.simplilearn.tp;

**import** javax.persistence.Column;

**import** javax.persistence.Entity;

**import** javax.persistence.Id;

**import** javax.persistence.Table;

@Entity

@Table

**public** **class** Product {

@Id

**private** **int** pid;

@Column

**private** String pname;

@Column

**private** Float price;

**public** Product() {

}

@Override

**public** String toString() {

**return** "Product [pid=" + pid + ", pname=" + pname + ", price=" + price + "]";

}

**public** **int** getPid() {

**return** pid;

}

**public** **void** setPid(**int** pid) {

**this**.pid = pid;

}

**public** String getPname() {

**return** pname;

}

**public** **void** setPname(String pname) {

**this**.pname = pname;

}

**public** Float getPrice() {

**return** price;

}

**public** **void** setPrice(Float price) {

**this**.price = price;

}

}

**Servlet: Productvalues**

**package** com.simplilearn.tp;

**import** java.io.IOException;

**import** java.io.PrintWriter;

**import** java.util.List;

**import** javax.servlet.ServletException;

**import** javax.servlet.http.HttpServlet;

**import** javax.servlet.http.HttpServletRequest;

**import** javax.servlet.http.HttpServletResponse;

**import** org.hibernate.Session;

**import** org.hibernate.SessionFactory;

/\*\*

\* Servlet implementation class Productvalues

\*/

**public** **class** Productvalues **extends** HttpServlet {

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

/\*\*

\* **@see** HttpServlet#HttpServlet()

\*/

**public** Productvalues() {

**super**();

// **TODO** Auto-generated constructor stub

}

/\*\*

\* **@see** HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)

\*/

@SuppressWarnings("unchecked")

**protected** **void** doGet(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

**try** {

SessionFactory factory = HibernateUtil.*getSessionFactory*();

Session session = factory.openSession();

// using HQL

List<Product> list = session.createQuery("from Product").list();

session.close();

PrintWriter out = response.getWriter();

out.println("<html><body>");

out.println("<b>Product Listing</b><br>");

**for**(Product p: list) {

out.println("ID: " + String.*valueOf*(p.getPid()) + ", Name: " + p.getPname() +

", Price: " + String.*valueOf*(p.getPrice()) + "<br>");

}

out.println("</body></html>");

} **catch** (Exception ex) {

**throw** ex;

}

}

/\*\*

\* **@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);

}

**protected** **void** service(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

Product product =(Product) request.getAttribute("product");

PrintWriter out = response.getWriter();

out.print("<h3> Product Details " + product+ "</h3>");

}

}

**Class: HibernateUtil**

**package** com.simplilearn.tp;

**import** org.hibernate.SessionFactory;

**import** org.hibernate.boot.Metadata;

**import** org.hibernate.boot.MetadataSources;

**import** org.hibernate.boot.registry.StandardServiceRegistry;

**import** org.hibernate.boot.registry.StandardServiceRegistryBuilder;

**public** **class** HibernateUtil {

**private** **static** **final** SessionFactory ***sessionFactory***;

**static** {

**try** {

StandardServiceRegistry standardRegistry = **new** StandardServiceRegistryBuilder()

.configure("hibernate.cfg.xml").build();

Metadata metaData = **new** MetadataSources(standardRegistry).getMetadataBuilder().build();

***sessionFactory*** = metaData.getSessionFactoryBuilder().build();

} **catch** (Throwable th) {

**throw** **new** ExceptionInInitializerError(th);

}

}

**public** **static** SessionFactory getSessionFactory() {

**return** ***sessionFactory***;

}

}

**product.hbm.xml**

<?xml version=*"1.0"* encoding=*"UTF-8"*?>

<!DOCTYPE hibernate-mapping PUBLIC

"-//Hibernate/Hibernate Mapping DTD 5.3//EN"

"http://hibernate.sourceforge.net/hibernate-mapping-5.3.dtd">

<hibernate-mapping>

<class name=*"com.simplilearn.tp.Product"* table=*"Product"*>

<property name=*"pid"*></property>

<property name=*"pname"*></property>

<property name=*"price"*></property>

</class>

</hibernate-mapping>

**hibernate.cfg.xml**

<?xml version=*"1.0"* encoding=*"UTF-8"*?>

<!DOCTYPE hibernate-configuration PUBLIC "-//Hibernate/Hibernate Configuration DTD 3.0//EN"

"http://www.hibernate.org/dtd/hibernate-configuration-3.0.dtd">

<hibernate-configuration>

<session-factory name=*""*>

<property name=*"hibernate.connection.driver\_class"*>com.mysql.jdbc.Driver</property>

<property name=*"hibernate.connection.password"*>surya1981</property>

<property name=*"hibernate.connection.url"*>jdbc:mysql://localhost:3306/webapp</property>

<property name=*"hibernate.connection.username"*>root</property>

<property name=*"hibernate.dialect"*>org.hibernate.dialect.MySQL8Dialect</property>

<property name=*"current\_session\_context\_class"*>thread</property>

<property name=*"hibernate.show\_sql"*>true</property>

<property name=*"hibernate.hbm2ddl.auto"*>create</property>

<mapping class=*"com.simplilearn.tp.Product"*/>

</session-factory>

</hibernate-configuration>

**web.xml**

<?xml version=*"1.0"* encoding=*"UTF-8"*?>

<web-app xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"* xmlns=*"http://java.sun.com/xml/ns/javaee"* xsi:schemaLocation=*"http://java.sun.com/xml/ns/javaee http://java.sun.com/xml/ns/javaee/web-app\_2\_5.xsd"* id=*"WebApp\_ID"* version=*"2.5"*>

<display-name>PHASE2-THIRD-PROJECT</display-name>

<welcome-file-list>

<welcome-file>index.html</welcome-file>

<welcome-file>index.htm</welcome-file>

<welcome-file>index.jsp</welcome-file>

<welcome-file>default.html</welcome-file>

<welcome-file>default.htm</welcome-file>

<welcome-file>default.jsp</welcome-file>

</welcome-file-list>

<servlet>

<description></description>

<display-name>Productvalues</display-name>

<servlet-name>Productvalues</servlet-name>

<servlet-class>com.simplilearn.tp.Productvalues</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>Productvalues</servlet-name>

<url-pattern>/Productvalues</url-pattern>

</servlet-mapping>

</web-app>

**Pushing the code to your GitHub repositories**

* Open your command prompt and navigate to the folder where you have created your files.

**cd <folder path>**

* Initialize your repository using the following command:

**git init**

* Add all the files to your git repository using the following command:

**git add .**

* Commit the changes using the following command:

**git commit . -m “Changes have been committed.”**

* Push the files to the folder you initially created using the following command:

**git push -u origin master**