**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.

**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.

**Source Code**

index.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>

<a href=*"fetch"*>Click here to view Product list and details</a>

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

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

Product Price:<input type=*"text"* name=*"price"*><br><br>

<input type=*"submit"* value=*"Save"*/>

</form>

</body>

</html>

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>

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

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

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

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

<property name=*"hbm2ddl.auto"*>update</property>

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

<property name=*"log4j.logger.org.hibernate.SQL"*>DEBUG</property>

<property name=*"log4j.logger.org.hibernate.type"*>TRACE</property>

<property name=*"dialect"*>org.hibernate.dialect.MySQL5InnoDBDialect</property>

<!-- mapping file -->

<mapping class=*"com.org.controller.Product"*/>

</session-factory>

</hibernate-configuration>

HibernateUtil

package com.org.model;

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 SessionFactory sessionFactory;

static {

try {

StandardServiceRegistry registery=

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

Metadata metadata= new MetadataSources(registery).getMetadataBuilder().build();

sessionFactory= metadata.getSessionFactoryBuilder().build();

} catch (Exception e) {

e.printStackTrace();

}

}

public static SessionFactory getSessionFactory() {

return sessionFactory;

}

}

Product (Entity class)

package com.org.controller;

import java.math.BigDecimal;

import java.util.Date;

import javax.persistence.Column;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

import javax.persistence.Table;

@Entity

@Table(name="eproduct")

public class Product {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

@Column(name="ID")

private long id;

private String name;

private BigDecimal price;

@Column(name="date\_added")

private Date dateAdded;;

public Product() {}

public Product(String name, BigDecimal price, Date dateAdded) {

super();

this.name = name;

this.price = price;

this.dateAdded = dateAdded;

}

public long getId() {

return id;

}

public void setId(long id) {

this.id = id;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public BigDecimal getPrice() {

return price;

}

public void setPrice(BigDecimal price) {

this.price = price;

}

public Date getDateAdded() {

return dateAdded;

}

public void setDateAdded(Date dateAdded) {

this.dateAdded = dateAdded;

}

@Override

public String toString() {

return "Product [id=" + id + ", name=" + name + ", price=" + price + ", dateAdded=" + dateAdded + "]";

}

}

ListServlet

package com.org.controller;

import java.io.IOException;

import java.io.PrintWriter;

import java.util.List;

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 org.hibernate.Session;

import org.hibernate.SessionFactory;

import com.org.model.HibernateUtil;

@WebServlet("/fetch")

public class ListServlet extends HttpServlet {

private static final long serialVersionUID = 1L;

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

response.setContentType("text/html");

SessionFactory factory= HibernateUtil.getSessionFactory();

Session session= factory.openSession();

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

PrintWriter out=response.getWriter();

out.print("<h1>Product List</h1><hr>");

for(Product p:list)

{

out.print(p.getId()+" "+p.getName()+" "+p.getPrice()+" "+p.getDateAdded()+"<br><br>");

}

}

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

doGet(request, response);

}

}

StoreData

package com.org.controller;

import java.io.IOException;

import java.math.BigDecimal;

import java.util.Calendar;

import java.util.Date;

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 org.hibernate.Session;

import org.hibernate.SessionFactory;

import com.org.model.HibernateUtil;

@WebServlet("/store")

public class StoreData extends HttpServlet {

private static final long serialVersionUID = 1L;

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

response.setContentType("text/html");

SessionFactory factory= HibernateUtil.getSessionFactory();

Session session= factory.openSession();

session.beginTransaction();

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

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

Product p=new Product();

p.setName(name);

p.setPrice(new BigDecimal(price));

p.setDateAdded(Calendar.getInstance().getTime());

session.save(p);

session.getTransaction().commit();

response.sendRedirect("success.jsp");

}

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

doGet(request, response);

}

}