**Hibernate Configurations using Annotations**

**Index.html:**

<!DOCTYPE html>

<html>

<head>

<meta charset=*"UTF-8"*>

<title>Hibernate Annotation Example</title>

</head>

<body>

<a href=*"list"*>List Products</a><br>

</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>

<!-- Database connection settings -->

<property name=*"format\_sql"*>false</property>

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

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

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

<property name=*"connection.password"*>abc@123</property>

<!-- JDBC connection pool (use the built-in) -->

<property name=*"connection.pool\_size"*>1</property>

<!-- SQL dialect -->

<property name=*"dialect"*>org.hibernate.dialect.MySQL5Dialect</property>

<mapping class=*"ListProduct"*/>

</session-factory>

</hibernate-configuration>

**Com.ecommerce Package:**

**HibernateUtil Class:**

**package** com.ecommerce;

**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***;

}

}

**EProduct class:**

package com.ecommerce;

import java.math.BigDecimal;

import java.util.Date;

public class EProduct {

private long ID;

private String name;

private BigDecimal price;

private Date dateAdded;

public EProduct() {

}

public EProduct(long id, String name, BigDecimal price, Date dateAdded) {

this.ID = id;

this.name = name;

this.price = price;

this.dateAdded = dateAdded;

}

public long getID() {return this.ID; }

public String getName() { return this.name;}

public BigDecimal getPrice() { return this.price;}

public Date getDateAdded() { return this.dateAdded;}

public void setID(long id) { this.ID = id;}

public void setName(String name) { this.name = name;}

public void setPrice(BigDecimal price) { this.price = price;}

public void setDateAdded(Date date) { this.dateAdded = date;}

}

**ListProduct Servlet:**

**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** javax.websocket.Session;

**import** org.hibernate.SessionFactory;

**import** com.ecommerce.EProduct;

**import** com.ecommerce.HibernateUtil;

@WebServlet("/ListProduct")

**public** **class** ListProduct **extends** HttpServlet {

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

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

// **TODO** Auto-generated method stub

**try** {

SessionFactory factory = HibernateUtil.*getSessionFactory*();

Session session = (Session) factory.openSession();

List<EProduct> list= ((org.hibernate.Session) session).createQuery("select \* from EProduct").list();

session.close();

PrintWriter out = response.getWriter();

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

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

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

out.println("ID: " + String.*valueOf*(p.getID()) + ", Name: " + p.getName() +

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

}

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

} **catch** (Exception ex) {

**throw** ex;

}

}

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

// **TODO** Auto-generated method stub

doGet(request, response);

}

}

**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\_3\_0.xsd"* id=*"WebApp\_ID"* version=*"3.0"*>

<display-name>HibernateAnnotations</display-name>

<welcome-file-list>

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

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

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

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

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

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

</welcome-file-list>

<servlet>

<servlet-name>ListProduct</servlet-name>

<servlet-class>ListProduct</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>ListProduct</servlet-name>

<url-pattern>/list</url-pattern>

</servlet-mapping>

</web-app>