**Hibernate Configuration Using XML**

**Index.html:**

<!DOCTYPE html>

<html>

<head>

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

<title>Hibernate With XML</title>

</head>

<body>

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

</body>

</html>

**Com.ecommerce package:**

**HibernateUtil class:**

**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:**

**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;}

}

**Eproduct.hbm.xml File:**

<?xml version=*"1.0"*?>

<!DOCTYPE hibernate-mapping PUBLIC

"-//Hibernate/Hibernate Mapping DTD 3.0//EN"

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

<hibernate-mapping package=*"com.ecommerce"*>

<class name=*"EProduct"* table=*"eproduct"*>

<id name=*"ID"* column=*"ID"*>

<generator class=*"increment"*/>

</id>

<property name=*"name"* type=*"string"* column=*"NAME"*/>

<property name=*"price"* type=*"big\_decimal"* column=*"PRICE"*/>

<property name=*"dateAdded"* type=*"timestamp"* column=*"DATE\_ADDED"*/>

</class>

</hibernate-mapping>

**Hibernate.cfg.xml File:**

<?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=*"connection.driver\_class"*>com.mysql.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>

</session-factory>

</hibernate-configuration>

**ListProducts 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 ListProducts extends HttpServlet {

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

// TODO Auto-generated method stub

try {

SessionFactory factory = HibernateUtil.getSessionFactory();

Session session = factory.openSession();

// using HQL

List<EProduct> list = ((org.hibernate.Session) session).createQuery("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://xmlns.jcp.org/xml/ns/javaee"* xsi:schemaLocation=*"http://xmlns.jcp.org/xml/ns/javaee http://xmlns.jcp.org/xml/ns/javaee/web-app\_3\_1.xsd"* id=*"WebApp\_ID"* version=*"3.1"*>

<display-name>HibernateConfigUsingXML</display-name>

<welcome-file-list>

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

</welcome-file-list>

<servlet>

<servlet-name>ListProducts</servlet-name>

<servlet-class>ListProducts</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>ListProducts</servlet-name>

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

</servlet-mapping>

</web-app>