**Component Mapping**

package com.ecommerce;

import java.math.BigDecimal;

import java.util.Collection;

import java.util.Date;

import java.util.List;

import java.util.Set;

import java.util.Map;

public class EProduct {

private long ID;

private String name;

private BigDecimal price;

private Date dateAdded;

private ProductParts parts;

public EProduct() {

}

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 ProductParts getParts() { return this.parts;}

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;}

public void setParts(ProductParts parts) { this.parts = parts;}

}

package com.ecommerce;

public class ProductParts {

private String hdd;

private String cpu;

private String ram;

public String getHdd() { return this.hdd;}

public String getCpu() { return this.cpu;}

public String getRam() { return this.ram;}

public void setHdd(String value) { this.hdd= value;}

public void setCpu(String value) { this.cpu= value;}

public void setRam(String value) { this.ram= value;}

}

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;

}

}

<?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" type="long" column="ID">

<generator class="identity"/>

</id>

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

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

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

<component name="parts" class="com.ecommerce.ProductParts">

<property name="hdd" column="parts\_hdd" type="string" />

<property name="cpu" column="parts\_cpu" type="string" />

<property name="ram" column="parts\_ram" type="string" />

</component>

</class>

</hibernate-mapping>

<?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">master</property>

<mapping resource="com/ecommerce/EProduct.hbm.xml"/>

</session-factory>

</hibernate-configuration>

<!DOCTYPE html>

<html>

<head>

<meta charset="UTF-8">

<title>Hibernate Component Mapping</title>

</head>

<body>

<a href="details">Product Details</a><br>

</body>

</html>

import java.io.IOException;

import java.io.PrintWriter;

import javax.servlet.ServletConfig;

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.transaction.\*;

import javax.xml.bind.\*;

import java.io.Serializable;

import java.math.BigDecimal;

import java.util.ArrayList;

import java.util.Calendar;

import java.util.Collection;

import java.util.List;

import java.util.Map;

import java.util.Set;

import org.hibernate.Session;

import org.hibernate.SessionFactory;

import org.hibernate.Transaction;

import org.hibernate.cfg.Configuration;

import com.ecommerce.EProduct;

import com.ecommerce.HibernateUtil;

import com.ecommerce.ProductParts;

/\*\*

\* Servlet implementation class ProductDetails

\*/

@WebServlet("/ProductDetails")

public class ProductDetails extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public ProductDetails() {

super();

// TODO Auto-generated constructor stub

}

/\*\*

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

\*/

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

// TODO Auto-generated method stub

try {

SessionFactory factory = HibernateUtil.getSessionFactory();

Session session = factory.openSession();

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

PrintWriter out = response.getWriter();

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

out.println("<b>Component Mapping</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());

ProductParts parts = p.getParts();

out.println("Parts =" + parts.getCpu() + ", " + parts.getHdd() + ", " + parts.getRam());

out.println("<hr>");

}

session.close();

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);

}

}

<?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\_4\_0.xsd" id="WebApp\_ID" version="4.0">

<display-name>HibernateComponentMapping</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>

<servlet-name>ProductDetails</servlet-name>

<servlet-class>ProductDetails</servlet-class>

</servlet>

<servlet-mapping>

<servlet-name>ProductDetails</servlet-name>

<url-pattern>/details</url-pattern>

</servlet-mapping>

</web-app>