**Practice project assisted**

Hibernate Component Mapping

index.html

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Hibernate Component Mapping</title>

</head>

<body>

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

</body>

</html>

ProductDetails.java

**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** 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.Color;

**import** com.ecommerce.EProduct;

**import** com.ecommerce.Finance;

**import** com.ecommerce.HibernateUtil;

**import** com.ecommerce.OS;

**import** com.ecommerce.ScreenSizes;

/\*\*

\* 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;

}

}

}

EProduct.java

**package** com.ecommerce;

**import** java.math.BigDecimal;

**import** java.util.Collection;

**import** java.util.Date;

**import** java.util.List;

**import** java.util.Map;

**import** java.util.Set;

**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;}

}

ProductParts.java

**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;}

}

HibernateUtil.java

**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.hbm.xml

<?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>

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=*"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"*/>

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

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

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

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

</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://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>