**Component Mapping:**

* create **Package,** enter com.ecommerce and in **Name** enter EProductand click on **Finish**

**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;}

}

* In **Package,** enter com.ecommerce and in **Name** enter ProductParts and click on **Finish**

**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;}

}

* In **Package,** enter com.ecommerceand in **Name** enter HibernateUtiland click on **Finish**

**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"/>

</session-factory>

</hibernate-configuration>

**index.html:**

<!DOCTYPE html>

<**html**>

<**head**>

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

<**title**>Hibernate Component Mapping</**title**>

</**head**>

<**body**>

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

</**body**>

</**html**>

**ProductDetails:**

**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);

}

}

**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>