

# Component Mapping

## 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.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 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);
    }
}

```

## EProduct.java:

```

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;}
}

```

## 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;
        }
    }
}

```

### 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;}

}

```

### 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>
    </class>
</hibernate-mapping>

```

```

        <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">Mysql123@*</property>
        <mapping resource="EProduct.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>
```

