

Component mapping Pom.xml:

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
https://maven.apache.org/xsd/maven-4.0.0.xsd">
<modelVersion>4.0.0</modelVersion>
<groupId>Component_Mapping</groupId>
<artifactId>Component_Mapping</artifactId>
<version>0.0.1-SNAPSHOT</version>
<packaging>war</packaging>
<build>
<resources>
<resource>
<directory>src/main/java</directory>
<excludes>
<exclude>**/*.java</exclude>
</excludes>
</resource>
</resources>
<plugins>
<plugin>
<artifactId>maven-compiler-plugin</artifactId>
<version>3.8.1</version>
<configuration>
<release>17</release>
</configuration>
</plugin>
<plugin>
<artifactId>maven-war-plugin</artifactId>
<version>3.2.3</version>
<configuration>
<warSourceDirectory>WebContent</warSourceDirectory>
</configuration>
</plugin>
</plugins>
</build>
<dependencies>
<dependency>
<groupId>org.hibernate</groupId>
<artifactId>hibernate-core</artifactId>
<version>5.6.5.Final</version>
</dependency>
<dependency>
<groupId>mysql</groupId>
<artifactId>mysql-connector-java</artifactId>
<version>8.0.28</version>
</dependency>
</dependencies>
</project>
```

Hibernate col:

```
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;
    }
}

```

Product col:

```

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);
    }
}

```

Productparts:

```

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;}

}

```