

Eproduct:

```
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 List<Color> colors;
    private Collection<ScreenSizes> screenSizes;
    private Set<OS> os;
    private Map finance;

    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 List<Color> getColors() { return this.colors;}
    public Collection<ScreenSizes> getScreensizes() { return
this.screenSizes;}
    public Set<OS> getOs() { return this.os;}
    public Map getFinance() { return this.finance;}

    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 setColors(List<Color> colors) { this.colors = colors;}
    public void setScreensizes(Collection<ScreenSizes> sizes) {
this.screenSizes = sizes;}
    public void setOs(Set<OS> os) { this.os = os;}
    public void setFinance(Map finance) { this.finance = finance;}
}
```

ColScreen:

```
package com.ecommerce;

public class ScreenSizes {
    private long SCREENID;
    private String size;

    public ScreenSizes() {
```

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    }
    public ScreenSizes(String size) {
        this.SCREENID = 0;
        this.size = size;
    }

    public long getSCREENID() {return this.SCREENID; }
    public String getSize() { return this.size;}
    public void setSCREENID(long id) { this.SCREENID = id;}
    public void setSize(String size) { this.size = size;}

}

```

Colpom.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>Collection_Mapping_in_Hibernate</groupId>
<artifactId>Collection_Mapping_in_Hibernate</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>

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        <dependency>
            <groupId>mysql</groupId>
            <artifactId>mysql-connector-java</artifactId>
            <version>8.0.28</version>
        </dependency>
    </dependencies>
</project>

```

Productdetail:

```

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.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
    }

```

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    /**
     * @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>Product Listing</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());

                List<Color> colors = p.getColors();
                out.println("Colors: ");
                for(Color c: colors) {
                    out.print(c.getName() + "&nbsp;");
                }

                Collection<ScreenSizes> sizes=
p.getScreensizes();
                out.println(", Screen Sizes: ");
                for(ScreenSizes s: sizes) {
                    out.print(s.getSize() + "&nbsp;");
                }

                Set<OS> os= p.getOs();
                out.println(", OS : ");
                for(OS o: os) {
                    out.print(o.getName() + "&nbsp;");
                }

                Map finances = p.getFinance();
                out.println(", Finance Options: ");
                if (finances.get("CREDITCARD") != null) {
                    Finance f = (Finance)
finances.get("CREDITCARD");
                    out.println(f.getName() + " &nbsp;");
                }
                if (finances.get("BANK") != null) {
                    Finance f = (Finance)
finances.get("BANK");
                    out.println(f.getName() + " &nbsp;");
                }
            }
        }
    }
}

```

```

        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);
}
}

```