

```

public class User {
    private String userID;
    private String name;

    public User(String userID, String name) {
        this.userID = userID;
        this.name = name;
    }

    public String getUserID() {
        return userID;
    }

    public void setUserID(String userID) {
        this.userID = userID;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }
}

```

```

import java.util.ArrayList;
import java.util.Properties;

public class Seller extends User{
    private ArrayList<Product> inventory = new ArrayList<>();

    public Seller(String userID, String name) {
        super(userID, name);
    }

    public ArrayList<Product> getInventory() {
        return inventory;
    }

    public void setInventory(ArrayList<Product> inventory) {
        this.inventory = inventory;
    }

    public void listProduct(Product product)
    {
        inventory.add(product);
    }

    public void printInventoryDetails ()
    {
        System.out.println();
        System.out.println("---Printing Inventory Details---");
        System.out.println("Inventory Management for Seller: " +
getName());
        for(Product product : inventory) {
            System.out.println("Product ID: " + product.getProductID());
            System.out.println("Name: " + product.getName());
            System.out.println("Price: " + product.getPrice());
            System.out.println();
        }
    }
}

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    }
    System.out.println();
}
}

```

```

import java.util.ArrayList;

public class Product{
    private String name;
    private Seller seller;
    private double price;
    private String productID;

    public Product(String name, Seller seller, double price, String
productID) {
        this.name = name;
        this.seller = seller;
        this.price = price;
        this.productID = productID;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public Seller getSeller() {
        return seller;
    }

    public void setSeller(Seller seller) {
        this.seller = seller;
    }

    public double getPrice() {
        return price;
    }

    public void setPrice(double price) {
        this.price = price;
    }

    public String getProductID() {
        return productID;
    }

    public void setProductID(String productID) {
        this.productID = productID;
    }
}

```

```

import java.util.ArrayList;

public class Buyer extends User{
    private ArrayList<Product> cart = new ArrayList<>();
    public Buyer(String userID, String name) {

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        super(userID, name);
    }

    public ArrayList<Product> getCart() {
        return cart;
    }

    public void setCart(ArrayList<Product> cart) {
        this.cart = cart;
    }

    public void addToCart(Product products)
    {
        cart.add(products);
    }

    public void displayProductsAddedToCart()
    {
        System.out.println();
        System.out.println("Printing Product Details:-");
        int i = 1;
        for(Product product : cart)
        {
            System.out.printf("---Product %d Details---", i);
            System.out.println();
            System.out.println("Product ID: " + product.getProductID());
            System.out.println("Product Name: " + product.getName());
            System.out.println("Price: " + product.getPrice());
            System.out.println("Seller Name: " +
product.getSeller().getName());
            i++;
        }
        System.out.println();
    }
}

```

```

public class Transaction {
    private String transactionID;
    private Product product;
    private Seller seller;
    private Buyer buyer;
    private double transactionFee;

    public Transaction(String transactionID, Product product, Seller
seller, Buyer buyer, double transactionFee) {
        this.transactionID = transactionID;
        this.product = product;
        this.seller = seller;
        this.buyer = buyer;
        this.transactionFee = transactionFee;
    }

    public String getTransactionID() {
        return transactionID;
    }

    public void setTransactionID(String transactionID) {
        this.transactionID = transactionID;
    }
}

```

```
public Product getProduct() {
    return product;
}

public void setProduct(Product product) {
    this.product = product;
}

public Seller getSeller() {
    return seller;
}

public void setSeller(Seller seller) {
    this.seller = seller;
}

public Buyer getBuyer() {
    return buyer;
}

public void setBuyer(Buyer buyer) {
    this.buyer = buyer;
}

public double getTransactionFee() {
    return transactionFee;
}

public void setTransactionFee(double transactionFee) {
    this.transactionFee = transactionFee;
}

public void displayTransactionDetails()
{
    System.out.println("Transaction ID:" + getTransactionID());
    System.out.println("Buyer: " + buyer.getName());
    System.out.println("Seller: " + seller.getName());
    System.out.println("Product: " + product.getName());
    System.out.println("Product Price: " + product.getPrice());
    System.out.println("Transaction Fee: " + getTransactionFee());
}
}
```

```
"C:\Program Files\Java\jdk-21\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2023.3.5\lib\idea_rt.jar=52369:C:\Program Files\JetBrains
Transaction ID:T401
Buyer: Hassan
Seller: Ahmed
Product: Laptop
Product Price: 1200000.0
Transaction Fee: 200.0

Printing Product Details:-
---Product 1 Details---
Product ID: P201
Product Name: Laptop
Price: 1200000.0
Seller Name: Ahmed
---Product 2 Details---
Product ID: P202
Product Name: Smartphone
Price: 2180000.0
Seller Name: Imran

---Printing Inventory Details---
Inventory Management for Seller: Ahmed
Product ID: P201
Name: Laptop
```

```
---Printing Inventory Details---
Inventory Management for Seller: Ahmed
Product ID: P201
Name: Laptop
Price: 1200000.0

Product ID: P202
Name: Smartphone
Price: 2180000.0
```

```
Process finished with exit code 0
```