Exercise 1:

```java
class Product{
        private String name;
        private double price;
        private int productID;
        private static int total;

        public Product(String n, double p){
                total++;
                productID = total;
                name = n;
                price = p;
        }

        public String getName(){
                return name;
        }

        public int getProductID(){
                return productID;
        }

        public double getPrice(){
                return price;
        }

        public void changePrice(Double p){
                price = p;
        }

        public static int getTotal(){
                return total;
        }
}
```

```java
public class TestProduct {
        public static void main(String[] args) {

                Product p1 = new Product("Milk", 2.5);
                Product p2 = new Product("Apple", 6);
                // Display all product info
                System.out.println("***** You have " +
Product.getTotal() + " products now.");
                System.out.println("You have " + p1.getName() +
"(ID="+ p1.getProductID() +"). Its price is $"+
String.format("%.2f", p1.getPrice()));
                System.out.println("You have " + p2.getName() +
"(ID="+ p2.getProductID() +"). Its price is $"+
String.format("%.2f", p2.getPrice()));

                Product p3 = new Product("Bread", 1.5);
                // Display all product info
                System.out.println("***** You have " +
Product.getTotal() + " products now.");
                System.out.println("You have " + p1.getName() +
"(ID="+ p1.getProductID() +"). Its price is $"+
String.format("%.2f", p1.getPrice()));
                System.out.println("You have " + p2.getName() +
"(ID="+ p2.getProductID() +"). Its price is $"+
String.format("%.2f", p2.getPrice()));
                System.out.println("You have " + p3.getName() +
"(ID="+ p3.getProductID() +"). Its price is $"+
String.format("%.2f", p3.getPrice()));

                // Change the price of Apple
                p2.changePrice(5.99);

                // Display all product info
                System.out.println("***** You have " +
Product.getTotal() + " products now.");
                System.out.println("You have " + p1.getName() +
"(ID="+ p1.getProductID() +"). Its price is $"+
String.format("%.2f", p1.getPrice()));
                System.out.println("You have " + p2.getName() +
"(ID="+ p2.getProductID() +"). Its price is $"+
String.format("%.2f", p2.getPrice()));
                System.out.println("You have " + p3.getName() +
"(ID="+ p3.getProductID() +"). Its price is $"+
String.format("%.2f", p3.getPrice()));
        }
}
```

```
D:\Desktop\UNI\CSIT111\Lab8\Ex1>javac TestProduct.java Product.java

D:\Desktop\UNI\CSIT111\Lab8\Ex1>java TestProduct
***** You have 2 products now.
You have Milk(ID=1). Its price is $2.50
You have Apple(ID=2). Its price is $6.00
***** You have 3 products now.
You have Milk(ID=1). Its price is $2.50
You have Apple(ID=2). Its price is $6.00
You have Bread(ID=3). Its price is $1.50
***** You have 3 products now.
You have Milk(ID=1). Its price is $2.50
You have Apple(ID=2). Its price is $5.99
You have Bread(ID=3). Its price is $1.50

D:\Desktop\UNI\CSIT111\Lab8\Ex1>_
```

Exercise 2:

File Name: CheckOut

```java
class CheckOut{
        public static void main(String[] args){

                System.out.println("***** At Register 1 *****");
                // Create first register
                CashRegister register1 = new CashRegister();

                // Create Milk Product, update total items in the register, update total price of items in the register
                Product milk = new Product("Milk", 2.99);
                register1.updateTotalItems();
                register1.updateTotalPrice(milk.getPrice());

                // Create Apple Product, update total items in the register, update total price of items in the register
                Product apple = new Product("Apple", 5.49);
                register1.updateTotalItems();
                register1.updateTotalPrice(apple.getPrice());

                // Create Bread Product, update total items in the register, update total price of items in the register
                Product bread = new Product("Bread", 1.75);
                register1.updateTotalItems();
                register1.updateTotalPrice(bread.getPrice());

                // Display total items and price in the register
                System.out.printf("You have purchased %s items", register1.totalItems);
                System.out.printf("\nTotal: $%s", register1.totalPrice);

                // Create second Apple Product, update total items in the register, update total price of items in the register
                register1.updateTotalItems();
                register1.updateTotalPrice(apple.getPrice());

                // Display new total items and price in the register
                System.out.printf("\nYou have purchased %s items", register1.totalItems);
                System.out.printf("\nTotal: $%s", register1.totalPrice);

                // Create second register
                System.out.println("\n\n***** At Register 2 *****");
                CashRegister register2 = new CashRegister();
                // Create Milk Product, update total items in the register, update total price of items in the register
                register2.updateTotalItems();
                register2.updateTotalPrice(milk.getPrice());

                // Create Bread Product, update total items in the register, update total price of items in the register
                register2.updateTotalItems();
                register2.updateTotalPrice(bread.getPrice());

                // Display total items and price in the second register
                System.out.printf("You have purchased %s items", register2.totalItems);
                System.out.printf("\nTotal: $%s", register2.totalPrice);
        }
}
```

File Name: Product

```java
class Product{
        private String name;
        private double price;
        private int productID;
        private static int total;

        public Product(String n, double p){
                total++;
                productID = total;
                name = n;
                price = p;
        }

        public String getName(){
                return name;
        }

        public int getProductID(){
                return productID;
        }

        public double getPrice(){
                return price;
        }

        public void changePrice(Double p){
                price = p;
        }

        public static int getTotal(){
                return total;
        }
}
```

File Name: CashRegister

```java
class CashRegister{
        public int totalItems;
        public double totalPrice;

        public void updateTotalItems(){
                totalItems = totalItems + 1;
        }

        public void updateTotalPrice(double p){
                totalPrice = totalPrice + p;
        }
}
```

```
D:\Desktop\UNI\CSIT111\Lab8\Ex2>javac CheckOut.java CashRegister.java Product.java

D:\Desktop\UNI\CSIT111\Lab8\Ex2>java CheckOut
***** At Register 1 *****
You have purchased 3 items
Total: $10.23
You have purchased 4 items
Total: $15.72

***** At Register 2 *****
You have purchased 2 items
Total: $4.74
D:\Desktop\UNI\CSIT111\Lab8\Ex2>
```