Polymorphic Behavior via Java interface

Lab / chapter 10

1) Save all the previous files in a folder named `suttononlineshopusinginterface` (change my lastname to your lastname). This is the package where you save and run your project.

2) Open a new java file and name it BookInterface and save it in the package folder `suttononlineshopusinginterface.`

3) Copy the following code to your BookInterface.java:

```java
package suttononlineshopusinginterface;

public interface BookInterface extends ProductInterface {
    public String getPublisher();
    public void setPublisher(String publisher);
    public int getYearPublished();
    public void setYearPublished(int yearPublished);
}
```

4) Modify Book.java to implement the BookInterface.

5) Open a new java file and name it ProductInterface and save it in the package folder.

6) Add the following code to your ProductInterface class:

```java
    public double computeSalePrice();
    public double getRegularPrice();
    public void setRegularPrice(double regularPrice);
```

7) Open new file and name it ElectronicsInterface and save it in the package folder.

8) Add the following code:

```
package suttononlineshopusinginterface;

public interface ElectronicsInterface extends
ProductInterface {

    public String getManufacturer();

}
```

9) Make sure to implement those interface classes to Electronic, Product and Book Classes.

10) Run your main.java. Figure below should be the result in the output window of the ID:

```
Item number 0: Type = suttononlineshopusinginterface.TV, Regular price = 1000.0, Sale price = 800.0
Item number 1: Type = suttononlineshopusinginterface.TV, Regular price = 2000.0, Sale price = 1600.0
Item number 2: Type = suttononlineshopusinginterface.MP3Player, Regular price = 250.0, Sale price = 225.0
Item number 3: Type = suttononlineshopusinginterface.Book, Regular price = 34.0, Sale price = 17.0
Item number 4: Type = suttononlineshopusinginterface.Book, Regular price = 15.0, Sale price = 7.5
totalRegularPrice = 3299.0
totalSalePrice = 2649.5
```

11) In this exercise, you built your OnlineShop project and exercised the polymorphic behavior through implementing methods of an interface. Take a screenshot of your outputs from step 10 and submit as attachments.