



ITCS 209 Object Oriented Programming	Name:	Lab Score	Challenge Bonus
	ID:		
	Section:		

Lab10: Input/Output and Exception Handling

In this lab, you have been hired by a local coffee shop to assist them in processing their sales orders. The coffee shop stores its orders in a text file, with each order containing a list of items and their prices. Your task is to write a Java program that can read these orders from the text file, extract the item details, and calculate the total sales for each order. You have been given the class `OrderReader.java` and text file `order.txt` to start with, your task is to complete the program by following the instructions provided below.

Task 1: Complete the method `readOrder`

`public static ArrayList<String> readOrder(String fileName)`: This method will take a filename of a text file containing an order in the ".txt" format as input. The method should read the content of the file line-by-line and add each line to an `ArrayList`. Finally, the method should return the `ArrayList` as output. Note that you are allowed to use any Java techniques or libraries to read the file.

Task 2: Complete the method `getTotal`

`public static double getTotal(ArrayList<String> order)`: This method will take the `ArrayList` of content in `order.txt` generated in task 1 as input. The method should compute the total cost of the ordered items by parsing the price of each item, multiplying it by the quantity of the item, and adding up the costs for all items in the order. The method should return the total cost as a double.

Task 3: Complete the method `getTax`

`public static double getTax(ArrayList<String> order)`: This method will take the `ArrayList` of content in `order.txt` generated in task 1 as input. The method should compute the tax amount for the purchase, using a tax rate of 7%. The method should return the tax amount as a double."

Task 4: Complete the method `getSubtotal`

`public static double getSubtotal(ArrayList<String> order)`: The method should compute the subtotal price of the order (i.e., the total price before adding tax). The subtotal amount should be calculated by subtracting the tax amount, computed in task 3, from the total cost of the order. The method should return the subtotal amount as a double."

Note that: You are allowed to modify code in main to *handle the exception* that may occur.

Expected Output:

```
I Sea Tea  
99 Phuttamonthon 4 Road, Salaya  
Nakhon Pathom 73170 THAILAND
```

```
[order]  
Coffee 2.50*2  
Latte 4.00*1  
Muffin 2.00*3  
Croissant 2.50*2
```

```
Total:                $20.00  
Tax:                  $1.40  
Subtotal:             $18.60
```

Challenge Bonus (Optional):

Modify the program by overloading the method `printReceipt` to output the receipt containing all information presented in the expected output. The method should create a new file named 'receipt1.txt' and write all the output to the file instead of printing it to the console.

Hint: To write content to a file, you can use the `PrintWriter` library."