SCIT

School of Computing and Information Technology

ASSIGNMENT 1 – PART 1

CSIT111– Programming Fundamental

Session 3: July to September 2023

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INSTRUCTIONS TO CANDIDATES

1. The assignment consists of two parts. This is the part 1 of the assignment.
2. Part 2 is Moodle quiz. Should be done in class.
3. The name of the program must be **YourName_A1.**java (Only one Java file); remember to replace **YourName** by your actual "shorter" name.
4. **Total mark of Assignment 1 is 8 marks; 4 marks for Part II.**

Your program, should begin with

// **Full Name:**
// **Java version:**
// **Tutorial Group**
// **Declaration: …… tell me if it is your own work …. and whether you have**
// **passed your program to your friends.**

Objective

The following features should be explored in your design:

- use of meaningful identifiers
- user friendly
- formatted outputs i.e., the use of **print**f statements
- explore the use of constants
- some basic programming styles for alignment of statements
- comment statements
- etc

Task (4 marks)

Difficult period for a lot of companies during the last few years. Some of them approach you to design systems allowing them to put items for online purchase. They want the system to be friendly and easier to use. You propose to them your idea:

Task 1

When entering the system, you allow the user to enter the items for online purchase. The following shows the 1st display when you execute your program:

```
Welcome to ABC online service
-----------------------------
Enter three items to be sold
1.
```

Of course, the number of items can be changed. Now user enters the items one by one:

```
Welcome to ABC online service
-----------------------------
Enter three items to be sold
1. Chesse burgers
2. Iphone 14
3. T Bone Steak
```

Try to replace "**ABC**" with your own name.

You also prompt the user to enter the delivery information:

```
Delivery information
--------------------
Customer name: Heng A K
Collection point: Clementi Campus Lab 5.14
```

Task 2

You now let the user enter the quantities and the costs for each item. The following shows the interactions and displays:

```
Enter the quantities and price of Chesse burgers: 1000   5.8      // enter two info
Enter the quantities and price of Iphone 14:       220    1245.6  // per line and ignore them
Enter the quantities and price of T Bone Steak:    300    24.6

Summary of items
----------------

Item                    Quantity        Price
-----------------------------------------
Chesse burgers          1000                5.80
Iphone 14               220             1245.60
T Bone Steak            300               24.60
-----------------------------------------
```

You should enter *two pieces of information per line of input*. Some comments can be placed next to the inputs, and you should ignore them.

You can see that after a user enters the information, a summary table is automatically generated.

Task 3

Oh! No! User discovers that the 1st two items should be swapped (because they want to promote iPhone 14 rather than the cheese burgers ☺). No problem, your system can also cater for that (**testing is not required**; *just include some statements to swap the info of the 1st and 2nd items*).

The following shows a summary table after the swaps:

```
Summary of items after the swaps
--------------------------------

Item                    Quantity         Price
-----------------------------------------
Iphone 14               220             1245.60
Chesse burgers          1000               5.80
T Bone Steak            300              24.60
-----------------------------------------
```

Task 4

Now customers can place their orders online. The following shows some of the interactions and display:

```
Please place your order
-----------------------
No of Iphone 14:    2
No of Chesse burgers: 20
No of T Bone Steak: 15
```

Immediately after the order, the system will generate a summary report of orders:

```
Summary of your order
---------------------

Item                      Quantity          Cost
--------------------------------------------------
Iphone 14                 2              2491.20
Chesse burgers            20              116.00
T Bone Steak              15              369.00
--------------------------------------------------
Subtotal:                                2976.20
GST (7%):                                 208.33
Total cost:                              3184.53
--------------------------------------------------
```

Task 5

Finally, the system also displays some delivery instructions:

```
Some important notes for delivery
---------------------------------

Customer name: Heng A K
Collection point: Sim Campus Lab 5.14
Note that payment by cash upon delivery
Thank you for using our system
```

Note that the customer's name and the collection point were entered by the customer in **Task 1.**

Task 6

At the end of the purchase, the system also displays a balance report in stock:

```
Balance report
--------------

Item                      Quantity  Sold      Balance
------------------------------------------------------
Iphone 14                 220       2         218
Chesse burgers            1000      20        980
T Bone Steak              300       15        285
------------------------------------------------------
```

As you are still in an early stage of design, you should assume that your program should do Task 1 followed by Task 2, followed by Task 3 etc. Upon executing your program, all the above screen shots captured should be in the same window, one after the other. Data *validation is not required. You can assume that the user enters the right information.*

IMPORTANT

The name of your program must be **YourName_A1.java** and make sure that this file can be compiled and can be executed. Upload **ONLY** this file to Moodle**. ALL ZIP FILE SUBMISSION WILL BE REJECTED**

No re-submission will be allowed after grading.

In the above file, remember to put down your name and the following declaration (some similar contents):

// Tell me if it is your own work, and whether you have passed your
// program to your friends etc etc etc
// and willing to accept whatever penalty given to you.

- **Wrong file name -0.2 mark**
- **No declaration, no name etc -0.3 mark**
- **No demo -0.5**