CSIS 2175

Due date: October 07, 2022, 17:00

Submission

You need to zip the Eclipse project folder for submission

You may submit your work multiple times, but only the last submission will be graded.

*Tutorial for zipping a folder:
https://www.youtube.com/watch?v=Ipn-T5Um3d4 for Windows
https://www.youtube.com/watch?v=V0wkG6zOpjA for Mac

Description

You are asked to implement a Console application called **CoffeeMachine.cs** for a Coffee Vending Machine System. It allows customers to purchase a coffee at a time. The program must show the coffees and the corresponding prices of different sizes (small, medium, large) as follows. The program must be able to collect the purchase information from the customer to complete the order. 5% tax should be added when calculating the price after confirmation.

Coffee Type	Small Price	Medium Price	Large Price
Latte	$3.70	$4.45	$5.00
Americano	$2.95	$3.50	$4.10
Cappuccino	$3.70	$4.55	$5.00
Caramel Macchiato	$3.75	$4.50	$5.00
Mocha	$4.50	$5.40	$6.00

Sample Run of Program

The followings show two sample runs of the program.

Sample Run#1 (Green text refers to user input)

```
Welcome to N&I Cafe
Please choose your coffee
Coffee 1: Latte
Coffee 2: Americano
Coffee 3: Cappuccino
Coffee 4: Caramel Macchiato
Coffee 5: Mocha
Enter the coffee number >> 3
Please choose the size (S/M/L):
```

```
(S)mall: $3.70 / (M)edium: $4.55 / (L)arge: $5.00 >> M
Do you want (M)ilk, (C)ream or (N)one? C
How many cream do you want? 2
How many sugar do you want? 2
Confirm you order (Y/N): Y
Thank you for your purchase!
Your Medium Cappuccino (2 Cream and 2 Sugar) is ready to serve.
Total cost: $4.78
```

Sample Run#2

```
Welcome to N&I Cafe
Please choose your coffee
Coffee 1: Latte
Coffee 2: Americano
Coffee 3: Cappuccino
Coffee 4: Caramel Macchiato
Coffee 5: Mocha
Enter the coffee number >> 1
Please choose the size (S/M/L):
(S)mall: $3.70 / (M)edium: $4.45 / (L)arge: $5.00 >> S
Do you want (M)ilk, (C)ream or (N)one? N
How many sugar do you want? 1
Confirm you order (Y/N): N
Welcome to N&I Cafe
Please choose your coffee
Coffee 1: Latte
Coffee 2: Americano
Coffee 3: Cappuccino
Coffee 4: Caramel Macchiato
Coffee 5: Mocha
Enter the coffee number >> 2
Please choose the size (S/M/L):
(S)mall: $2.95 / (M)edium: $3.50 / (L)arge: $4.10 >> L
Do you want (M)ilk, (C)ream or (N)one? M
How many milk do you want? 2
How many sugar do you want? 0
Confirm you order (Y/N): N
Welcome to N&I Cafe
Please choose your coffee
Coffee 1: Latte
Coffee 2: Americano
Coffee 3: Cappuccino
Coffee 4: Caramel Macchiato
Coffee 5: Mocha
Enter the coffee number >> 5
```

```
Please choose the size (S/M/L):
(S)mall: $4.50 / (M)edium: $5.40 / (L)arge: $6.00 >> L
Do you want (M)ilk, (C)ream or (N)one? M
How many cream do you want? 1
How many sugar do you want? 0
Confirm you order (Y/N): Y
Thank you for your purchase!
Your Large Mocha (1 Milk and 0 Sugar) is ready to serve.
Total cost: $6.30
```

Additional Requirement and Assumption:

- **Zero marks will be given if the program is not able to compile.**
- Your program must be able to produce the same output.
    - E.g., "**(S)mall**" and "**Small**" are considered as different output
    - "**purchase!**" and "**purchase**" are considered as different output
- You must create a class called **Coffee** to model a coffee. The class **Coffee** contains the followings, but not limited to, the following private instance variables:
    - **name (String)**
    - **largePrice (double)**
    - **mediumPrice (double)**
    - **smallPrice (double)**
- You may assume the user input must be valid.
- The following codes show an example how to create a string saving a double in a specific format:

    ```
    DecimalFormat formatter = new DecimalFormat("##.00");
    // # means any digit, zero shows as absent
    // 0 means any digit

    String str = formatter.format(2.1);
    // str becomes "2.10"
    ```

Grading

Correctness of the program: 80%
Programming style/comment/clarity: 20%