TCP1201 Objected-Oriented Programming and Data Structures

Assignment (20%)

Trimester 1, Session 2020/2021
Faculty of Computing and Informatics
Multimedia University

DUE DATE: 31 August 2020, 11:59pm

1. Foreword

- This is a group assignment with maximum of **TWO (2)** students per group.
- The deadline for the submission is on or before **31st of August 2020** (**Monday 11.59pm**). The time length is more than enough to complete the task below. Hence, no late work will be accepted and no deadline will be extended.
- **Group leader** of each group is to upload the report and source code into **MMLS**.
- Strictly no copying from any other sources except codes given in this course. If detected all parties involved will get zero marks.

2. Task

You are developing a food delivery management system for a new company named Foodeliver. The development consists of 2 phases:

1) Self-collect
2) Delivery

You only have to complete the **Phase 1 Self-Collect** in this assignment. For Phase 1, the number of restaurants is fixed to three (3), and the customers have to collect the food from the restaurant. No delivery service is provided.

The three (3) main roles in the self-collect phase are listed below:

1) FoodeliverMenu – contain all the menus from all restaurants. A dish or food item shall have code, name, and price.
2) Restaurant - update their menu in FoodeliverMenu, update order status (preparing, ready, collected), view order history.
3) Customer - purchase food from FoodeliverMenu, view order status and history, and collect food at the restaurant.

Design your classes, data fields, and methods wisely. Do not over design by adding classes, data fields, or methods that are not used or do not bring significant value to the system, e.g. I/C or passport number. You may add classes to further support association, aggregation, composition, inheritance, or additional features as long as it is not related to delivery.

For testing purpose, in the console screen, it should display:

```
Choose role

1 Customer
2 Restaurant

>
```

Key in the integer value above to display the content and activities that can be performed by each role. Students have to ensure that any update from one party should be reflected in the record of the other parties. For example, if a customer places an order, the restaurant should be able to view the order, etc.

3. Items to be submitted:

i. Java source code. Make sure the code can be compiled and started.
ii. Java documentation based on Javadoc.
iii. A PDF report showing:
   - A complete UML Class Diagram that matches the Java source code.
   - User manual on navigating the system with screenshots of the output
   - Include the leader and member details and contact number like in the table below:

ID	Name	Role	Email	Phone	% Contribution

Zip the THREE (3) files above and label it in the following format:

TC0X_TT0X_Student1ID_StudentName_Student2ID_Student2Name.zip

For example: Both Ali Yusof Bin Mohamed Ahmad (ID: 123456789) and Pravin Sriram A/L Subramanioum (ID: 234567890) are from lecture session TC01 and tutorial session TT02. Their zipped file will be:

TC01_TT02_123456789_Ali_Yusof_234567890_Pravin_Sriram.zip

Group leader takes the role to upload the zipped file into MMLS under his/her name.
A presentation is required for this assignment.

Mark Sheet (20%)

Criteria	Item
1. Program Design and UML Class Diagram (6 marks)	1.1. Java documentation, proper indentation, good identifier, and small size methods (2m)
	1.2. Association, Aggregation, and/or Composition (2m)
	1.3. Inheritance, Polymorphism, Abstract Class, and/or Interface (2m)
2. Program Execution (10 marks)	2.1. User friendliness (input & output sufficiently self-explained) (2m)
	2.2. Correct program features and output (the values of all data fields must be shown when displaying info). Mark is given only if the result is correct. (8m) i. Restaurants can view, add, update, and remove food in its menu. (2m) ii. Customers can view all food in FoodeliverMenu (1m) iii. A customer can purchase food from a restaurant, the order appears at the restaurant (2m) iv. Customer and Restaurant can view order history. (1m) v. Matching change of status for an order from both restaurant and customer (2m)
3. Presentation (2 marks)	Clear presentation and well prepared (2m)
4. Bonus (2 marks)	**THINK!** What are the additional features that can make the Phase 1 of Foodeliver system more complete? (2m)
5. Plagiarism, late submission, or no presentation	0 mark for the whole assignment