Design and implement (in Java) an **Online Food Ordering System** like Swiggy. In the system, there are restaurant owners who register to the system with their respective menu items along with their prices. There are customers who can choose from one or more restaurant's menu and build up their cart and order. There are some extra charges called delivery charges (may vary from restaurant to restaurant) that will be added to an order. Once an order is placed, it can also be tracked - placed, accepted, on the way, delivered. The various state of order can be updated by setting a timer (random time). Specifically, you need to perform the following tasks:

1. Identify and create all the possible classes that need to be made. Also define the various attributes of each class by using appropriate data types. For example, *Customer* has the attribute *Name of type String*. Try to make the system as complete as possible and use private and public modifiers wherever necessary.

   30 marks

2. Create the methods needed to perform different tasks such as *adding a food item to the cart*. Identify and define all such methods with appropriate return type and parameters.

   30 marks

3. Identify the relationships between the entities i.e. how they interact with each other. For example, "Customer interacts with Restaurant". This is not the only possible interaction. Try to identify all the possible relationships (like association and aggregation) and implement these relationships with the help of objects.

   20 marks

4. Other requirements: **20 marks**

   Perform the tasks like-

   a. Remove Item from cart and update the order amount
   b. Check Minimum order value before placing order

Bonus: Use UML notation for representing the system. However, to be eligible for bonus marks, the entire system should follow proper UML notation. **20 marks**

General Instructions:

1. Make assumptions if required and submit them in a separate file.
2. Create proper README file for the assignment. This file should contain a description of the usage of all non-trivial functions used in the code.
3. The code files, the assumption files, bonus file and the README file should be zipped together and uploaded on Backpack. The naming convention to be followed is: A2_FirstName_RollNo.
4. Plagiarism policy applies