WorkSheet:- 3.3

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Subject Name: SE Lab   **Subject Code:** 20CSP-255

AIM: - Write a design document for the following scenario

The software proposed is Food Ordering System. It has participants who will interact with the system, called the external entities. The *Supplier*, *Kitchen*, *Manager*, and *Customer* are the entities who will interact with the system. In between the process and the external entities, there is data flow (connectors) that indicate the existence of information exchange between the entities and the system.

Requirement Analysis:
Software Requirement
- Windows10 / Mac-OS
- Chrome/Firefox/Safari Browser
- App.diagrams.net website

Hardware requirement
- Computer / laptop
- Power supply

Importance of Design Document

- **Organization**

  The most important thing a data flow diagram does is to keep the program organized. Programmers use data flow diagrams to plan exactly how their new program is going to accomplish its intended purpose. While more simpler programs could probably be made without using a data flow diagram for organization, creating more complex ones, especially with groups of

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programmers, definitely requires the use of a data flow diagram to help keep the program on track. **For example**, if we want to develop online food ordering system there will be lot of features. so, it is easy to access and use them with the help of organized DFD.

- **Decision Building**

    In almost every program available to consumers, there are many parts where a program is going to have to make a decision based on data that was given either by the user or from another part of the program. These are usually known as "if-then" statements, and they tell the program what to do when given specific data to work with. Data flow diagrams help the programmer figure out what options the programs will need in order to handle the data it is given. **For example**, In food ordering program when you open it will check for condition that, if you have registered or not. If you are registered that you can login else you have to register.

- **Presentation**

    The worst possible thing a programmer can do when discussing a program with laypeople is to use the code to explain what the program does and how it will do it. Computer code is like a foreign language to most people, and using it as your backup will only result in confusion about your project. Instead, use the data flow diagram to explain the program to laypeople. It will definitely save the amount of time you would have spent explaining the code to them. **For example,** in food order system It is easy to present all the feature rather than visualizing them or taking help of coding language.

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- **Adaptability**

  During the course of a project, a programmer will sometimes find a better tool or realize that there is a better way to optimize the code but might not be sure where to put it or what else the programmer will need to modify in order to accommodate the code. If the programmer uses a data flow diagram, the diagram will help the programmer be able to see what will happen if certain code is injected into the program. **For example,** if a programmer needs to change a feature of online food ordering program, he can calculate the after effects of injecting the new code about the repercussions.

- **Error detection**

  Programs can have a lot of errors, or bugs, when they are being made. Because the amount of code can be extensive in bigger programs, sometimes it's difficult to pinpoint where exactly a problem is in the code, but with the help of a debugger and a data flow diagram, a programmer can eventually find the error in question and begin to figure out how to correct it. **For example,** If there is error on the level 3 of the DFD that it is easy to pinpoint and debug the software.

Objective:

The software proposed is Food Ordering System. It has participants who will interact with the system, called the external entities. The Supplier, Kitchen, Manager, and Customer are the entities who will interact with the system. In between the process and the external entities, there is data flow (connectors) that indicate the existence of information exchange between the entities and the system
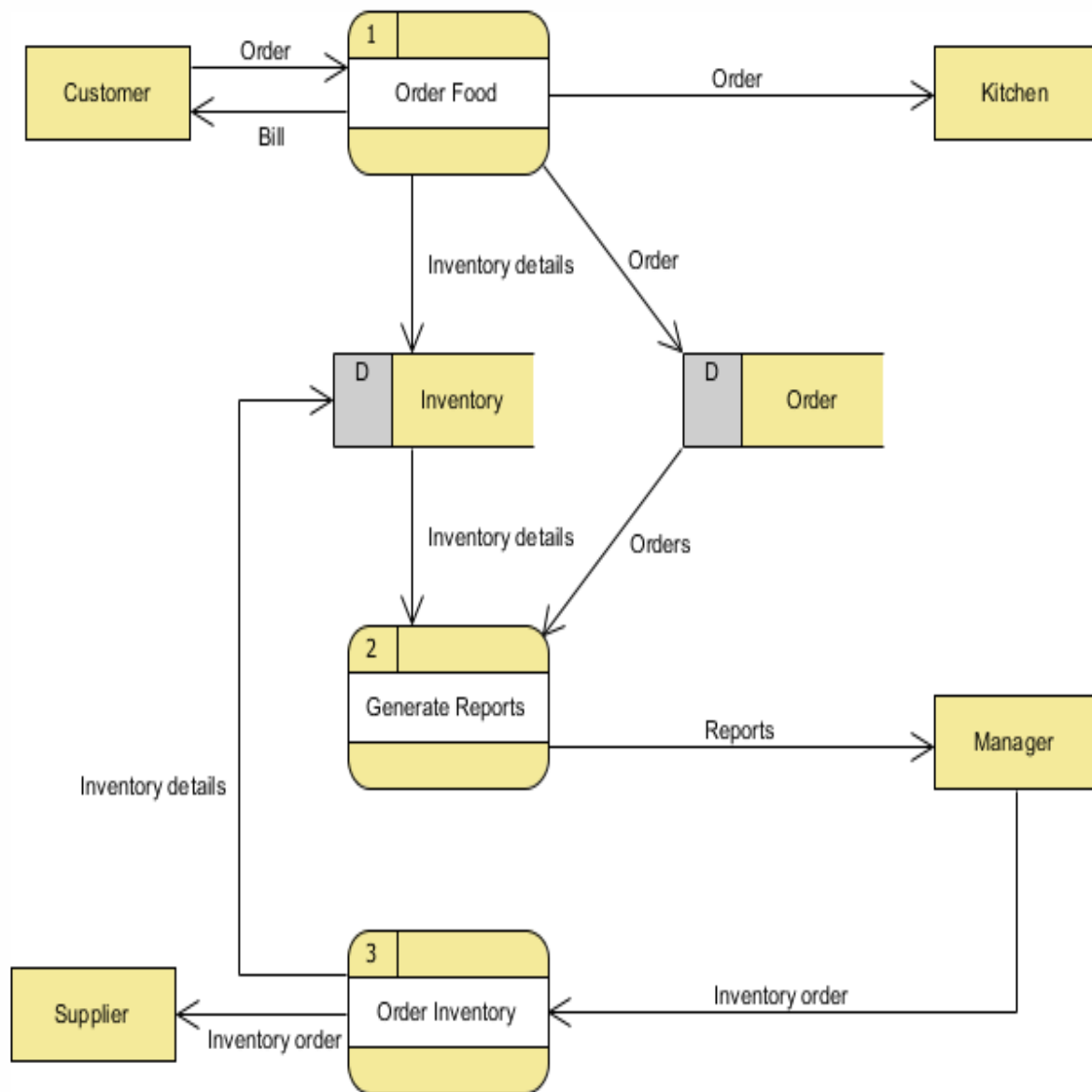
Based on the diagram, we know that a customer can place an Order. The Order Food process receives the Order, forwards it to the Kitchen, store it in the Order data store, and store the updated Inventory details in the Inventory data store. The process also delivers a Bill to the Customer.

The Manager can receive Reports through the Generate Reports process, which takes Inventory details and Orders as input from the Inventory and Order data store respectively.

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The Manager can also initiate the Order Inventory process by providing Inventory order. The process forwards the Inventory order to the Supplier and stores the updated Inventory details in the Inventory data store.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			
4.			