# Chapter 3: DESIGN

## INTRODUCTION:

Design is demonstrating a method of concept showing how various modules of framework associate and cooperate with each other. It envisions how a system work from its initial phase to the final phase. Here are the list of modelling that is used in this design phase.

The Unified Modeling Language incorporates a few subsets of outlines, including:

1. Structural Modelling

2. Behavioral Modelling

3. Database and

4. UI Modelling.

# 3.1. Structural Modelling:

* **Static Structural diagram:**

Class diagram

Object diagram

* **Implementation Diagram:**

Component

Deployment

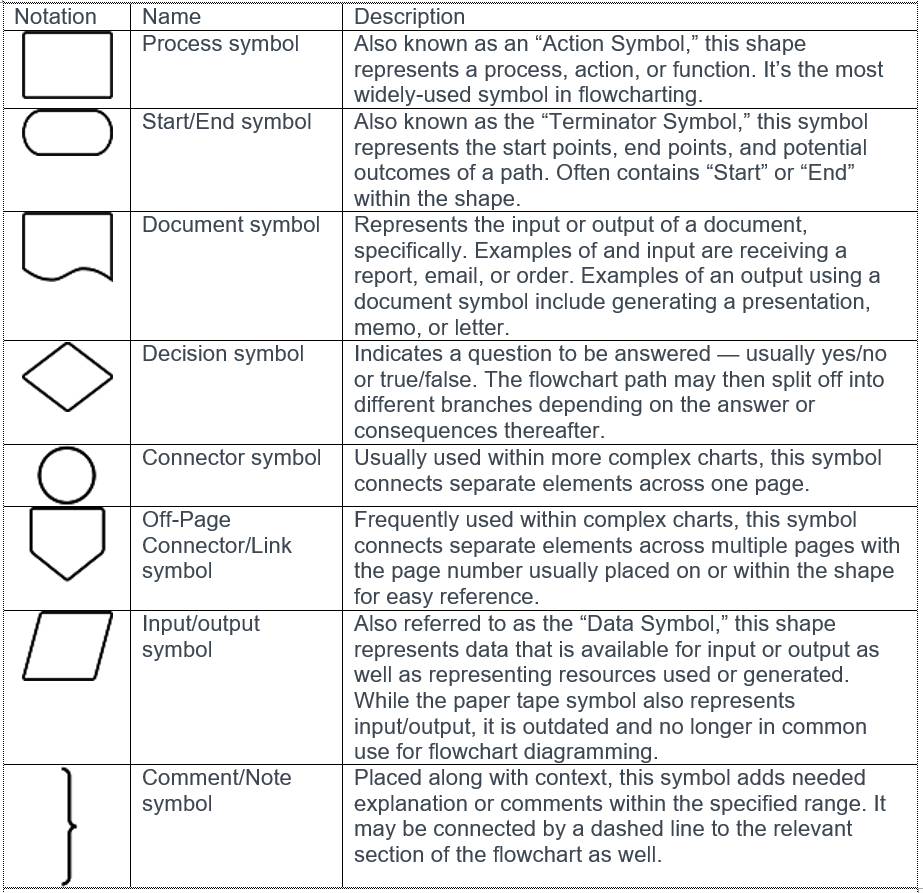
## 3.1.1. Class Diagram:

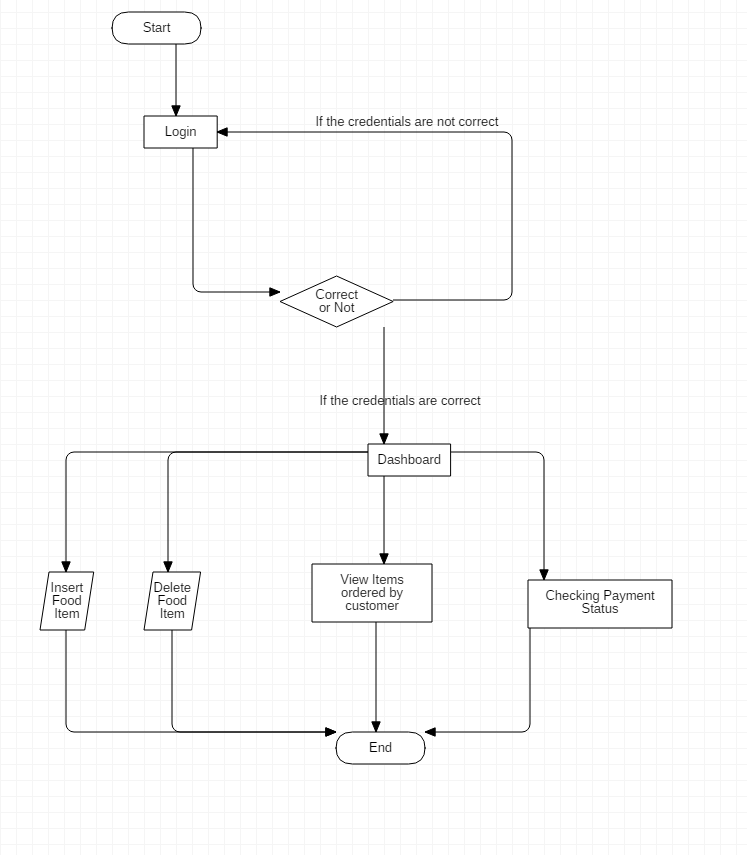
Class diagram is a portrayal of relationship and conditions between classes through strategies and utilization of various items. It shows how information models are utilized in straightforward or complex data frameworks.

Natural Language Analysis is utilized to distinguish potential classes that could happen in the framework and these classes were spoken to in beginning outline of examination particular stage. The proposed application pursues MVC patter for portrayal of class chart. Separate classes for example models are made alongside individual perspectives and controller.

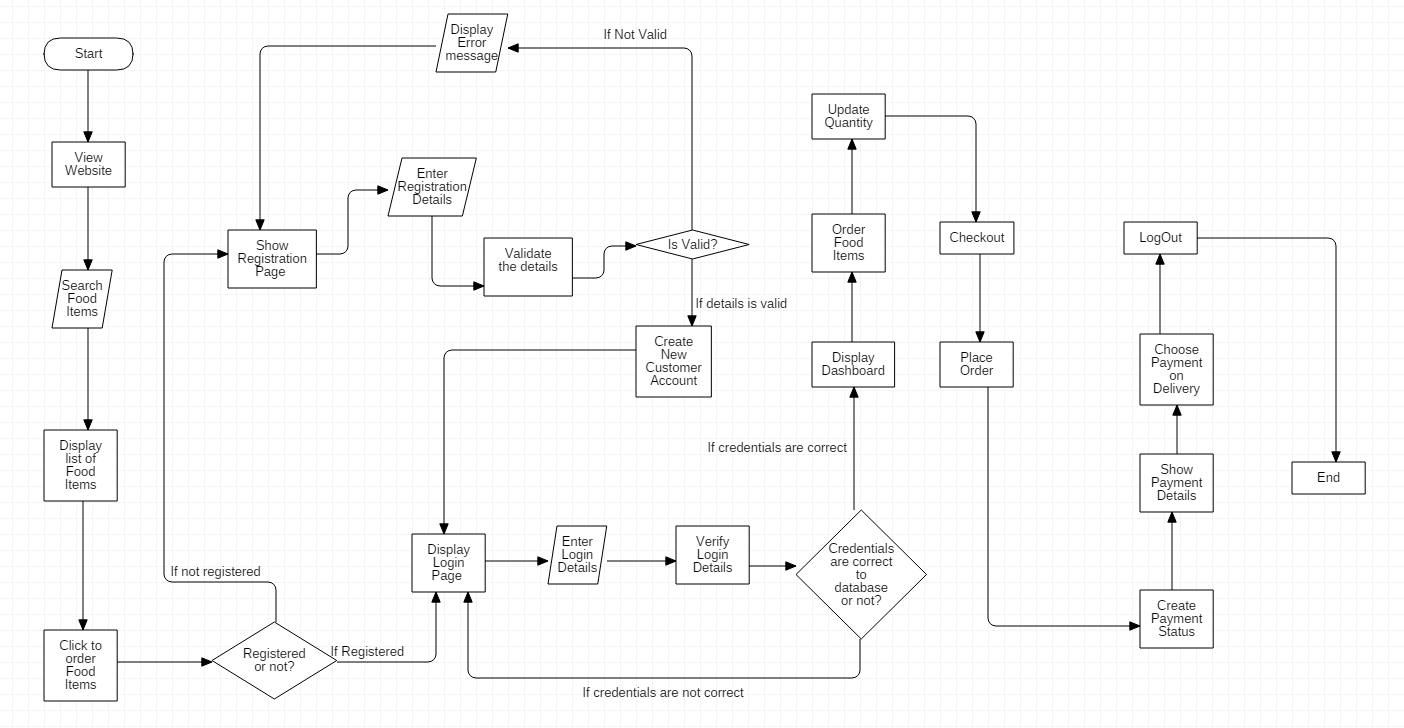
**Justification:**

## 3.1.2: Flow Chart:



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**Fig 5: Flow Chart for Admin**

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**Fig 6: Flow Chart for Customer’s Processes**

**Justification:**

Above flow chart shows the steps taken by learners. they can search courses and if they want to enroll on any course, they need to login. If user is not registered, he needs to create account. Once an account is created, he is redirected to the login page. Learners enter their login credentials which is verified and if the verification succeeds, they are sent to the dashboard. However, if it fails an error message is displayed to them. Once, logged in he can search course and then register(enroll) to the courses or send message to teacher(instructor) for more details. Learner can enroll to the course. They can view the course contents and study it. If all contents are studied, he can take a test to asses himself.

The above flow chart presents the steps that are required for a customer to begin the process. Here, before logging in they can only view the food items on the website and search for the food items. But, if they want to order the food items they must sign up by creating an account. If the customer is not registered then h/she needs to register for an account. When an account is created or they already have an account then a login page is displayed where they provide their login details after which an order page is shown.

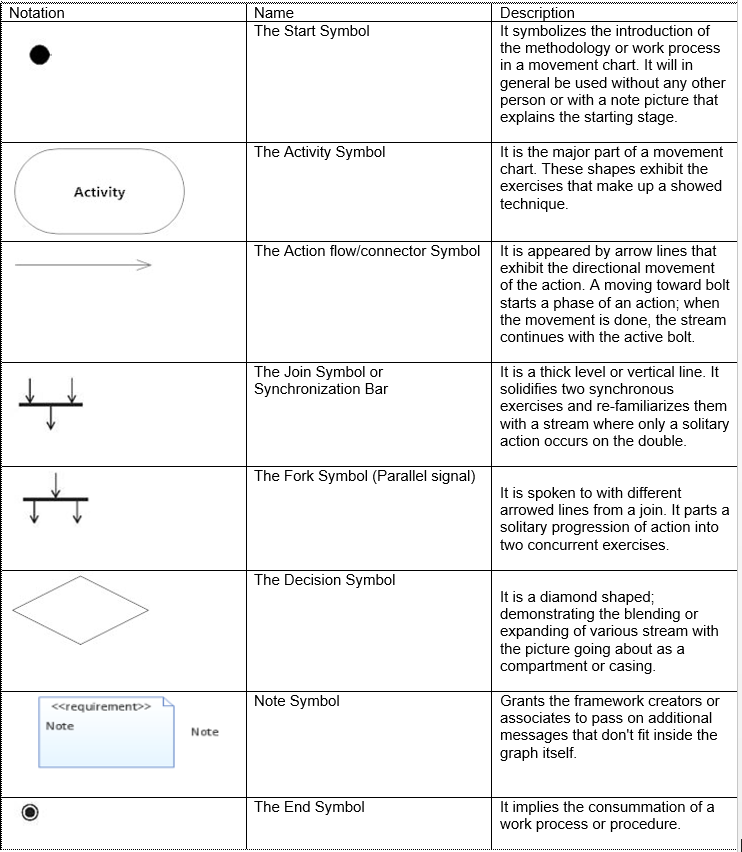
# 3.2. Behavioral Modelling:

## 3.2.1. Activity Diagram:

Activity diagram, is viewed as Behavioral diagram since they depict what must occur in the framework being demonstrated.

**Justification for the approach taken:**

* Movement outlines present various advantages to clients. Consider making an action chart to:
* Exhibit the rationale of a calculation.
* Depict the means performed in an UML use case.
* Represent a business procedure or work process among clients and the framework.
* Streamline and improve any procedure by explaining muddled use cases.
* Model programming engineering components, for example, technique, capacity, and activity



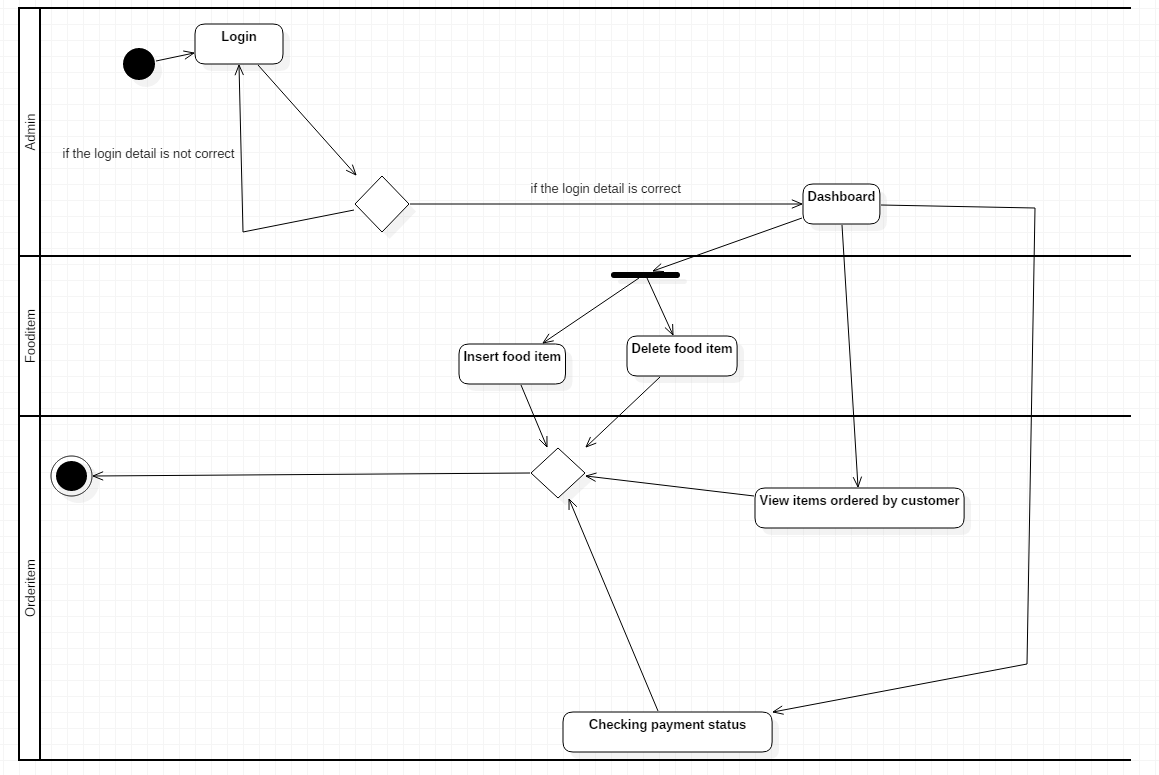


Fig1: Activity Diagram of Admin

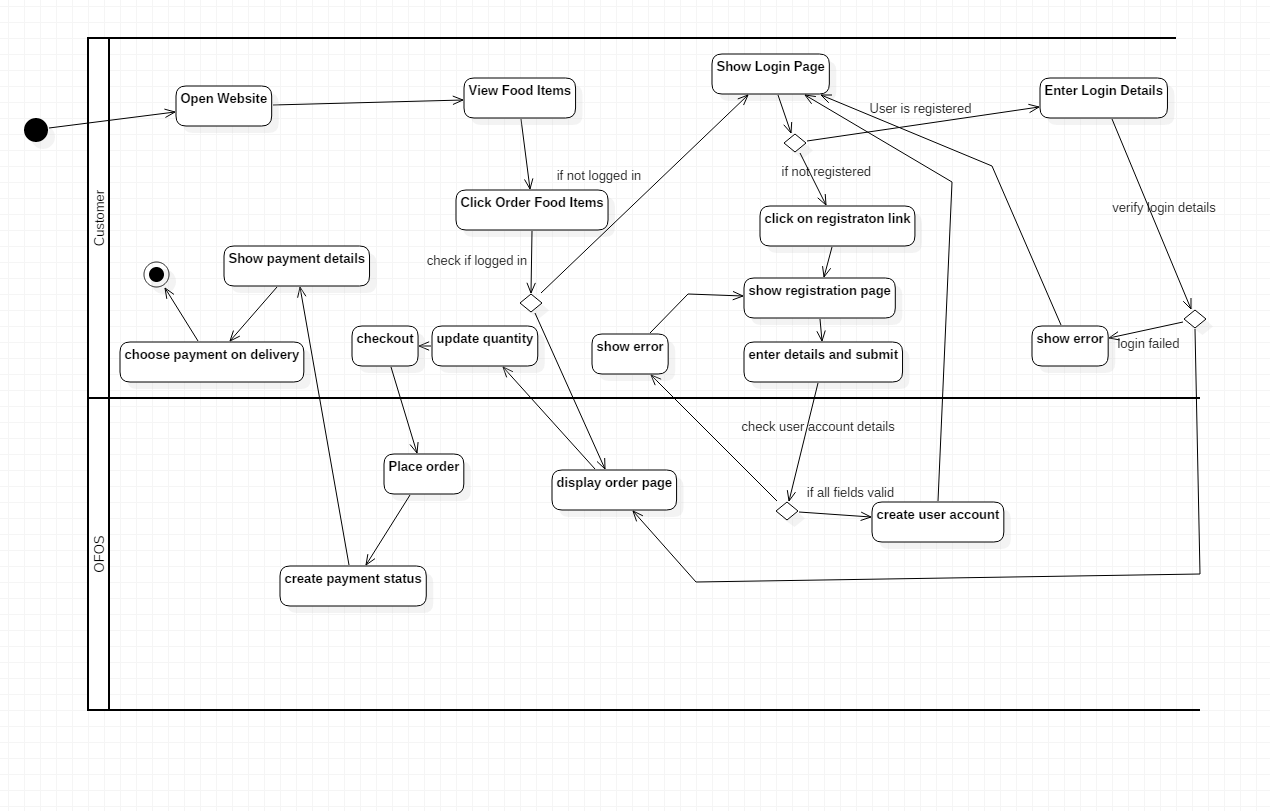
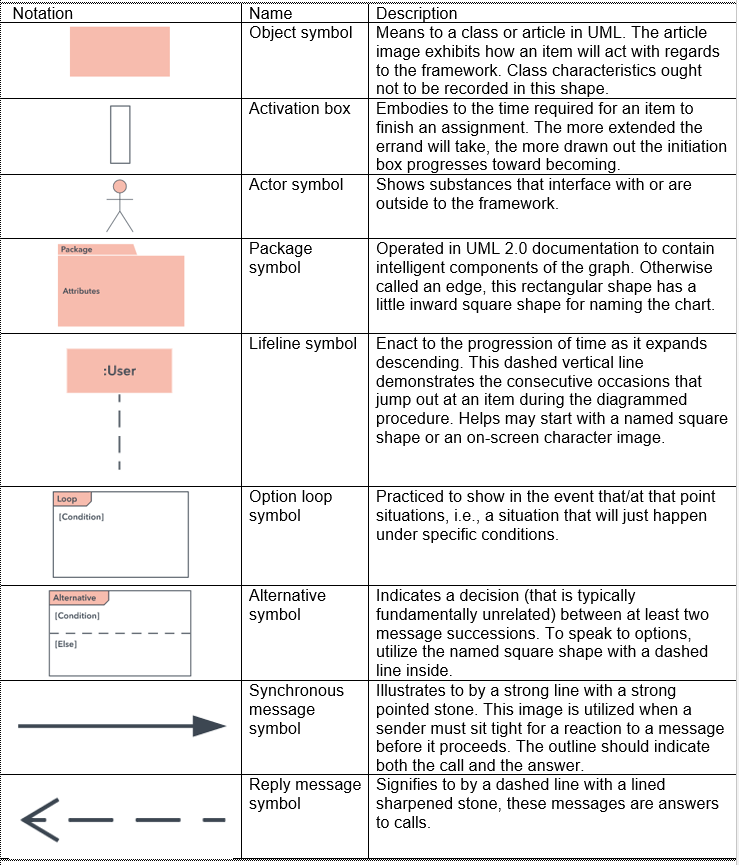
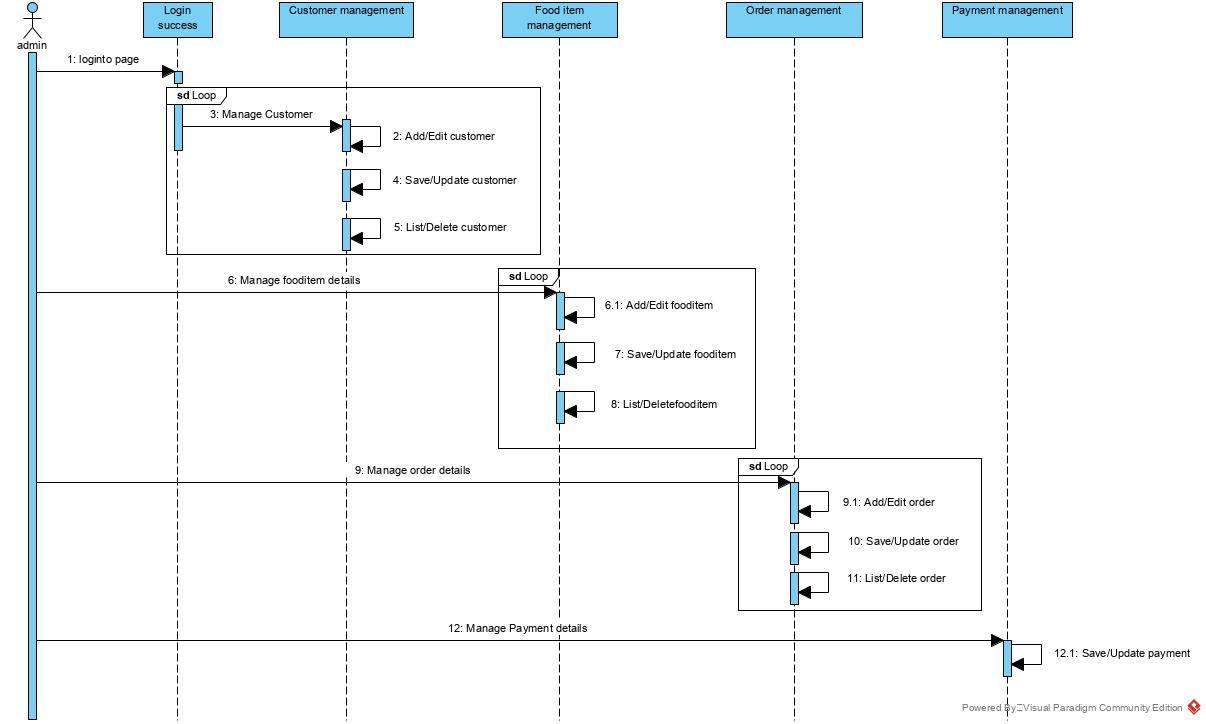


Fig2: Activity diagram of Customer

## 3.2.2. Sequence Diagram:

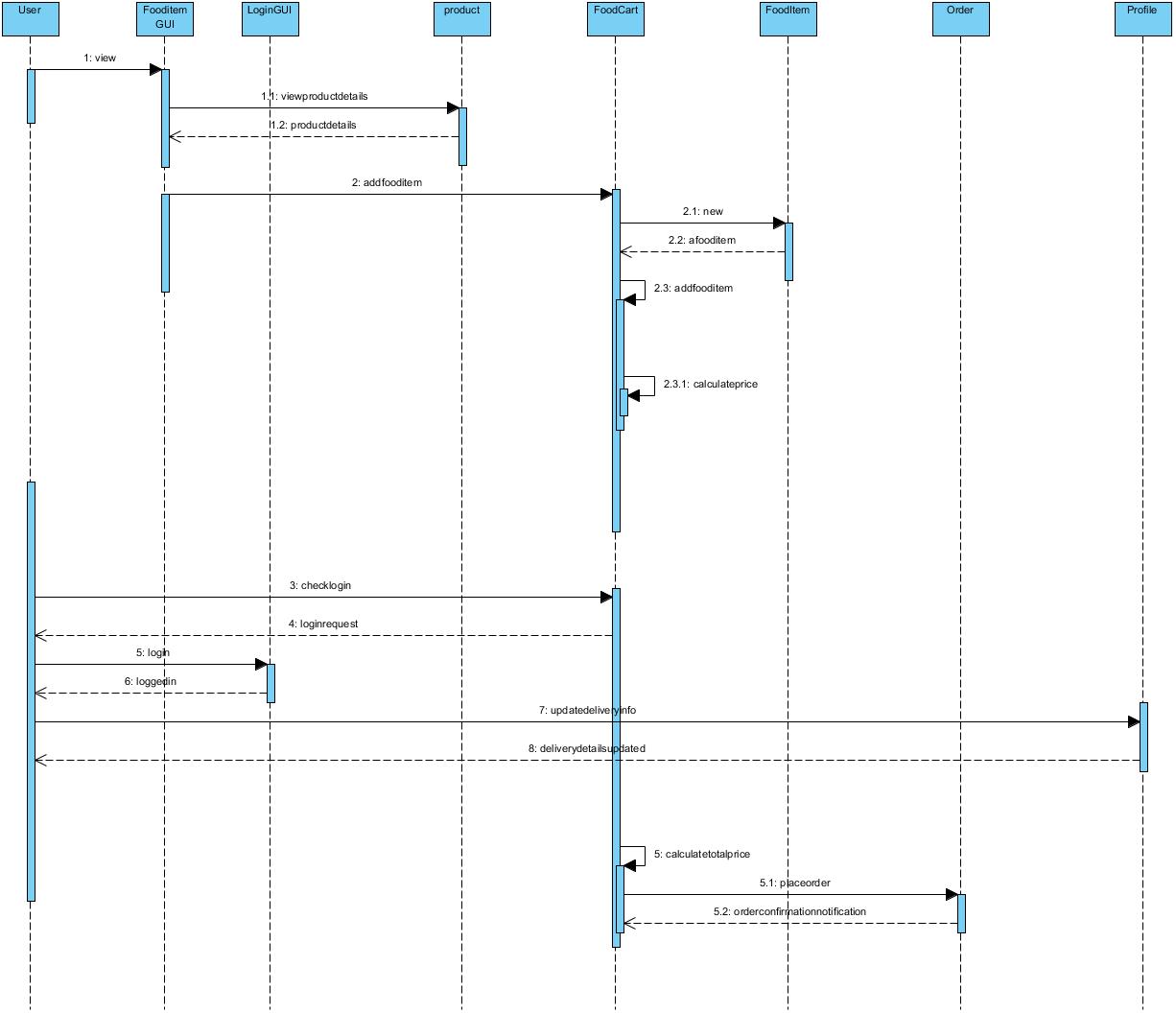
A sequence diagram, at times alluded to as an occasion chart or an occasion situation, demonstrates the request where items interface. Along these lines, you can outwardly speak to straightforward runtime situations.

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**Fig4: Sequence diagram of admin**

Justification:

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**Fig 5: Sequence diagram of customer**

Justification:

# 3.3: Database Modelling:

Database modelling demonstrates the sensible structure of a database, including the relationships and constraints that decide how information can be put away and got to. Singular database models are structured dependent on the principles and ideas of whichever more extensive information model the planners receive. Most information models can be spoken to by a going with database graph.

## 3.3.1. Data Dictionary

Data Dictionary is an once-over of data segments (table or entity and column or attribute) with their characteristics and portrayals. It has a kind of a ton of tables. . A basic stage in isolating a game-plan of articles with which customers’ accomplice is to see each address and its relationship to different things. Data word reference delineates the data objects of customer. It offers the quick report. By giving whole nuances it helps the clients. It outfits the information of every characteristic with its fields. To make the data word reference we should join quality name, data type, length and key.

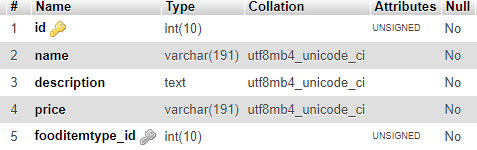


Fig: Table fooditems

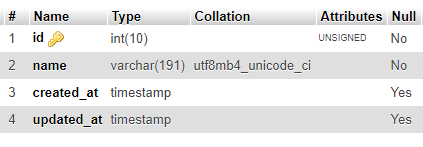


Fig: Table fooditemtypes

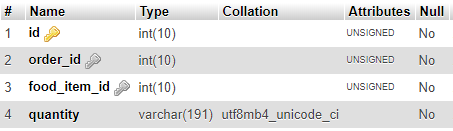


Fig: Table Orderitem

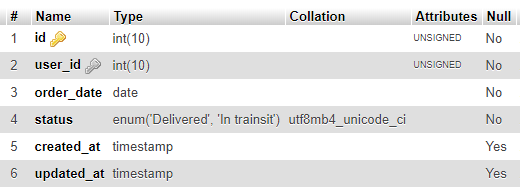


Fig: Table Orders

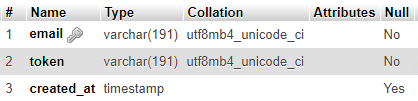


Fig: Table Password Resets

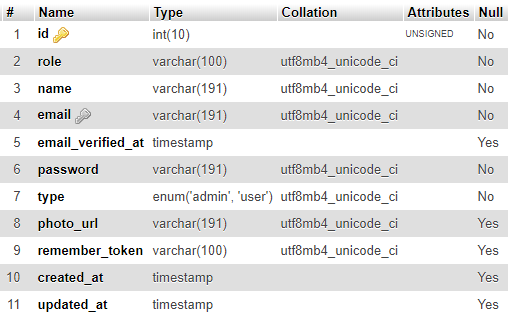


Fig: Table Users

## 3.3.2. ER Diagram:

An Entity Relationship (ER) Diagram is a sort of flowchart that outlines the way "components, for instance, people, things or concepts represent each other inside a structure. ER Diagrams are consistently used to structure or examine social databases in the fields of programming building, business information systems, guidance and research. Generally called ERDs or ER Models, they use a described arrangement of pictures, for instance, square shapes, valuable stones, ovals and interfacing lines to depict the interconnectedness of substances, associations and their attributes. They reflect semantic structure, with substances as things and associations as activity words.

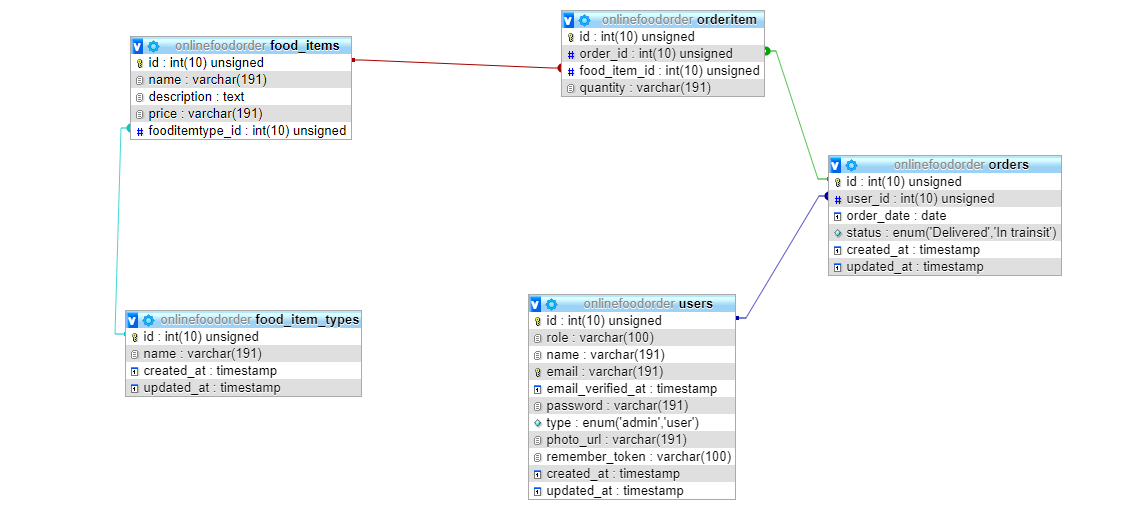


Fig 3: ER diagram

# 3.4.1. UI modelling:

UI is the front view of application where client communicates so as to utilize the product. Client can control and manipulate the product and hardware by methods for UI.

UI is a piece of programming that is designed in a way that it is relied upon to give the client understanding of the product. UI gives basic stage to human-PC communication.

UI can be content based, graphical, sound video based, contingent on the combination of fundamental equipment and programming. It can be equipment or programming or a blend of both. Prior to coding starts, we make model of the UI and to make that UI model to demonstrate the client, here, Balsamiq wire framing device is used that permits to make UI model before composing