ONLINE RESTAURANT MANAGEMENT SYSTEM

By Group No: 06

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1. Introduction

1.1 Background

The project **Online Restaurant Management System** is a web base application for giving order foods and managing food information. The project **Online Restaurant Management System** is developed on php languages which mainly focuses on basic operation and MySQL for database management system for an online food marketplace like - adding new food item, updating information of food, searching food menu of ordering food online and managing order of customers and calculate total sales amount of the website. **Online Restaurant Management System** is a web application designed to help admin to maintain and organize online market system. Our system is easy to use for both beginners and advanced users. It features a familiar and well thought-out, an attractive user interface, combined with strong searching, insertion and deletion capabilities.

1.2 Scope

1. Tracking Orders A good system will help you keep track of your
online orders and offer a centralized view

2. Reduce the Time for managing orders: With a good order management
solution, you can reduce the time taken to keep track of all the orders you have on
hand. Additionally, you save the time taken up in inventory recounts if your
records are in place.

3. Easy access to information: In this system any one can easily access food
Information whenever they need, all the information is available to all visitors.

Advantages
- Customer can be order food from any place in the world
- Delivery System is available.
- Customer add, update or delete item from add to cart

1.2.1 System Feature

1. Multiple Users: This system supports multiple moderators. Each moderator has to create their account by giving their details. They have to use their username and password when logging in. They manage all the food item, users and online orders.

2. Add, Update and Delete item: Moderators can update any food information. They can also delete information of any item. The process is very simple. Users have to type in the information and press the update or delete button. They can also add new food item.

3. User registration: One can easily create an account and order foods online. The process is very easy and user friendly.

4. Receive online orders: Users can place orders online and they can update or delete existing orders.

5. Update and Delete user: Moderators can update existing user's information and delete them is necessary.

6. Food details: This site has all the necessary information about foods for all types of users. Users can see the available item and can order which they want.

7. Orders history: This system keeps detailed record of each sell. It is very helpful to find out which products are doing well and which products are not. By keeping track of this, a business can be decided. It will reduce cost and prevents shortage of demanded products.

1.3 SDLC

1.3.1 Definitions of problems

Problems with conventional system:
1. Lack of immediate retrievals: -
The information is very difficult to retrieve and to find particular information like- E.g. - To find out about the customer's history, the user has to go through various registers. This results in inconvenience and wastage of time.
2. Lack of immediate information storage: -
The information generated by various transactions takes time and efforts to be stored at right place.
3. Error prone manual calculation: -
Manual calculations are error prone and take a lot of time this may result in incorrect information. For example: calculation of customer's bill based on various order.
4. Preparation of accurate and prompt reports: -
This becomes a difficult task as information is difficult to collect from various registers.

1.3.2 Human Requirements (As a customer)

1. Customer can find different type of restaurant and can order various type of food.
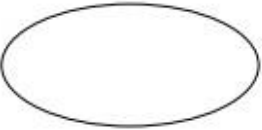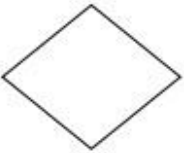2. Customer can add item (in add to cart) and also can delete if they want.
3. All information of the order will be added to the database along with the order.

2.   System Diagram

2.1   Entities and Their Attributes

Entity-Relationship Diagram is a graphical representation of entities and their relationship to each other's. It describes how data is related to each other. An entity is a piece of data- an object or a concept about which data is stored. A relationship is how the data is shared between entities. In E-R Diagram, there are 3 main Components:
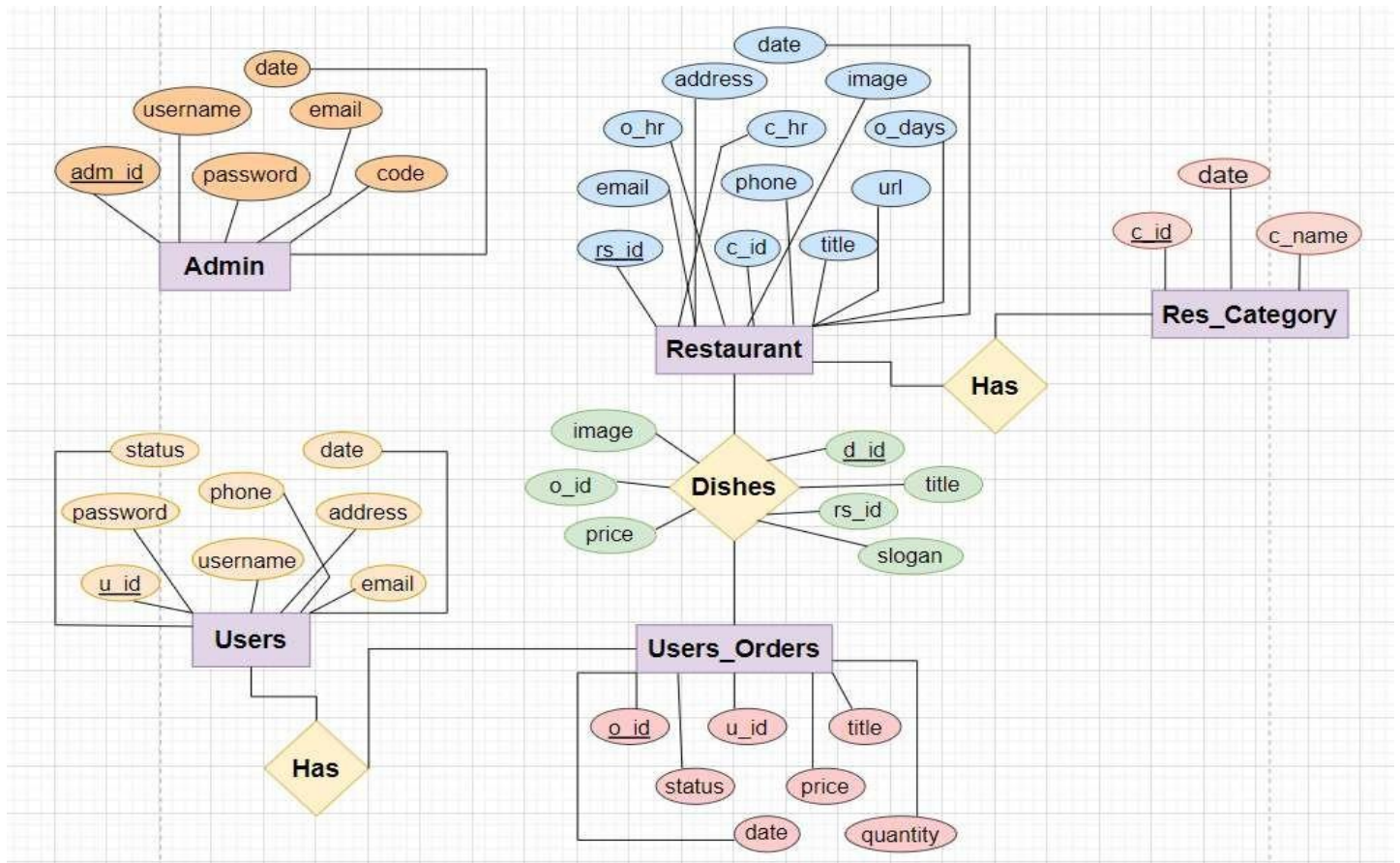
Symbol	Name	Description
	Entity	An entity can be any object, place, person or anything.
	Attribute	An Attribute Describes a property or characteristics of an entity.
	Relationship	A Relationship Describes relation between entities.

2.1.1 Database of Online Restaurant Management System
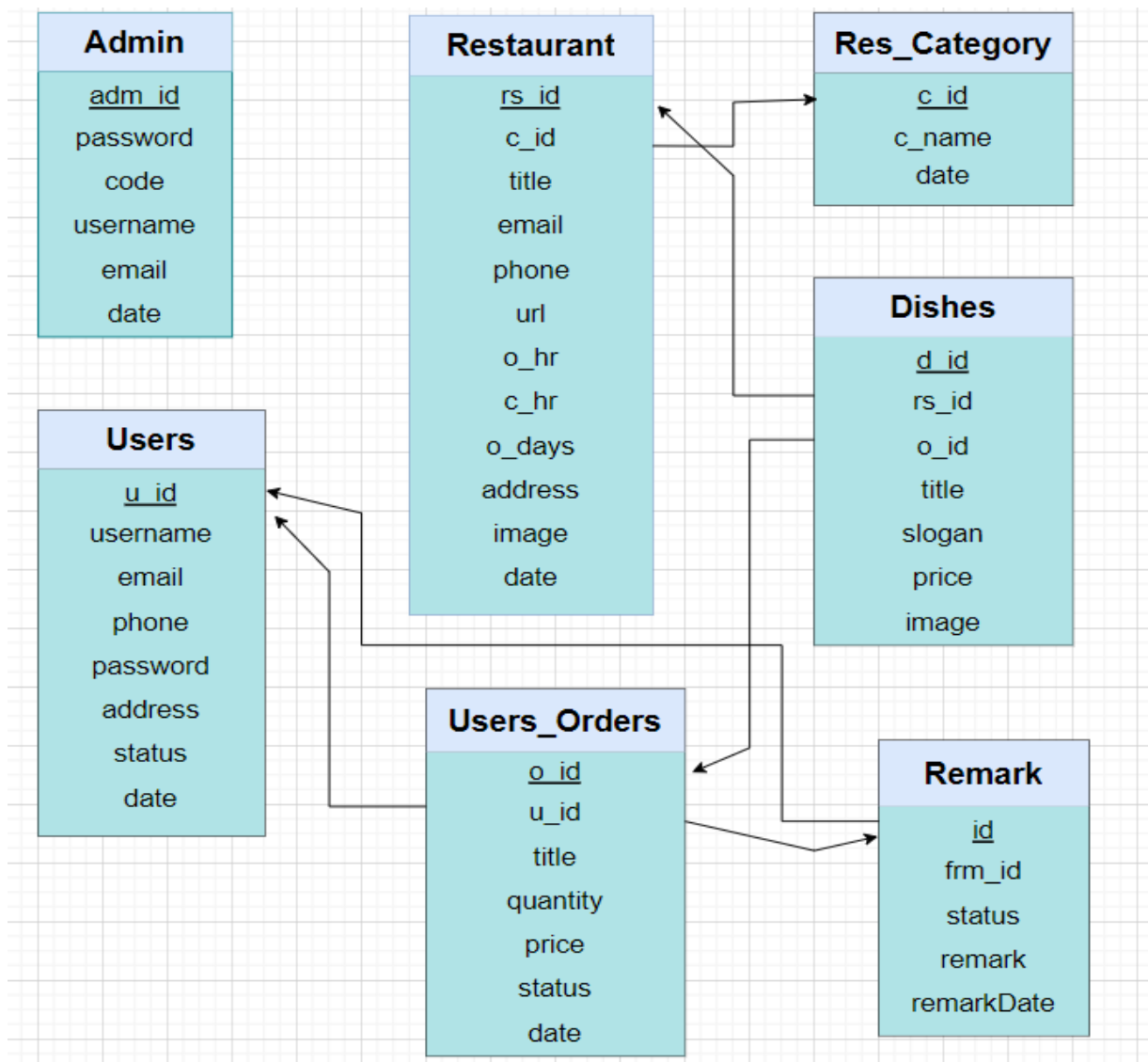
Figure-2.1: Online Restaurant Management System Schema Diagram

2.1.2 ERD

Figure-2.2: Online Restaurant Management System ER Diagram

2.2   Data flow Diagram

All data flow diagrams include four main elements: entity, process, data store and data flow. The two main types of notation used for data flow diagrams are Yourdon-Coad and Gane-Sarson, both named after their creators, all experts who helped develop DFD methodology: Ed Yourdon, Peter Coad, Chris Gane and Trish Sarson. There are some differences in style between the notation types. For example, Yourdon and Coad notation uses circles to represent processes, whereas Gane and Sarson notation use rectangles with rounded corners. Another variation is the symbol used for data stores— Yourdon and Coad uses parallel lines while Gane and Sarson notation uses an open-ended rectangle. Because DFD symbols vary, it's important to be consistent with whatever notation you choose in order to avoid confusion. If you're using DFD software, it will likely dictate which set of symbols are available to use.

All data flow diagrams include four main elements: entity, process, data store and data flow.

- **External Entity:**
  Also known as actors, sources or sinks, and terminators, external entities produce and consume data that flows between the entity and the system being diagrammed. These data flows are the inputs and outputs of the DFD. Since they are external to the system being analyzed, these entities are typically placed at the boundaries of the diagram. They can represent another system or indicate a subsystem.
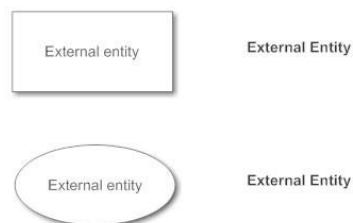
- **Process:**
  An activity that changes or transforms data flows. Since they transform incoming data to outgoing data, all processes must have inputs and outputs on a DFD. This symbol is given a simple name based on its function, such as "Ship Order," rather than being labeled "process" on a diagram. In Gane-Sarson notation, a rectangular box is used and may be labeled with a reference number, location of

where in the system the process occurs and a short title that describes its function. Processes are typically oriented from top to bottom and left to right on a data flow diagram.

level

Process

Gane & Sarson

- **Data Store:**
  A data store does not generate any operations but simply holds data for later access. Data stores could consist of files held long term or a batch of documents stored briefly while they wait to be processed. Input flows to a data store include information or operations that change the stored data. Output flows would be data retrieved from the store.

Datastore	Yourdon & Coad
C Datastore	Gane & Sarson

- **Data Flow:**
  Movement of data between external entities, processes and data stores is represented with an arrow symbol, which indicates the direction of flow. This data could be electronic, written or verbal. Input and output data flows are labeled based on the type of data or its associated process or data store, and this name is written alongside the arrow.

⟶ Data Flow

2.2.1 Activity list

- Viewing customer Information.

- Adding new customer data.

- Adding or Removing customer.

- Managing financial information.

2.2.2 Level Zero Data Flow Diagram
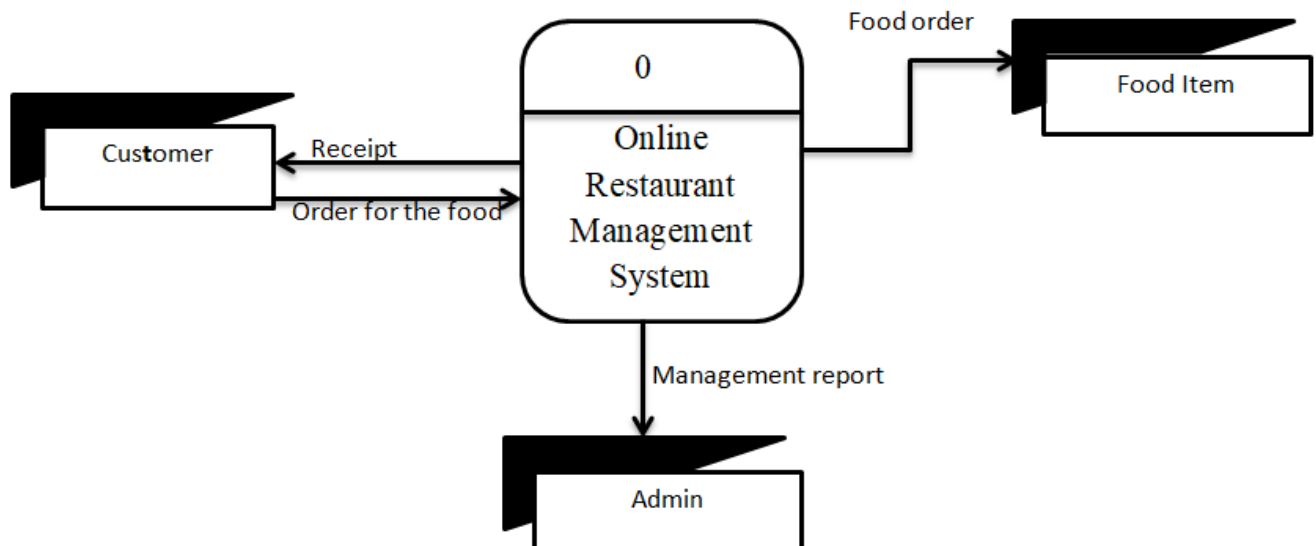
2.2.3 Level One Data Flow Diagram

Food order

Food Item

1.0

Processing
of an order

Customer

Receipt

Order for the food

Inventory data

Formatted
inventory

data

3.0

Update
inventory
files

Sold items

2.0

Update Sold
Items

4.0

Generate
Managemnt
Report

Inventory database

Formatted sold items data

Info. about daily inventory

Database of sold items

Admin

Info. about daily sold items

Bill
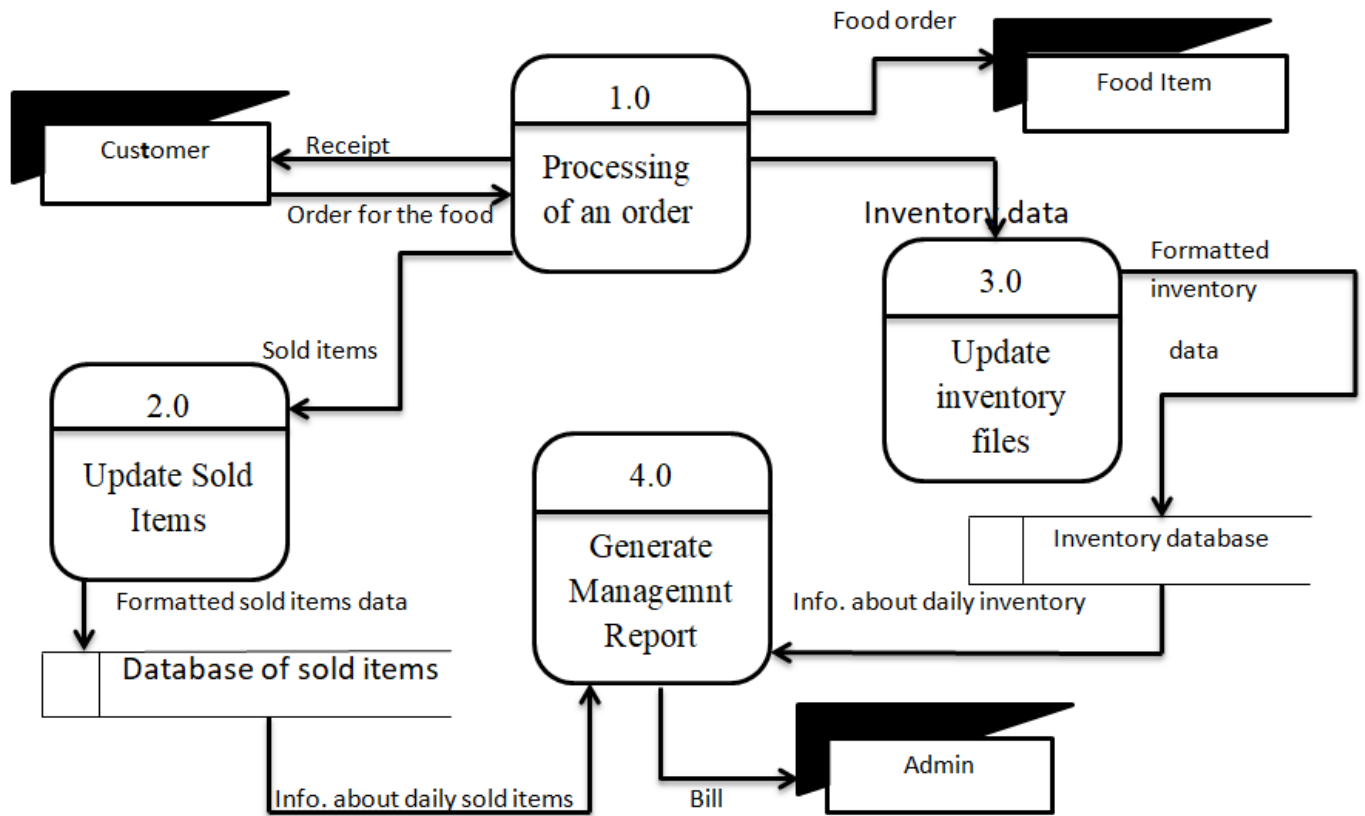
2.2.4 Label Two Data Flow Diagram
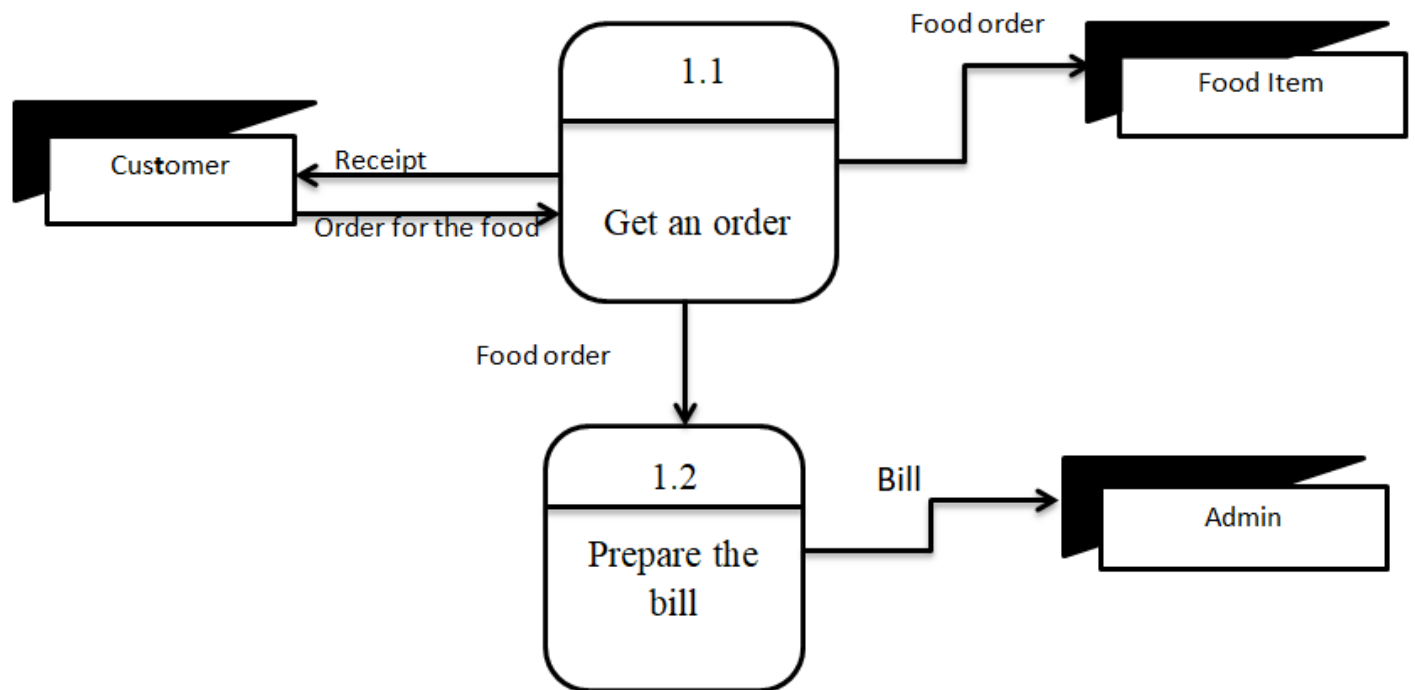
2.1 CRUD diagram.

Activities	Customer	Customer Order	Admin
Receive customer order	R	C	
Maintain customer order	U	U	
Terminate customer Account	U	U	
Viewing customer information	R		CRUD
Viewing food item	R	R	R
Adding new food item	R		CRUD
Updating order	RUD		CRUD
Managing financial information	CR		CRUD

3.   Project Management

Feasibility Study:

The main aim of the feasibility study is to determine whether development the project is financial and technical feasibility. There are 3 types of feasibility

- Technical

- Economical

- Operational

3.1   Technical Feasibility

Technical feasibility means either the processing system fulfills all current technical requirements or not. If any processing system has been made in any particular operation system and if it is not able to performs on further advance operating system, then the system is called technically not feasible system.

Every processing system must have provisions for advance and new technical changes day by day as technology improves the system must co-operate properly with any kind of advance modules, components and software.

This online restaurant management system is fully technical feasible because: -

- It can smoothly run with any advance version of windows.

- It has facility to produce output in a given time so that customer can see restaurant details.

- Admin can view information of customer easily.

- It has faster response time for delivery system.

- This system has ability to handle large amount of data.

- It has use powerful base of database system.

3.2 Economic Feasibility

Economic feasibility means that if the system is technically and operationally perfect then also it should be cost effective in sense that the system must not be highly expensive. Though system provides user every components and operations which are earlier required. All these must not bind the financial limit given to the customer at the time of requirement analysis. That simply affects entire project and image of developer. So, every project must be financially feasible for providing better service to the customer and for better market value.

- This system is financially very feasible because it provides large amount of information and serves huge mass of society.

- Compares to this use of system its cost is very low.

- It is not any more expensive for any restaurant, office or individual to use it.

- As this software is built in a way where everything is available in the market and comparatively cheap; so any restaurant can afford to buy this system.

- As this software not need to have rich computer configuration to run. So, company or client will not need to spend much money to buy good computers.

- It is also a money saving system.

Due to above mentioned reasons this processing system is technically and economically 100% feasible.

3.3 Operational Feasibility

- Operational feasibility was done to assure that the product would be developed that is used or not and how Will end-user management feel about the system.

- User can easily handle database because of easy user interface.

- Admin can view report of the system in a very easiest and short time.

3.4 Class Diagram
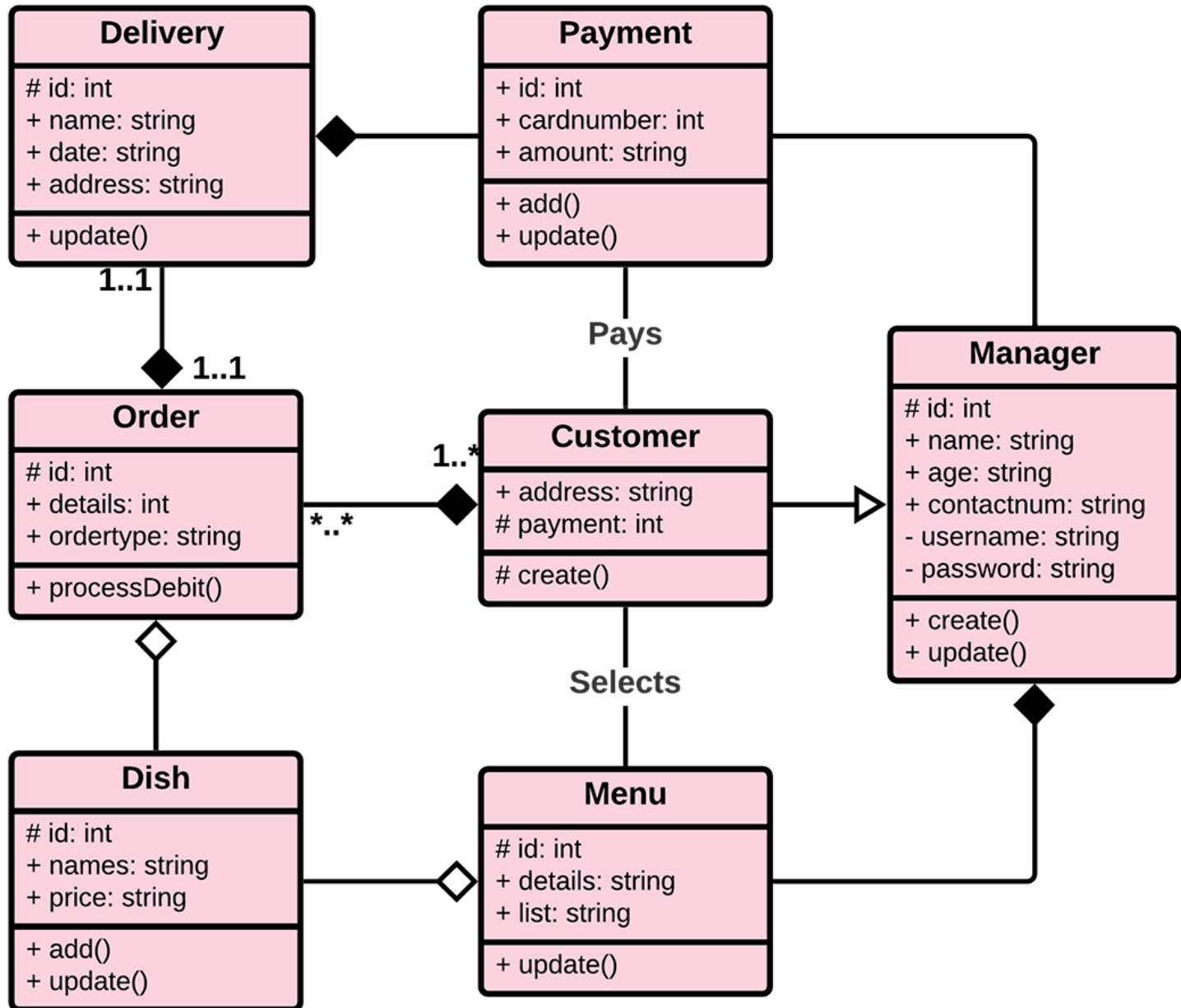
Figure-3.1: Class diagram of Online Restaurant Management System.

3.5 Activity Diagram

In Online Restaurant Management System, the whole system starts with the checking user level permissions. After that the whole system divided into three parts - Customer, Admin, these activity the whole systems ends.

Customer: In customer section if a customer is not registered then the customer can register an account. If customer is already registered then he/she can logged into the system providing valid data. Then customer can view details about food items view various type of restaurant, add food items and pay the bills on cash on delivery.

Admin: Admin logged in the system after giving required information. Then the admin manages customer information, delete customer account. Admin can give the order status to the customer that the order is on the way or not or it is delivered.
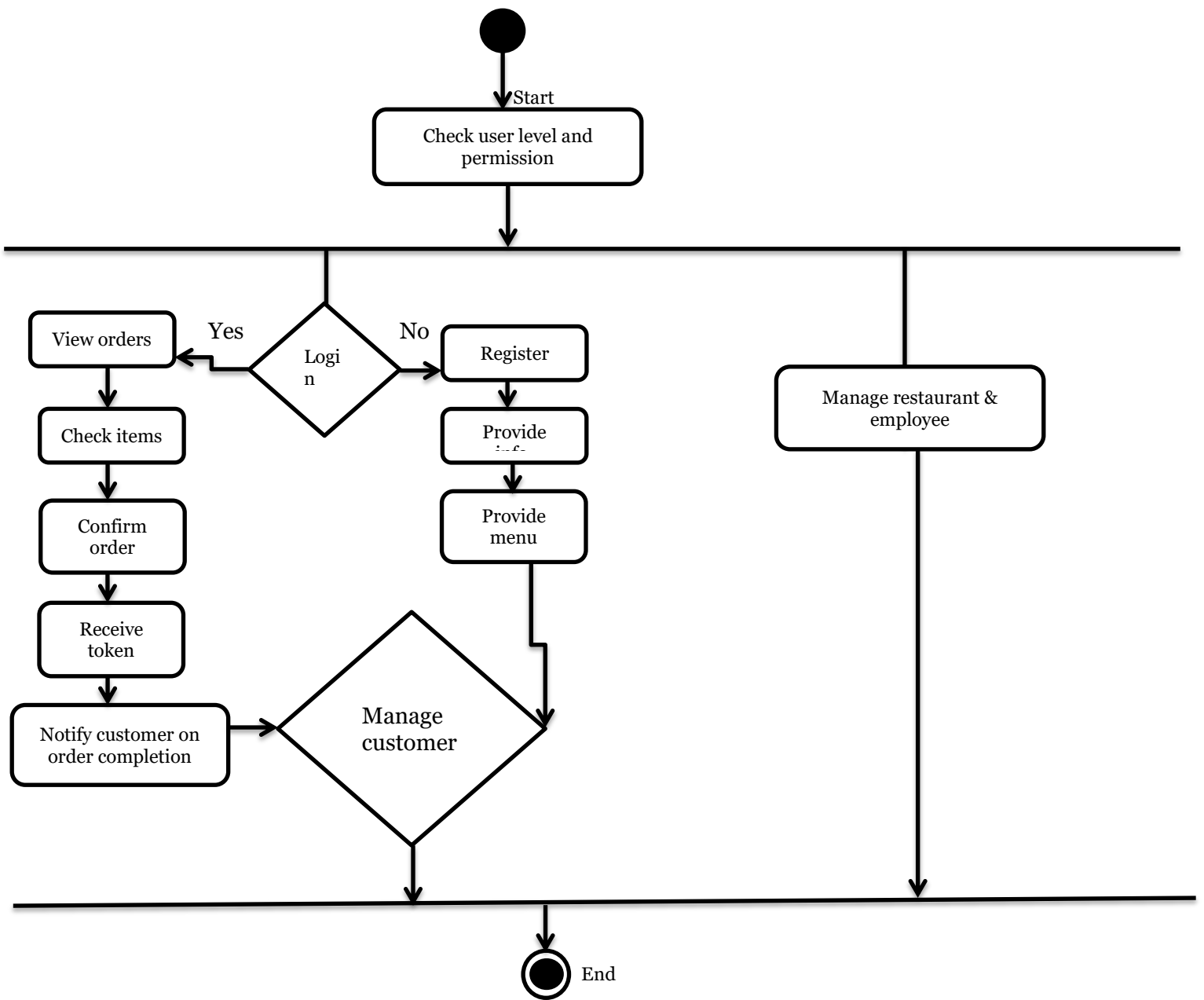
Figure-3.2: Activity Diagram of Online Restaurant Management System

3.6 Sequence Diagram

A sequence diagram is an interaction diagram. From the name it is clear that the diagram deals with some sequences, which are the sequence of messages flowing from one object to another. Interaction among the components of a system is very important from implementation and execution perspective. So Sequence diagram is used to visualize the sequence of calls in a system to perform a specific functionality.
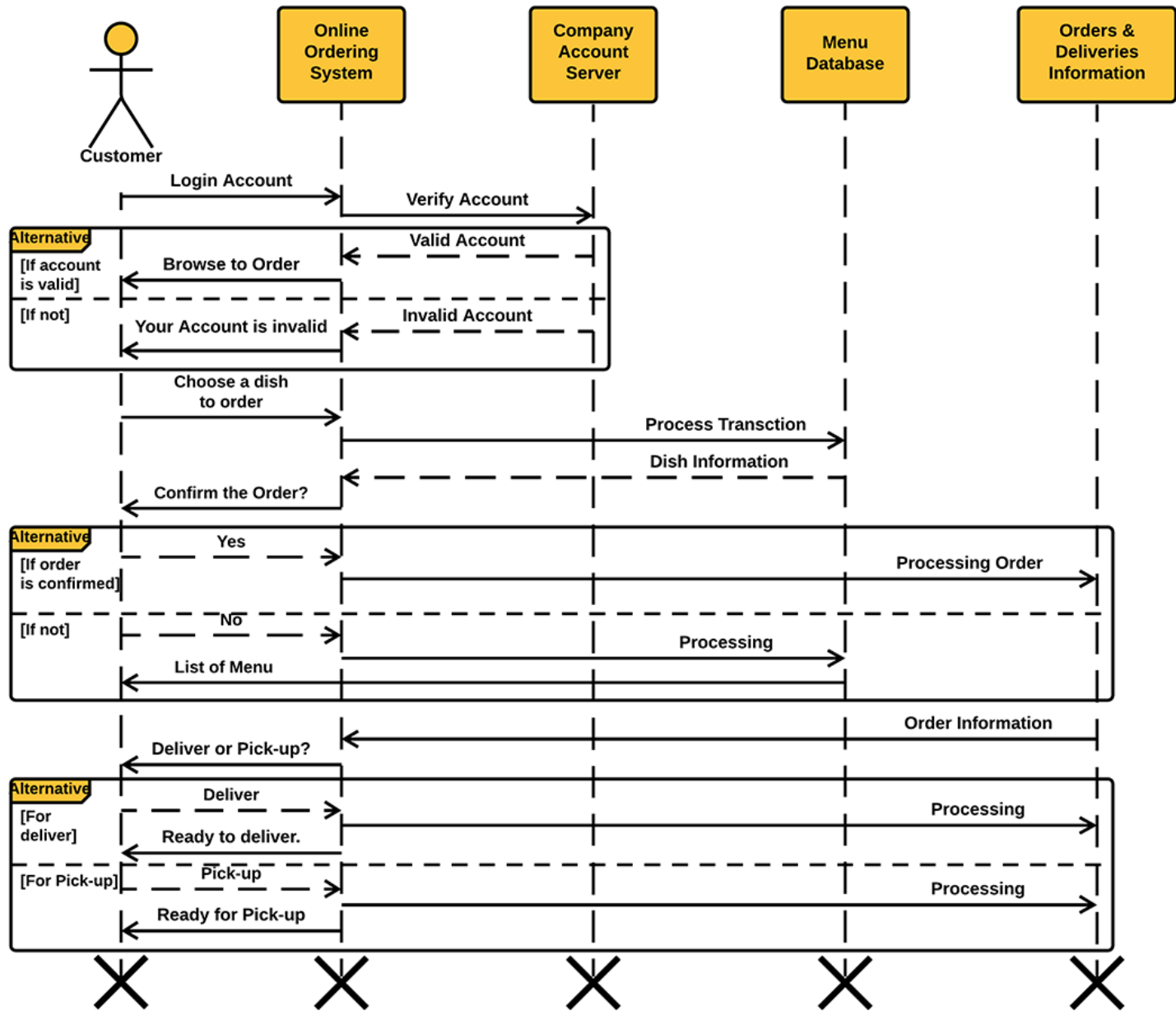
Figure-3.3: Sequence Diagram of Online Restaurant Management System

4. Designing effective input and output

In our software there are mainly three user's patient, admin and doctors. For each user there have different login and menu system. In the beginning every user will be able to see all of three option of login. These three options have three different login page and different menu. After logging into the software user get the services. We have used MySql database to implement our software. It has almost 16 pages.

4.1 User Interface

User interface design or user interface engineering is the design of user interfaces for machine and software, such as computers, home appliances, mobile devices, and other electronic devices, with the focus on maximizing usability and the user experience.

4.2 Mesh generation and description

4.2.1 Wireframe

A website wireframe, also known as a page schematic or screen blueprint, is a visual guide that represents the skeletal framework of a website. Wireframes are created for the purpose of arranging elements to best accomplish a particular purpose.

4.2.2 Home page:

This is the landing page of our project. It shows all the popular dishes of the month. It has

- Log in and sign up option. Restaurant option that contains all the details about restaurant.
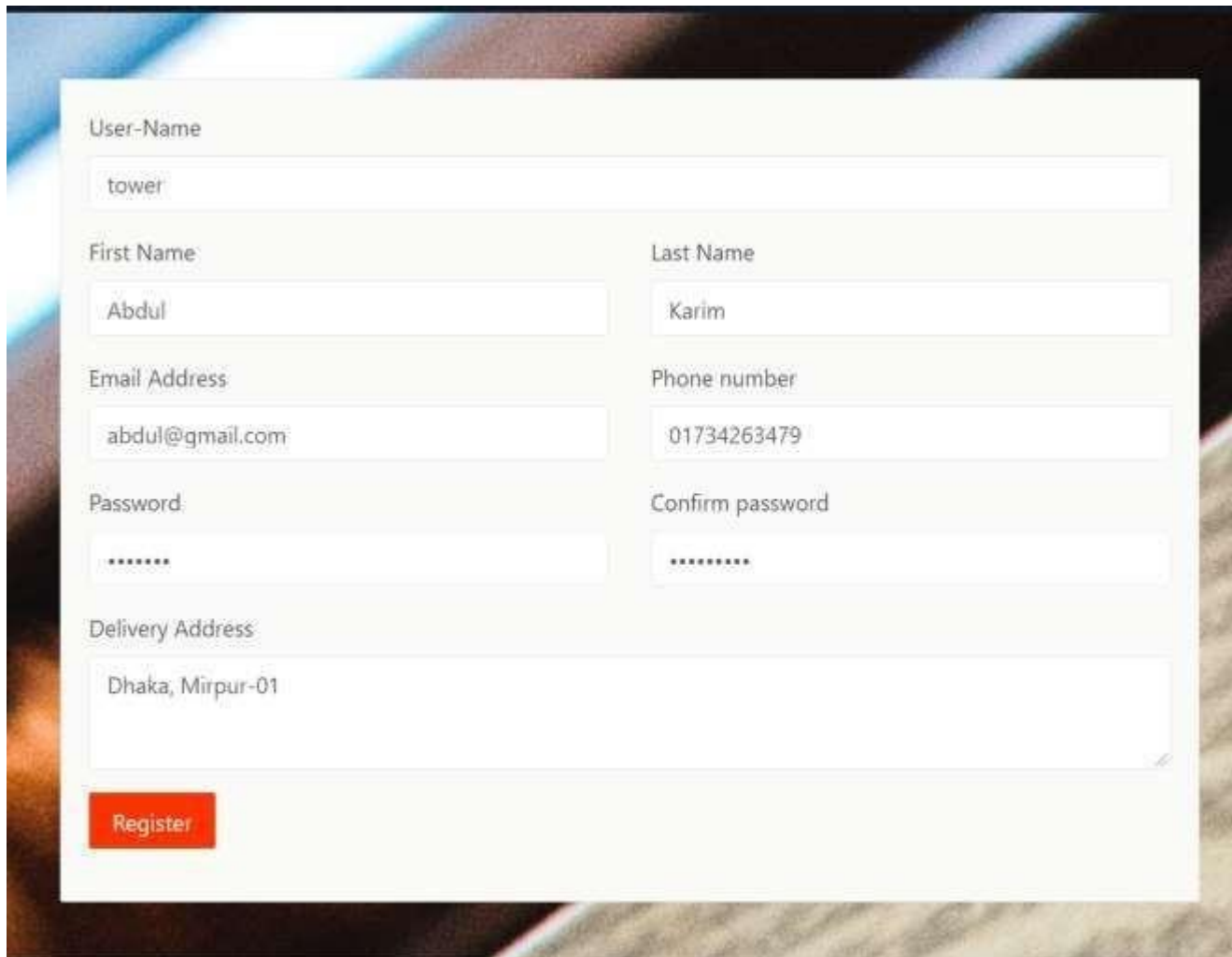
Figure-4.1: Home page

4.2.3 User account create page

Actor: Customer.
Input: User name, email, password and confirm password.
Output: Create a new user and show user profile page.

Figure-4.2: Signup page.

Figure-4.3: Login page
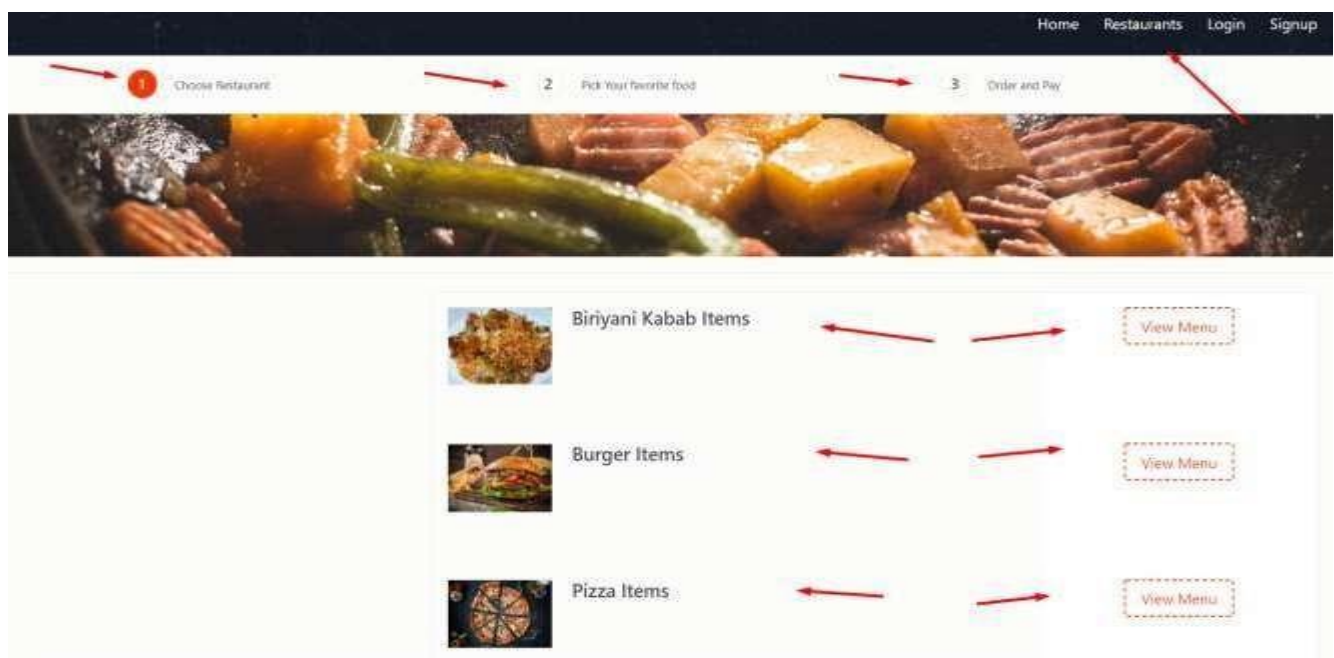
Figure-4.4: Restaurants page
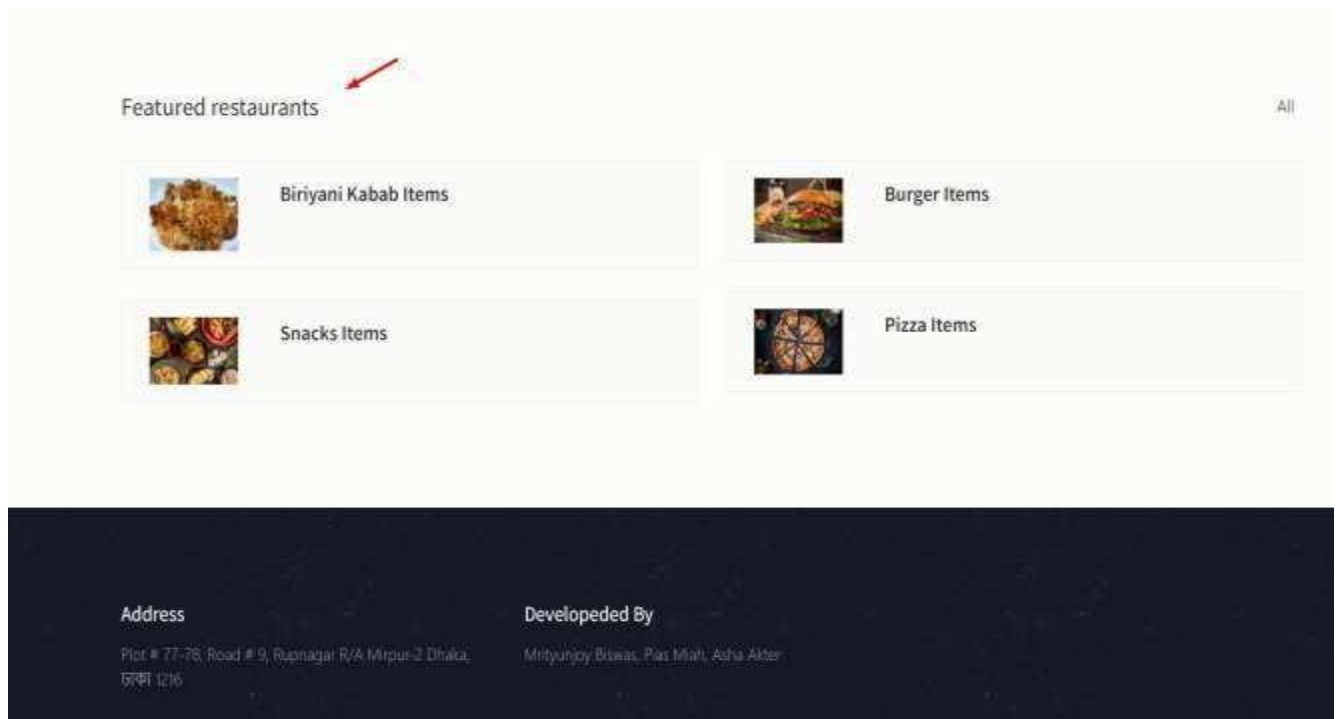
Figure-4.5: Restaurant Featured page

4.2.4 Customer order page
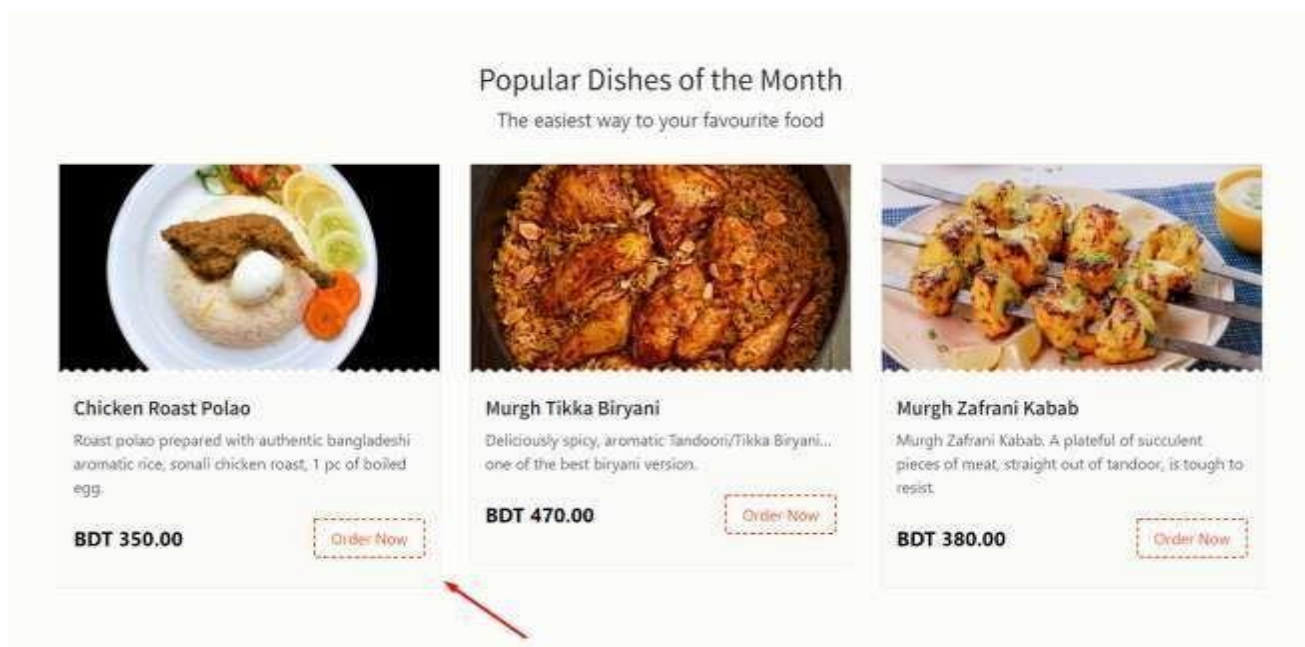
Figure-4.6: Order page
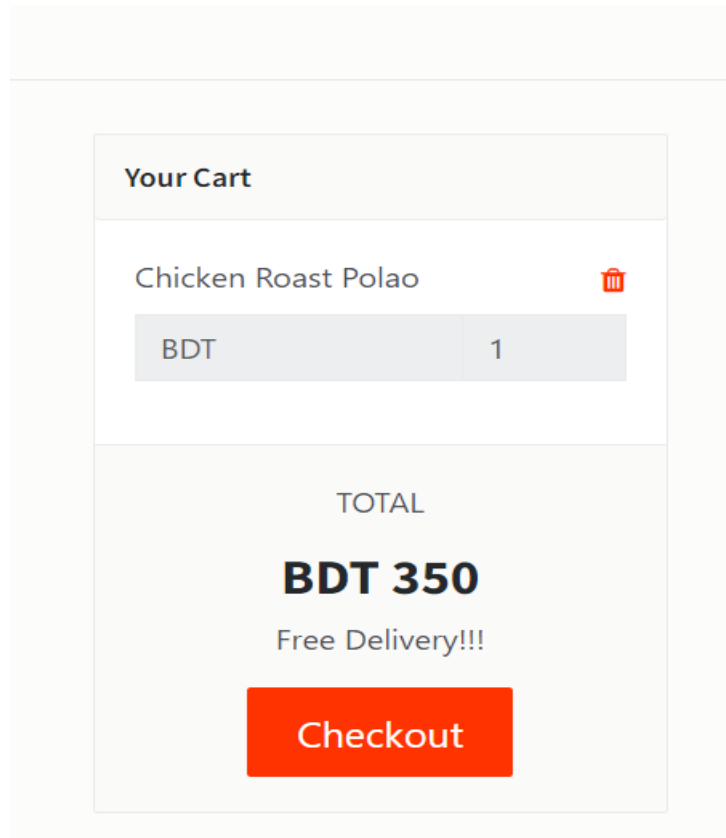
Figure-4.7: Add to cart order page
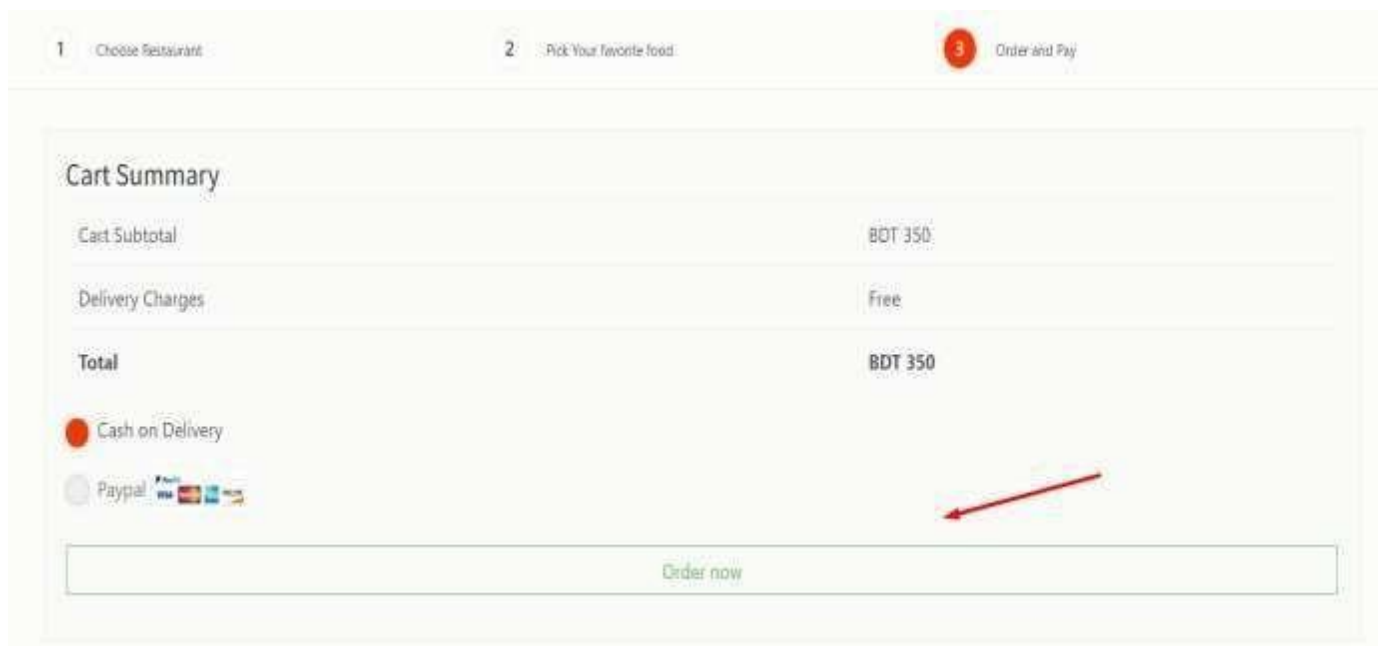
Figure-4.8: Confirm order page
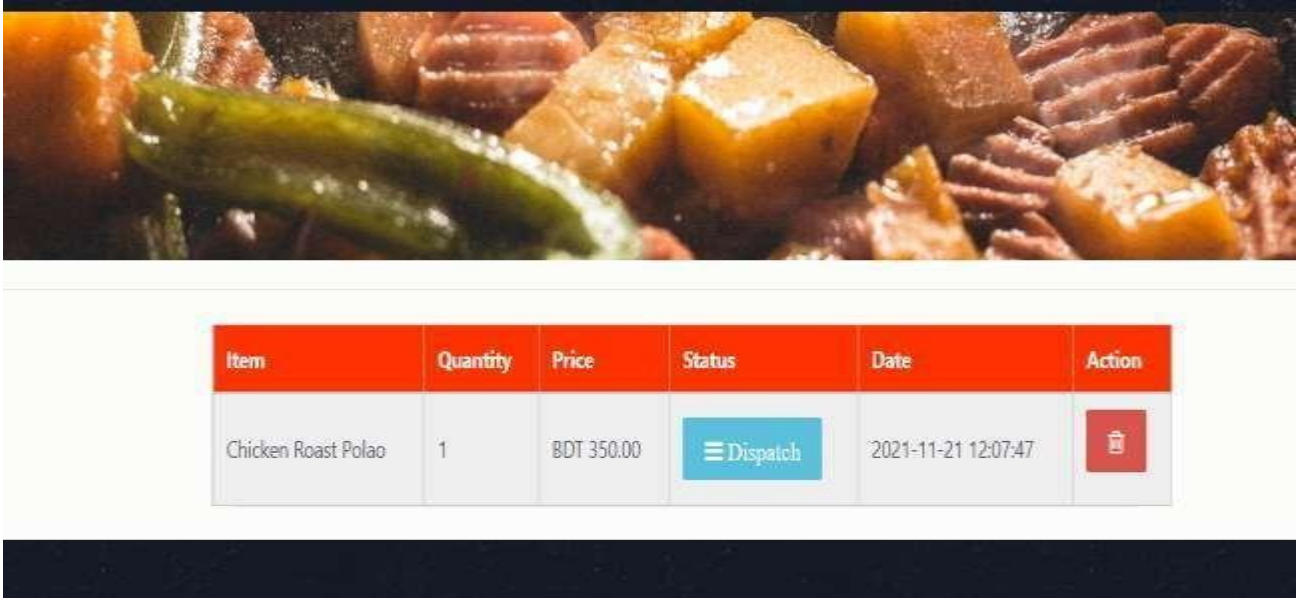
Figure-4.9: Order confirmed page
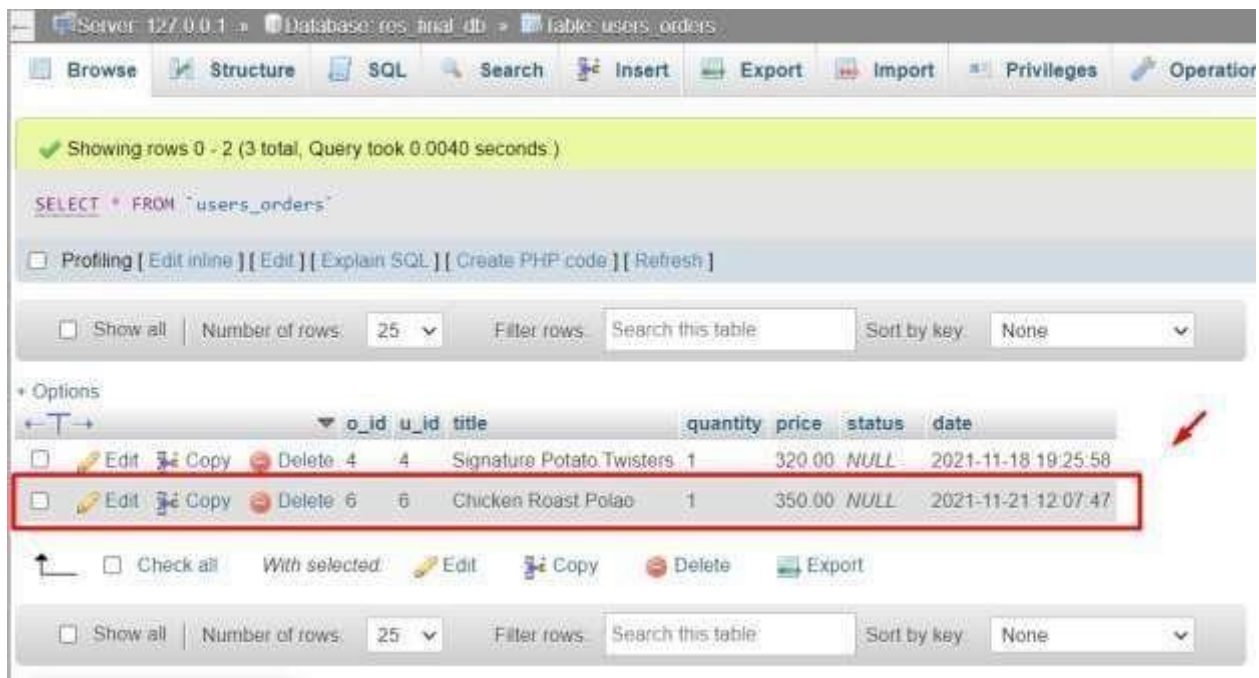
Figure-4.10: Order added to database
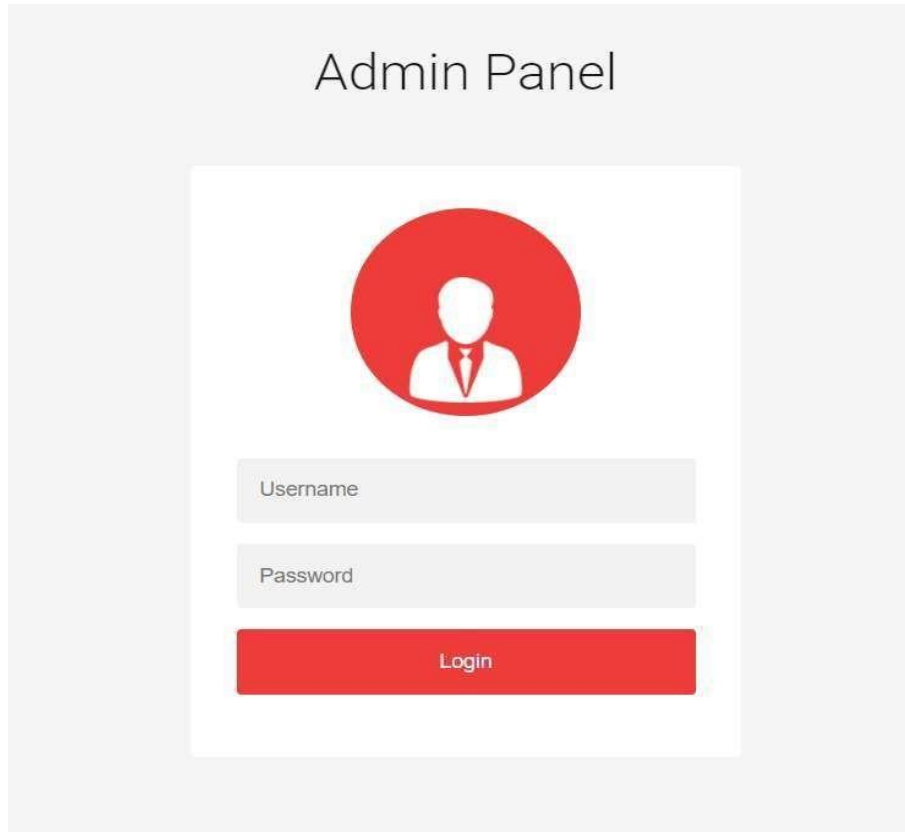
4.2.5 Admin Login

Actor: Admin

Flow:

1. Only Admin user can browsers this page.

2. Admin user can add and delete restaurant and can search all users' activities.

Figure-4.11: Admin Login panel
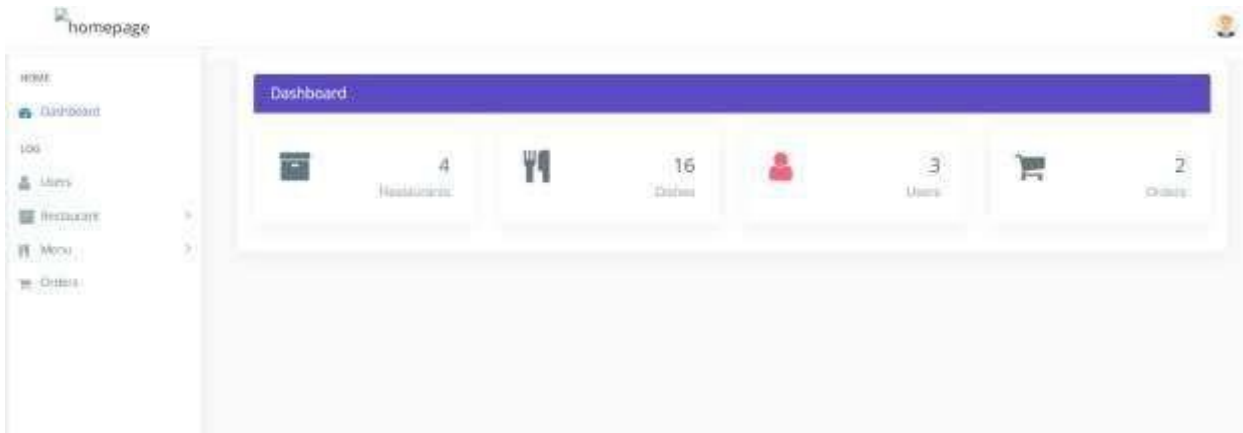
Figure-4.12: Admin home page

4.2.6 Admins menu

Actor: Admin
Output: Admin details page
Flow:
1. Admin can browsers this page.
2. Admin can view all modules here

Figure-4.13: User section

Figure-4.14: All Restaurant section

4.2.7 Admins Restaurant and Menu section

Figure-4.15: Restaurant add section

Figure-4.16: All Menu section

4.2.8 Admins add menu and all order section

Figure-4.17: Add menu section
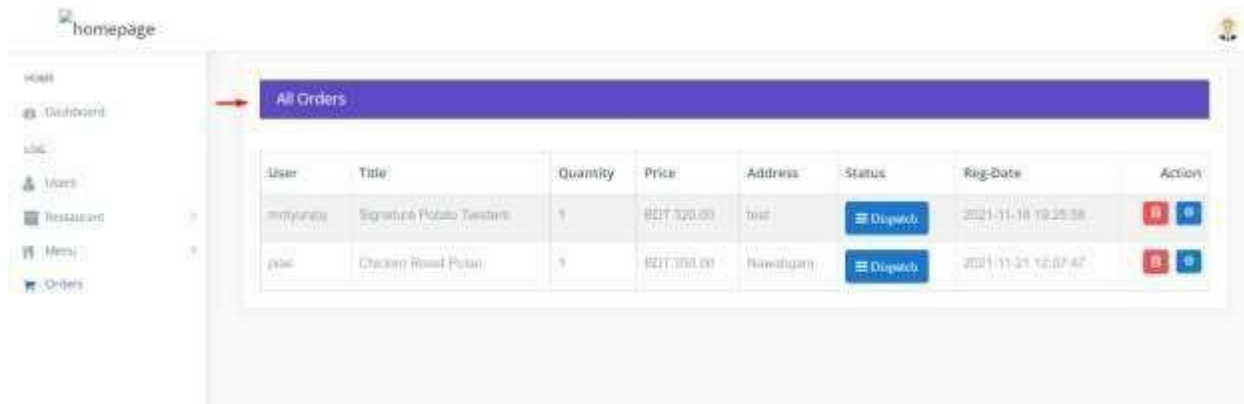
Figure-4.18: All Order section