COMSATS University Islamabad, Sahiwal
COMSATS Road, off GT Road, Sahiwal,
Pakistan

Eten Heist
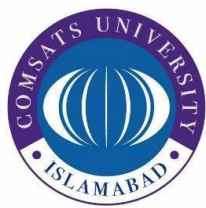## \<Online Food Ordering Platform\>

By

Iram Khan	CIIT/FA18-BCS-079/SWL
Tayyaba Iqbal	CIIT/FA18-BCS-133/SWL
Ulfat Amin	CIIT/FA18-BCS-134/SWL

Supervisor

Ms. Azka Mahmood

Bachelor of Science in Computer Science (2018-2022)

The candidate confirms that the work submitted is their own and appropriate credit has been given where reference has been made to the work of others.

COMSATS University Islamabad, Sahiwal
COMSATS Road, off GT Road, Sahiwal, Pakistan

Eten Heist
<Online Food Ordering Platform>

A project presented to
COMSATS University Islamabad,
Sahiwal Campus

In partial fulfillment
of the requirement for the degree of

Bachelor of Science in Computer Science (2018-2022)

By

Iram Khan	CIIT/FA18-BCS-079/SWL
Tayyaba Iqbal	CIIT/FA18-BCS-133/SWL
Ulfat Amin	CIIT/FA18-BCS-134/SWL

DECLARATION

We hereby declare that this software, neither whole nor as a part has been copied out from any source. It is further declared that we have developed this software and accompanied report entirely on the basis of our personal efforts. If any part of this project is proved to be copied out from any source or found to be reproduction of some other. We will stand by the consequences. No Portion of the work presented has been submitted of any application for any other degree or qualification of this or any other university or institute of learning.

Iram Khan   **Tayyba Iqbal**   **Ulfat Amin**

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CERTIFICATE OF APPROVAL

It is to certify that the final year project of BS (CS) "Eten Heist" was developed by **IRAM KHAN (CIIT/FA18-BCS-079), TAYYABA IQBAL (CIIT/FA18-BCS-133)** and **ULFAT AMIN (CIIT/FA18-BCS-134)** under the supervision of "Ms. AZKA MAHMOOD" and co-supervisor "Mr. AHMAD SHAF" and that in their opinion; it is fully adequate, in scope and quality for the degree of Bachelors of Science in Computer Science.

Supervisor

Ms. Azka Mahmood

Lecturer

Department of Computer Science

COMSATS University Islamabad, Sahiwal Campus

External Examiner

Lecturer

Department of Computer Science

COMSATS University Islamabad, Sahiwal Campus

Head of Department

Department of Computer Science

COMSATS University Islamabad, Sahiwal Campus

Executive Summary

Online ordering and delivery have made the process of ordering and receiving meals at one's doorstep much easier, with more customization options and control in the hands of customers. First and foremost, clients may order food from their chosen eateries without difficulty. Second, clients can maintain control over their meal choices as well as other aspects of their experience. It is a web-based online food ordering system. Online food ordering was founded in 2012 with headquarters in Berlin, Germany. It is a global food delivering service whose parent company is Delivery hero Food Panda is a for-profit business. Food Panda takes orders and transmits them directly to partner restaurants, where they are subsequently delivered to clients by delivery riders.

Websites and mobile apps are used to access the service. It connects users with restaurants in their neighborhood that deliver food and allows them to select, order, and pay for their meals online or offline. To confirm orders and estimate delivery times, Eten Heist sends out an SMS. Online food delivery business operates in more than 40 countries across 5 continents. Restaurant-controlled online food ordering, the restaurants create their own website and app, or choose to hire a delivery vendor. If they choose to create their own website, they make sure to obtain software that manages the orders efficiently, meaning it has the capability to manage different orders at once. When they hire a vendor, the restaurant pays for a monthly fee or percentage-based fees.

Eten Heist is a replica of Food Panda, an E-commerce platform that simplifies the food ordering process. The suggested system will simplify ordering process by displaying a filter for price search functionality, user interface and update the menu to include all accessible options, making customer work easier for selecting meal according to his/her pocket money. Customer can pay their bills with online transaction methods. The order confirmation is sent to the customer by E-mail. One module will be for restaurant manager to deliver food either by using their own rider or by using Eten Heist rider. Some websites have functionalities that are distinct from others like many websites do not provide filters for price search functionality, some websites have high delivery charges and have no options for the choice of rider either he should be from Food Panda or from their own restaurants. So, this website will help our users to get all functionalities like filters for price search, choice of riders to the restaurants within one system, best quality and quantity of food, less delivery charges and online transaction methods will also help them to get paid with in local currency. We will cover all the drawbacks of Food Panda in our Eten Heist website. Here customers will be easily understanding our interface and can easily make order of the food that he wants. Customers can order their food according to their pocket money as we will have filters for price search which will help customer to select meals according to money.

Acknowledgement

All praises to Almighty Allah who bestowed upon us a minute portion of His boundless knowledge by virtue of which we were able to accomplish this challenging task.

We are greatly indebted to our project supervisor "Ms. Azka Mahmood" and our Co-Supervisor "Mr. Ahmad Shaf". Without their personal supervision, advice and valuable guidance, completion of this project would have been doubtful. We are deeply indebted to them for their encouragement and continual help during this work.

And we are also thankful to our parents and family who have been a constant source of encouragement for us and brought us the values of honesty & hard work.

Iram Khan   **Tayyba Iqbal**   **Ulfat Amin**

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Abbreviations

SRS	Software Requirement Specification
PC	Personal Computer
SDD	Software Design Document
DFD	Data Flow Diagram
FYP	Final Year Project

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CHAPTER 1
INTRODUCTION

1. Introduction

Eten Heist offers people to easily explore meals in their neighborhood and order your favorite meals online or on their phones. On-demand Eten Heist assists restaurants in providing a simple and seamless customer experience, resulting in increased sales and reduced wait times. While many restaurant chains offered doorstep food delivery, the strategy was mainly ineffective since managing the entire delivery procedure with the extent of customization was incredibly difficult. The eateries breathed a sigh of relief when our aggregator website supplied on-demand service. Online ordering and delivery have made the process of ordering and receiving meals at one's doorstep much easier, with more customization options and control in the hands of customers. First and foremost, clients may order food from their chosen eateries without difficulty. Online food delivery business operates in more than 40 countries across 5 continents. Restaurant-controlled online food ordering, the restaurants create their own website and app, or choose to hire a delivery vendor. If they choose to create their own website, they make sure to obtain software that manages the orders efficiently, meaning it has the capability to manage different orders at once. When they hire a vendor, the restaurant pays for a monthly fee or percentage-based fees. (Canivel, July 19,2021)

1.1. Brief

Online food delivery business operates in more than 40 countries across 5 continents. Restaurant controlled online food ordering, the restaurants create their own website and app, or choose to hire a delivery vendor. If they choose to create their own website, they make sure to obtain software that manages the orders efficiently, meaning it has the capability to manage different orders at once. When they hire a vendor, the restaurant pays for a monthly fee or percentage-based fees.

However, food delivery riders and drivers usually do not receive any insurance coverage, protective gear, or sick pay as independent contractors, which have led to some asking for improved safety standards. In response, Deliveroo gave riders a helmet with a GoPro camera to record any problems they may face, specifically with criminals. The riders can raise safety concerns about delivery areas from the website. The vendor covers the developmental costs. Customers can remark on the sales procedure, delivery, taste, and overall opinion of restaurants in the Food Panda review area on restaurant pages.

On-demand Eten Heist assists restaurants in providing a simple and seamless customer experience, resulting in increased sales and reduced wait times. While many restaurant chains offered doorstep food delivery, the strategy was mainly ineffective since managing the entire

delivery procedure with the extent of customization was incredibly difficult. The eateries breathed a sigh of relief when our aggregator website supplied on-demand service. Online ordering and delivery have made the process of ordering and receiving meals at one's doorstep much easier, with more customization options and control in the hands of customers. First and foremost, clients may order food from their chosen eateries without difficulty. (Marasigan, (July 29,2021))

There are a lot of benefits that our system will bring in different cities of Pakistan.

- Local Payment methods
- All services on single platform
- Secure platform
- Work history
- Quantity of food
- Low delivery charges
- Filter for price search

At starting we will target the cities community. Our application will cover all the needs of food delivery restaurants providing them with secure platform with local payment methods and providing the physical service providers the exposure they need to compete the market and boost their restaurant business. The quantity of food would not be less as compared to other platforms providing these types of services. There will be no compromise on food quantity.

If we go back in time, ordering food online was difficult, but it is today incredibly simple to do so. There is a plethora of websites for ordering food, but each has its own set of settings. As a result, we're creating a food panda duplicate that will fix all this website's problems.

- Food panda's delivery fees are exorbitant.
- Food panda do not have filters for search.
- They don't have online paying option.
- Not having restaurants rider selection option.

Eten Heist is a web-based application. We build the application using MVC (Model View Controller) technique, which is way too secured than traditional web techniques. As each task is assigned to different layer. Overall Modules of the application are outlined below:

- UI Design Module
- SQLite Module
- Web Ordering system module

- Sign in Module
- Admin Module

Features of the application are listed below

- Easy to use friendly User Interface
- Security to third party payment methods
- Filters for price search

1.2. Relevance to Course Modules

In relevance to course module those subjects are mentioned that we have studied in our degree and now we have implemented in our FYP. We have tried to make an application with the help of our relevant courses of our degree in Bachelors in Computer Science. First, we have tried to approach our requirements then we gather the area in which our project works then we analyze the model which fulfills the requirement of our project because all these things are being taught to us in Software Engineering 1 and 2. Then we are working on interface of our application which fulfills the need of our subject Human Computer Interface. Then after this we start our development in Android Studio because in web, we have studied HTML/XML and CSS. Then we learn about the Copyright and about References in Professional Practices in IT for our safety and security.

1.2.1. Introduction to Computer Programming (CSC103)
We have studied the basics of programming in this course. Using the concepts of C#, we implemented this project.

1.2.2. Object Oriented Programming (CSC241)
Using the concepts of OOP approach in programming pattern and coding design we implemented our project.

1.2.3. Software Engineering, I & II (CSC291 & CSC392)
This course helped us to evaluate our development methodologies which are used in us project.

1.2.4. Database Systems (CSC271)
In this project, we develop relational database.

1.2.5. Human Computer Interaction (CSC456)
This course helped us while designing logo for the project.

1.3. Project Background
This project will increase efficiency and improve services provided to the customers through better application of technology in daily operations. This will be able to stand out from competitors in the food service industry.

Its main aim is to simplify and improve the efficiency of the food ordering process for both customer and restaurants. It minimizes manual data entry and ensures data accuracy and security during order placement process. Customers will also be able to view product menus and their ingredients and be able to a visual confirmation that the order was place correctly.

1.4. Literature Review

Eten Heist system is proposed in which it will keep track of user orders smartly, it will provide filters for price search options, sign in or sign-up options to users. Basically, they implemented a food ordering system for different type of restaurants in which user will make order or make custom food by one click only. Efficiency and accuracy of restaurants as well as human errors were improved by this user-friendly application. Earlier drawbacks of Food Panda were overcome by this system. The front end was developed using HTML and CSS in Django python and in backend SQLite database was used.

1.4.1. Analysis from Literature Review

The Eten Heist comprises of many different concepts like payments methods, security, filters for price search, good quality and quantity of food etc. These are the major concepts to be covered in the literature review. The basic domain of the system is marketplace concept.

Here the list of selected pre-ordered items shall be shown on the kitchen screen, and when confirmed, order slip shall be printed for further order processing. The solution provides easy and convenient way to select pre-order transaction from customers.

These are the features:
- Local Payment methods
- All services on single platform
- Secure platform
- Work history
- Quantity of food
- Low delivery charges
- Filters for price search

1.5. Literature Review Table

The difference of websites is explained in which weakness of different food ordering websites are explained. As well as proposed solution of these restaurants are given. Their delivery charges are high and they provide less quantity of food to customers which is also a

big drawback of these food ordering websites. To tackle all these problems, we are developing replica of Food Panda. Here in table below, all solutions are explained. The name of the restaurants is given in which weaknesses and proposed solutions are given.

Websites Name	Weakness	Proposed Project Solution
Food panda	Food Panda's delivery fees are exorbitant.	Cheap delivery charges. Restaurants can deliver food through their own rider.
Uber Eats	To join Uber, you must pay a $350 activation fee.	For sign up, No cost for activation.
Cheetah	Cheetah offers a comprehensive delivery service around the city, but it takes a long time to arrive.	Eten Heist provide the services all over the city and nearby areas.

1.5.1. Comparison of Food Panda and Eten Heist

The comparison of Food Panda with Eten Heist is given below. As every con of Food Panda is explained in table which irritates customers too. Moreover, the solution of Food Panda's con's is given which is shown in Eten Heist comparison.

Food Panda	Eten Heist
● High-cost delivery charges.	● Low-cost delivery charges.
● Provides no filters for price search.	● Provide filters for price search.
● Provide less quantity of meal.	● No compromise on quality & quantity
● There is no choice availability of restaurant's or Eten Heist riders.	● Choice availability of restaurant's or Eten Heist rider .

1.6. Methodology and Software Life cycle for This Project

There are several existing methodologies that can be used to develop this application using software development processes. The most common methodologies for this type of software are agile and incremental model.

Agile methodology is explained that we have used in developing our Eten Heist website. We have used agile method as we have developed our modules in parts. So agile method is used in which we required to develop any system in chunks not whole system.

1.6.1. Agile Model

Agile, which combines both incremental and iterative approaches, is a suitable strategy to follow while developing features for food delivery software, such as restaurant rating/reviews, search filters, online ordering, and so on. For each build, the goal is to have working software. An iterative method of constructing the feature with wire frames, mock-ups, and prototypes and presenting them to the customer for each increment of the build will help to gather input that can be integrated in subsequent increments of the development. As in incremental model is a process of software development where requirements are broken down into multiple standalone modules of software development cycle. The development is done in steps from analysis design, implementation, testing/verification, maintenance. Each iteration passes through the requirements, design, coding and testing phases. And each subsequent release of the system adds function to the previous release until all designed functionality has been implemented. The system is put into production when the first increment is delivered. The first increment is often a core product where the basic requirements are addressed, and supplementary features are added in the next increments. Once the core product is analyzed by the client, there is plan development for the next increment.
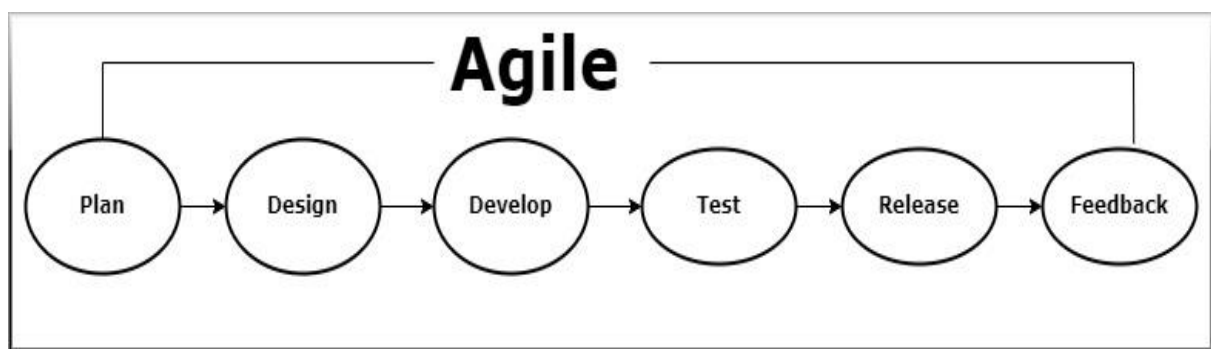

FIGURE 1 AGILE MODEL

1.7. Rationale behind Selected Methodology

Agile model is used to develop this project, in which we divided our work in multiple modules. All these modules are further divided into more easily managed modules which made up the actual implementation of the requirements.

Reason behind using this model is:

- It is easy to test and debug the product during iterations.
- Software released in increments over time is more likely to satisfy changing user requirements than if it were planned as a single overall release at the end of the same period.
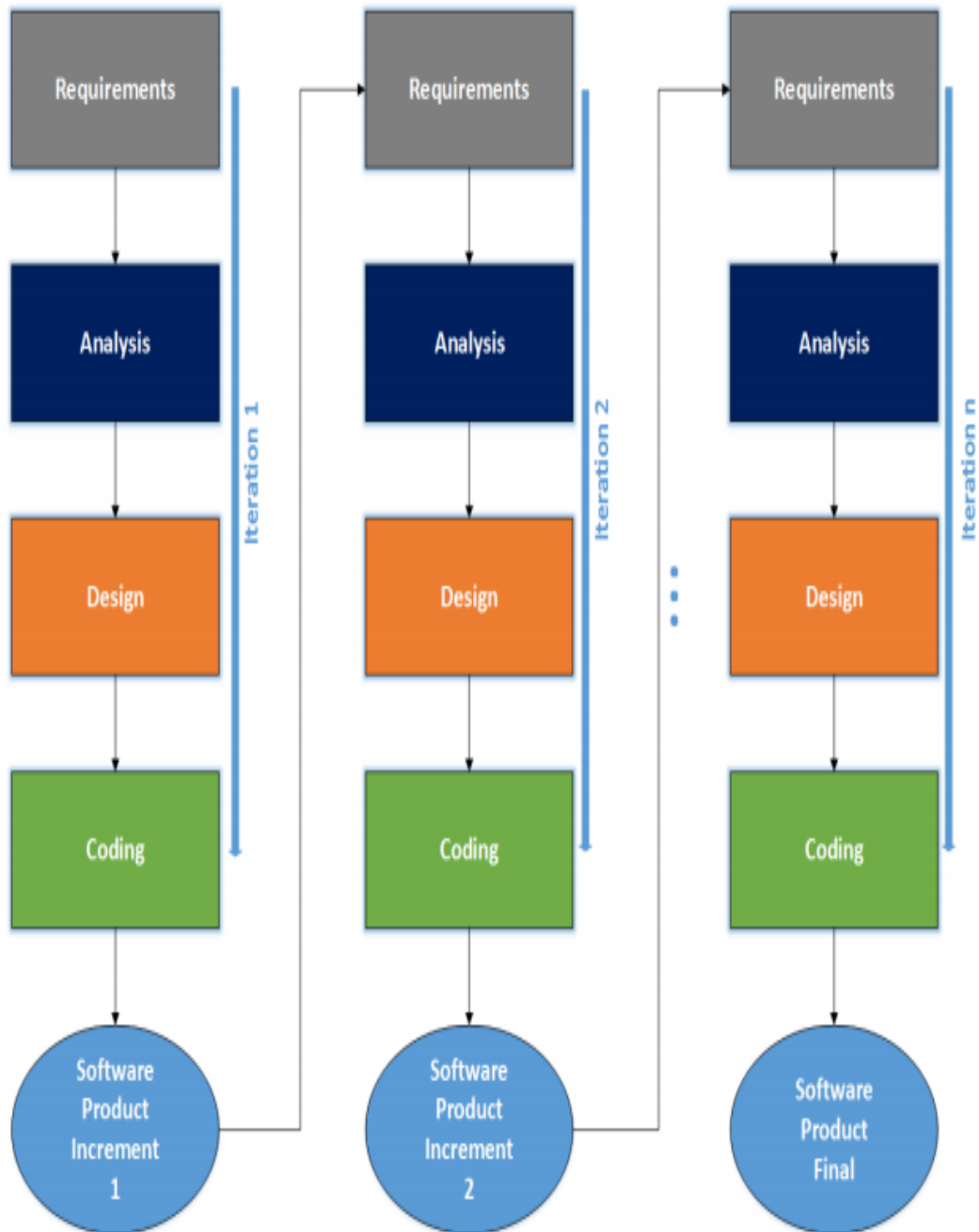

FIGURE 2 AGILE MODEL DIAGRAM

CHAPTER 2
PROBLEM DEFINITION

2. Problem Statement

If we go back in time, ordering food online was difficult, but it is today incredibly simple to do so. There is a plethora of websites for ordering food, but each has its own set of settings. As a result, we're creating a food panda duplicate that will fix all this website's problems.

- Food panda's delivery fees are exorbitant.
- Food panda do not have filters for price search.
- They don't have online paying option.

2.1. Deliverables and Development Requirements

There are three modules that are going to be deliverable

- Admin module
- Payment module
- Sign in module

Admin Module:

Admin module will monitor the whole market place including the transactions, user verifications and analytics. Admin dashboard will show the total number of users and the number of active users. Admin would be able to maintain all menus, categories and see overall profits and loss. Admin could set the payment methods the percentage of delivery on each order.

Payment Module:

In this Module our main functionality of our Web based application would be covered which is the payment method. APIs of local payment service providers will be integrated with our application and digital service providers would be able to avail the secure payment methods without any extra charges.

Sign In Module:

In this module we will create sign in options for our Web based Application which will include email and Google signing option. Users shall be able to login and logout from the application use email or their google id's.

2.2. Requirement Analysis

In requirement analysis we have defined, analyzed, validated and managed all system requirements. We have analyzed and gathered all the requirements that is needed for our system to develop.

2.2.1. Use Cases Diagram(s)

A use case diagram is a graphical depiction of a user's possible interactions with a system. A use case diagram shows various use cases and different types of users the system has and will often be accompanied by other types of diagrams as well. The use cases are represented by either circles or ellipses.
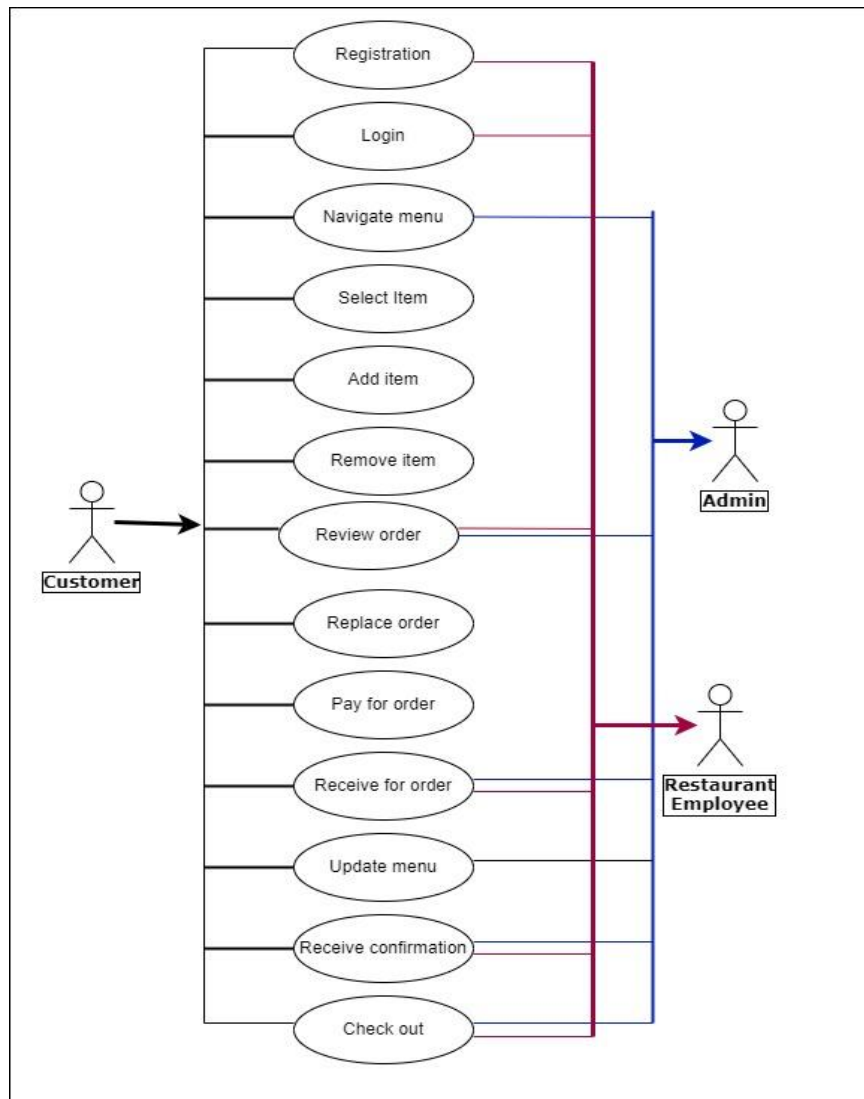

FIGURE 3 USE CASE DIAGRAM

2.2.2. Detailed Use Case Diagram

The table below indicates a comprehensive use case template.

TABLE 1 USE CASE 1 – LOGIN & REGISTER

Use Case ID:	UC-1
Use Case Name:	Eten Heist

Actors:	Admin: primary actor and have full control over system.
	Restaurant Employees: secondary actor and have restricted access.
	customer: secondary actor.
Preconditions:	**PRE-1**. Both User and Customer are logged into Eten Heist for ordering food.
	PRE-2. Both Customer and User must be registered for proper usage of this application and transactions of money into accounts to work done
	From both sides.
	PRE-3. Admin must have access to all accounts to check their work and duty.
Postconditions:	**POST-1**. Ordering food is uploaded in Eten Heist timeline with a status of
	"Ordering food Status."
	POST-2. Status of available food orders is updated to reflect
	Food ordering in this application.
	POST-3. Remaining food orders and delivery food services list will be updated.
Normal Flow:	• Customers have to login for ordering food by their username and passwords.
	• Customer after login in Eten Heist will finds out their relevant food that they want to order and after selecting food customer will add this food to cart for placing order.
	• Different food menus are available from where a customer can choose delicious foods from any restaurant and then place an order.
	• Customer can select one or more dishes for ordering.
	• Customer will see food ordering message after placing order.
Alternative Flows:	• Upload multiple food orders from different restaurants.
	• Customers can order food and can place in different restaurants at the same time.
	• User can go back to condition one for uploading more orders uploading at once.
	• After customer ordering all possible orders by any customer could be canceled.
Assumptions:	Assume that more than 4 dishes will be ordered by same customer on daily basis then a record of customers on daily Basis is maintained.

2.3. Functional Requirements

Our website is having many functions like login, sign up, menu management, payment

methods. All the functionality are explained below.

2.3.1. Functional requirement signs up
Provides sign up for user to register user for authentication purpose.

TABLE 2 : SHOW THE FUNCTIONAL REQUIREMENT FOR SIGN UP

Identifier	Requirement ID 1
Title	Create Account
Requirement	A user may create profile on the Eten Heist as Seller or Customer. The information needed for creating profile may be personal information.
Source	The information of the user will come from the user and validate it by their Google account or whether their mobile numbers.
Rationale	For authentication of user.
Dependencies	Requirements ID 1 is dependent on user's information.
Priorities	Medium

2.3.2. Functional requirement Login

Provide login for Admin and user to give the access to the admin dashboard and user dashboard.

TABLE 3: SHOW THE FUNCTIONAL REQUIREMENT FOR LOGIN

Identifier	Requirement ID 2
Title	Log-In Account
Requirement	If the user has already had an account. Then user can just log-in the account by using the credentials.
Rationale	For authentication of user.
Dependencies	Requirements ID 2 is dependent on system information.
Priorities	Medium

2.3.3. Functional requirement Menu System

Provide an option for Admin to share different menus and dishes according to different events.

TABLE 4: SHOW THE FUNCTIONAL REQUIREMENT FOR MENU SYSTEM

Identifier	Requirement ID 3
Title	Menu System
Requirement	The admin can post for menu that he needs to be done. And people can choose accordingly.
Dependencies	Requirements ID 3 is dependent on Customers' requirements.
Priorities	High

2.3.4. Functional requirement Job Post

Provides an option for Admin to post a job and people can apply on that job.

TABLE 5: SHOW THE FUNCTIONAL REQUIREMENT FOR JOB POST

Identifier	Requirement ID 4

Title	Job Posting
Requirement	The admin can post for a job that he needs to be done. And people can apply accordingly.
Dependencies	Requirements ID 4 is dependent on Customers' requirements.
Priorities	High

2.3.5. Functional requirement Payment Method

Provide secure payment methods to user on which they can trust.

TABLE 6: SHOW THE FUNCTIONAL REQUIREMENT FOR PAYMENT METHODS

Identifier	Requirement ID 5
Title	Payment Method
Requirement	The employee and Customer should have an account on the Payment method providers platform to perform the transactions.
Dependencies	Requirements ID 5 is dependent on Customers' requirements.
Priorities	High

2.4. Non-Functional Requirements

Non-Functional Requirements are the requirements that specify criteria that can be used to judge the operation of system. Those constraints under which system will be operated are called non-functional requirements. For example, language runs time environment, operating environment performance requirements, usability requirements etc. These are all those requirements whose are not belonged to functional requirements but they affect overall on the system. We can say some extra conditions requirements that are not included in the use cases. These are usually called non-functional requirements. (Hero, (2016-12-10))

2.4.1. Performance

Performance of the system is very good. It performs all the tasks very correctly and provide all the results quickly and accurate.

2.4.2. Usability

Usability requirements deal with ease of learning, ease of use, error avoidance and recovery, efficiency of interactions, and accessibility. The system will help in saving time and improving efficiency. This system will give the facility to help the user. Clear and high-quality function will be carried out by the system. System will help the user to pack away from error by allowing the debugging facility.

USE-1: The application will be easy to understand as use.

USE-2: User having minimal android usage knowledge would be able to use it.

USE-3: The interface of the application would be easy to learn and remember.

The functionality of this product can be enhanced with some modules in future.

2.4.3. Security

- Users are required to log in to it, to gain access to different features of it.

- It will allow only authorized members who logged in to do administrative task

- It should have protection against virus.

- There should have login option for authorized member.

- The System must have a strong security to protect itself from any external threats

- System wouldn't allow any unauthorized user to enter in the system; this action will maintain and improve the security level of the system.

2.4.4. Reliability

REL-1: The system must respond to 99% of user requests.

REL-2: Should provide an effective and efficient way of monitoring.

REL-3: This system is available 24 hours while the access on internet.

CHAPTER 3
DESIGN AND ARCHITECTURE

3. System Architecture

A system architecture or systems architecture is the conceptual model that defines the structure, behavior, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviors of the system.
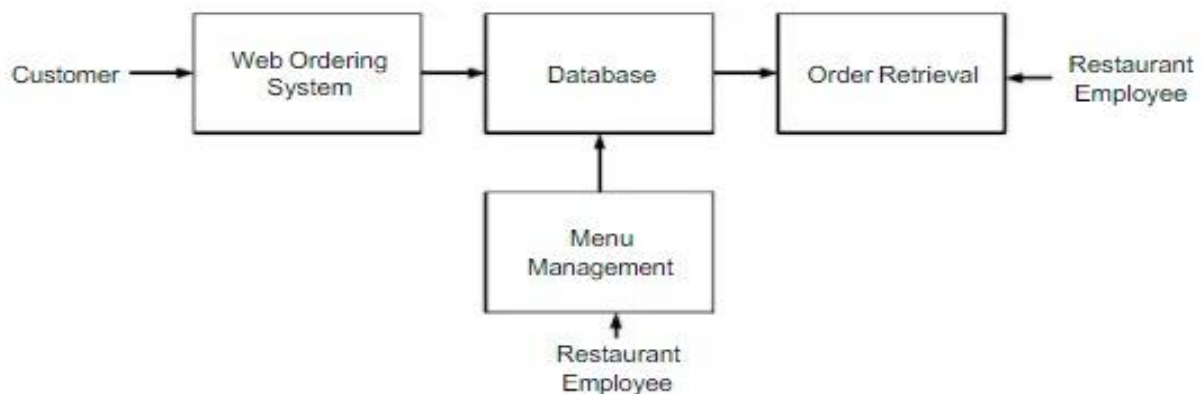
FIGURE 4 ARCHITECTURAL DIAGRAM

3.1. Data Representation

A Data Flow Diagram (DFD) is a graphical representation of the "flow" of data through an information system, modeling its process aspects. DFD shows what kind of information will be input to and output from the system, where the data will come from and go to, and where the data will be stored. It does not show information about the timing of process or information about whether processes will operate in sequence or in parallel.

3.1.1. DFD Level 0

In data flow diagram of Eten Heist website, customer will order the food thorough Eten Heist. Then customer will choose meal from different restaurants that will be register with Eten Heist. After ordering food bill will be shown to customer.
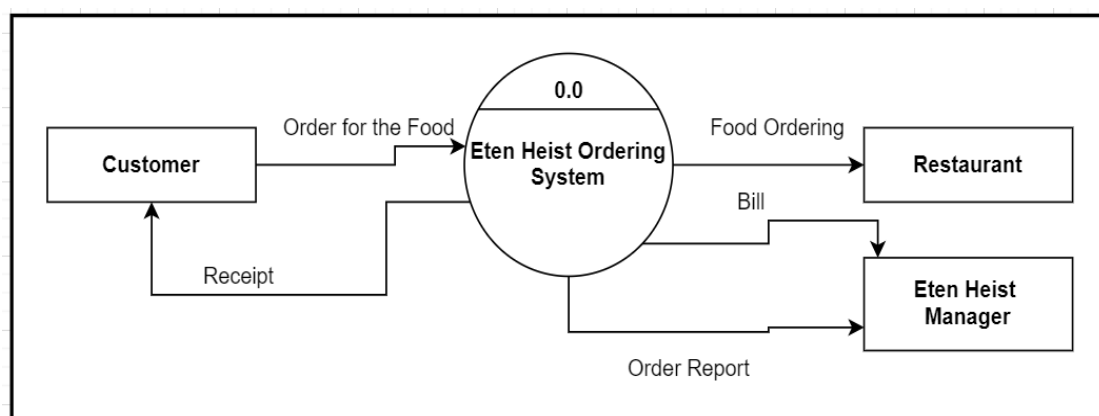
FIGURE 5 DATA FLOW DIAGRAM

3.1.2. DFD Level 1 for Admin

Here data flow diagram of admin is shown in which admin is a main person who will update offers in festivals, and will also maintain menu. Admin will fix prices of the food according to menu. He will update or delete menus according to events.
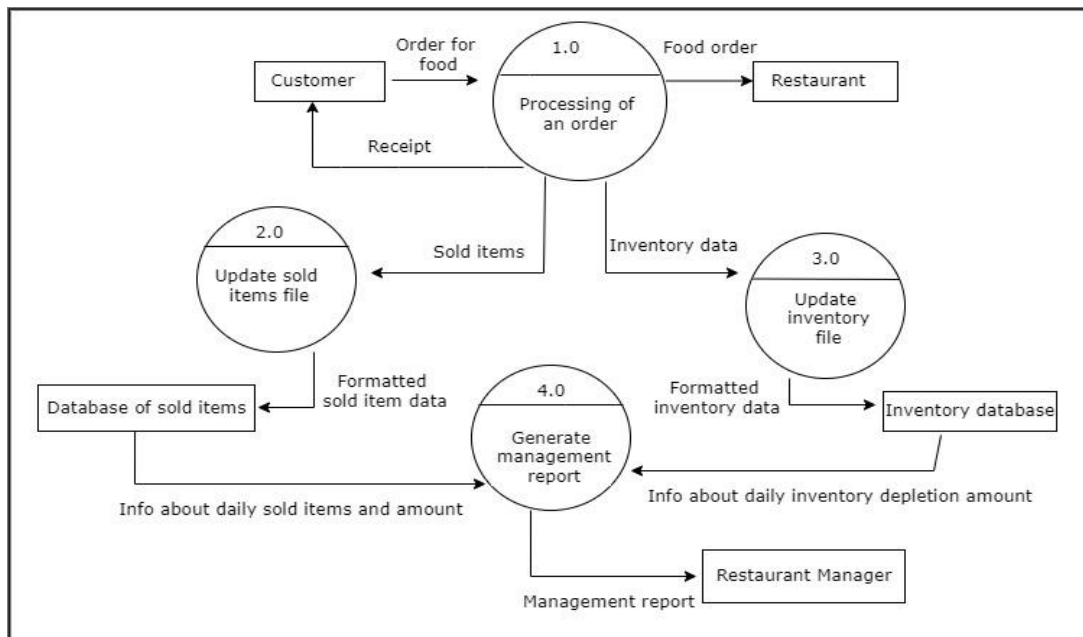

FIGURE 6 DATA FLOW DIAGRAM FOR ADMIN

3.1.3. DFD Level 1 for User

In data flow diagram of user, it is shown that when any customer will order food from desire restaurants then after confirmation of the order, he will see his bill which he will pay either through online payment or through cash payment.
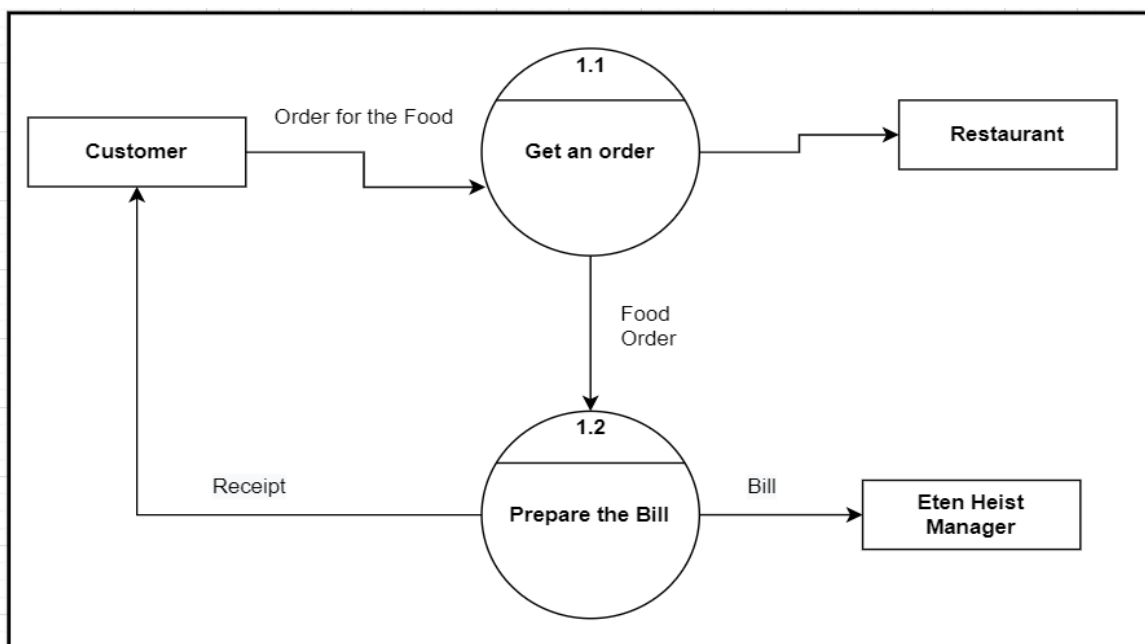
FIGURE 7 DATA FLOW DIAGRAM FOR USER

3.2. Process Flow/Representation

The process flow diagram is given below. Here we will place order from desired restaurant. But before order we will choose our location, then we will select city and then we will select meal. So whole process is explained below in diagram.
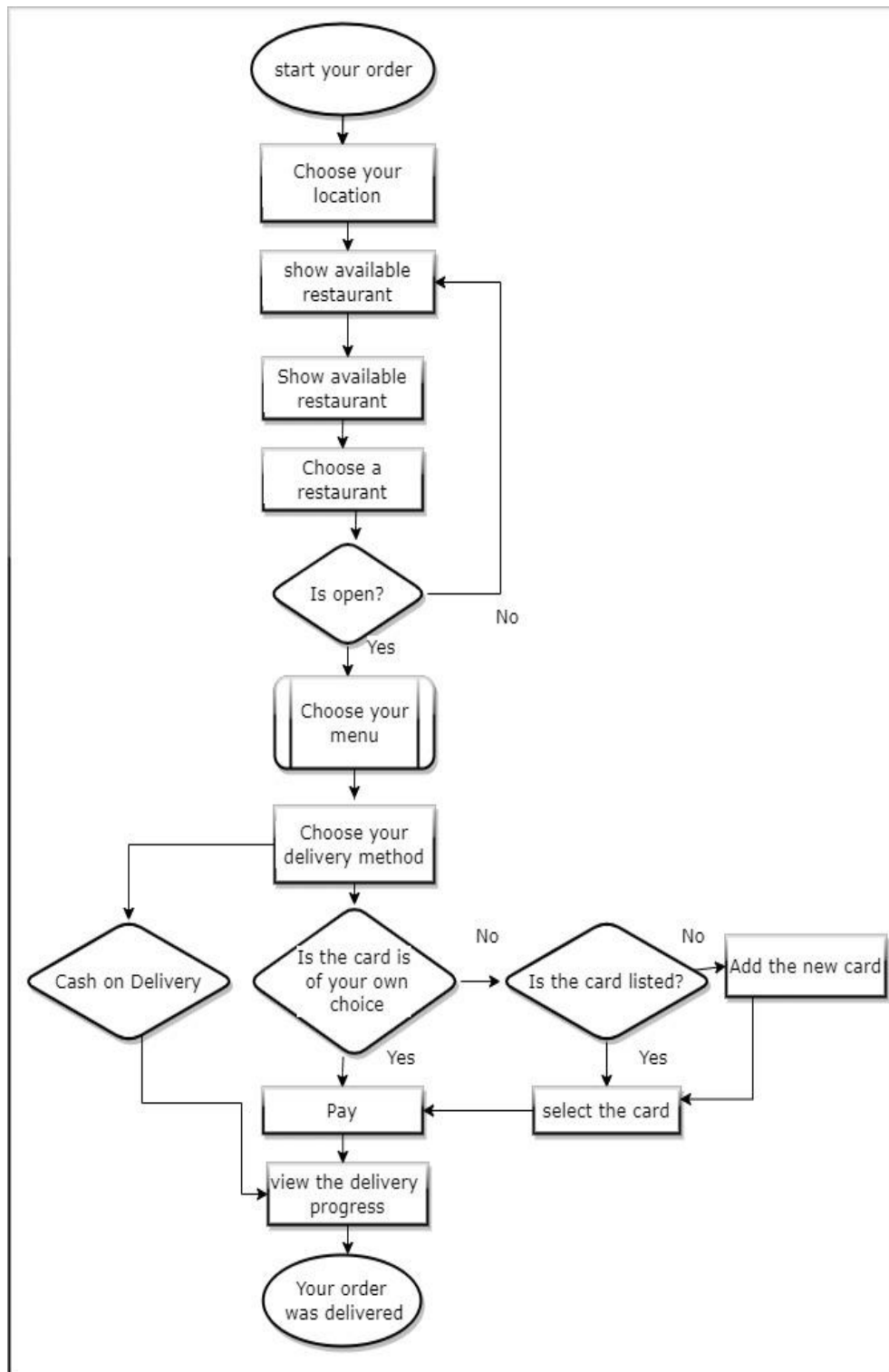
FIGURE 8 PROCESS FLOW DIAGRAM
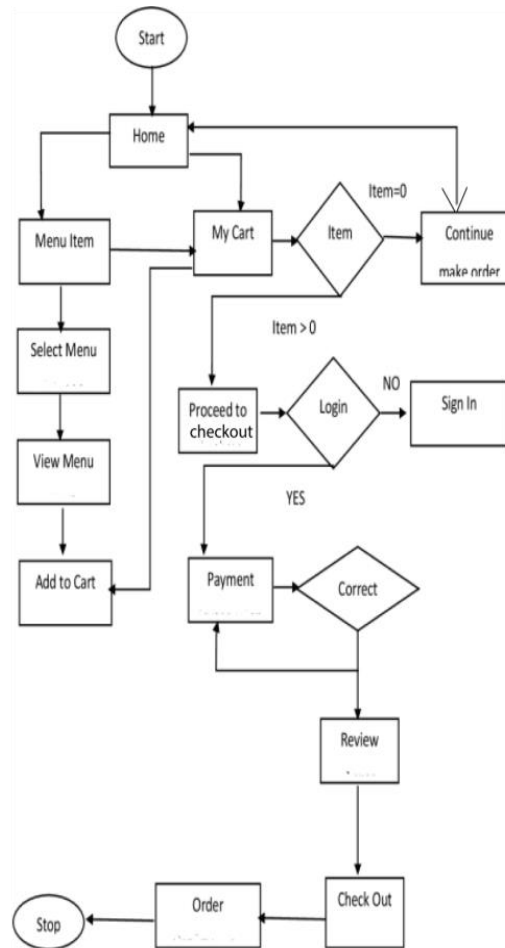
3.3. Design Models

The model of the system is described in which class diagram, customer sequence diagram and seller sequence diagram along with their descriptions are added.

3.3.1. Class Diagram

Class diagram describes the attributes and operations of a class and also the constraints imposed on the system.

In software engineering, a class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among objects. (Russell, 18 December 2017)

The purpose of class diagram is the following:

1. Shows static structure of classifiers in a system.
2. Diagram provides a basic notation for other structure diagrams prescribed by UML.
3. Helpful for developers and other team members too.

4. Business Analysts can use class diagrams to model systems from a business perspective.
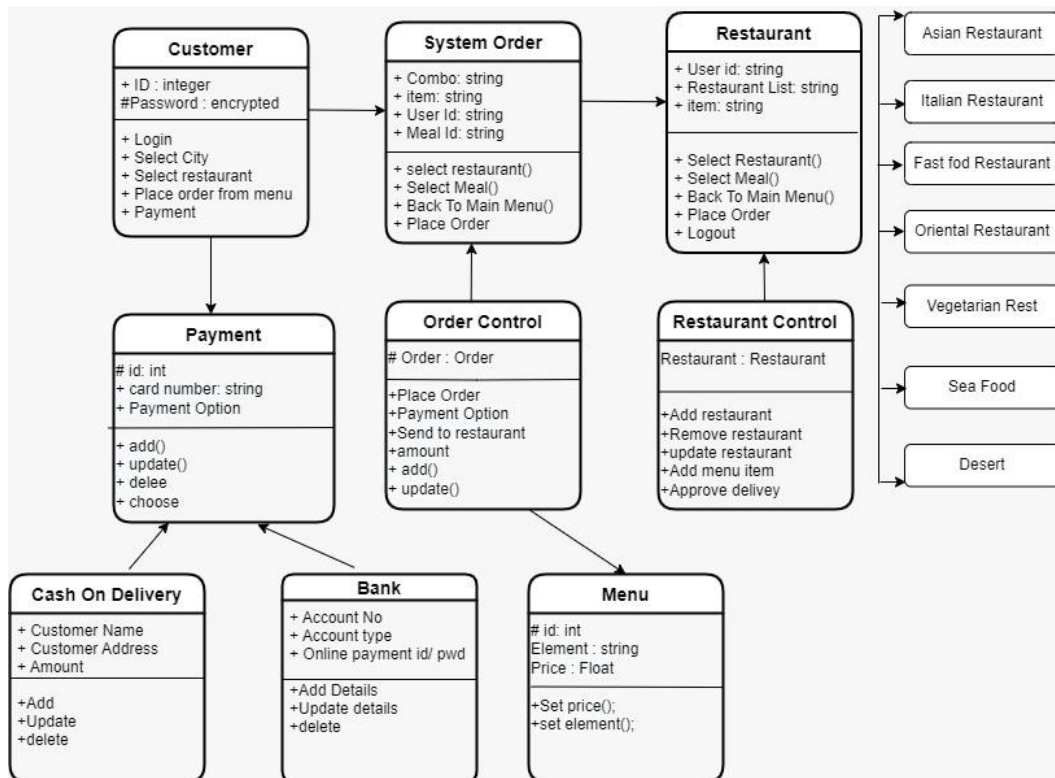
FIGURE 10 CLASS DIAGRAM

3.3.2. Customer Sequence Diagram

A sequence diagram shows the sequence of messages passed between objects. Sequence diagrams can also show the control structures between objects.
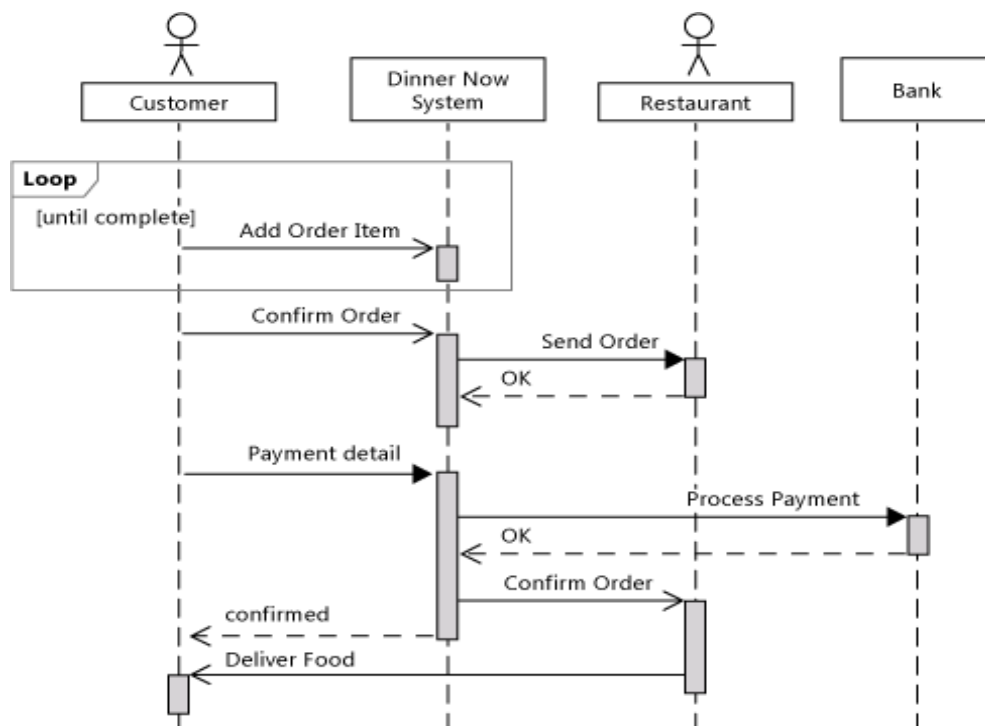

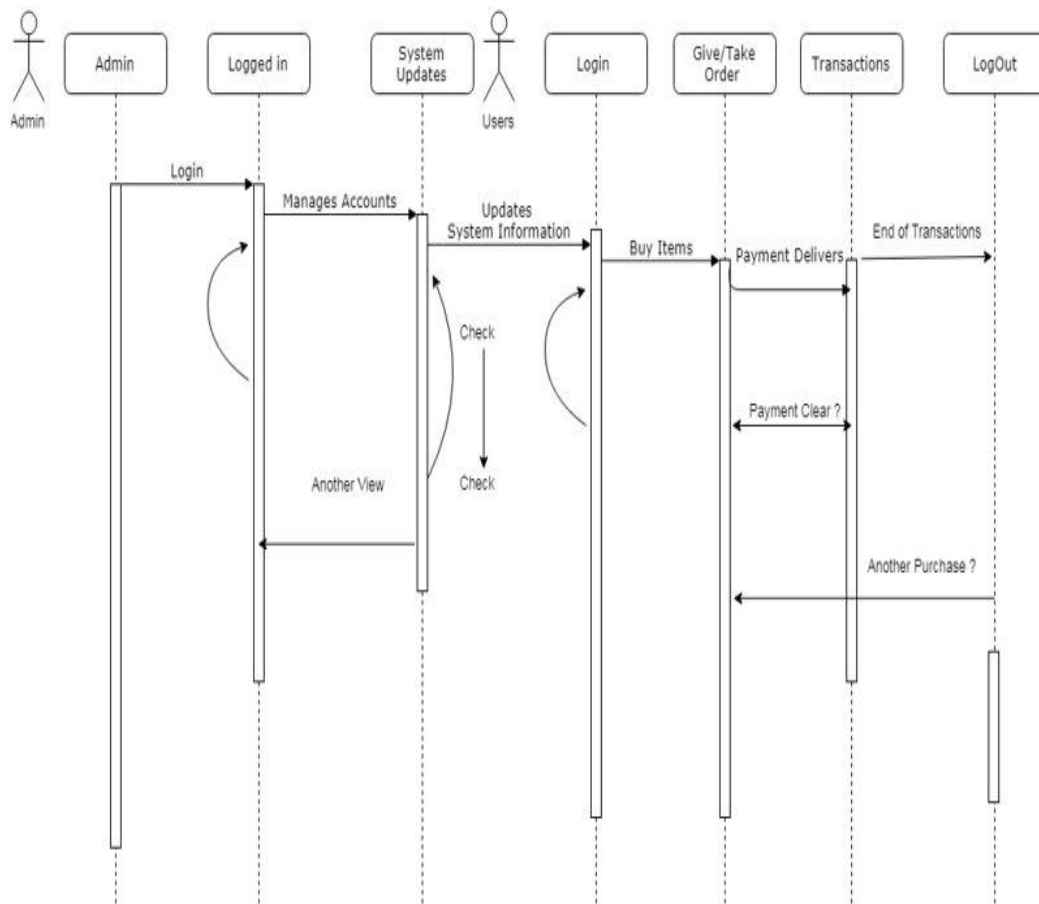FIGURE 11 CUSTOMER SEQUENCE DIAGRAM

Customer Sequence Diagram Description

Here all the description of the customer sequence is explained in which customer is a person who will work as an actor.

TABLE 5: USER SEQUENCE DIAGRAM DESCRIPTION

Sequence ID	CSD
Sequence Name	Customer sequence diagram
Actors	Customer: secondary actor interacts only specific parts.
Description	Customer places order from chosen restaurant menu which is then stored in the DB. In return DB sends the feedback to the customer that the order is placed.
Normal Flow	• Customer places an order from menu. • Order is stored in DB. • Feedback is sent to customer. • Order confirmation is sent to customer.

3.3.3. Seller Sequence Diagram

In seller sequence diagram, admin firstly sign up for using website and maintaining any menu. After sign up, admin can use website regularly by just login. The user will just make orders according to desire by using filters for price search.

FIGURE 12 SELLER SEQUENCE DIAGRAM

Seller Sequence Diagram Description

Below is a table of seller sequence diagram in which everything is described. Here seller is a secondary actor. As good design can have lots of small methods in different classes. Because it is difficult to figure out the overall behavior of the design, so we draw a seller sequence diagram to verify the behavior.

TABLE 6: SELLER SEQUENCE DIAGRAM DESCRIPTION

Sequence ID	SSD
Sequence Name	Seller sequence diagram
Actors	Seller: secondary actor interacts only specific parts.
Description	When customer places order then the employee of that restaurant confirms the order by giving customer delivery timing. All the data is stored in DB. In return DB sends the feedback to the employee that the order is places. Employee then starts preparing orders. And sends a response. Then delivery completion entry is made to the DB and feedback is given accordingly.
Normal Flow	1: Sign up user 2: Login 3: Select category from dashboard 4: Upload menu 5: See results

CHAPTER 4

IMPLEMENTATION

4. Implementation

In this chapter, we'll focus on an implementation of "Eten Heist" application. Where administrator and user can perform many activities on this system. The most important goal of this phase is to develop the application. The work in this phase should be much straighter forward as a result of the work done in the planning and design phases. This phase involves changing design specifications into executable programs. When the design is there, developers can have an idea on looks of application. All that is needed by developers is to put them at one place to understand about the intended project. (Bhasin, (8 May, 2019))

4.1. Activity Diagram for Admin Module implementation

An activity diagram visually presents a series of actions or flow of control in a system similar to a flowchart or a data flow diagram. Below is the activity diagram for admin module implementation.
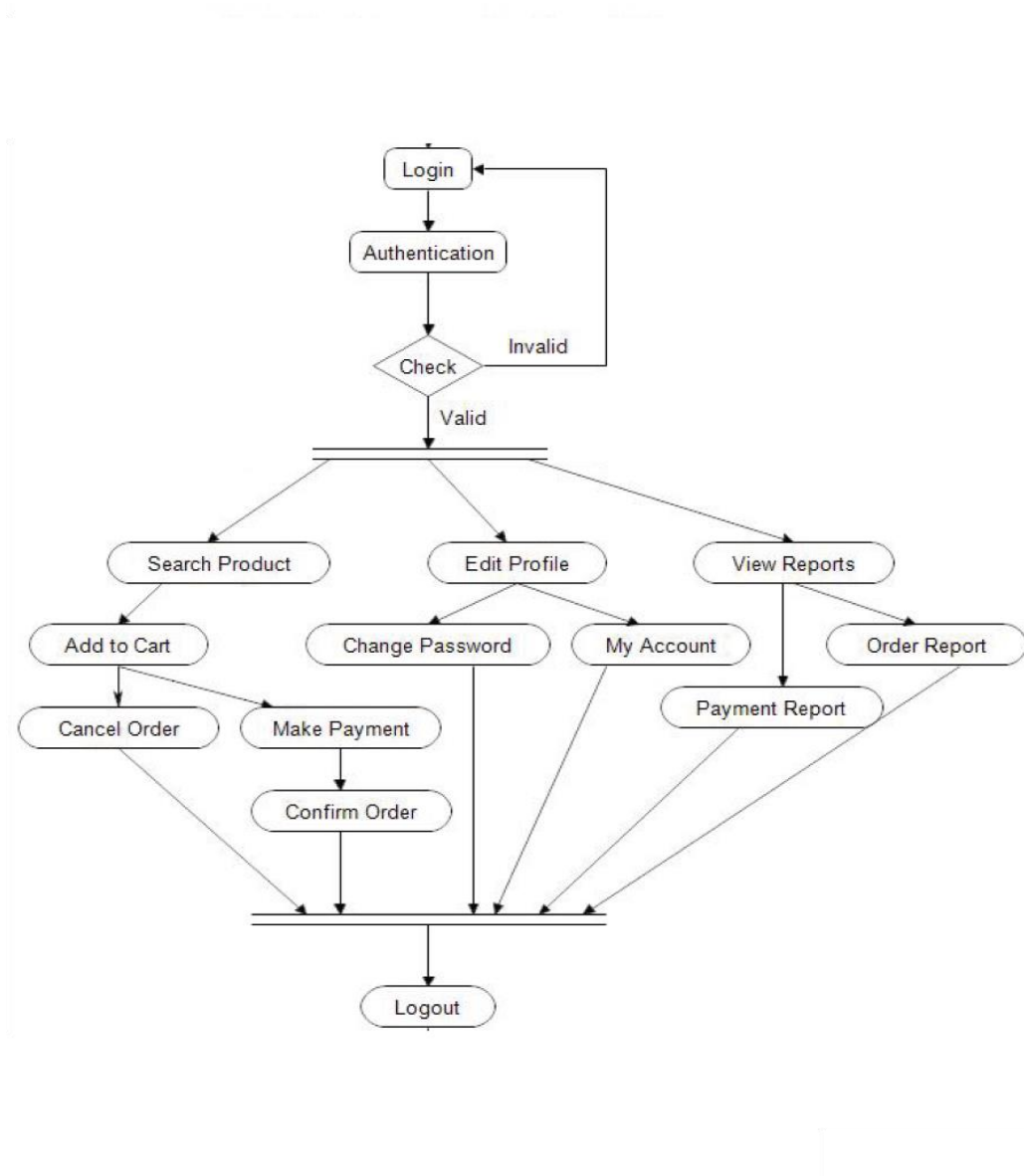
FIGURE 13 ACTIVITY DIAGRAM FOR ADMIN MODULE IMPLEMENTATION

4.2. Activity Diagram for User Module implementation

An activity diagram visually presents a series of actions or flow of control in a system similar to a flowchart or a data flow diagram. Below is the diagram for user module implementation.
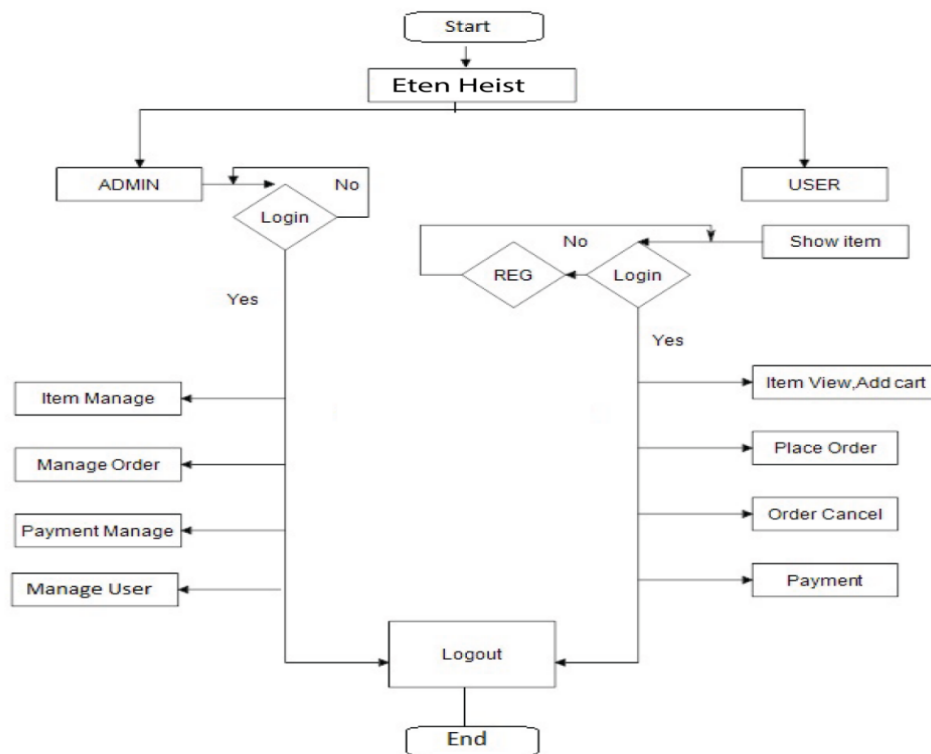

FIGURE 14 ACTIVITY DIAGRAM FOR USER MODULE IMPLEMENTATION

4.3. User Interface

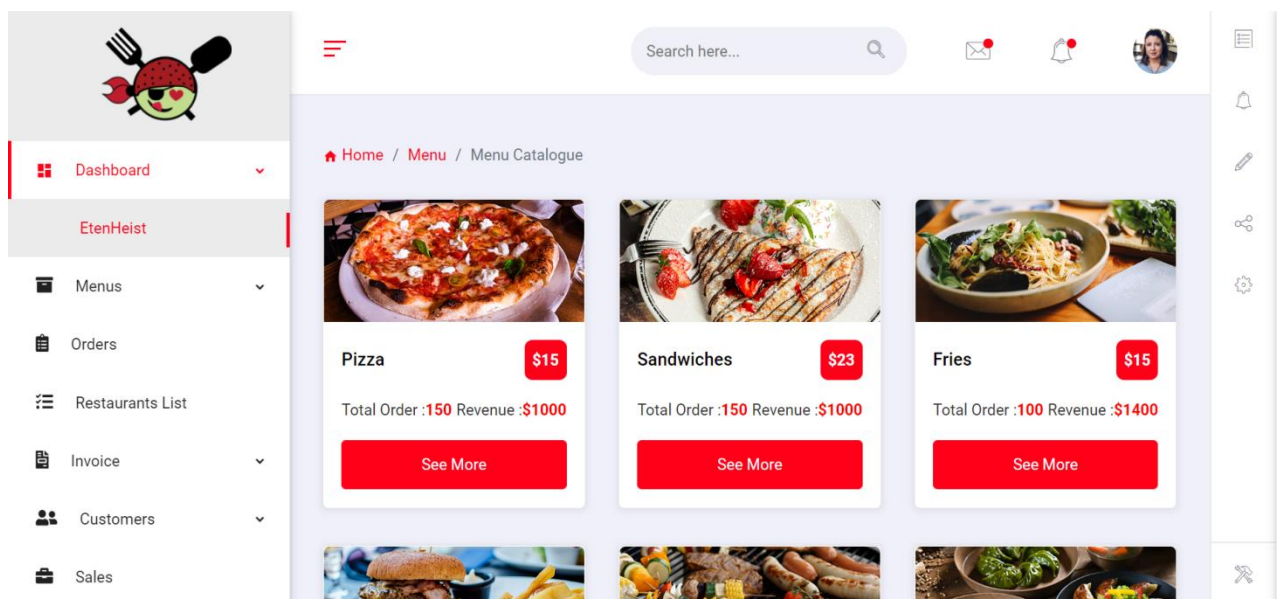Presenting you some screenshots of our project. Here you can see our interface in which our logo is shown as well as prices of different food is also available.

FIGURE 15 ADMIN PANEL PRODUCT CATEGORY

4.3.1. Admin Dashboard

Below is the figure of admin dashboard. Here admin can see total orders, cancel order, pending orders and everything related to ordering etc.
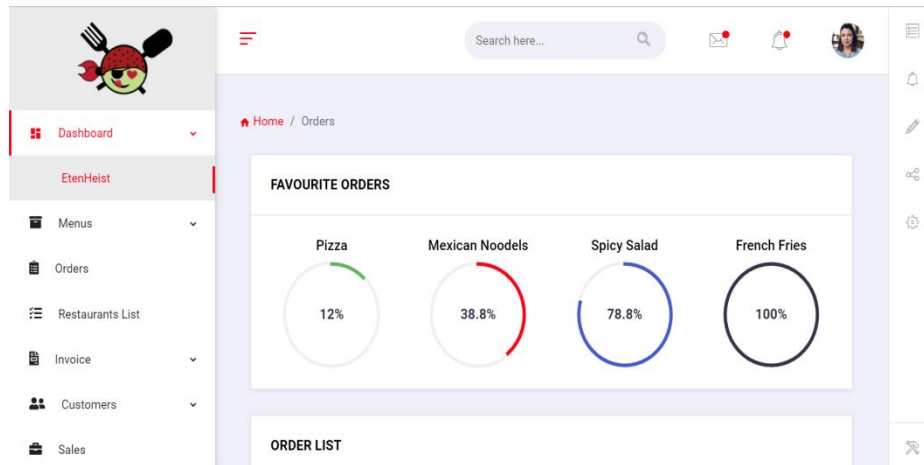
FIGURE 16 ADMIN DASHBOARD

4.3.2. Admin panel Invoice detail

Below is the figure of admin panel invoice detail.
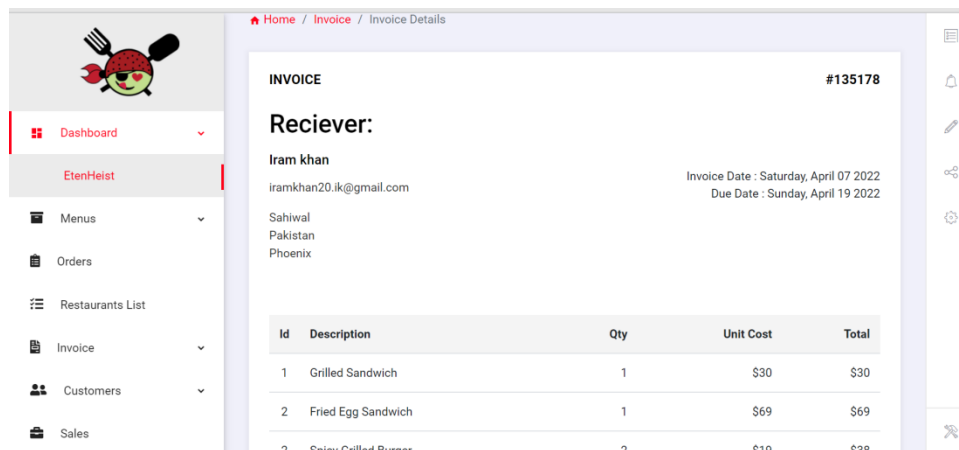
FIGURE 17 ADMIN PANEL INVOICE DETAIL

4.3.3. Admin Panel Widgets
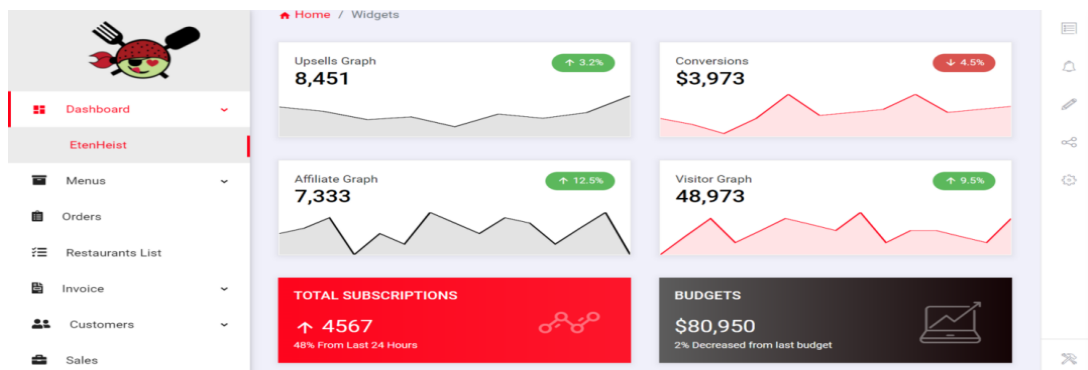
Below is the figure of admin panel widgets.

FIGURE 18 ADMIN PANEL WIDGETS

4.3.4. Admin Panel Menu Grid

Below is the figure of admin panel menu grid.
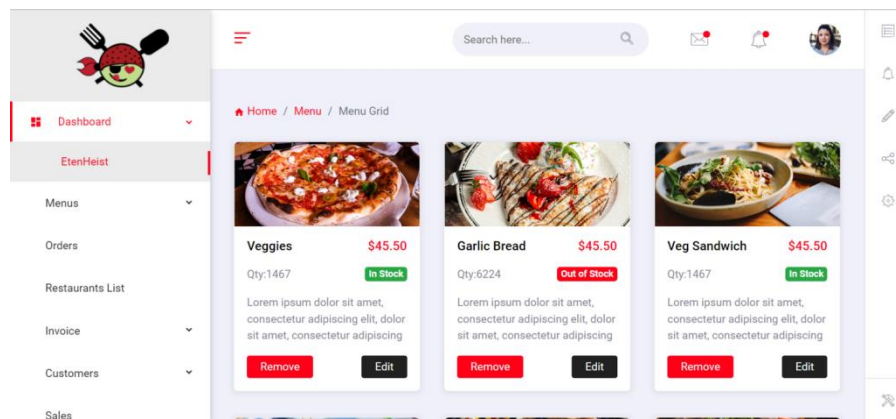
FIGURE 19 ADMIN PANEL MENU GRID

4.3.5. Admin Panel Model List
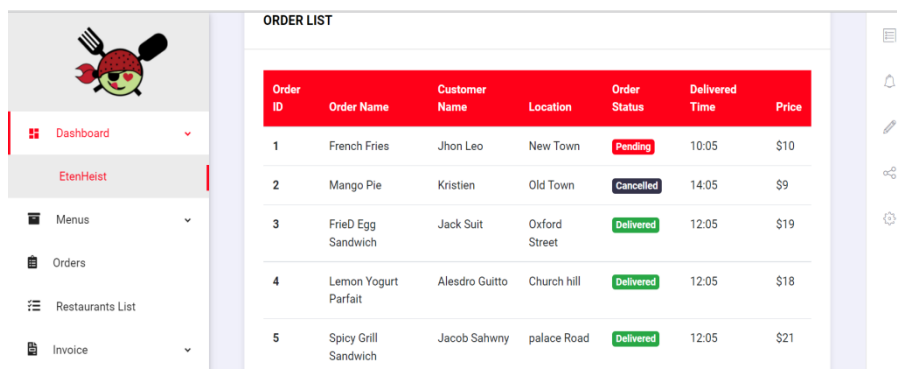
Below is the figure of admin panel model list.

FIGURE 20 ADMIN PANEL MODEL LIST

4.3.6. Menu

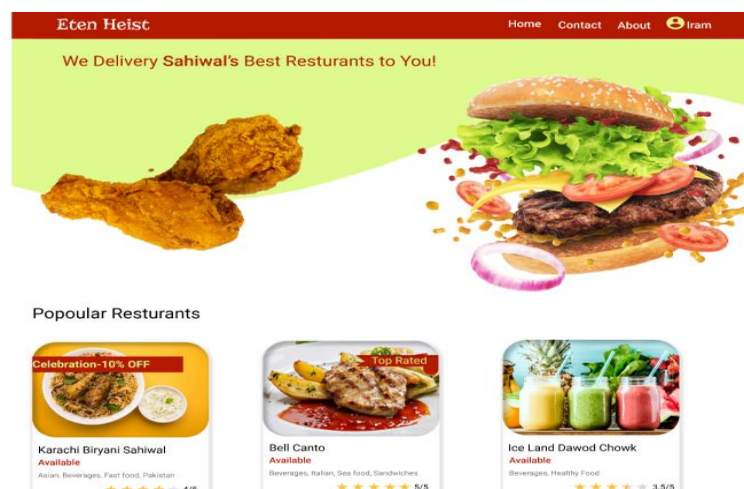Here our menu is shown in which user can search food by using filters for price search according to his pocket money.

FIGURE 21 ETEN HEIST FIGURE

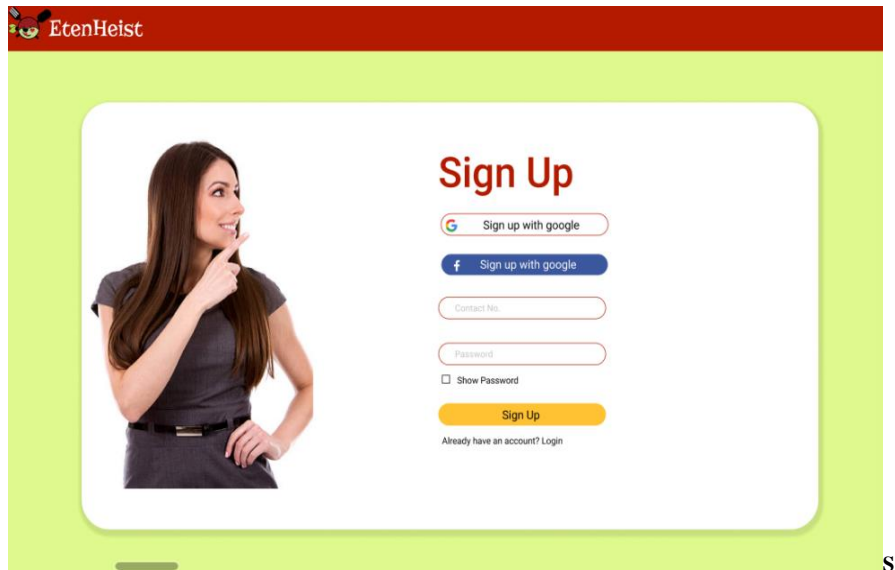### 4.3.7. Sign-up Page
Below is the figure of sign-up page.

FIGURE 22 SIGN UP PAGE

4.3.8. Login Page
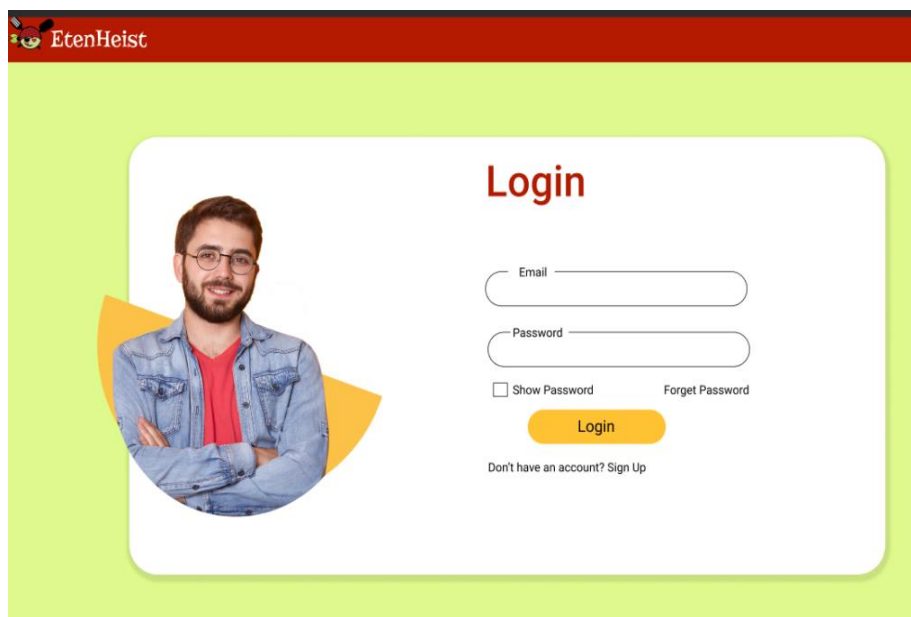Below is the figure of Login Page. Here user will login by writing his e-mail address and password.

FIGURE 23 LOGIN PAGE

4.3.9. Lunch Menu page
Below is the figure of lunch menu page. Here all the menu is displaying according to cities. We can select favorite food of specific city from specific restaurants.

FIGURE 24 SPECIAL DEALS

FIGURE 25 LUNCH MENU PAGE

4.3.10. Popular Brands

Below is the figure of popular brands.

FIGURE 26 POPULAR BRANDS

4.3.11. Price Range Page

Below is the figure of price range page.
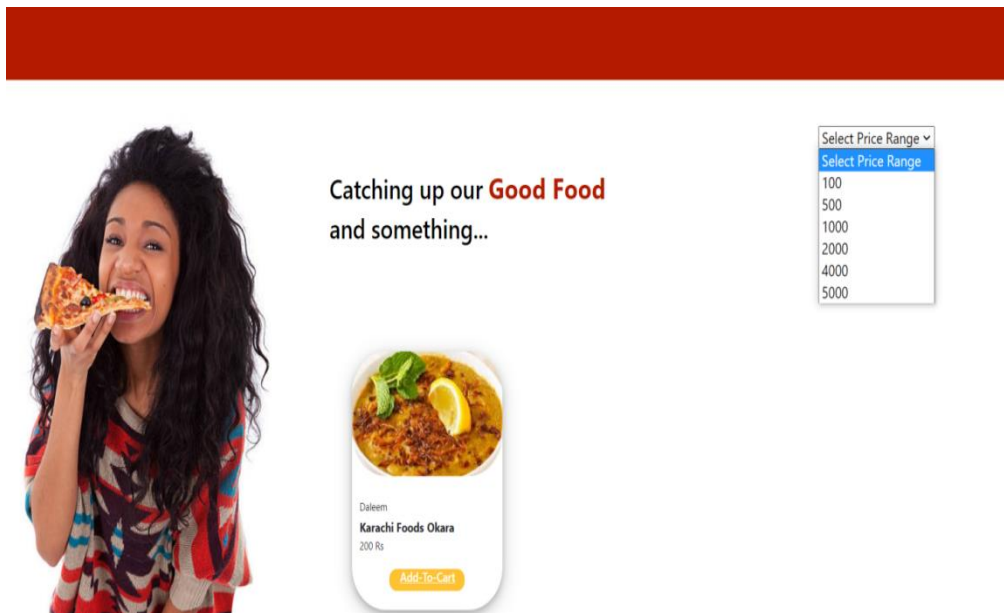
4.3.12. Cart Detail Page

Below is the screenshot of cart page from our website.
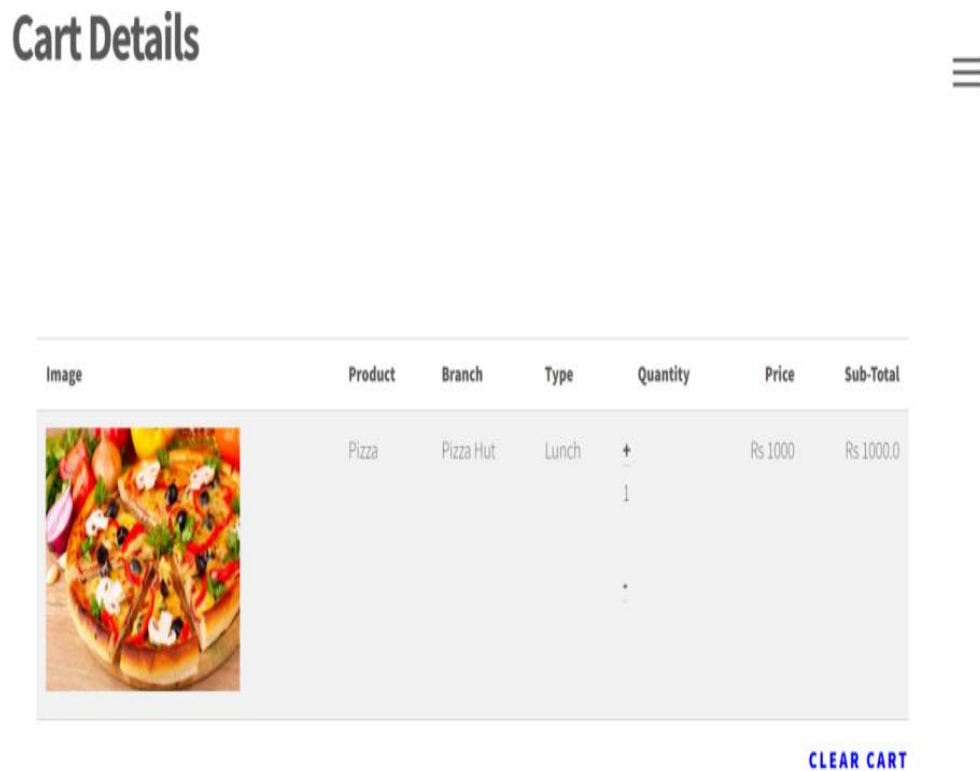
4.3.13. Problem interface

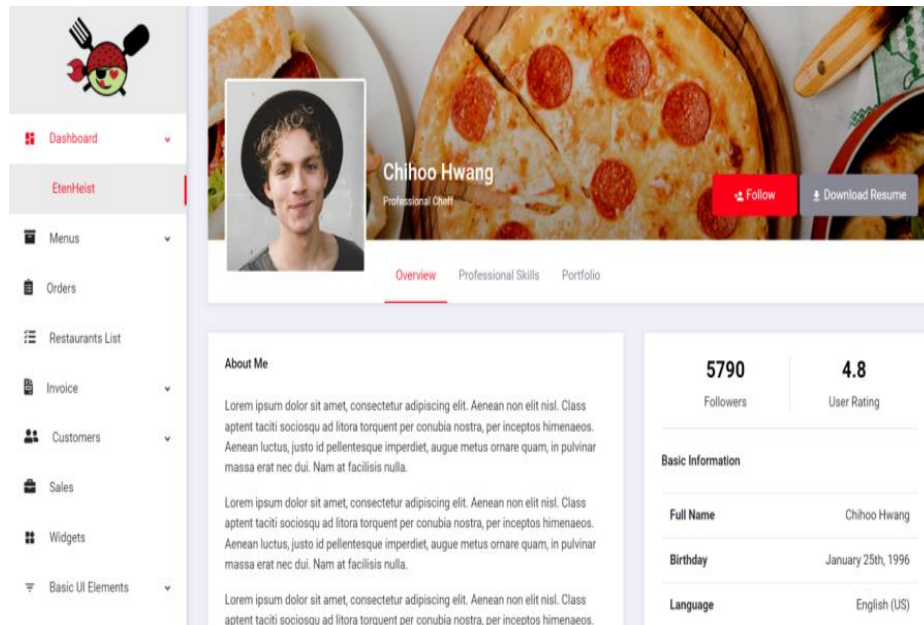Below is the screenshot of problem interface page from our website.

FIGURE 29 PROFILE INTERFACE

4.3.14. Product Detail Page

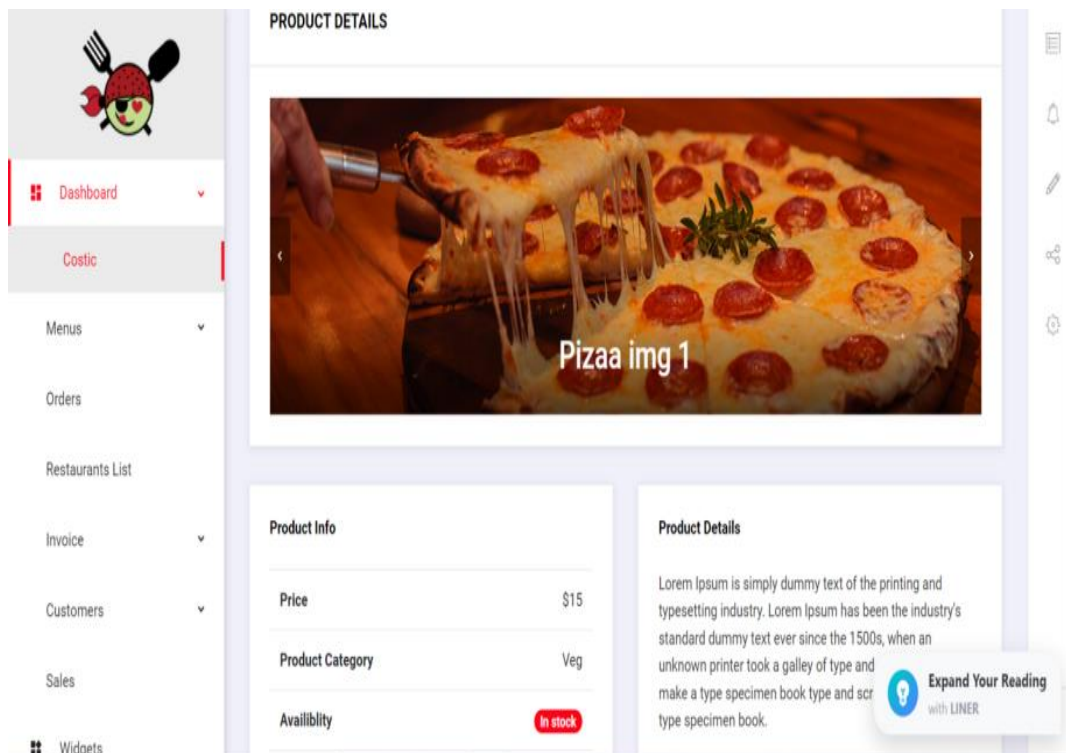Below is the screenshot of product details page from our website.

FIGURE 30 PRODUCT DETAIL PAGE

CHAPTER 5

TESTING AND EVALUATION

5. Manual Testing

Manual testing is a software testing process in which test cases are executed manually without using any automated tool. All test cases executed by the tester manually according to the end user's perspective. It ensures whether the application is working, as mentioned in the requirement document or not.

The System is manually tested by multiple user all modules and functionality are performed successfully. Different input is taken from the user and system will provide recommendation on respective input. (Bhasin, (8 May, 2019))

5.1.1. System testing

Once the system has been successfully developed, testing has to be performed to ensure that the system working as intended. This is also to check that the system meets the requirements stated earlier. Besides that, system testing will help in finding the errors that may be hidden from the user. There are few types of testing which includes the unit testing, functional testing and integration testing. The testing must be completed before it is being deploy for user to use.

5.1.2. Unit Testing

Unit testing is a type of software testing where individual units or components of software are tested. Unit testing of software applications is done during the development (coding) of an application. Unit Tests isolate a section of code and verify its correctness. In procedural programming, a unit may be an individual function or procedure. Unit testing is usually performed by the developer. (Canivel, July 19,2021)

Unit Testing 1: Login as FYP Committee

Testing Objective: To ensure the login/Register form is working correctly

TABLE 7: UNIT TESTING 1 DESCRIPTION

No.	Test case / Test script	Attribute and Value	Expected Result	Result
1	Verify user login click on the login form with correct input data	Username: admin Password: admin	Successfully logged into the Recommender page of the system	Pass
2	Take to Registration form on clicking "Register Now"	And then click on the register button to get registered.	Successfully register the new user	Pass

Unit Testing 2: Edit Profile

Testing Objective: To ensure the edit profile form is working properly.

TABLE 8: UNIT TESTING 2 DESCRIPTION

No.	Test case / Test script	Attribute and Value	Expected Result	Result
1	Updated User profile information by clicking on edit button	Updated values of the respective fields.	Successfully updated the user information in database	Pass

5.1.3. Functional Testing

The functional testing will take place after the unit testing. In this functional testing, the functionality of each of the module is tested. This is to ensure that the system produced meets the specifications and requirements. (Marasigan, (July 29,2021))

Functional Testing 1: Login with different roles

Objective: To ensure that the correct page with the correct navigation bar is loaded.

TABLE 9: FUNCTIONAL TESTING DESCRIPTION

No.	Test case/Test script	Attribute and Value	Expected Result	Result
1.	Login as a User	Username: Ir@m Password: 123123	Main Page for the user loaded with the buy and sell options	Pass
2.	Login as an admin	Username: admin Password: admin	Admin Dashboard should load.	Pass

5.1.4. Integration Testing
Integration Testing 1: Login with different roles

Objective: To ensure that the correct page with the correct navigation bar is loaded.

TABLE 10: INTEGRATION TESTING DESCRIPTION

No.	Test case/Test script	Attribute and Value	Expected Result	Result
1.	Login as a User	Username: Ir@m Password: 123123	Main Page for the user loaded with the buy and sell options	Pass
2.	Displaying menu	Input Data in the given below form	Will publish the menu dishes on the website	Pass
3	Placing order	Input keywords in	Will show you	Pass

		the search bar for the required menu	the list of menus	

5.2. Automated Testing

Automated testing is the technique of testing a product that requires special application tools for controlling the test execution and eventually evaluates test outputs with predicted ones. These tests are automated through these special tools and hence the name automated testing requires little or no involvement from testing engineers or testers.

5.2.1. Performance Testing
Automated Testing 1: Load Homepage

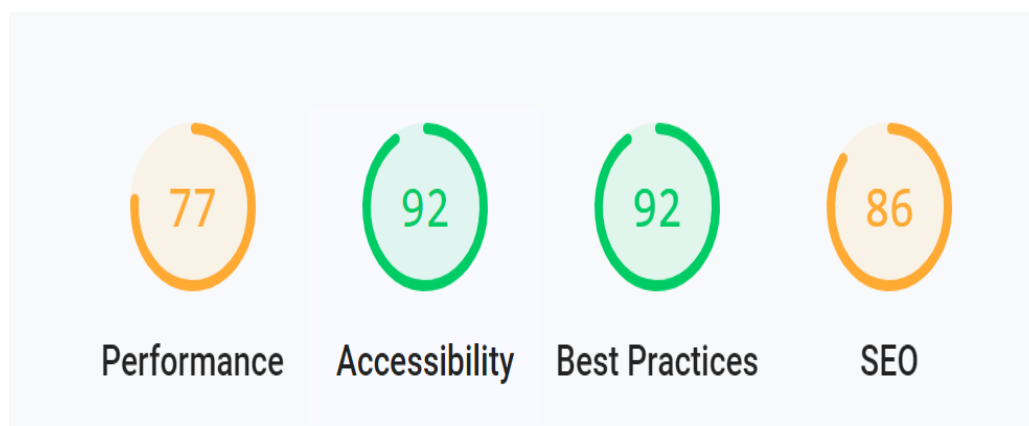**Objective:** To measure the time taken by page to load.

FIGURE 31 PERFORMANCE MEASURE

5.2.2. Memory Testing
Automated Testing 1: Load Homepage

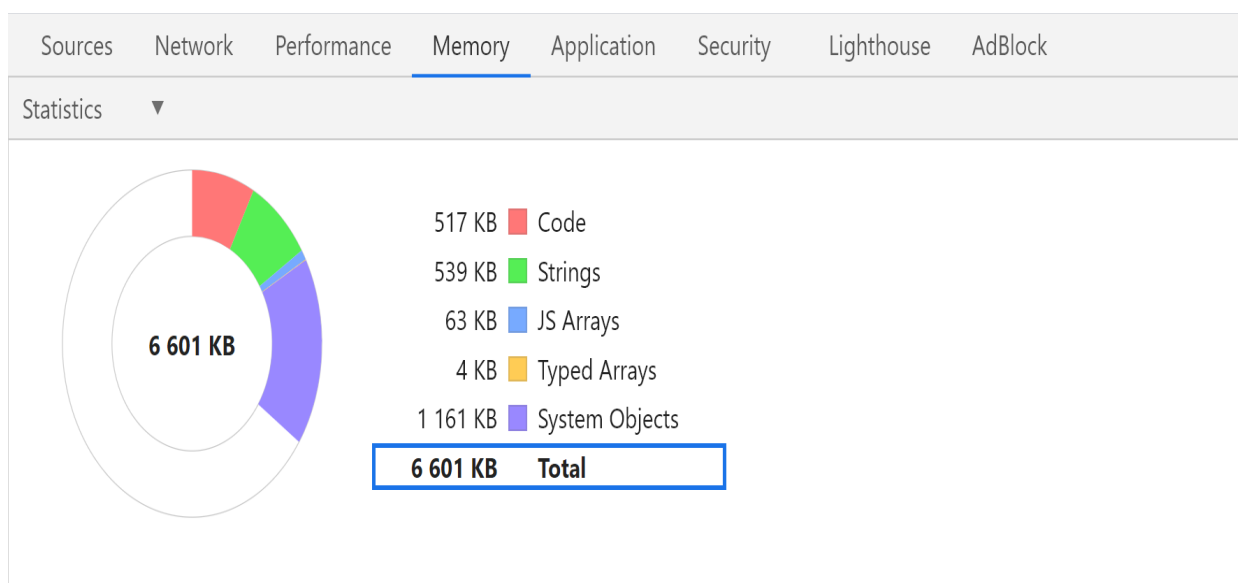**Objective:** To measure the memory taken by page to load.

FIGURE 32 MEMORY CONSUMPTION

CHAPTER 6
CONCLUSION AND FUTURE WORK

6. Conclusion

The goal is to provide best quantity and quality of food to the customers with a secure platform with local payment methods. The goal is to provide customer low-cost delivery with an option to pay online or cash on delivery. Restaurants will benefit from the system if they want to transmit orders by their own riders or if they want us to serve orders if there aren't enough riders. Delivery charges will be low and for the restaurant's community of Pakistan to easily delivery the food. They can choose our riders or their own delivery boys. This system also involves online transaction method to ease customers.

6.1. Future Work

The next version can carry a whole new feature which would help the platform to grow its business as well as compete with the international marketplace giants. Our Future work would include the feature listed below:

- Integrate all the online payment gateways to compete in the national market.
- Launch mobile based application to access the platform on the go.
- Integrate recommendation system to help users to search better on the platform.

7. References

[1] Canivel, Roy (July 19,2021) riders
[2] Marasigan, Lorenz (July 29,2021) food panda rider's glitch
[3] Delivery Hero (2016-12-10)
   from https://www.foodpanda.com.kh/en/
[4] Russell, Jon (18 December 2017) food panda deliveries
[5] Hitesh Bhasin (8 May,2019) how food panda earns money
   from: http://www.marketing91.com/marketing-mix-foodpanda/