



Daffodil
International
University

Green Leaf Restaurant

By

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A Project submitted in partial fulfillment of the requirement for the degree of
Bachelor of Science in Software Engineering

Department of Software Engineering
DAFFODIL INTERNATIONAL UNIVERSITY

Semester – Fall'2022

APPROVAL

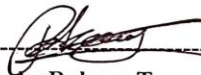
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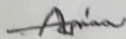
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It hereby declares that project has done by Md. Abdullah Al Azim under the supervision of Ms. Tapushe Rabaya Toma, Assistant Professor, Department of Software Engineering, Daffodil International University.

I also declare that neither this project nor any part of this has been submitted to anywhere.

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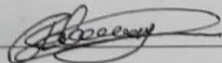
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ABSTRACT

Nowadays, people are awaked about viruses. And they keep a distance from where they get infected with virus. Restaurant is one place people get gather most. So it's a place where people get affected most. So, they keep a social distance from people even menu card. So we developed a Digital menu system where people order food through scanning a QR code that enables ease to them.

And only staff got registered to the system and confirm consumers order foods, prepared and deliver to them. Hopefully, it will be handy for both staffs and people who order food through QR code.

This application is developed with PHP languages, a framework like Laravel.

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Chapter1. Introduction

1.1 Introduction

This document is prepared to determine documentation for “Green Leaf Restaurant”. It is a handy app for the peoples so that they can reach the restaurant and order through QR code. A consumer can get all the information about the food items. He/she can order every available food items from the restaurant.

1.2 Objective

People faces problems during food ordering with waiters. After Covid-19 pandemic, people awake about virus and keep distance with Menu Card. Moreover, sometimes they feel bored about to ask food and sometimes await a long. Our web-app is for them so they can easily communicate, order food without waiting or hesitate. Moreover, this app gives high accuracy for data which never manipulate by a person or group.

The objectives of the Green Leaf Restaurant are:

- Check the availability of food items
- Helping consumers to order and get their favorite foods
- Searching for a specific food item

1.3 Expected Outcome

This app is for helping people and restaurant staffs.

So, the expected outcome of this project is

- App will be user friendly
- People get advantages.
- Our app will be popular around the whole world and use in and every restaurant.

Chapter 2. Overall Overview

2.1 Introduction

Our proposed system will be available for all types of users. The system will provide different features such as search foods and order or cancel.

2.2 Product Perspective

Green Leaf Restaurant is a system in which consumers from worldwide who visit to the restaurant scan a QR code to search and order a specific food items to acquire food without hesitate and wait a long. They check if the food items are available or not. They can get information about food items.

2.3 Product Function

After opening the website by scanning a QR code, the consumers will see a page opening an option to search their specific food items or direct order any food items. Consumers don't need to sign in or sign up to search foods or using this web-app. The sign in options are needed for staffs.

2.4 User characteristic

This site doesn't require any specific computer knowledge to use it except the developers and administrators of it. Standard users are thought to be from any age and gender and from any nationality who can use the app. On the other hand, administrators and potential developers need a high level of expertise to understand technologies.

Chapter 3. Background Analysis

3.1 Introduction

This is a handy app for consumers so that they can search and check the authenticity of every food items. Consumers are also bored about the waiters to wait a long to order foods. So, they can use this app to order food without any hesitate.

3.2 Project Purpose

At the post COVID-19 pandemic, people awaked to be safe. At the restaurant, they want a social distance from physical card menus. So we built this app for them to ensure healthy environment.

3.3 Challenges

There are so many challenges in this project because this is developed in a different environment with different programming languages.

- New coding Environment.
- Difficult to learn a new framework.
- Difficult to draw any diagram for a lack of resources.
- Difficult to make it User friendly.

Chapter 4. Feasibility Study

4.1 Introduction

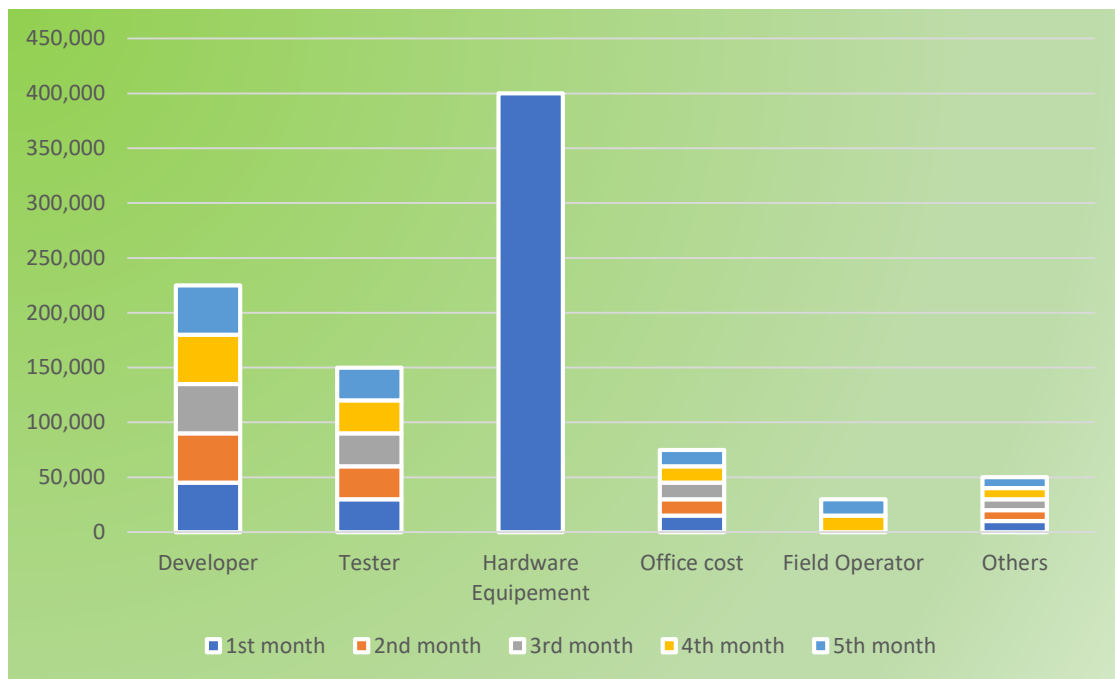
Feasibility study refers of a software product in words of how much beneficial outcome after developing that software and how to cut cost correctly.

4.2 Technical Feasibility

In technical feasibility we study about our hardware capability and capability of our team. An existing technology may not be used and upgradation need to fulfil to succeed the project.

4.3 Economic Feasibility

Here we discuss about our project economic feasibility. Such as cost for developing this project and outcome as benefit.



*Cost calculated with BD currency

4.4 Schedule Feasibility

In this session, we talk about our project time scheduling. Schedule feasibility help us how timeline or deadline is analyzed for a proposed project to reduce cost. It has a great impact for not to fail to complete the project.

Here we have estimated our schedule management through GANTT (Generalized Activity Normalization Time Table) chart.

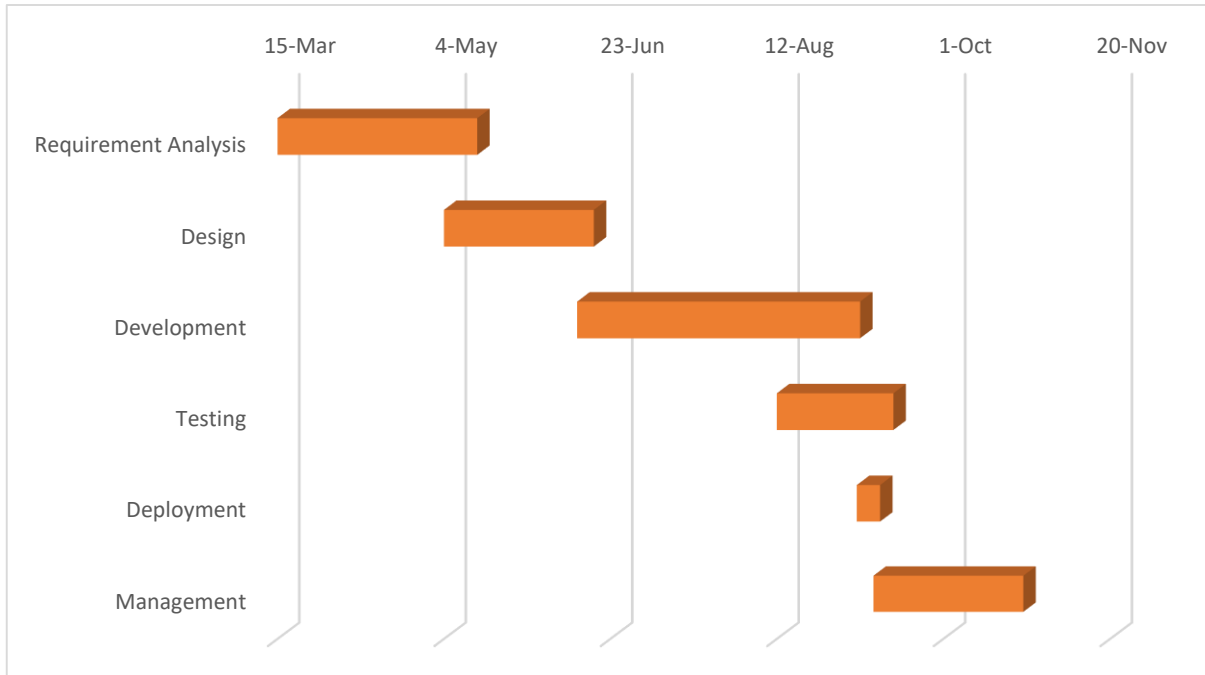


Fig 4.4 Gantt Chart

Chapter 5. Stakeholder

5.1 Introduction

If one or a company is directly or indirectly involved to a project, he/she/they will be a stakeholder. There are two types of stake holder. Such as Internal stakeholder and External stakeholder.

5.2 Internal Stakeholder

Those who are directly involved in a project, they are internal stakeholder.

In our project, the internal stakeholders are,

Designer

Developer

Tester

5.3 External Stakeholder

Those who are indirectly involved to a project, they are external stakeholder.

In our project, the External stakeholders are,

Consumers

Chapter 6. Software Requirement Specification

6.1 Introduction

In this section, all software requirements will be explained in detail. All requirements are divided into two groups as functional and non-functional.

6.2 Functional Requirements

A functional requirement for a system defines product features and functions that accomplished by the developer, which describe the services of the system. This is a clear-cut to both of developers and stakeholders.

- **F.R. 1 – Scan QR Code**

DESCRIPTION-Guest scan the QR code to enter restaurant website.

INPUT-QR Code.

PROCESSING-Redirected to website home page.

OUTPUT- Displays All the food items.

- **F.R. 2 – Staff login & Authentication**

DESCRIPTION-Staff login into the application.

INPUT- For authentication: Email, Password.

PROCESSING- Logs in to the dashboard.

OUTPUT- Shows dashboard.

- **F.R. 3 – View food items**

DESCRIPTION-Guest and staff can see the food items' info.

INPUT- N/A

PROCESSING- Showing food info.

OUTPUT- Shows foods.

- **F.R. 4 – Edit Food Item**

DESCRIPTION-Staff can change food items.

INPUT- Food Items values

PROCESSING- display a window.

OUTPUT- Change selected food item.

- **F.R. 5 – Add to cart**

DESCRIPTION-Guest select specific food to add into cart.

INPUT- N/A

PROCESSING- display a window.

OUTPUT- Shows all selected food items.

- **F.R. 6 – Edit cart**

DESCRIPTION-Guest see every selected food items.

INPUT- N/A

PROCESSING- display a window.

OUTPUT- Shows all food items.

- **F.R. 7 – Edit cart**

DESCRIPTION-Guest can increase or decrease food items.

INPUT- N/A

PROCESSING- display a window.

OUTPUT- Shows all food items.

- **F.R. 8 – Confirm order**

DESCRIPTION-Guest confirms order.

INPUT- N/A

PROCESSING- display a window.

OUTPUT- Shows confirmation.

6.3 Non-Functional Requirements

6.3.1 Security

As Mentioned before the end-user doesn't need to give any information in this system. They will only search for any donor. So, this is a very secure site for the end-user. Moreover, we added security for tempering data.

6.3.2 Reliability

The system provides storage of all databases on redundant computers with automatic switch over. The reliability of the overall program depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes. Thus, the overall stability of the system depends on the stability of the container and its underlying operating system.

6.3.3 Availability

The system should be available at all times, meaning the user can access it using a Phone browser, only restricted by the downtime of the server on which the system runs. In case of a hardware failure or database corruption, a replacement page will be shown. Also, in case of a hardware failure or database corruption, backups of the database should be retrieved from the server and saved by the administrator. Then the service will be restarted. It means 24 x 7 availability.

6.3.4 Maintainability

A commercial database is used for maintaining the database and the application server takes care of the site. In case of a failure, a initialization of the program will be done. Also, the software design is being done with modularity in mind so that its maintainability can be done efficiently.

6.3.5 Portability

PHP Language and Laravel architecture is used for making this application. So That end-user part is fully portable and using any phone should be able to use the features of the system, including any hardware platform that is available or will be available in the future. An end-user can use this system on phone. Either it is Android or IOS. The system shall run on the Phone

Chapter 7. Diagrams and Description

7.1 Use Case Diagram

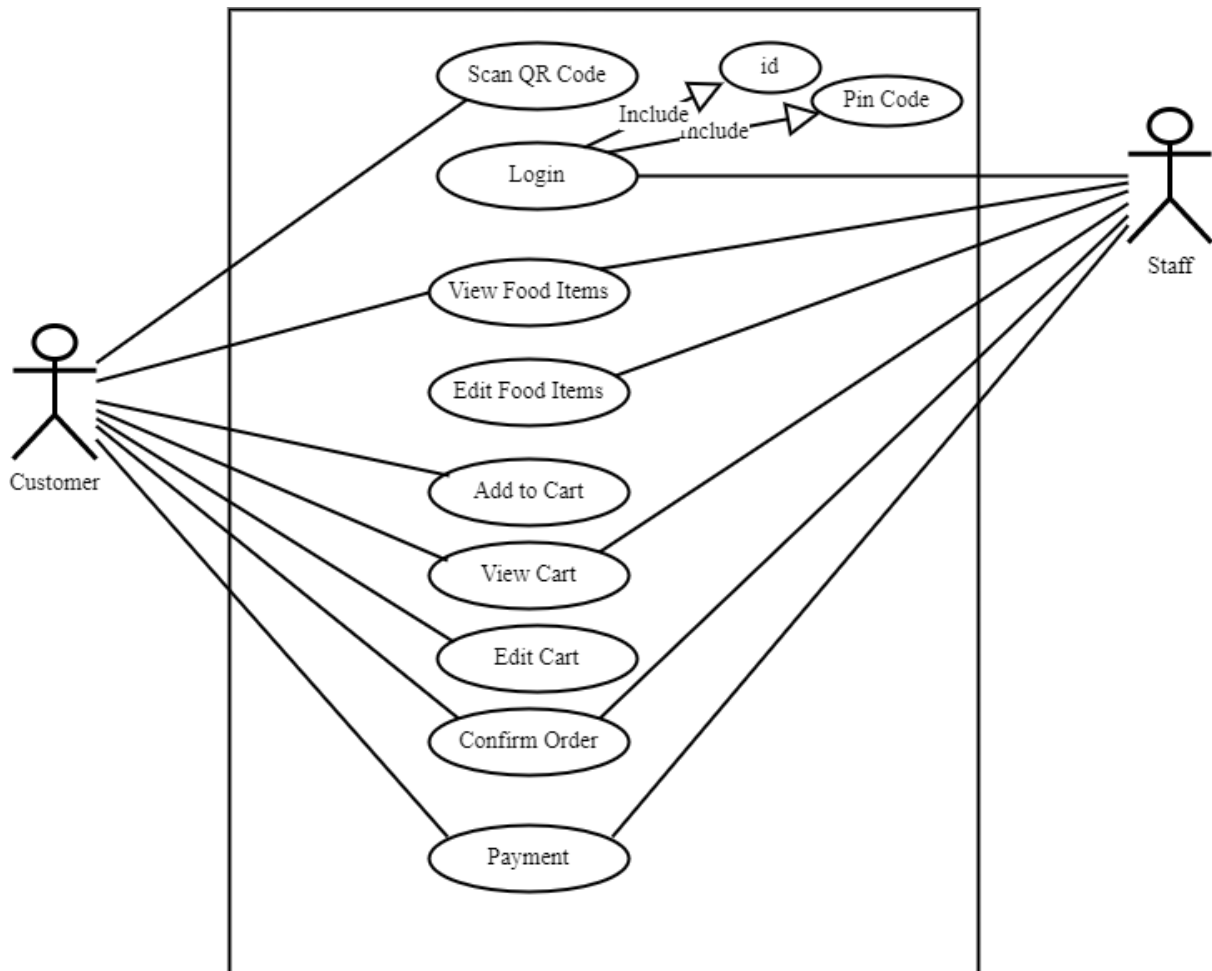


Fig 8.1.1 Use case diagram

7.2 Use Case Description

7.2.1 Scan QR Code

Use Case ID	UC-01	
Use Case Name	Scan QR Code	
Goal	Go to the restaurant website	
Precondition	Guest must be connected with internet	
Actors	Guest	
Trigger	Button	
Description	Step	Action
	1	Scan QR Code
	2	Redirected to website
Post-condition	Guest can scan anytime	
Alternative Flow	N/A	

7.2.2 Login

Use Case ID	UC-02	
Use Case Name	Log in	
Goal	Log in to the dashboard	
Precondition	Staff must be added by admin	
Actors	Admin, Stuff	
Trigger	Button	
Description	Step	Action
	1	Enter into dashboard
	2	Access every required features
Post-condition	User can log in anytime	
Alternative Flow	N/A	

7.2.3 View Food Items

Use Case ID	UC-03	
Use Case Name	View food items	
Goal	Viewing food item's information	
Precondition	Guest must select 1 food item	
Actors	Stuff, Guest	
Trigger	Button	
Description	Step	Action
	1	Enter food cart
	2	Show all ordered food items
Post-condition	Guest confirm or cancel order	
Alternative Flow	N/A	

7.2.4 Edit Food Items

Use Case ID	UC-04	
Use Case Name	Edit food items	
Goal	Changing food item's information	
Precondition	Admin Must Login	
Actors	Stuff	
Trigger	Button	
Description	Step	Action
	1	Enter food cart
	2	Show all food items
Post-condition	Guest confirm or cancel order	
Alternative Flow	N/A	

7.2.5 Add to Cart

Use Case ID	UC-05	
Use Case Name	Add to Cart	
Goal	Order for preparing food	
Precondition	Guest must select 1 food item	
Actors	Guest	
Trigger	Button	
Description	Step	Action
	1	Select 1 food item
Post-condition	Guest confirm or cancel order	
Alternative Flow	N/A	

7.2.6 View Cart

Use Case ID	UC-06	
Use Case Name	View Cart	
Goal	Ensure food order	
Precondition	Guest must select 1 food item	
Actors	Guest	
Trigger	Button	
Description	Step	Action
	1	Select 1 food item
Post-condition	Guest confirm or cancel order	
Alternative Flow	N/A	

7.2.7 Edit Cart

Use Case ID	UC-07	
Use Case Name	Edit Cart	
Goal	Increase or decrease order	
Precondition	Guest must select 1 food item	
Actors	Guest	
Trigger	Button	
Description	Step	Action
	1	Select 1 food item
Post-condition	Guest confirm or cancel order	
Alternative Flow	N/A	

8.2.8 Confirm Order

Use Case ID	UC-08	
Use Case Name	Confirm order	
Goal	Confirm to prepare	
Precondition	Guest must select 1 food item	
Actors	Guest	
Trigger	Button	
Description	Step	Action
	1	Select 1 food item
Post-condition	Guest confirm or cancel order	
Alternative Flow	N/A	

8.2.9 Payment

Use Case ID	UC-9	
Use Case Name	Payment	
Goal	Confirm to pay the bill	
Precondition	Guest must order 1 food item	
Actors	Guest, Staff	
Trigger	Button	
Description	Step	Action
	1	Order 1 food item
Post-condition	Guest confirm or cancel order	
Alternative Flow	N/A	

7.3 ER Diagram

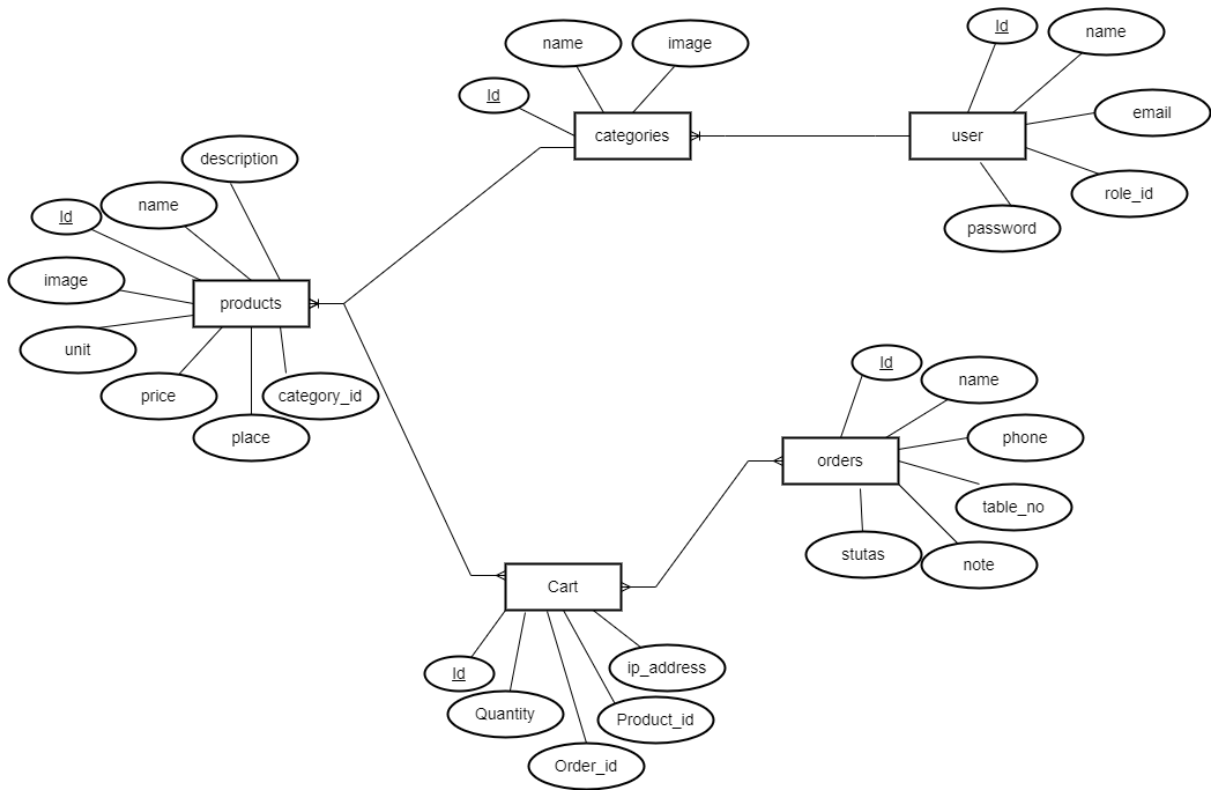


Fig7.3 ER Diagram

7.4 Sequence Diagram

7.4.1 Customer Sequence Diagram

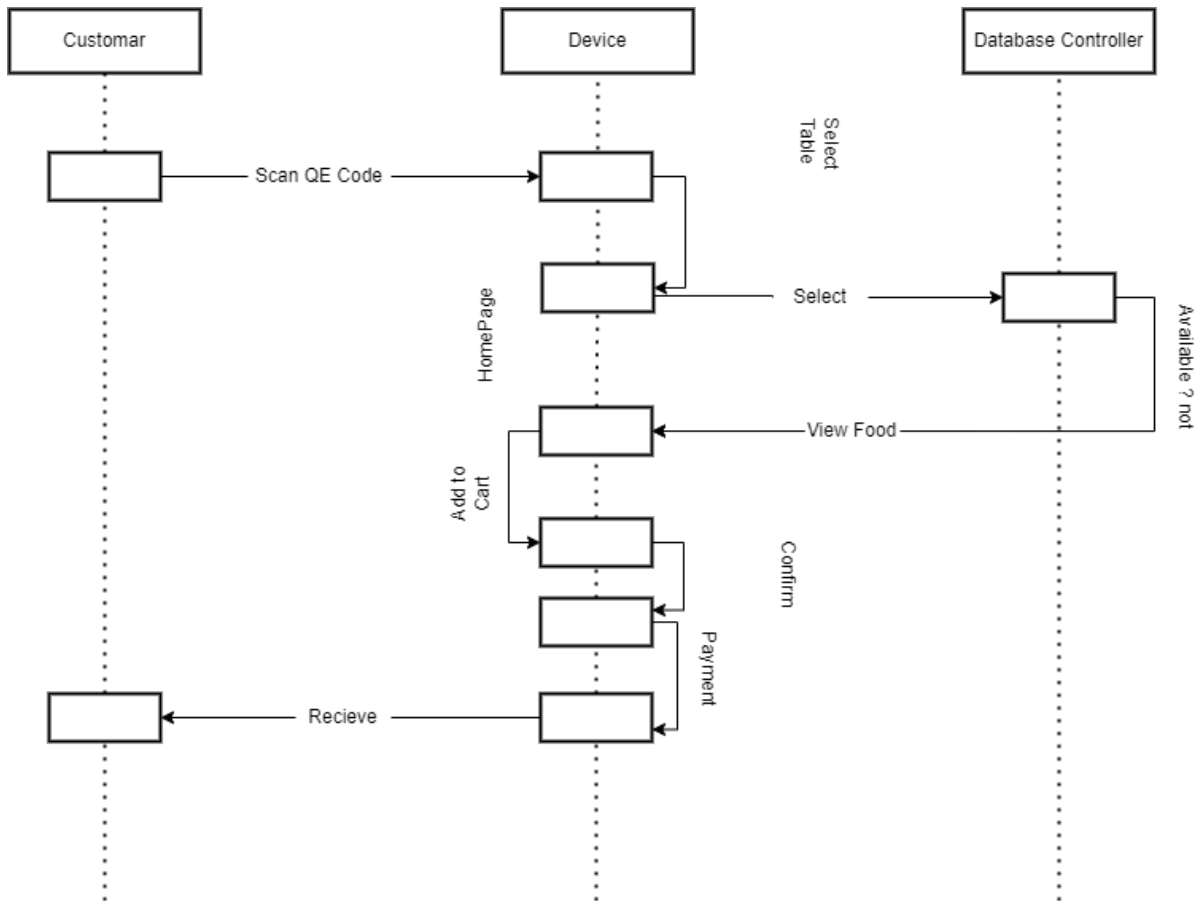


Fig 7.4.1 Customer Sequence diagram

7.4.2 Staff Sequence Diagram

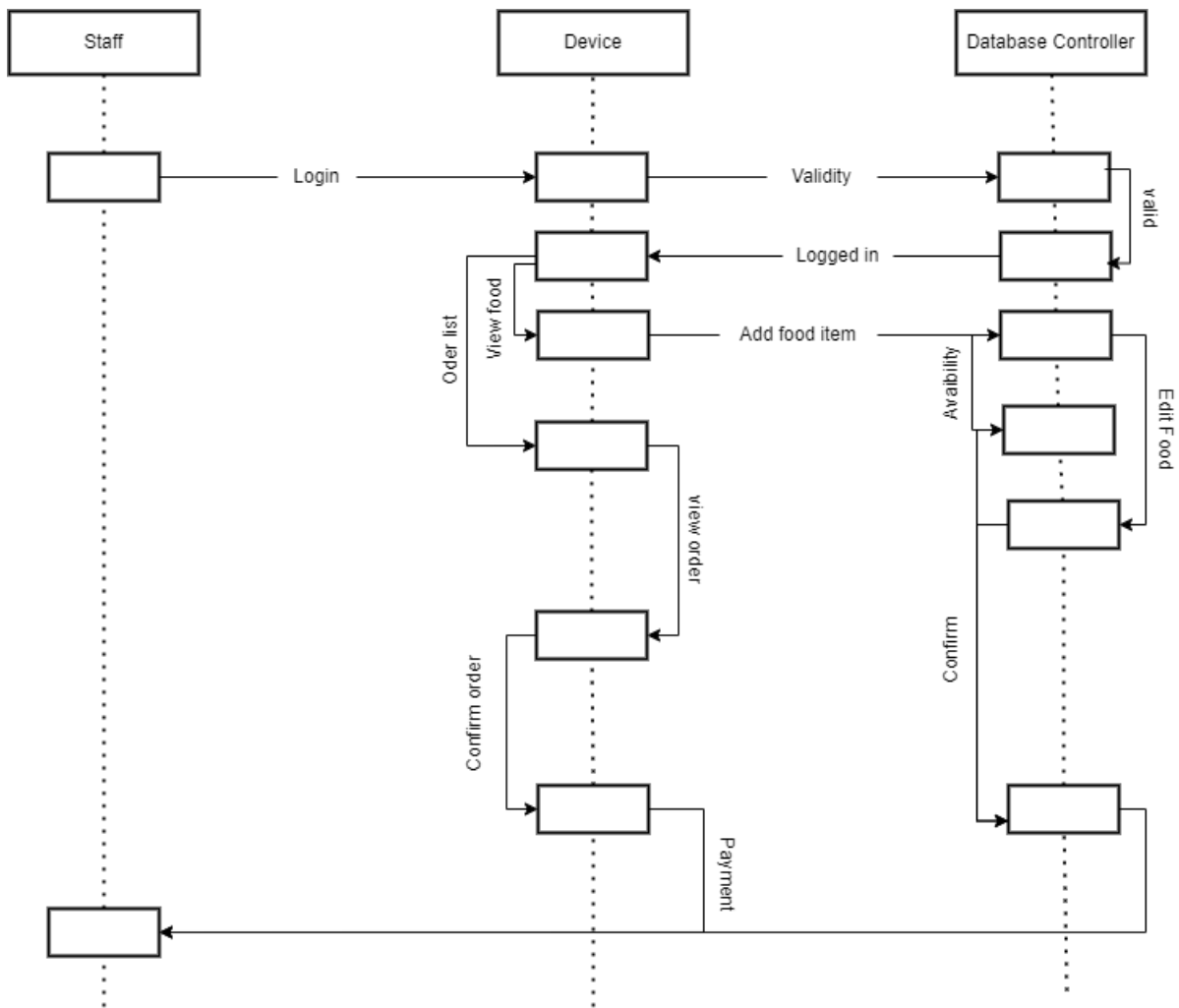


Fig7.4.2 Staff Sequence diagram

7.5 Activity Diagram

7.5.1 Customer Activity Diagram

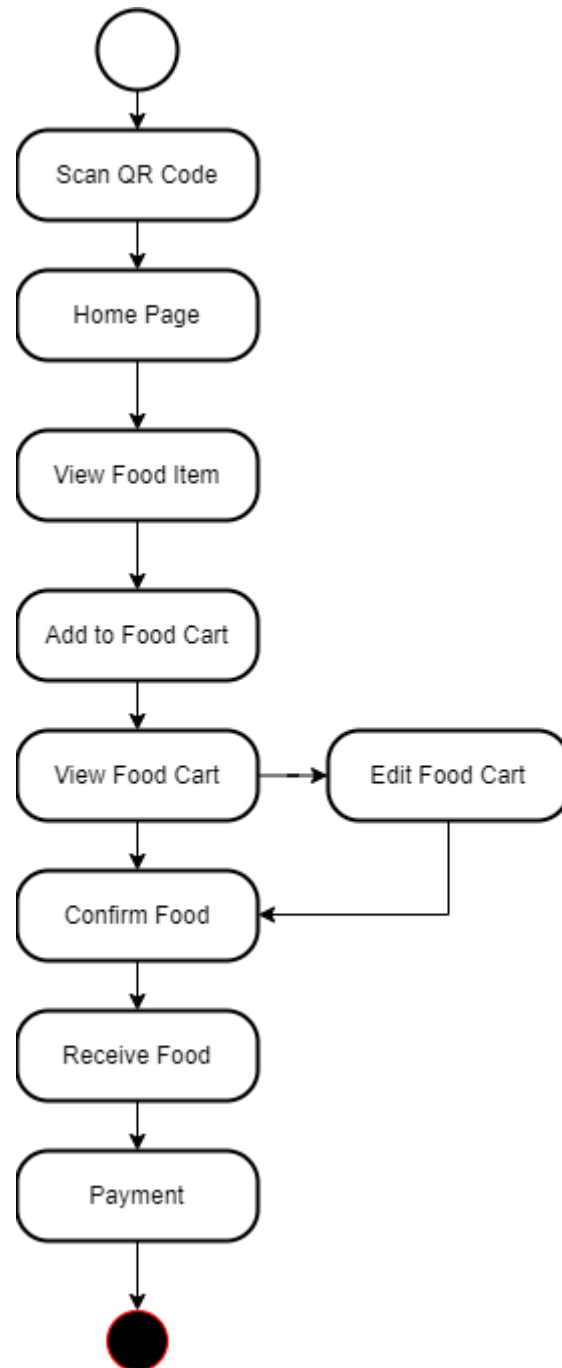


Fig7.5.1 Customer Activity diagram

7.5.2 Staff Login Activity Diagram

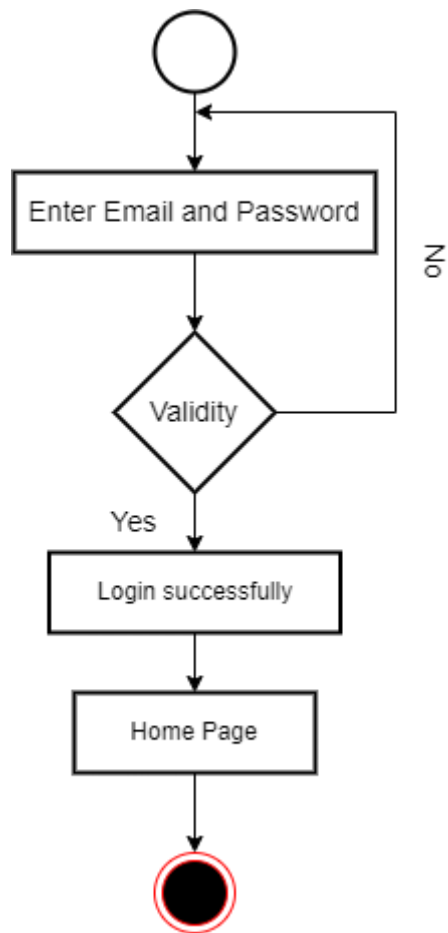


Fig7.5.2 Staff Login Activity diagram

7.5.3 Staff Food Order Activity Diagram

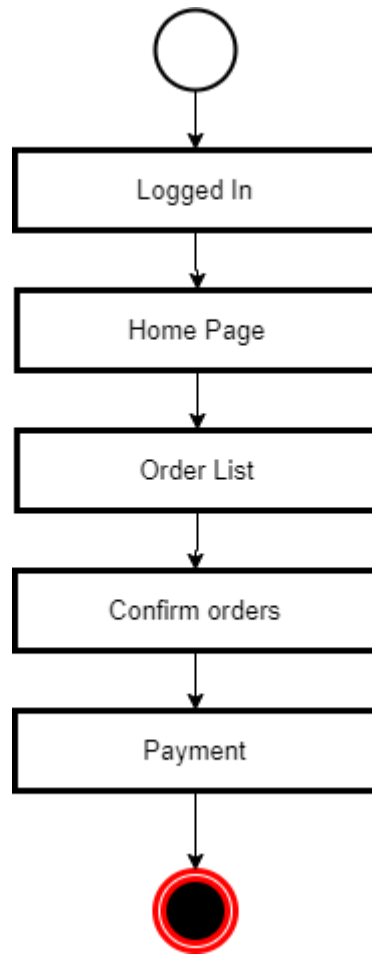


Fig7.5.3 Staff Food Order Activity diagram

7.5.4 Staff Food Activity Diagram

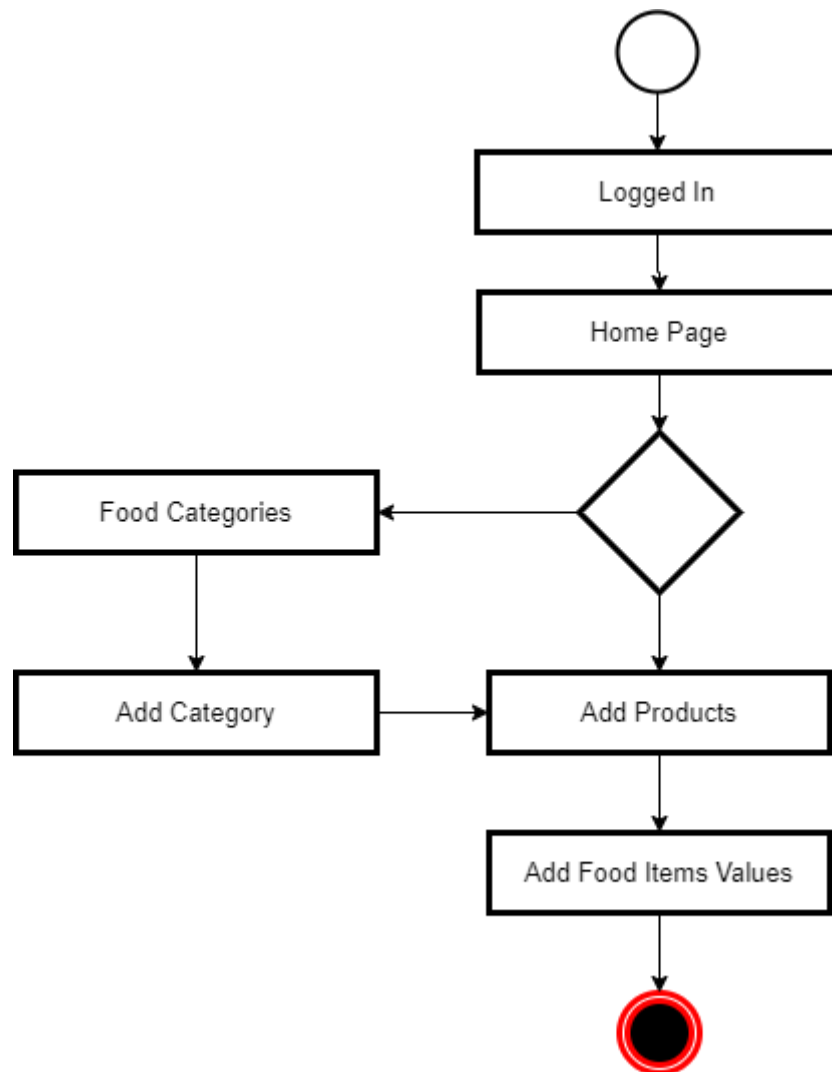


Fig8.5.4 Staff Food Activity diagram

Chapter 7. System Implementation and User Manual

8.1 Development Methodology

We have followed the below methodology while developing the app.

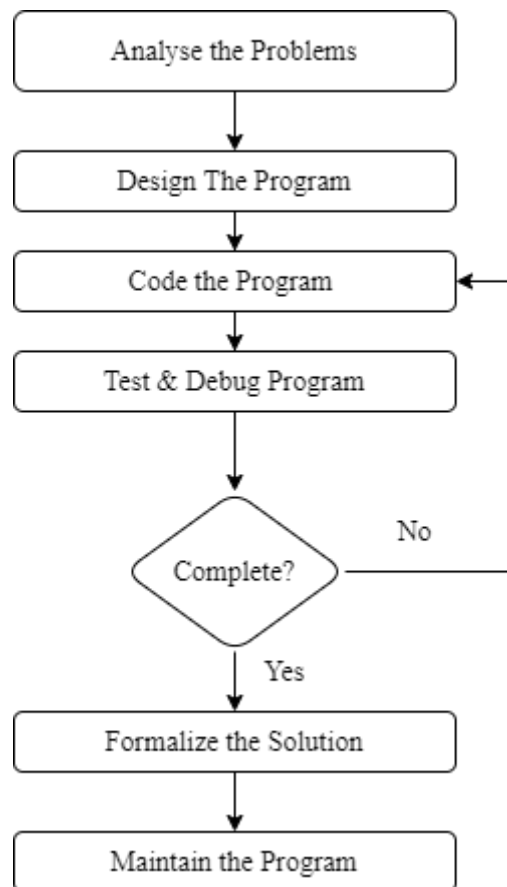


Fig 8.1 Development Process

8.2 Development Tools and Technology

8.2.1 Tools

We used several tools to develop this project. Such as

(I)VS Code editor

8.2.2 Technologies

(I)Web Development: Laravel (PHP Framework)

,

8.3 User Manual

In UI design, this project is used a lot of tools for making this app user friendly. Design is given below

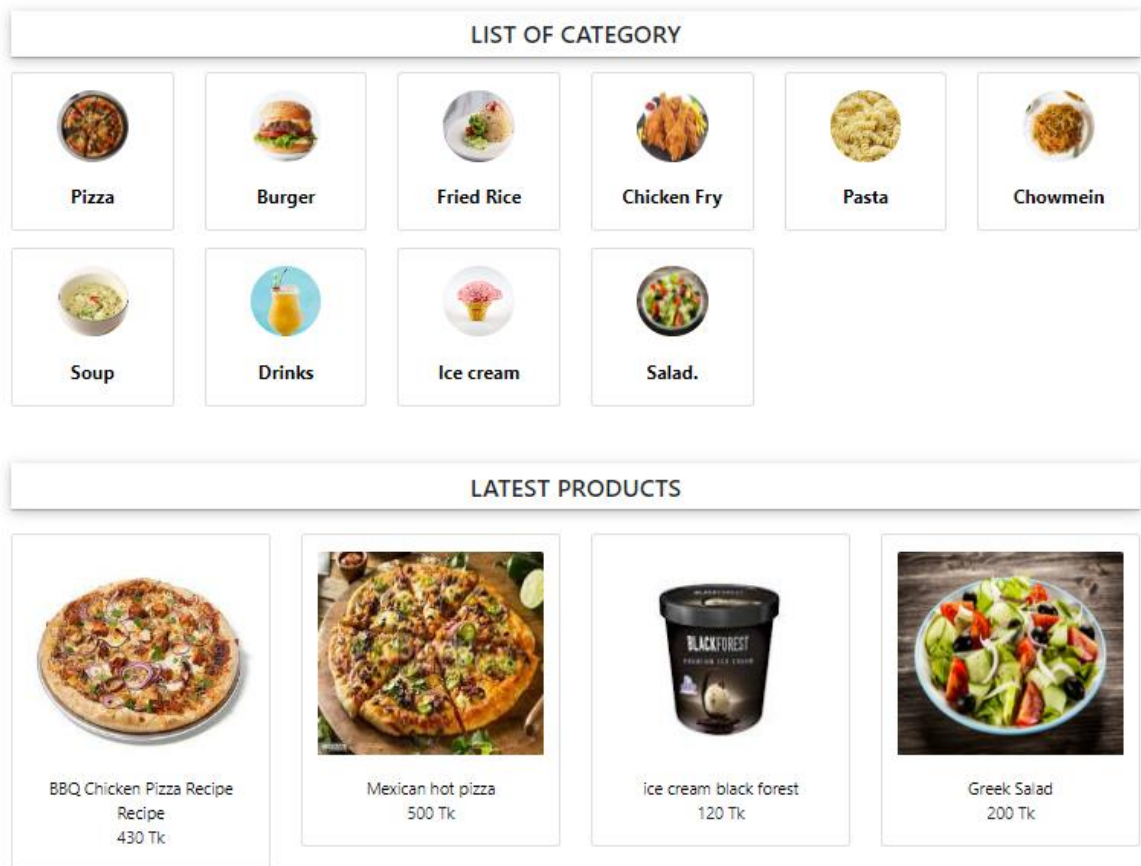


Fig8.3.1 Home Page



Fred Rice
---Fried Rice
---stock: Available
---Price: Pc 249 Tk


Add To Card

Use cold, leftover cooked rice. Left in the fridge overnight, the rice grains will firm up, making it easier to separate and decreasing the chances of your fried

RELETED PRODUCTS



Fig8.3.2 View Food Item

SL	Poroduct Name	Product Image	Product Price	Product Quantity	Delete
#1	Fred Rice		249Tk	<input type="text" value="1"/> <input type="button" value="Update"/>	<input type="button" value="Delete"/>

Total Amount: **249Tk**

CHECKOUT FORM

Enter Name

Enter Phone

Table no.

Notes

Fig8.3.3 Food Cart

Login

E-Mail Address

Password

Remember Me

Fig8.3.4 login Page

Admin

- Dashboard
- Category
- Products
- Orders
- Contact
- Logout

Home

Categories 10

Products 13

Orders 2

ALL ORDERS

Name	Phone	Action
Abdulla all azim	018726732	<input type="button" value="edit"/> <input type="button" value="delete"/>
azim	16566	<input type="button" value="edit"/> <input type="button" value="delete"/>

Fig8.3.5 Admin Dashboard

ALL PRODUCTS













Product Title	Category Name	Price	Unit	image	Description	Action
BBQ Chicken Pizza Recipe Recipe	Pizza	430	Pc		Most types of pizzas are high in calories and sodium, as they're usually topped with cheese, salty meats and other high-calorie toppings. Plus, some pizzas contain added sugar in the crust, certain toppings and sauce	 
Mexican hot pizza	Pizza	500	Pc		Most types of pizzas are high in calories and sodium, as they're usually topped with cheese, salty meats and other high-calorie toppings. Plus, some pizzas contain added sugar in the crust, certain toppings and sauce	 
BBQ Burgers	Burger	230	Pc		Shortened in length, the term Burger is used to describe a popular sandwich made from ground meats that are formed into a patty, cooked, and placed between two halves of a bun.	 
Naga burger	Burger	240	Pc		The spiciest burger in town - Naga Blast by MADCHEF. Each burger <i>has beef patty drenched Mad Chef's home made hot Naga sauce and a layer of cheddar</i>	 

Fig8.3.6 All Food Items

Home

Category Create Form

Category Name *

Category Name

Image

Choose Files No file chosen

Create New Category

LIST OF CATEGORY
















Index	Category Name	Category Image	Action
1	Pizza		 
2	Burger		 
3	Fried Rice		 
4	Chicken Fry		 
5	Pasta		 

Fig8.3.7 Create Food Category

Product Create Form

Product Title **Price**

Product title Product Price

--Select Category-- **--Select Unit--**

Select Product Select Product

Product Image **--Select Product Place--**

Choose Files No file chosen Select Product

A Normal text **Bold** *Italic* Underline Small **“** **☰** **☰** **☰** **☰** **🔗** **📄**

Place some text here

Fig8.3.8 Add Food

Chapter 9. Testing

Software testing is a process where software is investigated. There are lot of ways of testing software There are some testing descriptions we are doing over our software that are given below.

9.1 Usability Testing

Usability testing is a process that examines how easy it is for someone to use a particular piece of software.

9.2 Functional Testing

This test tester looked at how many users submitted their application if it were possible in our app. Our app has passed this test.

9.3 Compatibility testing

To make sure the software works properly, it is sometimes tested on different systems, such as different versions of Windows, Macs, and web browsers.

9.4 Security testing

This test measures how well the software protects users' security. This includes things like authorizing actions, verifying identities, protecting confidential information, ensuring the integrity of data, and ensuring that data is available when needed.

Chapter 10. Conclusion and Future Scope

10.1 Conclusion

In today's world, there are so many new technologies and ideas. But we can't always rely on them to protect us from disease or death. This app will help people stay social distance from each other when they're eating out.

10.2 Scope for Future Development

- Spread it worldwide
- Adding new features
- Upgrade the system

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