



Daffodil
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University

Title: Canteen Management System

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This Project report has been submitted in fulfillment of the requirements for the Degree of Bachelor of Science in Software Engineering.

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DECLARATION

I hereby declare that, this project report submitted to the Daffodil International University, is a record of an original work done by me under the guidance of Mr. Khalid Been Badruzzaman Biplob, Lecturer at the department of Software Engineering, Daffodil International University. I also declare that the project reported in this document has not been submitted to any other University or Institute for the award of any degree or diploma.

Submitted By:



Md. Muntasir Foysal Shuvo

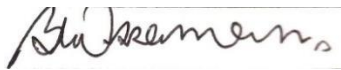
Id: 153-35-1318

Department of Software Engineering

Faculty of Science and Information Technology

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Md. Khalid Been Badruzzaman Biplob

Department of Software Engineering

Faculty of Science and Information Technology

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ACKNOWLEDGEMENT

Alhamdulillah, I have been successfully complete the project by the Gratefulness of almighty Allah. I would acknowledge many honorable individuals whose have been contributed for the preparations of the project in different stages.

First, I would like to thanks from my heart to my parents to give the opportunity for Studying in Software Engineering. They made my way easier to achieve my goals and my dreams, without them, it will not be possible.

I would express my deepest thanks to my honorable supervisor and teacher Md. ,Lecturer, Department of Software Engineering, Daffodil International University. He is the smartest person I had ever seen and she had lot of experience in the software engineering field. His valuable advice, supervision and lot of experience made it easier to complete the project. Gratefulness from my heart to Honorable Dr. Touhid Bhuiyan, Head, the Department of Software Engineering, for his kind aid to finish my project. Also, thanks from my heart to my honorable faculty member and staff of Software Engineering department of Daffodil International University. My contribution to this project did not make it successful without help of my course mate. They always encouraged me to develop this project and help me to discover the project goals and problem also help me find out the critical problem solutions.

Finally, I would like to express my grasp to the readers, reviewers of this document who will send me criticisms for further improvement.

ABSTRACT

This project is “Canteen management system”. This android based project to help student to get a canteen service. This service boost business communication and brings transparency in the system. . Every software development follows some rules and method, I also following some method to develop this project. My whole project work will follow the agile methodology. Which is best software development process to develop a software. I choose it because my whole project needs to implement some part then test it and agile methodology will help me to reduce the project risk.

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CHAPTER 1. INTRODUCTION

1.1. Project Overview

This is Canteen Management System is an android base application. Where customer can visit this system. Customer can view menu list.

1.2. Project Purpose

This application makes a canteen easier to manage and the user get more benefits by using this. Basically user get needs of their food more fast. And only authorized member get this facility. User can pay the bill by online payment system. Here for the user can save more times.

1.2.1. Background

Day by Day, everything is under application basis. That is why this application is the best application for a Institute's student, they can save time and order their foods by using this application. The canteen admin can easily handle this application cause of this user friendly application.

1.2.2. Benefits and Beneficiaries

This is android based system and everyone can use this system. There are two types of users in this system. Customer can easily use this application.

After using this, customer can easily see the menu list. Customer can order their food with valid email and phone number.

Another user admin can monitor the system and if any customers needs any extra things, admin will help them.

The user will be this system:-

- Admin
- Students/Customer

List of the performance the system will provide:-

- Customer see the offer item and select the food
- Customer see the all types of food category list easily
- Customer know the item price
- Customer can give their payment by online transaction

1.2.3. Goals

This application will maintain customer activity. This application has two users, customer and admin. User can easily use this application. They can see all the food list with their price. Customer can give their payment by online transaction.

1.3. Stakeholders

There are two types of stakeholders

- Restaurant Owner
- Customer

1.4. Proposed System Model (Block Diagram)

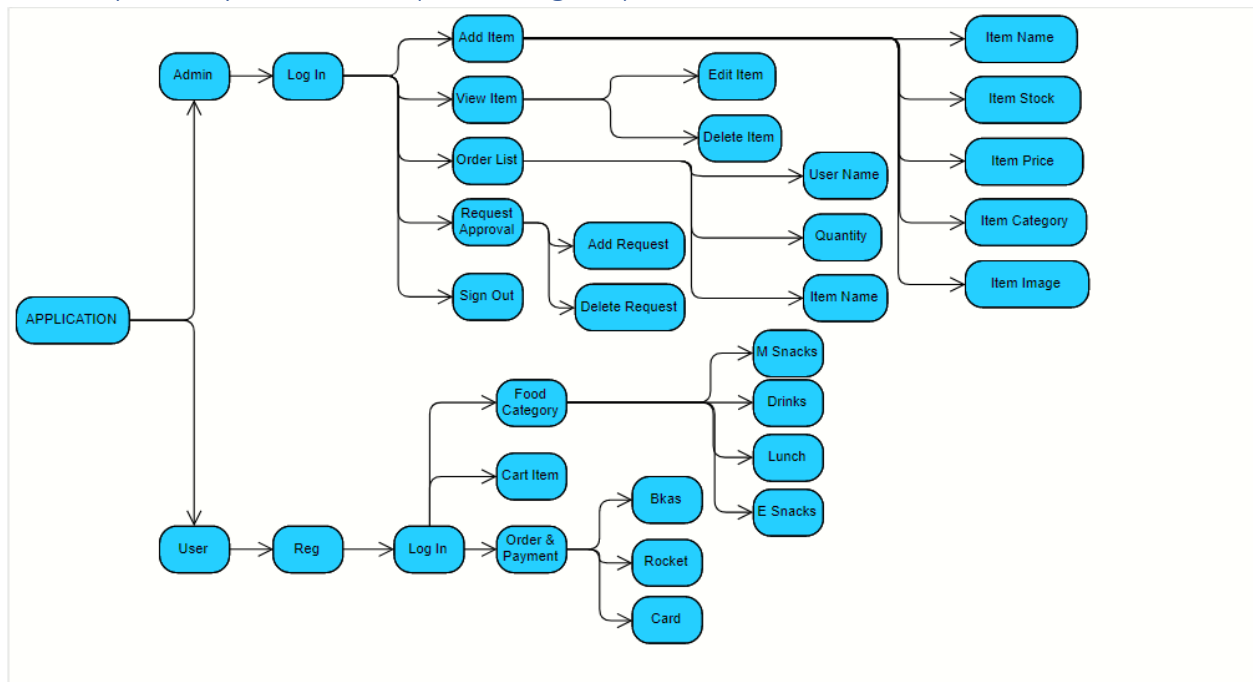
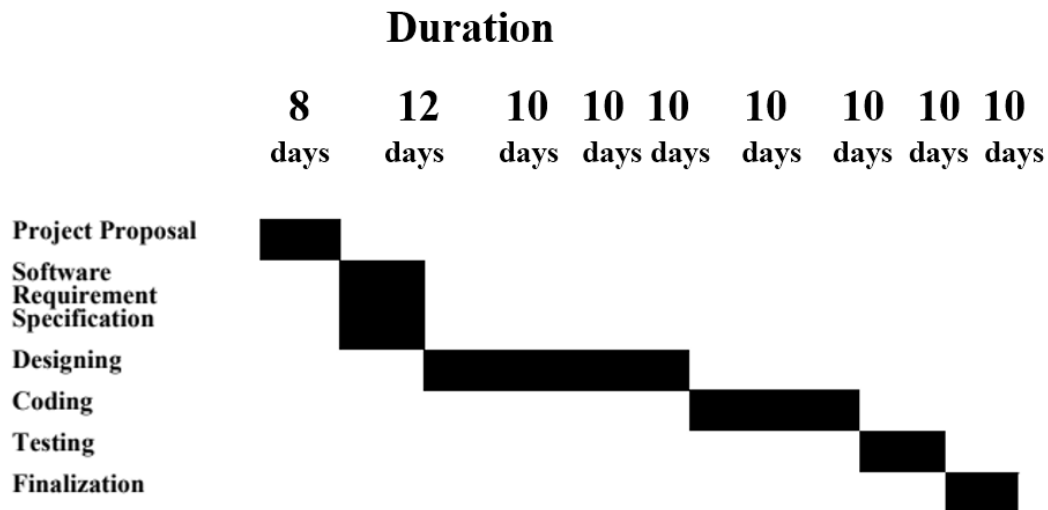


Figure 1.1: Block diagram

1.5 Project Schedule

1.5.1. Gantt Chart



1.5.2 Release Plan/Milestone

The following contents delivers with the project:

- Documentation
- Individually Resource Assignments
- Detailed 4 months plan

CHAPTER 2 SOFTWARE REQUIRMENT SPECIFICATION

2.1. Functional Requirements

- View List Features
- Categories and Item administration

- The system will display a list of all items offered by the canteen admin to the students or user. The user should have authorized first. The system will display detailed food items descriptions pictures and prices

2.2. Data Requirements

- Describe how the system will process and store the data elements and logical data groupings identity data archiving requirements

2.3 Performance Requirements

2.3.1 Speed and Latency Requirements

- Data insert in SQLite database in a second
- If there are any validation error occur, then this error show in one second

2.3.2 Accuracy Requirements

- After login, every successful login users would show the proper data from the database.
- Only customer would see the menu list
- Only Authentic user can view the authentic data.

2.3.3 Capacity Requirements

- There is limitation for the customers, only authorized user can use this.

2.4 Dependability Requirements

2.4.1 Reliability Requirements

- The Customer registration must should register with valid data & the database will update with the given data.
- Customer should login to system after input the must valid email and password

- Admin should approve the user request

2.4.2. Availability Requirements

- This application run in android device or IOS device
- This system is android base application & it's available when the canteen is open

2.5 Maintainability & Supportability Requirement

2.5.1. Maintenance Requirements

- It's Fixed if the server is overloading or hackers attack.
- Fixed bugs if the system/process will be crash.
- Fixed bugs if the system/process will be corrupted.
- Help center if any problems will be happen.

2.5.2 Supportability Requirements

- User manual will conferred for users with documents.

2.6 Security Requirements

2.6.1 Access Requirements

- Registered user will be able to login the system.
- Admin account will be incapability accounts which will check the customer activity & management the system.
- Only registered users can use the system.

2.7. Usability and Human-Interactions Requirements

2.7.1. Ease of Use Requirements

- User interface should easy to use

2.7.3. Understanding and Politeness Requirements

- Customer accounts should be approve first by admin.
- Only authorized user can use this.

2.7.4. Accessibility Requirements

- This application will be accessible for any device(Mobile) with internet connection.

2.8.Look and Feel Requirements

2.8.1. Appearance Requirements

2.8.2. Style Requirements

2.9 Operational and Environment Requirements

2.9.1. Expected Physical Environment

- The away a physical space is organized and arranged says a lot to customer about what is expected there and the sort of interactions that are welcome. It is important to us to develop an inclusive.

2.10 Legal Requirements

2.10.1. Compliance Requirements

- Utilize services that already pass with complex internationally recognized standards to more easily meet new requirements, such as facility the request of data-subject.

2.10.2. Standard Requirements

- User must be used this application system.
- Admin should not need to know any programming knowledge but must to know the management the system.

CHAPTER 3. SYSTEM ANALYSIS

3.1 Use-Case Diagram

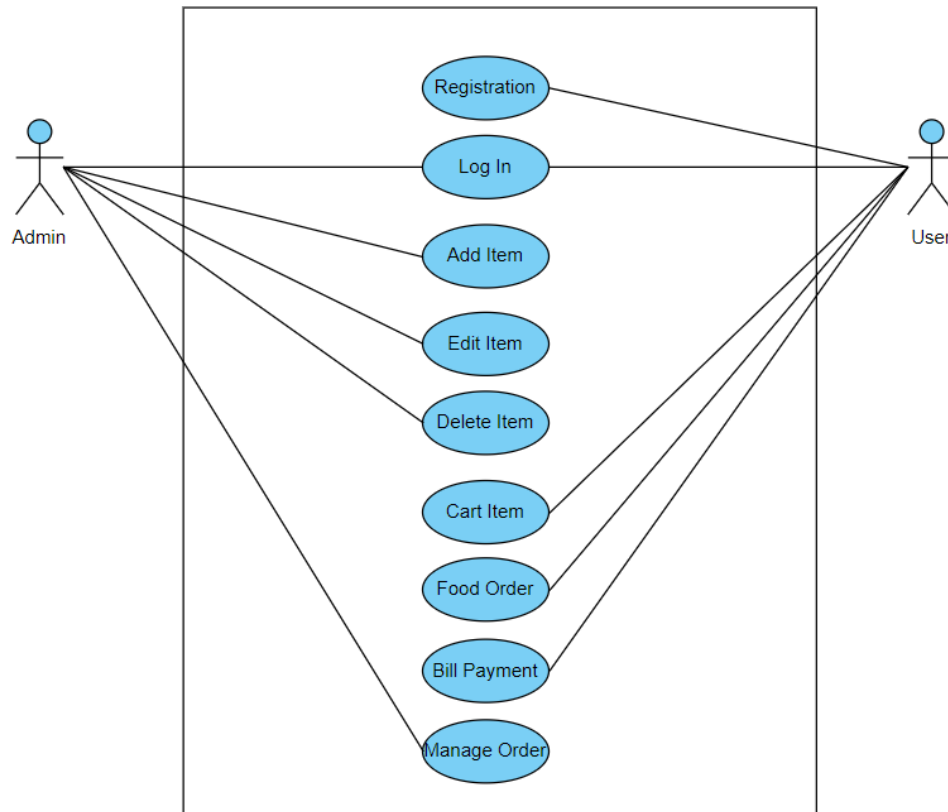


Figure 3.1: Use Case Diagram

3.2. Use Case Description

Table 3.1: Admin Login

Use Case Name	Login	
Scenario	Admin can login the system	
Brief Description	Admin should login with the organization's email id and password	
Actor	Admin	
Precondition	Must be organization's valid email password for login	
Follows of events	Step	Action
	1	Confirm valid Email Address.
	2	Confirm valid password
Exception Condition	If Admin does not give valid email or password or both, the system will ignore login.	

Table 3.2:Admin Add Item

Use Case Name	Add Item	
Scenario	Admin can add items	
Brief Description	Admin can add many items of food	
Actor	Admin	
Precondition	Must be run this application.	
Follows of events	Step	Action
	1	Add to view list

Table 3.3:Admin Edit Item

Use Case Name	Edit Item	
Scenario	Admin can edit item	
Brief Description	If the supply of food is insufficient or any change of food then the admin can edit it.	
Actor	Admin	
Follows of events	Step	Action
	1	Select edit
	2	Successfully edited

--	--

Table 3.4: Admin Delete Item

Use Case Name	Delete Item	
Scenario	Admin can login the system	
Brief Description	Admin should login with the organization's email id and password	
Actor	Admin	
Precondition	Must be organization's valid email password for login	
Follows of events	Step	Action
	1	Confirm valid Email Address.
	2	Confirm valid password
Exception Condition	If Admin does not give valid email or password or both, the system will ignore login.	

Table 3.5:Admin Manage Order

Use Case Name	Manage Order	
Scenario	Admin can Manage order	
Brief Description	Admin can manage order which given by customer	
Actor	Admin	
Precondition	Admin manage order into the system	
Follows of events	Step	Action
	1	Successfully manage order
Exception Condition	Valid Admin can manage order	

Table 3.6:User Registration

Use Case Name	registration
Scenario	User has registration
Brief Description	User can registration first
Actor	User
Precondition	User have to registration into the system

Follows of events	Step	Action
	1	Successfully registered
Exception Condition	Valid user can registration	

Table 3.7:User Log In

Use Case Name	Login	
Scenario	User can login the system	
Brief Description	User should login with the organization's email id and password	
Actor	User	
Precondition	Must be organization's valid email password for login	
Follows of events	Step	Action
	1	Confirm valid Email Address.
	2	Confirm valid password
Exception Condition	If user does not give valid email or password or both, the system will ignore login.	

Table 3.8:User Cart Item

Use Case Name	Cart Item	
Scenario	User can add items	
Brief Description	User can add many cart items of food	
Actor	User	
Precondition	Must be run this application.	
Follows of events	Step	Action
	1	Add to view list

Table 3.9:User Food Order

Use Case Name	Food Order	
Scenario	User can order food	
Brief Description	User can order food into the system	
Actor	User	
Precondition	Must be run this application.	
Follows of events	Step	Action
	1	Successfully order food

Table 3.10: User Bill Payment

Use Case Name	Bill Payment	
Scenario	User can pay bill	
Brief Description	User can pay bill online into the system	
Actor	User	
Precondition	Must be run this application.	
Follows of events	Step	Action
	1	Successfully bill paid

3.3. Activity diagram

3.3.1 Admin Log In

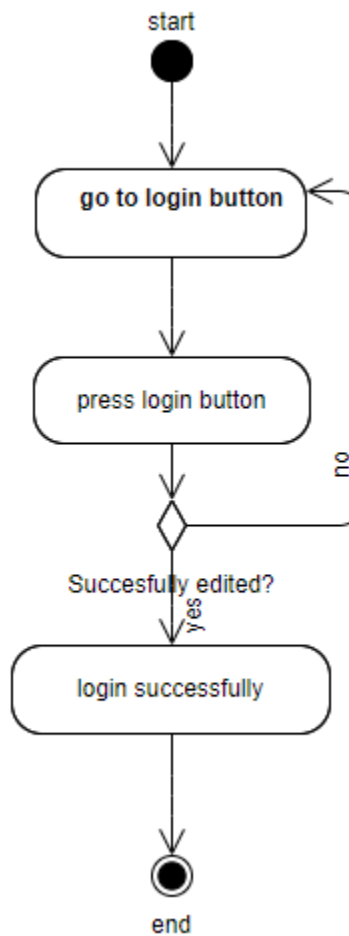


Figure 3.3.1: Activity diagram

3.3.2 Admin Add Item

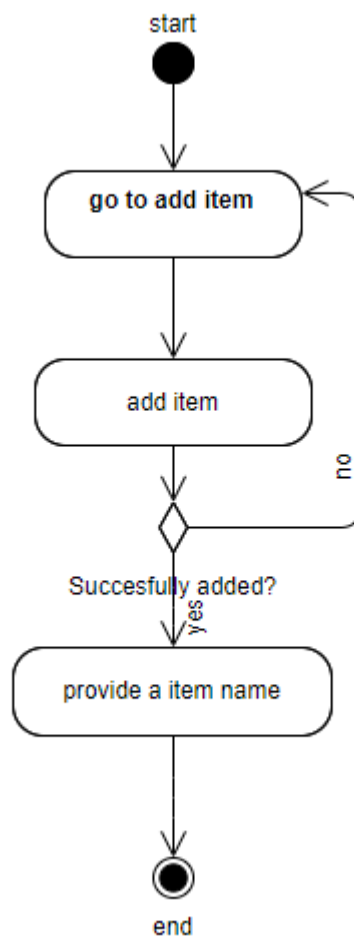


Figure 3.3.2 Admin Add Item

3.3.3 Admin Edit Item

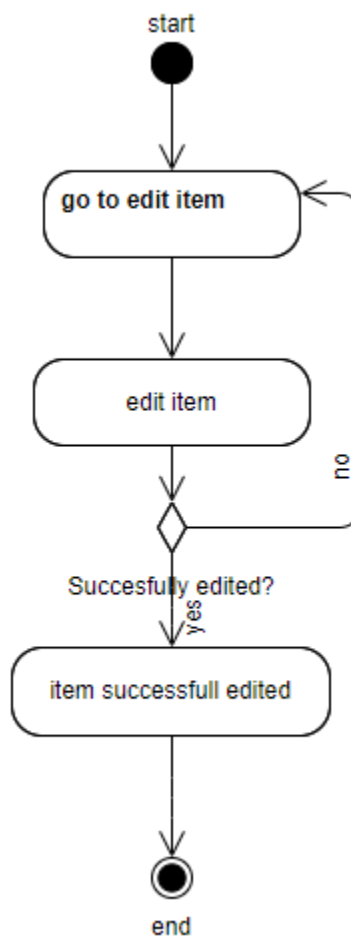


Figure3.3.3 Admin Edit Item

3.3.4 Admin Delete Item

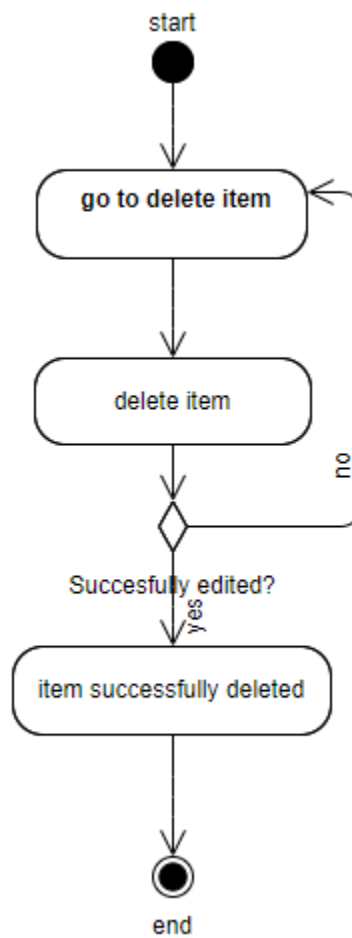


Figure 3.3.4 Admin Delete Item

3.3.5 Admin Manage Order

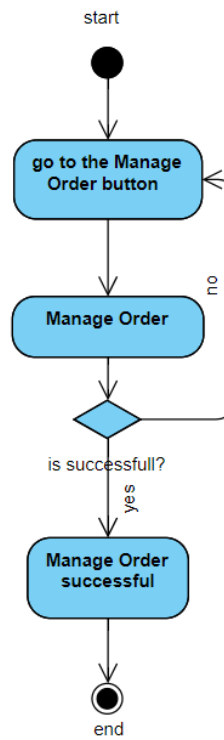


Figure 3.3.5 Admin Manage Order

3.3.6 User Registration

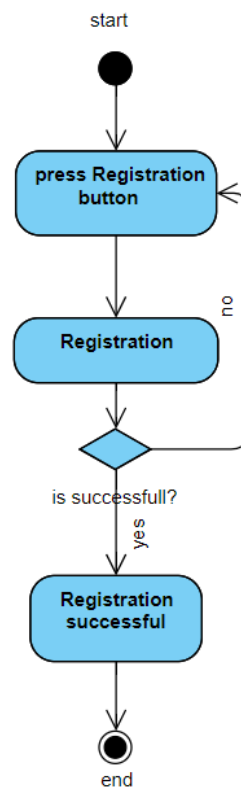


Figure 3.3.6 User Registration

3.3.7 User Log In

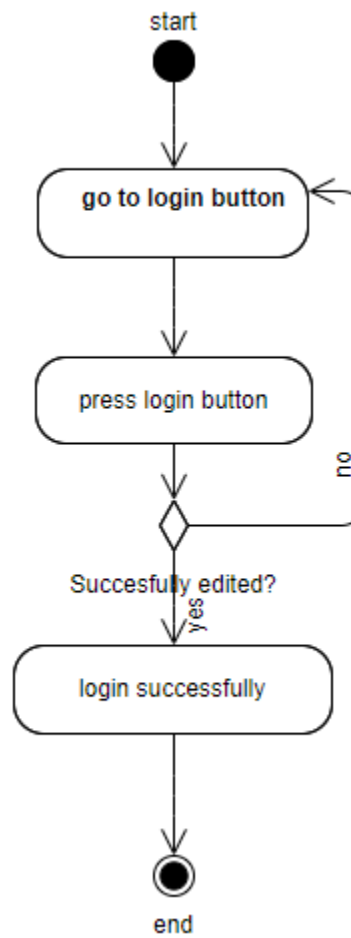


Figure 3.3.7 User Log In

3.3.8 User Food Order

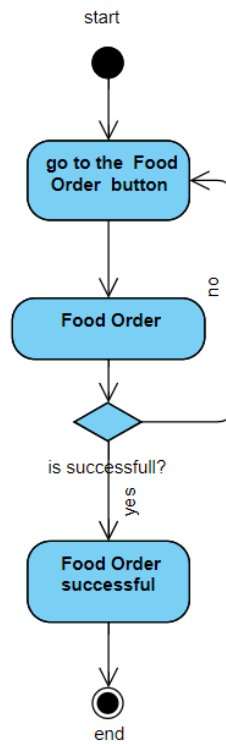


Figure 3.3.8 User Food Order

3.3.9 User Cart Item

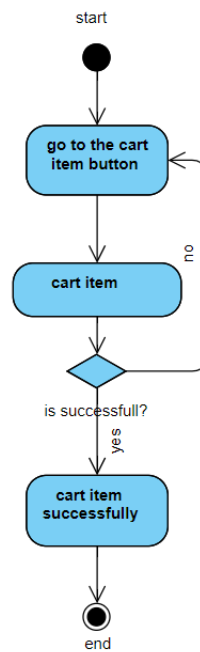


Figure 3.3.9 User Cart Item

3.3.10 User Bill Payment

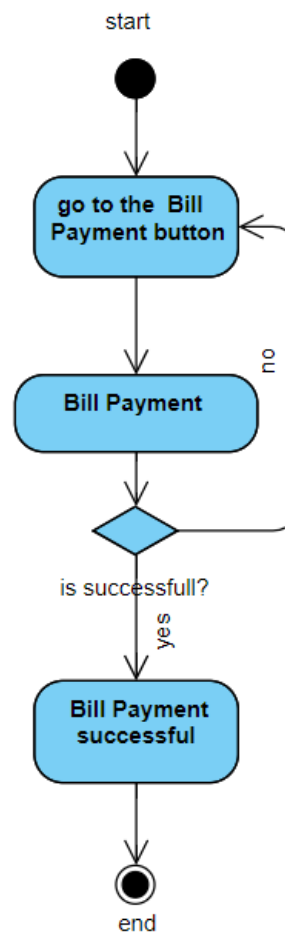
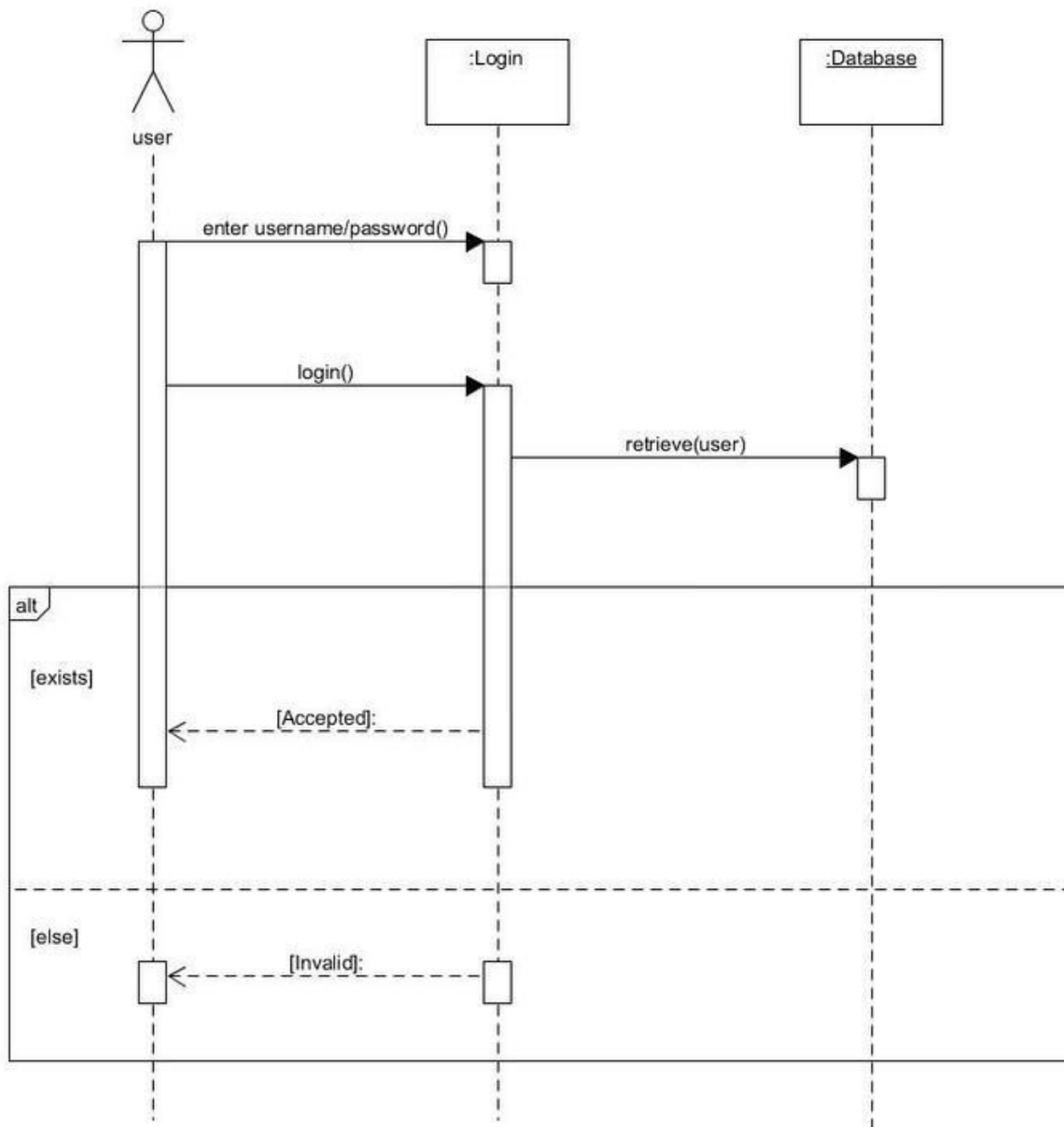


Figure 3.3.10 User Bill Payment

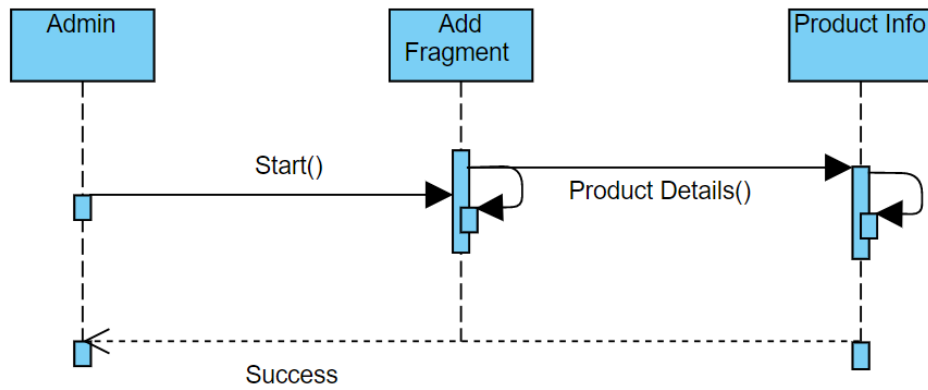
Chapter 4 System Design Specification

4.2. Sequence diagram

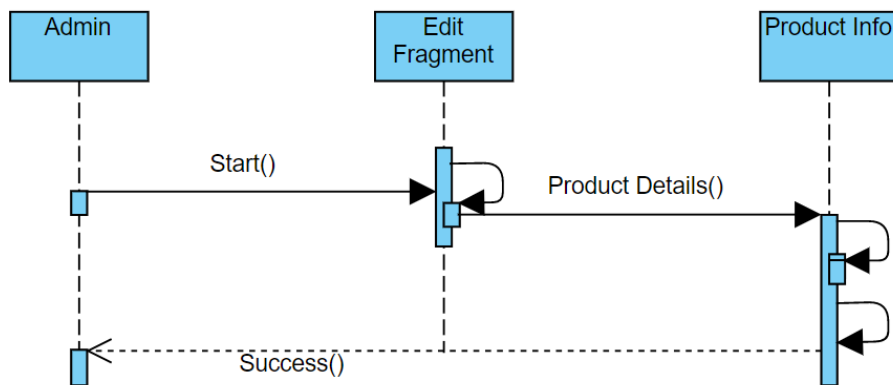
4.2.1.Admin Log in



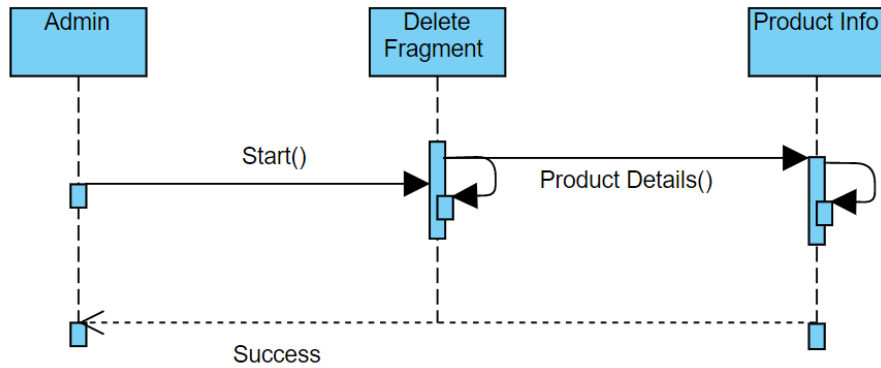
4.2.2 Admin add item



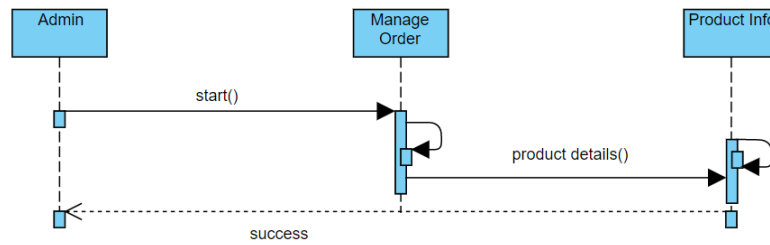
4.2.3 Admin Edit Item



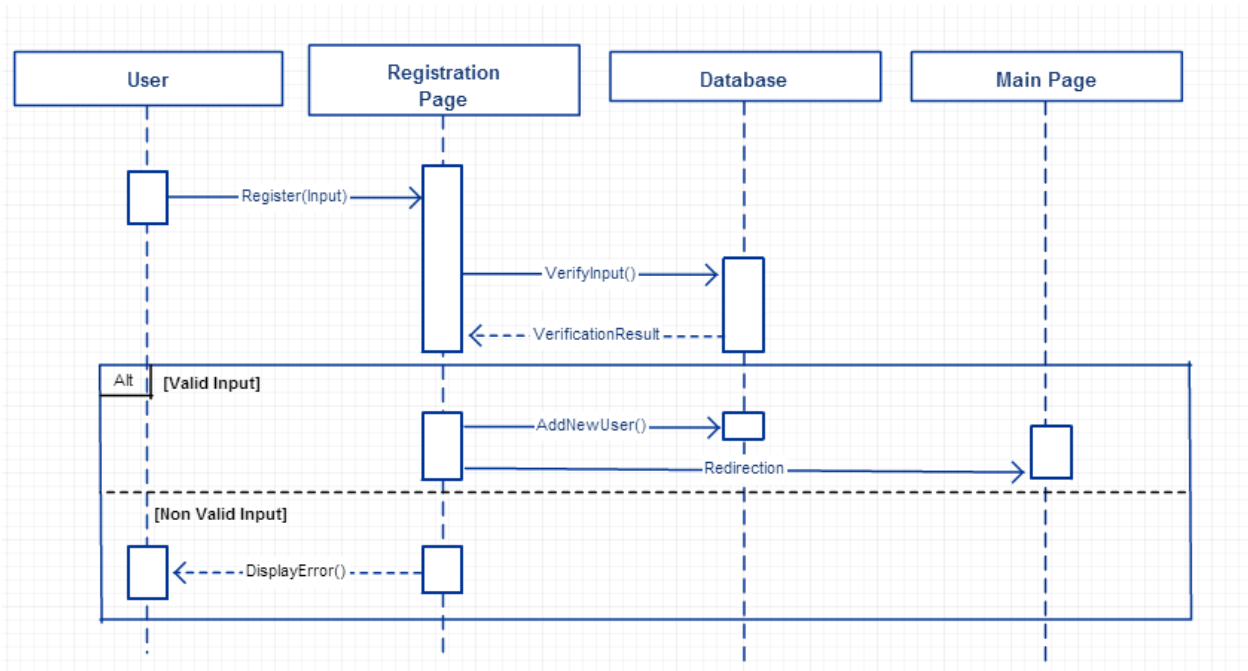
4.2.4 Admin delete item



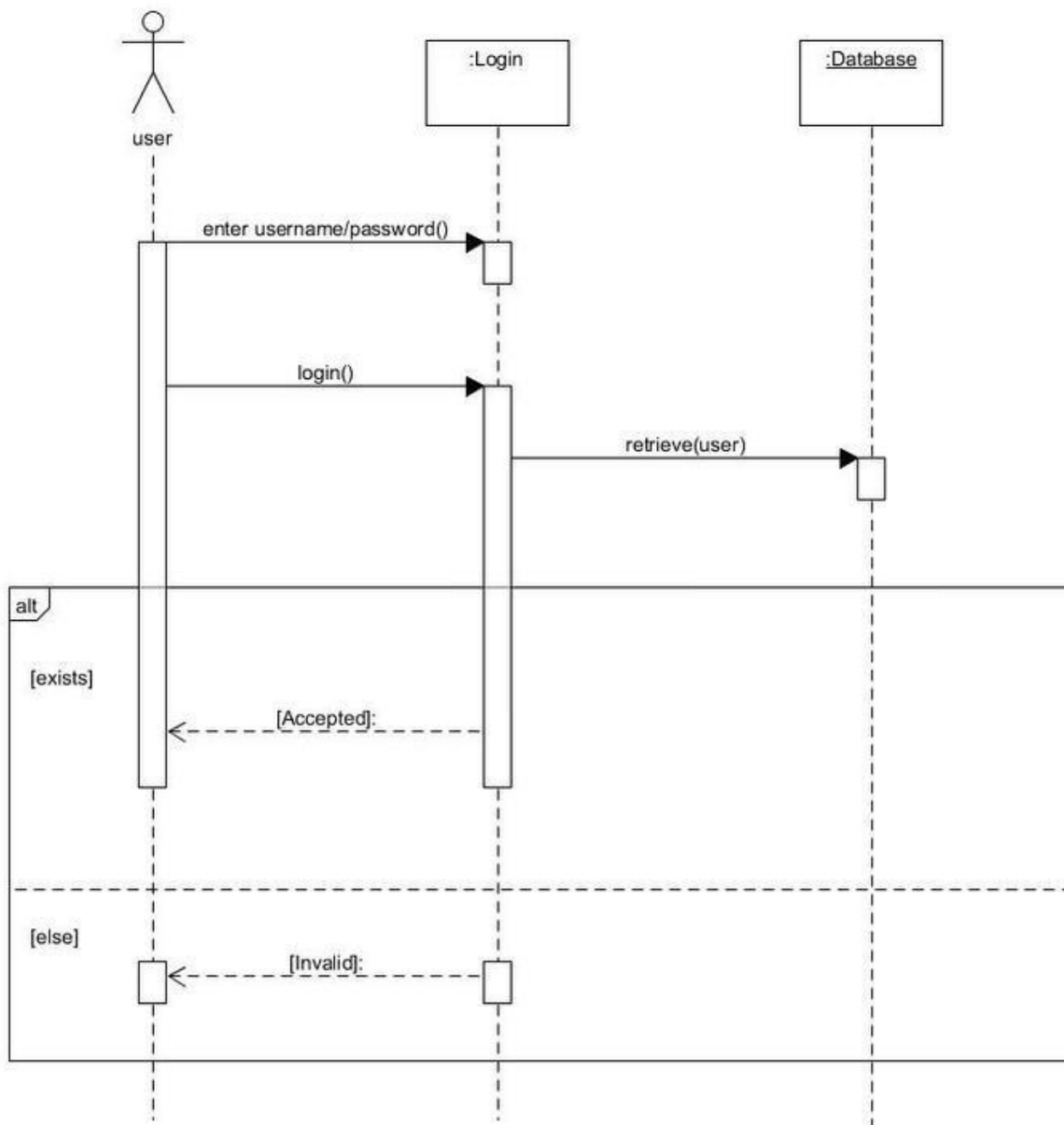
4.2.5 Admin Manage order



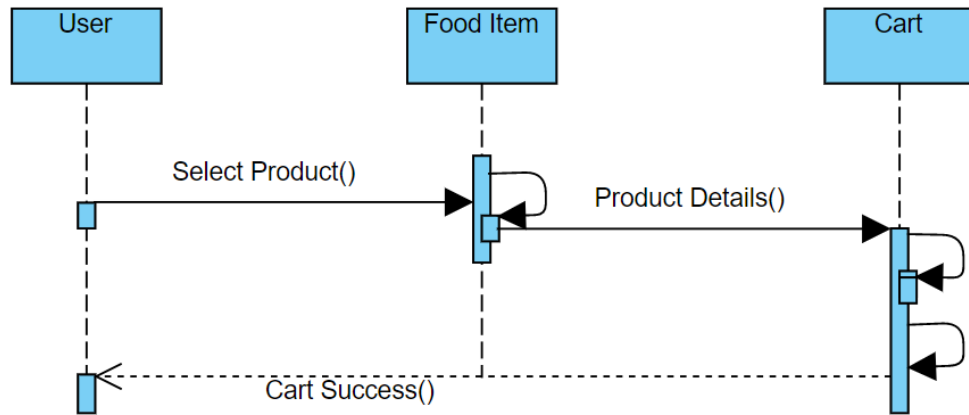
4.2.6. User Registration



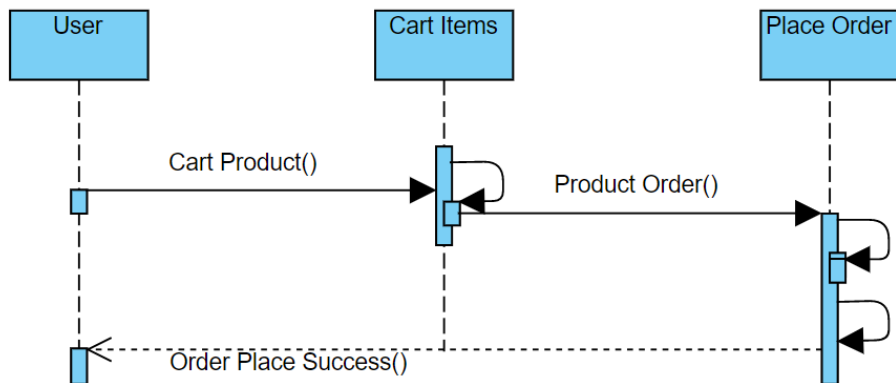
4.2.7 User Log In



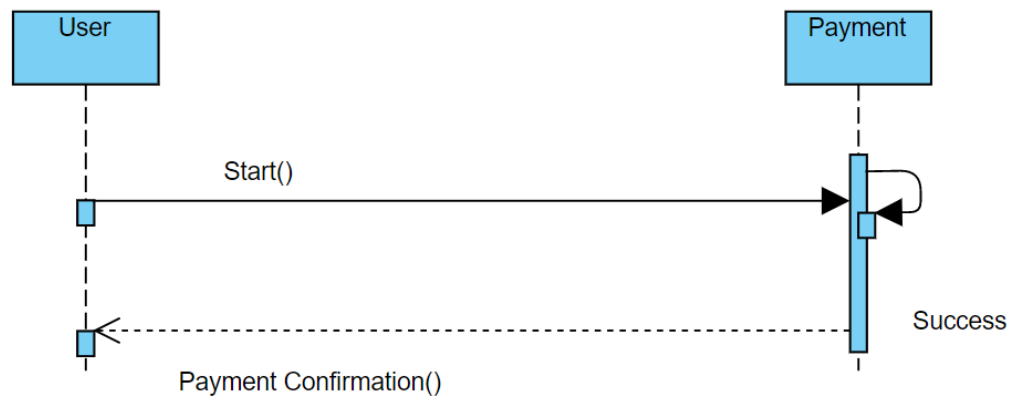
4.2.8 User cart item



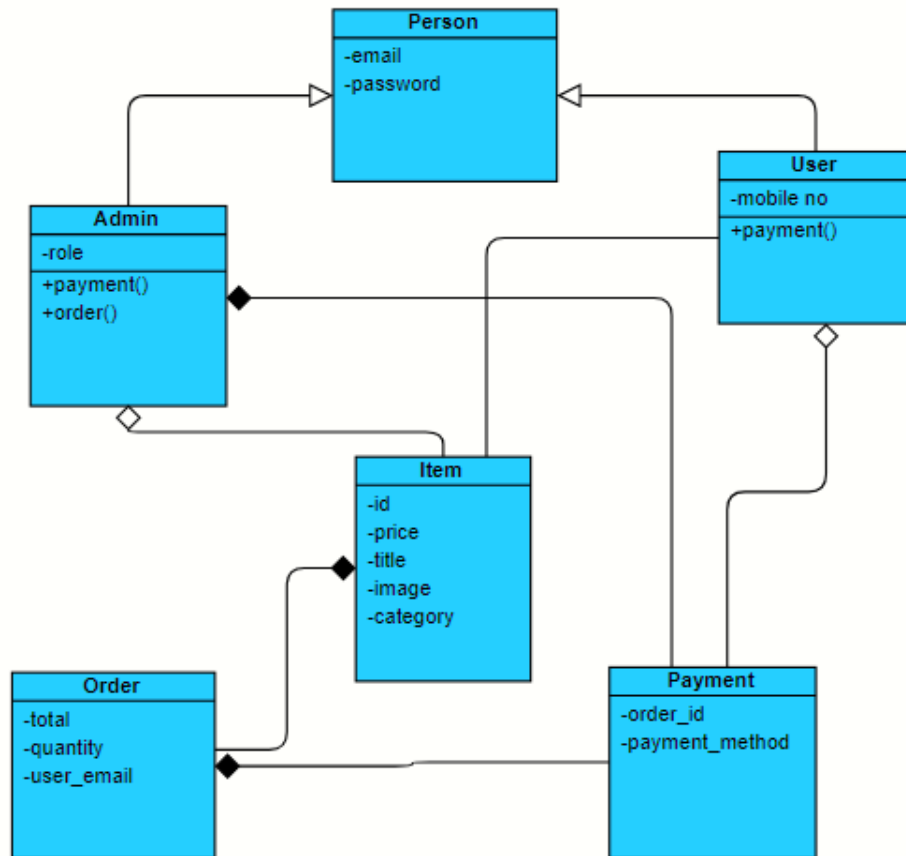
4.2.9. User Food Order



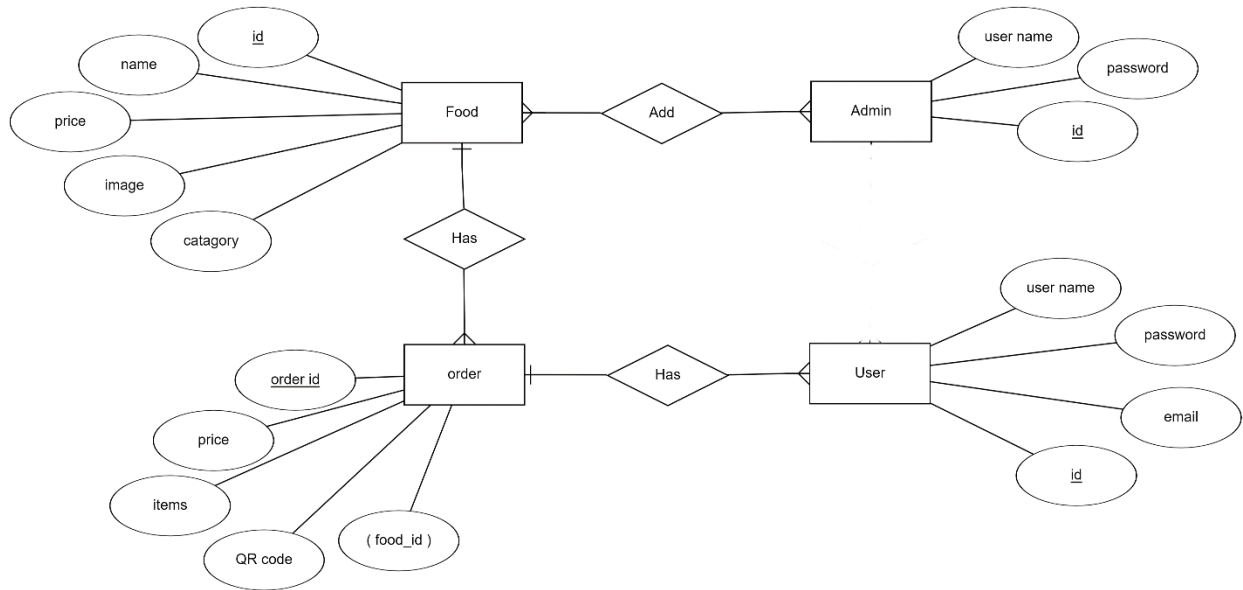
4.2.10 User Bill Payment



4.3 Class diagram



4.4 ER diagram



4.5.1 Development tools & technology

4.5.1.1. Android

4.5.1.2 XML

4.5.1.3 Java

4.5.1.4 SQLite

4.5.2. Implementation Tools & Platforms

4.5.2.1 Android Studio

4.5.2.2 Mobile Phone

CHAPTER 5. SYSTEM TESTING

5.1.1. Features to be tested

- Admin login

5.1.2. Features not to be tested

- Order
- Payment

5.2. Testing Strategies

5.2.1. Test approach

- The entire system will be tested manually.
- The system testing based on android device.

5.2.2. Pass/Fail Criteria

- System will crash considered as fail case.
- The test will pass if the event conference the object design requirement or fail or not.
- List all results that decide test case is passed or failed.

5.2.3. Suspension and Resumption

- The process will passing the test if every develop is successfully if not than it's try again.
- The process works rightly after each changing in the design

5.2.4 Testing Schedule

Table 5.1: Testing Schedule(Online Food Corner)

Test Phase	Days	Owner
------------	------	-------

Test plan creation	7 days	Muntasir Foysal Shuvo
Test specification creation	10 days	Muntasir Foysal Shuvo
Test specification team review	10 days	Muntasir Foysal Shuvo
Component testing	10days	Muntasir Foysal Shuvo
Integration testing	10days	Muntasir Foysal Shuvo
System testing	15 days	Muntasir Foysal Shuvo

5.3. Testing Environment

Development:-

- Used by developers
- No client data

Testing:-

- Used by software engineer
- No client data

Production:-

- Used by live clients
- Full Production data

5.4. Test Case

5.4.1. Test case 1

Table 5.2: Test case 1

Test case :2	Test case name: Login
System: Canteen Management System	Subsystem/A
Designed by: Shuvo	Design date: 15-10-2019
Executed by: Shuvo	Executed date: 17-11-2019
Pre-Condition: User must be login with valid email and password	

Step	Action	Expected System Response	Pass /Fail	Comment
1	When a user click's the login button without email and password	Email & Password required.	Pass	Email & Password required.
2	When a user enter email without password	The process show, password is required.	Pass	Password required.
3	When a user enter password without email	The process show, mail is required.	Pass	Mail required.
4	When a user enter valid email and wrong password.	The process show, password is incorrect	Pass	Invalid login attempts
5	When a user enter valid password and wrong email.	The process show, email is not found.	Pass	Invalid login attempts
6	When a user enter wrong email and wrong password.	The process show, email is not found.	Pass	Invalid login attempts
7	When a user enter valid password and valid email.	The system will successfully access to the account and redirect to the dashboard	Pass	Login attempts successful

CHAPTER 6 USER MANUAL

6.1. User Manual(Admin)

Admin have to select user type and input email and password

Admin can see the admin home panel

Admin can add item, price and category

Admin can edit or delete item

Admin can approve user

Admin can see the order list

10:21

65

Login

Email

Password

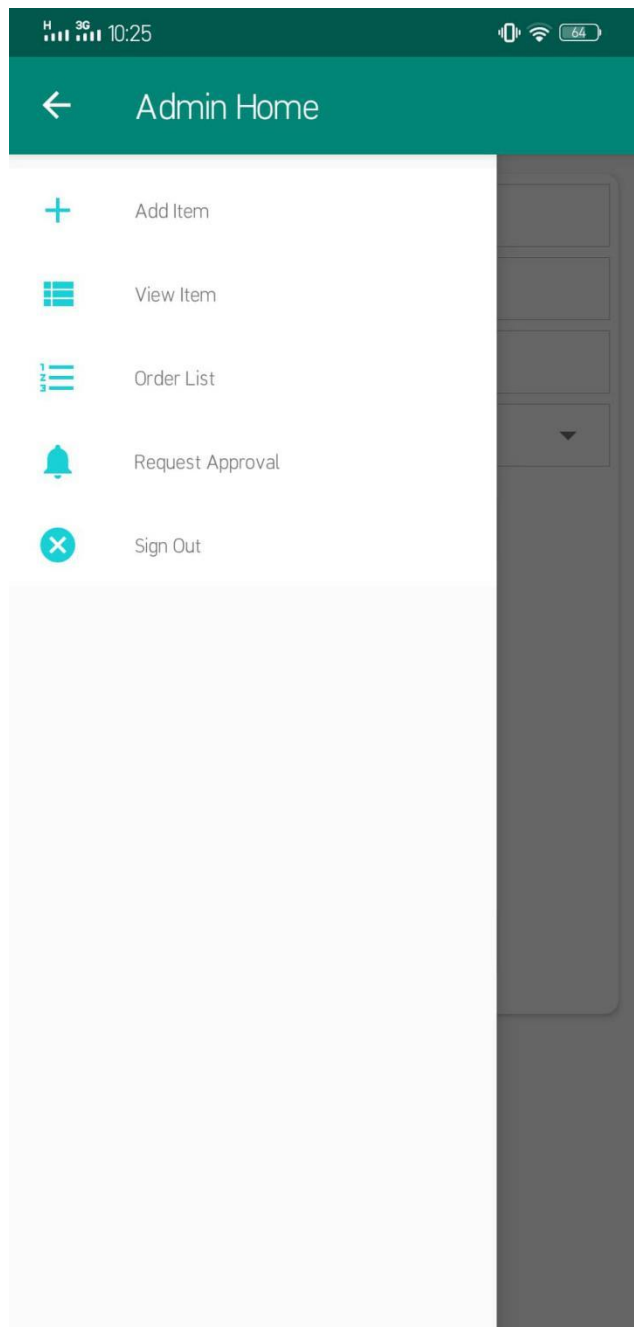
Select user type

Login

Register Yourself

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33



10:25

64

Admin Home

Enter item name

Enter item stock

Enter item price in BDT

Select Item Category

Import Image



Add Item

3G

10:28

63

☰

Admin Home

Biriani

25

300.0

Select Item Category ▾

Import Image



Update Item

H

3G

10:27

64

≡

Admin Home

Drinko Soft Drinks

20

15

Drinks

▼

Import Image



Add Item



Admin Home



Biriani

300.0 Tk. 25 Lunch

Edit

Delete



Drinko Soft
Drinko Soft Drinks

15.0 Tk. 20 Drinks

Edit

Delete



uf

14.0 Tk. 25 Morning Snacks

Edit

Delete



Want to add user activities335@gmail.com ?

Add

Delete

6.2. User Manual (Customer)

User have to select user type

User have to register by submitting email and password

User have to login using email and password

User can see food category

User can add items to cart

User can see payment amounts

User can pay for the items



Login



Email



Password

Select user type



Login

Register Yourself



Registration



shuvo 21



017654213494



activities335@gmail.com



.....



.....

Register



Login



Email



Password

Select user type



Login

Food Categories



See Cart Details

Cart

MORNING
SNACKS

DRINKS

LUNCH

EVENING
SNACKS



Biriani

300.0 Tk. Stock : 20 Lunch

Add to cart

Food Categories



See Cart Details

Cart

MORNING
SNACKS

DRINKS

LUNCH

EVENING
SNACKS



Drinko Soft
Drinko Soft Drinks

15.0 Tk. Stock : 20 Drinks

Add to cart

Cart Details

Your carted item

☐	Biriani	300.0 Tk.	20	Add Delete
	+ 1 -			
	Total			

☐	Drinko Soft Drinko Soft	15.0 Tk.	20	Add Delete
	+ 1 -			
	Total			

Payment and order



Please Select Payment Method

Select payment method



Enter Account Number

Total amount = 630

Order

Payment and order



Please Select Payment Method

Rocket

02525552

Total amount = 630

Order

Food will be delivered : 0:11

Chapter 7. PROJECT SUMMARY

7.3 Limitations

Every project has some limit, no project can be accurate fulfill. My project “Cantten Management System” it has some limitation.

- The application is available when the canteen is open

7.4 Obstacles & Achievements

Every day technologies are system update. It's fully tough to work, but not so difficult. When I am developing the system, there are too many error occurs.

7.5 Future Scope

Every project should be have some future scope, so that the application add some update features. This project has some scope & the scope can be

- Customer can payment online.

There are many features can be updated on this project. But this many feature which can't be develop by one person.

CONCLUTIONS

All though I've developed the system 'Canteen Management System' there are lots of limitation in there . I tried my best to overcome my limitations. The Project will help the customer get their required food easily. I've developed the system for food lover people and this make me proud.

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