

ONLINE YEMENI AGRICULTURE PRODUCT SHOPPING
SYSTEM (OYAPSS)

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ABSTRAK

Mengikut peredaan masa kini, Perniagaan Elektronik adalah merupakan ekonomi digital. Ekonomi digital ini adalah berdasarkan kepada dua faktor iaitu perdagangan elektronik dan teknologi informasi. Teknologi informasi ini adalah zaman perkomputeran dan komunikasi yang telah mencipta kewujudan maya perdagangan elektronik, dimana ia bergantung kepada perkomputeran dan perkara lain dalam teknologi untuk melaksanakan pengurusan bisnes. Laman sesawang Online Yemeni Agriculture Product Shopping System (OYAPSS) merupakan sistem atas talian dan sangat penting untuk melakukan aktiviti-aktiviti jual beli. Fungsi perniagaan yang memudahkan pertukaran dan pergerakan produk-produk daripada pengeluar dan pengguna melalui kaedah-kaedah tertentu dan metod untuk mencapai kelebihan yang diperlukan oleh masyarakat dalam melakukan proses perniagaan. Proses ini dilakukan melalui Pemasaran Berasaskan Internet dalam mempraktikkan semua aktiviti seperti pengiklanan, pengjualan, pengedaran, promosi, harga dan penggunaan kaedah elektronik dan digital. Laman ini akan membenarkan masyarakat yang ingin membeli tanpa perlu bergerak tetapi dengan hanya melayari laman sesawang dan melihat gambar-gambar produk serta melakukan pembelian. Ini akan memudahkan pengguna untuk memilih produk yang mereka inginkan dengan lebih tepat.

ABSTRACT

In today trends, Electronic Marketing is one of the so called digital economies. The digital economies are based on two facts which are the Electronic-commerce and Information Technology. Information technology in the era of computing and communication is what has created the virtual presence of Electronic-commerce, which relies mainly on computing and various means of technology for implementation and business management. The Online Yemeni Agriculture Product Shopping System (OYAPSS) website is an online system and the most important activities of OYAPSS. It is the marketing function that seeks to facilitate the exchange and flow of products from the product to the consumer through the use of specific tools and methods to achieve the benefits required by the parties to the marketing process. This process is done mainly through the Internet Based Marketing in the practice of all activities such as advertising, selling, distribution, promotion, pricing and the use of electronic methods in the process of meeting the price online. The site will serve people who do not want to shop through their travels Makes and prefer to get their products through the live images displayed on the sites dedicated to companies on the Internet. The factors of discrimination and choice will be clearer to the customers.

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LIST OF SYMBOLS

OYAPSS	Online Yemeni Agricultural Product Shopping System
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CHAPTER 1

INTRODUCTION

1.1 Background

Recently, and more than ever, the market environment is increasingly become more competitive due to the new product development which raises the necessity of marketing strategies in the organizations. Today, all the organizations including distance learning education programs - want to be on the consumer mindset within better perception than their competitors. In addition taking advantage of the technological development and the prosperity of the Internet and attract a large number of people to surf the Internet almost daily. Plus, to find a good way to display marketing and products of various sizes and colors, as well to facilitate the presentation of products to customers from the trouble to go to shops.

However, this project is a dynamic project that interacts with most of products in terms of modification, addition and deletion. In this project, create an "e-commerce" website to facilitate the purchase and selection of the product that we want without effort. Website has been chosen because in 2018 an experiment made by Wagner, Schramm-Klein, & Steinmann can conclude that PC, laptops and netbooks are the most popular devices used to perform online shopping through the web browser. It will be a site for the sale of most of Yemeni products, the products of Yemen are presented in particular of all kinds and the selection is easy and it is through Email confirmation and delivery through agents to the provinces.

As mentioned above, that the technology is an important factor that make our life easier. Developed countries are the most benefited of such technologies since they have all the IT infrastructures. In addition, developing countries are trying to use the new technologies to the maximum advantages based on their available infrastructures. Yemen is one of those developing countries that has the basic and essential IT infrastructure which enable it to take an advantages of the new technologies usage. Many government and private sectors are highly demanding to use the new technologies to make the organization more effective and

perform well. One of those private companies that willing to change its manual system to an automatic and online system is Sky Yemen Company (SYC) of Yemeni products sales.

1.2 Problem Statement

The Online Yemeni Agricultural Product Shopping System for Sky Yemen Company (SYC) is considered a new industry in Yemen which import and export many kind of Yemeni products such as honey, raisin, Tea and coffee. Based on this basis, the company decided to develop a website that provide many accessible information to the customers such as products details, new products, offers, prices and many more. The intended online Yemeni Agricultural products shopping system will help customers to get their products online without any effort. However, this system will address the following issues:

- There is no online system that includes most Yemeni products.
- The need to deal with Yemeni sites in the field of electronic commerce.
- Providing the needed products for Yemeni people.
- The difficulties in the current traditional / manual system

1.3 Goal and Objectives of the study

The overall goal of the intended project is to develop an online shopping system to sale the Yemeni Agricultural products that achieved through the following objectives:

1. To analyze requirements of the Online Yemeni Agricultural Product Shopping System for Sky Yemen Company SYC.
2. To implement an online system to meet the company specification.
3. To validate the functionality and the performance of the proposed system by user acceptance testing.

1.4 Scope

This project is to deal with Yemeni products as well as to an initiative with the aim of promoting e-commerce in Yemen and boosting the confidence of the Yemeni community in the internet as a means of purchasing and selling. To achieve this, this system will be developed under several stages such as creating website to disseminate the information, features and services within the company. The following functions that the system is required to handle are based on the requirements by the Chief Executive Officer Mr Hani Naji Alasalami, technician and other supporting staff.

- i. Display the information and company's news
- ii. View the latest products in the online webpage provided by the company
- iii. Afford details for each product.
- iv. View the cost for all the product items.
- v. Provide the latest offers along the pricing details.
- vi. Enable the customer to buy the available items exhibited in the website.
- vii. View all the contact details of the company that ease the communication process in the company.
- viii. Design a separate webpage or extended webpage for the staff to manage the online system functions such as add, update, delete and modify the records in database.
- ix. This system will be used by the admin which is system manger, deliver and the customer.
- x. Payment method will not be implemented in this system since the current situation in Yemen and most of Yemeni people does not used credit card and have online account. This function will be proposes for future work.
- xi. Instead of online payment method, notify is going to be the method for payment notification and the payment will be hand-to-hand once item is received.

1.5 Thesis Organization and report

This thesis/report consists three (3) chapters.

Chapter 1: Introduction, Chapter 2: Literature Review (**Comparison**) and Chapter 3: Methodology.

Chapter 1 describes briefly about the project from background, problem statement, goal and objective of the study, scope of the project of the project and report/thesis organization.

Chapter 2 describes the Project Review, exciting system, information about S.Y.C, Challenges or disadvantages, Similar Existing systems, system to be developed (S.Y.C) and Comparison of existing systems and developed system “S.Y.C”.

Chapter 3 describes about the methodology, testing plan, gantt chart and the implementation of the system development process.

Chapter 4 describes the implementation of the system and the testing results and discussion.

Chapter 5 describes about the conclusion of the project, improvement for the future and the challenges faced throughout the project implementation.

Chapter 2

LITERATURE REVIEW

2.1 Introduction

In any research or project, literature review is an important element to be conducted. The aim of this is to comprehensively understand and grasp more knowledge related to the topic intended to be investigated. The more knowledge and information acquired related to the project /research is the more that the project will be easier to understand and come out with a good product. For example, by studying the existing systems related to this project, a clear picture and rich information will be given to build the system easily. This chapter provides details on the current SYC system and it will introduce three existing systems to compare and find the gaps for further improvement.

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2.2 Project Review

The idea of this project comes from the SYC which is located in Yemen and it wants to build the Online Yemeni Agricultural Product Shopping System for the company which allow the company to sale their products online and allow the customer to view the latest news of the company products and book the desired items.

The Online Yemeni Product Shopping System shall be able to be used by the system manger and the customers at any time.

2.3 About the S.Y.C

S.Y.C is private company which provides most of Yemeni products. This company is located in Yemen which used the manual system to sale the product so it does not help the company to sale more products and view it to all customers .So far from this project it will help the company make more effort to have many customers and it to be one of the most successful local companies in selling the Yemen products. Also, it is new company which provides products online which are have a good quality and features, so the company is keen to deliver the products to the largest number of people interested to buy the products they want.

Moreover, the company offers the possibility of wholesale and retail, which enables any customer to buy one kg or more. It facilitates payment and purchase, by documenting the sale and purchase documents are supported which includes the purchasing process and the parties to the transaction date, and the price of purchasing process.

The existing (current) system which is used by S.Y.C is manual system which means that the company does it work using documentation of papers and this current system makes the work of the company limited. Therefore, the company wants to make the new system which makes the work easier and efficiency by allowing the customer to buy online and using the database to store the company information of their products.

2.4 The difficulties and Disadvantages

The main challenge of this project is the important need to explain what e-commerce is and introduce its importance and security risks to the people who can't use it properly.

The lack of the credit card culture resulted in suspicion and lack of trust in anything to do with e-commerce, so choose Email to book the products in this project to make people more trust and communicated with of the need for such a study.

Finally, it is a challenge because of the lack of cooperation by the government to help us address those concerns and non-existence of any cyber laws or practices that can help the online marketing in Yemen.

2.5 Similar Existing Systems

In this era, most peoples like to choose the easiest and cheapest way to shop. Furthermore, most of people prefer using online marketing system to shopping which can help them get want they want to buy. So in his sections will introduces two existing system that related to the existing system then it will give comparison between these three systems which are the Amazon, Trandeindia and which are for sale products online will describes these three system in more details.

2.5.1 Amazon Products for Sale

The Amazon is online shopping for various things in many countries. For example, it provides online shopping for selling many products. For example it is provides category for agriculture products for sailing and other categories. I selected this system because it provides some agriculture products online shopping for sale. Figure 1.1 represents the home page for Amazon agriculture products shopping.

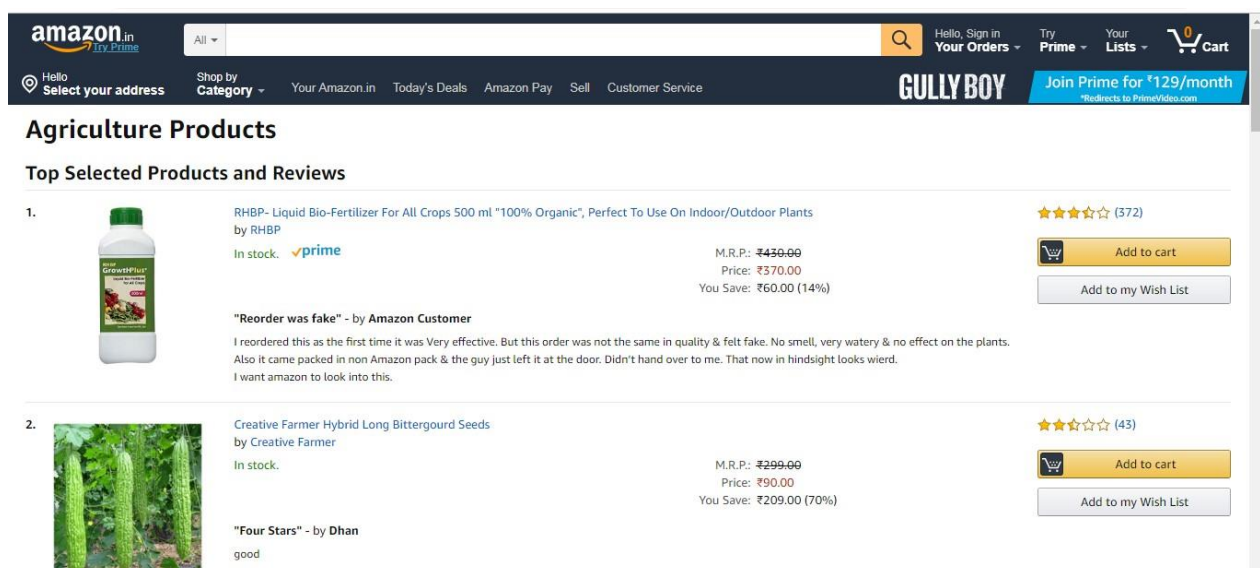


Figure 2.1: Home page of Amazon website.

However , there are features which is allow the user to select the products that they want to buy and add to cart as well as they can view the price of each product. In addition, it provides the best product seller which allows the user to view the most sellers in the website. Also, user can see the most product that view from customer which is have same function in OYAPSS system.

2.5.2 Tradeindia.com

Trandeindia online shop is an e-commerce website which allows the customer to view products and other things which are related to the products that S.Y.C is try to implement. Figure 1.3 shows the Home page of the Trandeindia Online shopping and The Figure 1.4 shows part of that Trandeindia shopping which is adding the product.

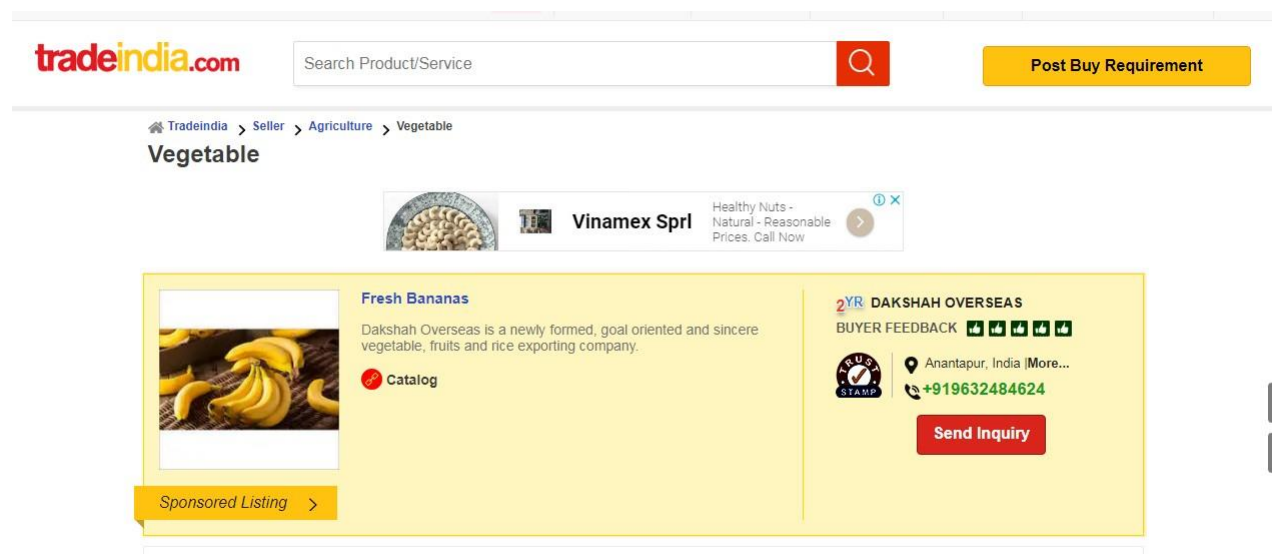


Figure 2.2 Home page for Trandeindia online shop

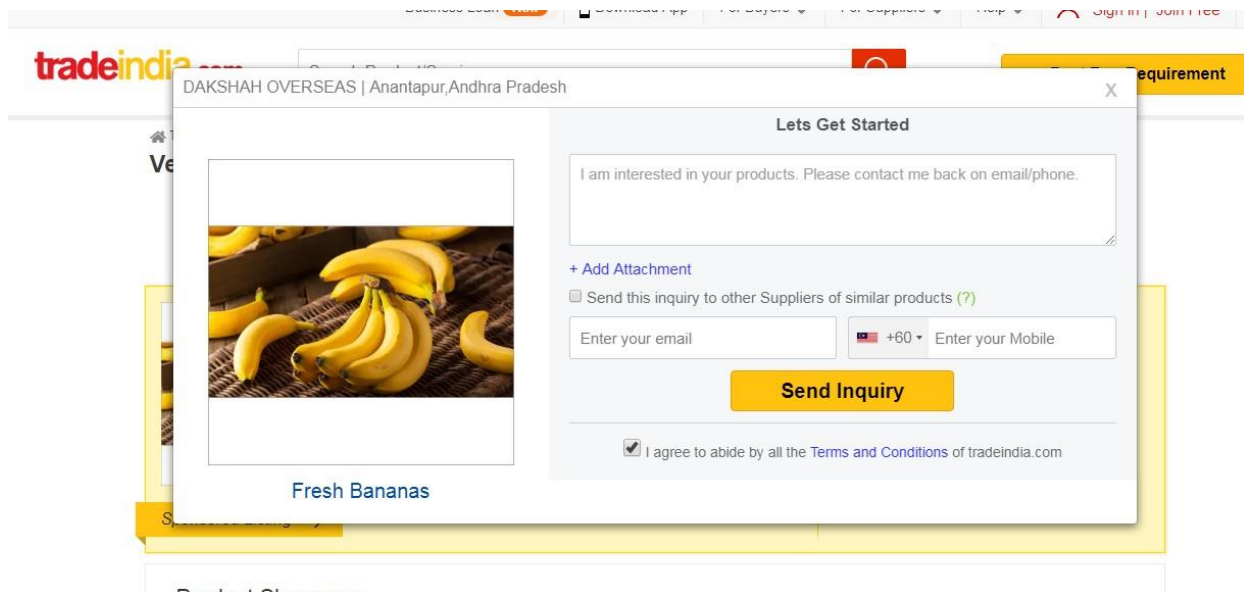


Figure 2.3 home page of Trandeindia

Furthermore, it allows the user to search for the product that he/she want to buy by providing the search function in its website as showing in Figure 2.1 customer can select the product the want and order by sending inquiry to request product they want from the system. Moreover, Trandeindia website provides the latest information about the new products of any products.

2.5.3 AgroStar Online Shop

AgroStar online shop is an e-commerce website in India which allows the customer to buy agriculture products somehow is related S.Y.C that will be tries to implement. Figure 1.5 shows the Home page of the AgroStar Online shopping.

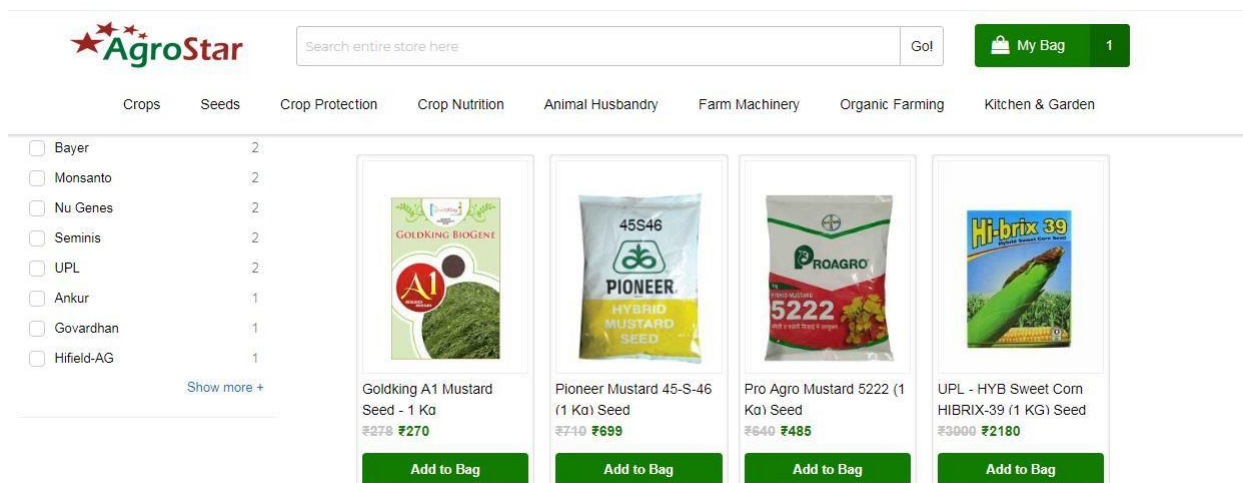


Figure 2.4 Home page of AgroStar

This website is only for the Indian which is proved Indian's Agriculture Product customer can view the products in the system and select any item want to buy. After add the product customer chose the city that want product to be delivering to him. There is disadvantage of this system which can not create account if you do not have Indian contact number.

2.5.4 The System to be Developed for (S.Y.C)

This system is about online Yemeni Agriculture Product Shopping system develop for S.Y.C Company as mentioned before it is allow the staff of the company to login into website of the system to perform different of function in the system such as to manage the ordering like delete the order. Also it allows the staff to manage the product such as add product, delete product and update the details of existing product.

Moreover, his system allow the customer to perform many functions such as it allow the user to view the product in details, order the product online by entering the customer information as his name ,address and Email address to booking items. In addition, it the customer can view all products that he/she want to buy by selecting the specifications product that he/she wants to order and then the system will show the price for each product in the system, customer can select many product and system will calculate the total price. Also customer can cancel the product that has been selected from the system.

2.5.5 Comparison of Existing Systems and S.Y.C System

Table 2.1 Comparison Table

Features	Amazon	Trandein dia	AgroStar	S.Y.C	Online S.Y.C
Programmin g Language	Java	Java	C#	-	PHP
Usability	YES	NO	NO	NO	YES
Web- based	YES	YES	YES	NO	YES
Online Agricultural Products	YES	YES	YES	NO	YES
View order status	YES	YES	YES	NO	YES
Online payment	YES	YES	-	-	-

CHAPTER 3

PROJECT METHODOLOGY

3.1. Introduction

This chapter is about the methodology of this project which will be using to make the system fulfills the objective of the project, and the justification of why it has been chosen for this project. Methodology is a sequence of methodical work done through steps.

Having a methodology along with the research will simplifies the work and guides the work of the project. Therefore, any project has to have methodology to make the success of the project.

This chapter defines the methodology which will be used in this project. It will identify and explain the project phases in detail thoroughly. In addition, this chapter discussed on devices, hardware and software requirement that have been used in this project development then the conclusion of this chapter.

3.2 Methodology

An iterative lifecycle model does not attempt to start with a full specification of requirements. Instead, development begins by specifying and implementing just part of the software, which can then be reviewed in order to identify further requirements. The iterative model has been selected as the Software Development Process for this project. The main reason is that requirements of this system are well-understood but there are maybe many functions of the project which might be added later on to this system, so the iterative provide advantage to return to capture requirement for the new functions that will be added in to the system.

Also, it is simple and easy to understand the process. The iterative model is easier to understand than the other software process models. Its phases are show in the Figure 3.2.

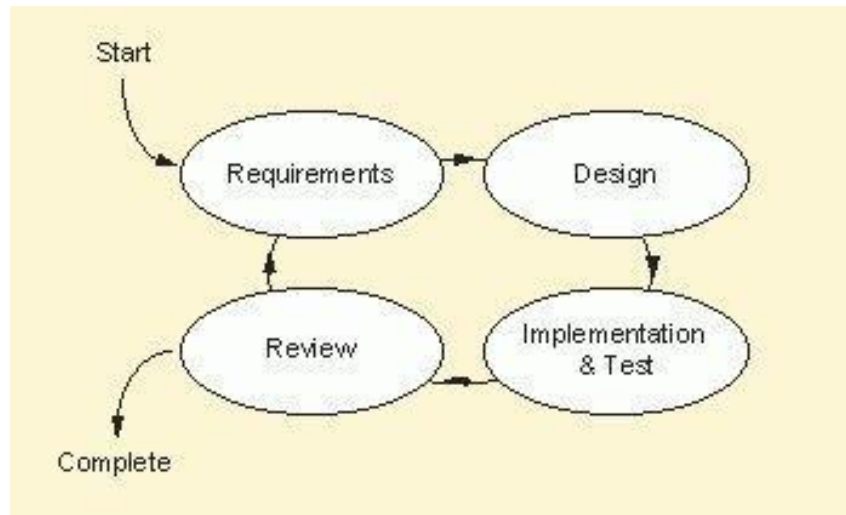


Figure 3.1: the phases of the iterative modules

So this model it will reduce the company's cost for developing this system. This is because it is simple and easy to understand, so it will be understandable to the company's staff.

3.2.1 Requirements Planning

The goals of this phase are to gather and analyze the entire requirements that have been requested by the company. So, after the all requirements have been identified and documented, the next step is to study them and prepared them to be design. In addition, objectives, problem statement and requirements of the project have also been identified to ensure the requirements of project are fulfilled. The requirements will be obtained by having a meeting and discussion with the client. Everything related to system and any helpful items for the development of the system such as existing systems or documents will be recorded to our references.

3.2.2 User Design

In this phase, the flow of the system will be decided and a work plan will be prepared for defining the steps necessary for the system, to select the appropriate construction approach for the system, and a schedule by which these steps can be completed. Besides on

that, the information regarding the look of the system and the flow that has been documented during the requirement phase will be used to design the interface of this system.

This phase produces a detailed system area model, an outline system design, and an implementation plan which is Use Case Diagram and Context Diagram, which help developer to comprehend and adapt with the system to fulfill the requirements.

3.2.2.1 Use Case Diagram

Figure 2.2 show the use case diagram is a basic chart to explain the cooperation between the user and the system. There are three main actors in these systems which are the Admin, customer and deliver. Also the use case diagram explains the advantage of each user with the system in the system. Admin is for mange the products (add, delete and edit) and should login into the system as well can view customer information. Costumer can register in the system and view products and select the item want to buy, deliver can register in the system and view customer information as well can send conformation that costumer received the item to the system.



Figure 3.2 show use case diagram of OYAPSS

3.2.2.2. Context Diagram

Figure 2.3 show context diagram of Online Yemeni Agricultural Product Shopping System (OYAPSS). There are three kind of user which is Admin, customer and deliver. Admin able to login, manage product, view customer information and send Email conformation. Customer able to register selects product and book product.

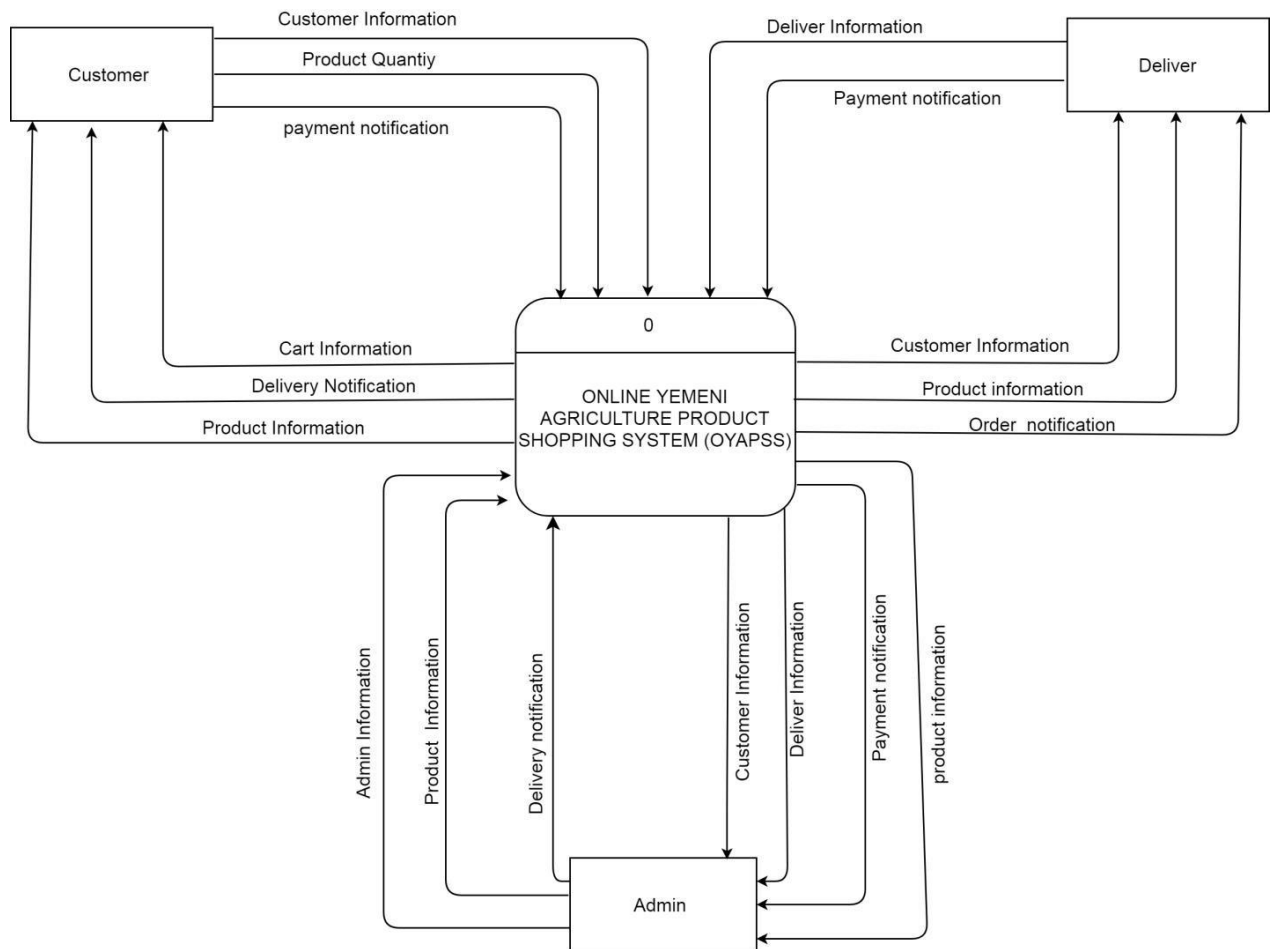


Figure .3.3 show context diagram of OYAPSS

The context diagram show above for the Online Yemeni Agricultural product shopping system that have three actors. Admin need to login with username and password system will do login status. After Admin has been login into the system will manage the products (add , delete or edit) .Thus while the costumer book the item Admin will have notification and will view customer information after that send notify for item his been booked .Customer will register in the stem the will go to view product in details . After that can book the item that want buy it submit with email and information about his place. Deliver will register or login if have account already then view customer information .So after deliver delver the item and take money from the costumer will conformer it is already received.

3.2.3 Implementation and Testing

After completing the design phase, the next step is to implement or develop the system. In this phase, the system will be divided into several modules and each module will be tested accordingly. Then, once all the modules has been developed, the integration will be performed to form the whole complete system and tested if the all the modules can interact or integrate among each other. During this phase, there are several types of testing that will be conducted which are the unit testing, component testing, system testing and user acceptance testing.

3.2.4 Review

For each iteration, there is a phase known as review phase where the module that has been developed will be reviewed. The reviewer is depends on what the module is related to. For example, if the module consists of high level programming, then the best reviewer will be from supervisor or experienced developer. If the module is simple and the client eager of it, then the reviewer shall be the client. Still, supervisor or experienced developer will be referred aftermath and advice will be taken whether we can proceed to the next phase or not.

3.3 Hardware Requirement

In order to develop and test the system, some hardware might be needed such as:

- A desktop computer or laptop computer

3.4 Software Requirement

Table 3.1 shows list of software and description that will be used during the development process and also documentation.

Table 3.1 Shows List Of Software And Description

Software	Description
Microsoft Office Word 2013	Prepare the documentation that has in this project.
Windows 7	Develop and run the system, prepare the documentation and install other software.
Visual Studio Code (VSCode)	The Integrated Development Environment (IDE) that will be used to write the codes and manage the project directories and files.
Draw.io	To model, design and create diagram, use case and others model for the documentation.
Xampp	It is use to launch a localhost server as well as to host MySQL database which is the PHPMyAdmin to be use the implementation and testing phase.
PHP Laravel Framework	The framework that will be used to develop and build the system.
MySQL	The database that will be used to store and retrieve data for the system.
PHPMyAdmin	The database management system that uses MySQL which assist the development process.
Mozilla Firefox Browser	The internet browser that will be used to launch and test the system during the development phase.

3.5 Gantt Chart

Gantt Chart for the whole planning of the project can be refer in **APPENDIX A**.

3.6 General Architecture

This section will explain about the general architecture that will be used in the development of the system. The architecture that will be used is the Model-View-Controller (MVC) architecture. This is because the framework that will utilize is the PHP Laravel Framework which applies the MVC architecture.

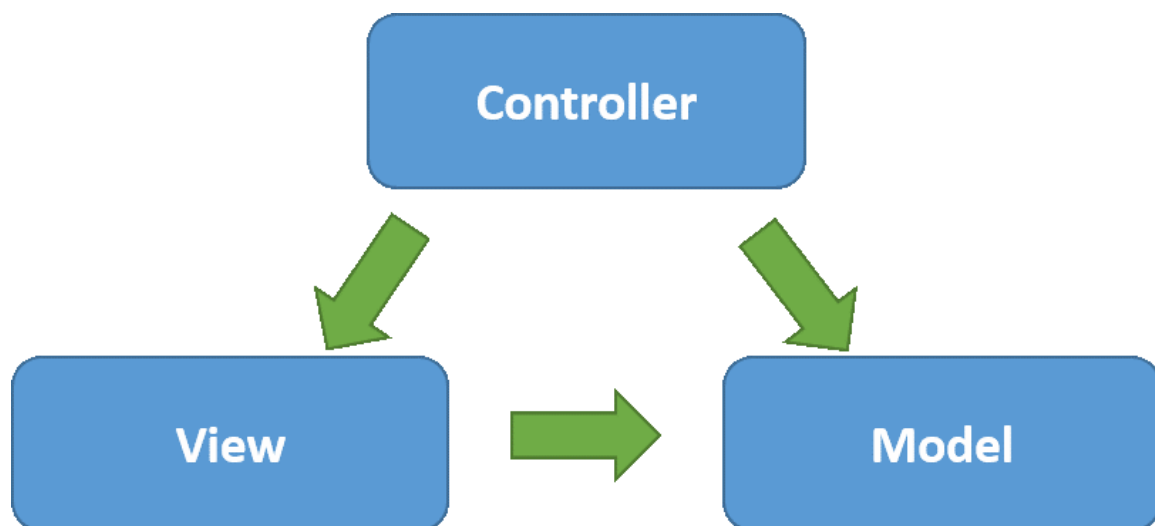


Figure 3.4 Show MVC

3.6.1 Model

Model is where the reference of table in database took place. When a model is created, we can configure the model to be referred to a table in database so that we can use it in controller to perform communication between the database and the view. For example, in a

controller we can use a model created to retrieve data or to save data to from or to the table in the database.

3.6.2 View

View is where the user interface is designed and can be visible to the user. In order to navigate to a specific view, a route must be set to a controller and then the controller can return the view to be displayed in a browser. Plus, a controller can pass information stored in a medium of PHP variable which can also be displayed in the view. Not only that, view can also pass value to the controller for the next action if necessary.

3.6.3 Controller

Controller might be the main gear for the other to work. Controller can be considered as a manager for the other components. With controller, a route can be set up to it so that controller can return a view which will be displayed in the browser. Furthermore, controller is where data retrieval or storing took place in the system. Controller becomes the connection between a view and model(s).

3.7 Implementation

This section will explain the implementation thoroughly of the methodology chosen. Iterative methodology is consists of four main phases which are the requirement planning phase, design phase, implementation and testing phase, and review phase.

In requirement planning phase, the requirement will be obtained by having a meeting and discussion with the client. Everything that will help to design the system such as existing systems or any related documents will be recorded. This phase will be the best for confirmation of all requirements both functional and non-functional since in later phase, doing so will cause a lot of problem and risks to occur. Once, all requirements has been noted and documented as well as the client is satisfied with the requirements stated, then we should proceed to the next phase which is the design phase.

In design phase, the requirements that have been obtained previously will be converted into more explainable figures or keywords that can be understood by the developer. In which the design should be easily translated into codes to be used in implementation and testing phase. Things that should be included in design phase are the general architecture, the flow of the interface, the number of views, the models involved, the data dictionary for the database and any algorithm used in the system. Once it is settled, then the next phase can be proceeded.

For the implementation and testing phase, the design of the module will be used as a reference for the development process. This phase involved the construction of functionalities to fulfill the client requirements. Plus, once the functionalities have been finished, the testing will take place accordingly and any design errors, logical errors or bugs will be debugged and fixed. When all of them have been tested and considered to be free from errors then the module shall be reviewed in the next phase.

As for the review phase, the completed module will be sent or presented to a reviewer. The reviewer can be the supervisor or experienced developer. Though, it can also be the client itself depending on what the module is focused on. For example, a module with difficult implementation may require supervisor or experienced developer to be the reviewer. Else, module that involved more to the user interface design or display will be reviewed by the client. Once everything is satisfied, the process will iterate to the requirement and planning phase again for the next module.

This methodology will end once the entire module has been integrated and finished in term of testing. After that, the system can be hosted on a real environment which is the internet where smoke testing will take place to increase the reliability of the system gradually.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Introduction

This chapter focused on the results and discussion of the projects within the scopes of the system architecture and design, system implementation, testing and their outcomes. This chapter is important as it ensure the whole system to be structured well within the implementation phase and to understand the whole system architecture. Prior to that, the testing shall be executed to the system to maintain its qualities and functionalities.

In subchapter **4.2**, the system design of MVC for OYAPSS will be shown including the list of controllers involved and their functionalities. Subchapter **4.3** will be explaining on the implementation of Laravel in focus to the setup environment and conduction and using the specialties of Laravel framework in web development process. Subchapter **4.4** explains in detail about Laravel Eloquent ORM (Object-relational Mapping) technique and their process in web development.

Next, subchapter **4.5** focus on the use of AJAX technology in Laravel, a web technology that have existed since 1990s which is a game changer in web development industry. Last but not least, subchapter **4.6** is about process and documented testing of the system and their results.

4.2 System Design

Laravel uses MVC architecture which is fairly easy to learn and understand. In this project, we will implement the architecture for the development process and manage it through Rapid Application Development (RAD). Figures below show the design of the MVC architecture for OYAPSS.

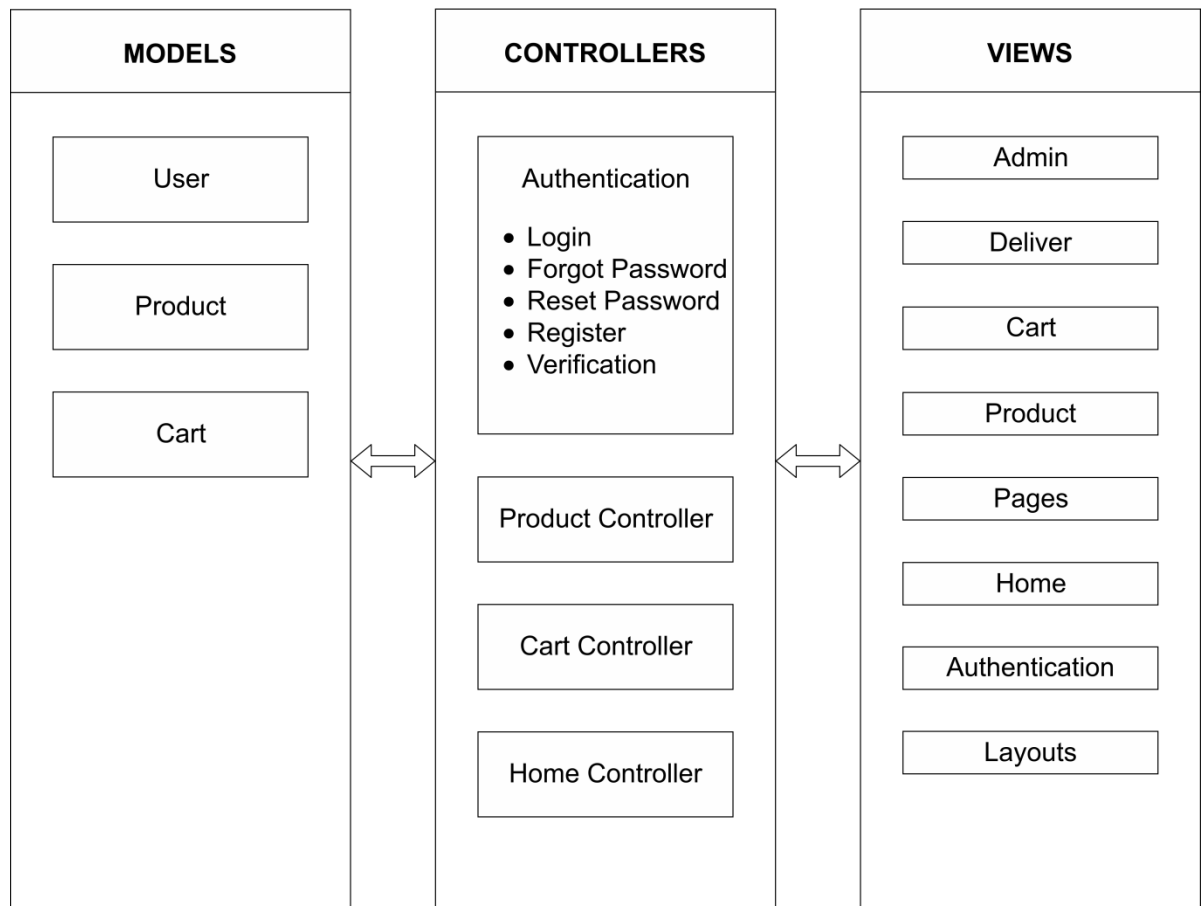


Figure 4.1 – MVC Structure for OYAPSS

OYAPSS consists of controllers →

- Authentication Controller

Consist of several sub controllers to handle basic authentication process

- Login Controller is to handle login process for registered user.
- Forgot Password Controller allow user who forgot their password to retrieve back their lost account and assign new password.
- Reset Password Controller allow user to reset their password and

assign a new one.

- Register Controller for new users to register account and utilize OYAPSS features.
- Verification Controller for handling verification among newly registered user, this is to prevent from bots, spammers or integrity issues.
- Product Controller
 - Handles the product management process in terms of creating, editing, displaying and deleting.
 - Product controller is the core of the system since most part of the system may have involved this controller
- Cart Controller
 - Cart Controller is for handling orders from the customer. For example, each order has a sequence of stages.
 - Awaiting Checkout (AC) – Customer has to take action by checking out their cart
 - Awaiting Approval (AA) – Admin has to take action by approving customer cart.
 - Approved, Awaiting Deliver Assignment (AP) – Deliver has to take action by grabbing the order and continue the process.
 - Awaiting Delivery (AD) – Deliver has to gather the items and deliver them
 - On Delivery (OD) – Deliver notified customer if the order is on delivery
 - Delivered (DD) – Once order has been completed and delivered
 - Order Cancelled (OC) - Cancelled, only can be done before being approved
 - Each stages have their own function in the controller
 - The sequence of stages is AC, AA, AP, AD, OD and DD. While OC

can be triggered anywhere in any sequence based on circumstances.

- Home Controller
 - Handles page navigation and general data fetching process from public views such as the homepage.

4.3 Implementation

4.3.1 Environment Configuration

In web development, the most common practice is to have two different environments. First is the local environment which is the development environment that developers use to develop the system and conduct testing. This environment can only be accessed by the developer itself. This environment may also share its configuration and can be modified without affecting other developers in the team. Second is the live server where the system can be accessed by multiple users at once from different places and should one person encounters fatal bug, then it may affect other users as well. Nowadays, live server is easy to be dedicated with the existence of cloud computing technology. A person can have multiple cloud server at once without worrying on the security, space and performance issues.

In this project, we will implement this practice with having a local directory using XAMPP with PHP version of 7.1.26. For the live server, we will be using the free version of web hosting known as 000Webhost for making the system live and can be accessed by public users. Along with XAMPP, it provides the Database Management System (DBMS) named as PHPMysqlAdmin which is quite famous and easy to manage.

The best browser to test the system is either by using Google Chrome or Mozilla Firefox. In this project, we will be utilizing Mozilla Firefox since it is much lighter and flexible than Google Chrome. Though, both of them provide services for developer view and inspection mode.

For the ease of code writing, Visual Studio Code will be used as the code editor. The reason for choosing this code editor is because it allows developer to install various of extension such as code snippets and helpful add-in which will boost development productivity.

4.3.2 Laravel Setup

To do development using Laravel, we need to download *Composer*, a library that allows you to create a new Laravel project without within few minutes. We do not have to worry on structuring the project structure by ourself as it is an automated process.

Once a project is created, we can then open the project structure using Visual Studio Code or any text editing software and begin our development. When creating a new Laravel project, the library will automatically provide the simples authentication functions along with their own table in the database. We may then modify as we need or used it directly since the security process behind the generated module is guaranteed.

4.3.3 Laravel Models

As a part of MVC architecture, model play roles as the middle-man for interacting between the back-end process of Laravel and the database on the server.

4.3.4 Laravel Views

In MVC architecture, view is the one of the important component that makes the website to be interactive. View is where the user interface is being shown to the user, consisting of many elements from HTML to any interactive user interface libraries that helps to enhance the website even more.

In Laravel, view used the file extension of “**blade.php**” which is integrated with Laravel built-in library that allows the use of simplified PHP functionalities within the front-

end codes. For instance, instead of using “<?php ... ?>” for regular PHP, Laravel uses “{{ ... }}” instead which is much more convenient and easy to use.

4.3.5 Laravel Controllers

Controllers are the home to logical statements that contribute to the functionalities of the system. Usually, a function or method in a controller may involves fetching data from database through model and then perform logical algorithm that will be supplied to a specific view for displaying or other purpose.

In Laravel, data fetching has been made easier with the existence of Eloquent ORM (Object-relational Mapping) programming technique. This technique allows developer to work with the database in more efficient ways without the need of writing SQL queries but using built-in syntax instead. For example, normal SQL query for fetching a specific row with given unique ID from a table would be:

```
SELECT * FROM table_A WHERE unique_id = „1“;
```

In Laravel, this statement can be even shorter as shown:

```
Table_A::find(1);
```

Other SQL clause such as „ORDER BY“ and „GROUP BY“ also available in eloquent but with different syntax. This technique is really useful as it provides the easiest way of fetching data without the need to think the SQL statement and producing SQL syntax errors. More details on eloquent are explained in **4.4 Laravel Eloquent Object-relational Mapping (ORM)**.

4.3.6 Basic Routing

Routing in Laravel basically means that before any view is accessible, the view must be routed with specific URL so that user can access it from the webpage by directing to the specified URL path. For example, a view called „Manage Product“ can be routed under the URL path of „/manage-products“. When a user opens the URL path on the browser, the view shall be accessible. Routing also helps to connect view and a controller for further complex process. Which means that before the view being shown, the controller will perform its algorithm and finally passed to the view.

In Laravel project structure, routing usually took place in „web.php“ file in „Routes“ folder. This file is where routes that connect between views and controllers are specified and stored. Laravel automatically allocate the relationship between the connection of each routes and execute when user redirect to it.

4.4 Laravel Eloquent Object-relational Mapping (ORM)

One of the advantages using Laravel is that developer can retrieve or send data from or to database without the need of writing the query statement such as SQL statement. In this project, the eloquent process explanation will be more related to SQL server.

Within a database, there could be multiple of tables existed serving their own storage purpose to the system. Laravel makes that for every table created will come along with a “Model” of that table. For example, when a table named “product_detail” is created using the command terminal in development workspace, a Model of name “ProductDetail” will be automatically created and kept in the “app” folder of the project. This Model can then be utilized by Controllers or other components to interact with the table.

With Model, we can start using eloquent technique by calling the Model reference. Table 4.1 below shows some basic eloquent and their significant towards the Model.

Table 4.1 – Laravel Eloquent

Eloquent Statement	SQL Statement / Clause	Explanation
get()	SELECT ... FROM	Return data when executed
find(Value)	N/A	Return specific row with passed ID
paginate(Integer)	LIMIT	Limit the rows returned by number specified
where(Field Name, Value)	WHERE	Conditional clause to filter our data
orderBy(Field Name)	ORDER BY	Sort the data retrieve by field specified
groupBy(Field Name)	GROUP BY	Group data by specified Field
\$row->column_name	UPDATE ... SET	Update or display the value of the column of the Row
\$row->save()	-	Commit the changes done to the row

In general, there are more eloquent methods that can perform many different purpose including retrieving or storing data with even complex condition.

4.5 Using AJAX Technology in Laravel

Asynchronous JavaScript and XML or AJAX is a technology that existed long since the 1990s of web development. AJAX helps making a web browsing experience to become even much efficient. AJAX allows portion of the website to be able to retrieve data form web server and loaded instantly or without the need to refresh the whole webpage. This technology reduces the waiting time for users since most common page refresh may took few seconds. Assuming a user have to face page refresh every time the user tries to obtain information from the webpage, valuable time could have been wasted a lot.

Thus, in this project, AJAX will be implemented using JavaScript with jQuery library to improve the user experience especially in a website where the user age range are varying from youths to elders. In order to implement AJAX, there are several components that should be concern off. First is the path of a file (usually PHP file with logical statements) that we want the AJAX to retrieve information from. Secondly is what should trigger the AJAX, either buttons or other components with abilities to trigger event. Third, what kind of method do we wanted to deliver, whether it is a „POST“ or „GET“ depending on the objective.

Using jQuery library, there are several ways of implementing AJAX. The first one is by using „\$.ajax()“ as in **Figure 4.2** and the second one is directly use „\$.post“ or „\$.get“ as in **Figure 4.3** which is much more simpler but could be a little bit confusing for developer who were still not familiar enough. Though, both works the same except the syntax could differs.

```
function getMessage(id) {
    $.ajax({
        method: 'POST',
        url: '/products/getviews/' + id,
        data: {productid: id, _token: '<?php echo csrf_token() ?>'},
        success: function(data) {
            document.getElementById("welcomeProductViews").innerHTML = data.view;
        },
        error: function(data){
            var errors = data.responseJSON;
            console.log(errors);
        }
    });
}
```

Figure 4.2 – Using „\$.ajax()“ Method in jQuery

```
function loadAA(){
    $.get("{ URL::to('/admin/dashboardPanelAA') }", function(data){
        $("#resultAction").html(data);
    });
}
```

Figure 4.3 – Using „\$.post“ or „\$.get“ Method in jQuery

Since Laravel use routing technique to redirect to a view, the URL path for the AJAX will be a bit different compared to regular URL path.

4.6 Testing and Results

In this project, the testing is done in two approach. First is within the development period, in which the testing is being done unplanned (without proper test cases) and debugging is done every time bugs or mistakes is detected. Second is after the module is finish, the testing here will be done in a planned and recorded environment, where every input boxes and buttons shall be documented their validation, event fired and their outcomes with different data. Below are parts of planned testing technique.

4.6.1 Register (Customer)

Register as **Customer**

- Customer can order item(s) from the product list.
- Once order has been approved, a deliver will conduct the delivery.
- Customer will be notified on the approval and who is the deliver.
- Prepare your cash as the deliver appear infront of the doorstep.

Username

E-Mail Address

Password

Confirm Password

Shipping Address

Postcode

State

Contact No.

Register

Figure 4.4 – Registration for Customer

Customer will be our main users, customer account may be created in higher amount than Deliver and Admin. Thus, customer module requires higher attention compared to the others. In this module, decision table testing technique and test cases are conducted to see whether the system manage to handles possible errors.

Table 4.2 Authentication Decision Table

Test Condition ID	Test Condition
TCON_REG_CUS_01	Valid Username
TCON_REG_CUS_02	Valid Email & Format
TCON_REG_CUS_03	Email Availability
TCON_REG_CUS_04	Matching Password Confirmation

Test Condition																
TCON_REG_CUS_01	F	F	F	F	F	F	F	F	T	T	T	T	T	T	T	T
TCON_REG_CUS_02	F	F	F	F	T	T	T	T	F	F	F	F	T	T	T	T
TCON_REG_CUS_03	F	F	T	T	F	F	T	T	F	F	T	T	F	F	T	T
TCON_REG_CUS_04	F	T	F	T	F	T	F	T	F	T	F	T	F	T	F	T
Output																
Registration Succeed	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	T

Registration Failed and Warning Message Pops Out	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	F

Table 4.3 – Test Case for Customer Registration

TEST CASE ID	PARAMETER – DATA		TEST TYPE	EXPECTED	ACTUAL	CONCLUSI ON
TC_REG_CUS _01	Username	“Nabeel”	Normal	Register Successful.	Register Successful.	Pass
	Email	“Nabeel@gmail.c om”		Redirected to dashboard page.	Redirected to dashboard page.	
	Password	“nabeel”				
	Confirm	“nabeel”				

	Password					
	Shipping Address	“No. 12, ABCD”				
	Postcode	“26300”				
	State	“Yemen”				
	Contact No	0123435469				
TC_REG_CUS_02	Username	“Nabeel”	Erroneous	Validation will trigger email formatting warning.	Validation trigger email formatting warning.	Pass
	Email	“Nabeel.com”				
	Password	“nabeel”				
	Confirm	“nabeel”				

	Password						
	Shipping Address		“No. 12, ABCD”				
	Postcode		“26300”				
	State		“Yemen”				
	Contact No		0123435469				
TC_REG_CUS_03	Username		“Nabeel”	Erroneous Entering password below the minimum of 6 characters. Should trigger	Validation will trigger password minimum length warning.	Validation trigger password minimum length warning.	Pass
	Email		“Nabeel@gmail.com”				
	Password		“nab”				

	Confirm Password	“nab”	validation.			
	Shipping Address	“No. 12, ABCD”				
	Postcode	“26300”				
	State	“Yemen”				
	Contact No	0123435469				
TC_REG_CUS_04	Username	“Nabeel”	Erroneous Entering wrong confirm password. Should trigger	Validation will trigger password confirmation was not matching.	Validation trigger password confirmation was not matching.	Pass
	Email	“Nabeel@gmail.com”				
	Password	“nabeel”				

	Confirm Password	“nab”	validation.			
	Shipping Address	“No. 12, ABCD”				
	Postcode	“26300”				
	State	“Yemen”				
	Contact No	0123435469				

4.6.2 Register (Deliver)

Register as Deliver

- You will be notified when a customer nearby you had made an order.
- Grab the order and retrieve it from the supplier.
- Be fast as you might need to compete with other delivers.
- Deliver to the customer and get your payment.

Username

E-Mail Address

Password

Confirm Password

Contact No.

Register

Figure 4.5 – Registration for Deliver

Deliver is not part of Customer nor Admin but still require intermediate attention in testing the module and ensure that no exploitation or security issues happen. The test will be similar to customer.

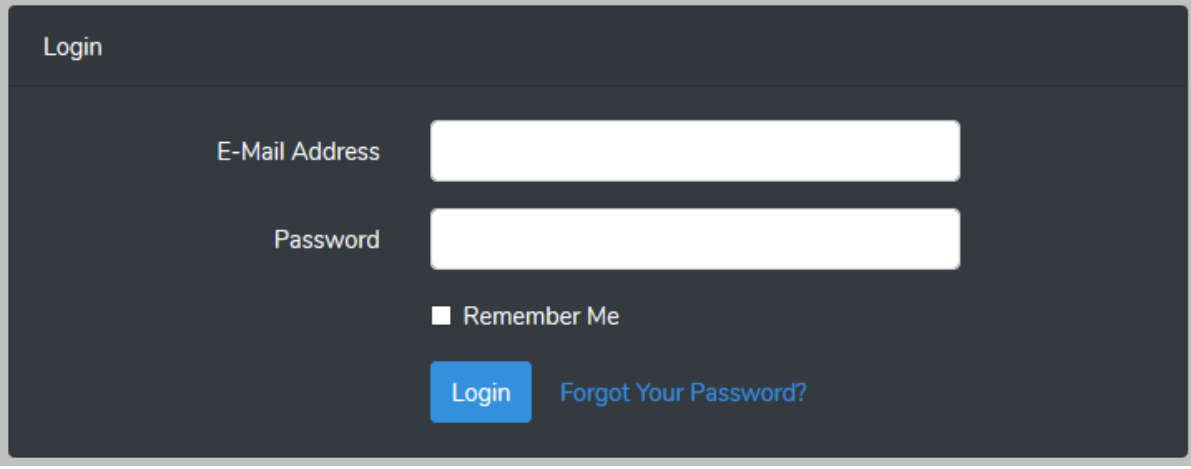
Table 4.4 – Test Case for Deliver Registration

TEST CASE ID	PARAMETER – DATA		TEST TYPE	EXPECTED	ACTUAL	CONCLUSION
TC_REG_DEL_01	Username	“Nabeel”	Normal	Register Successful.	Register Successful.	Pass
	Email	“Nabeel@gmail.com”		Redirected to dashboard page.	Redirected to dashboard page.	
	Password	“nabeel”				
	Confirm Password	“nabeel”				
	Contact No	0123435469				

TC_REG_DEL_02	Username	“Nabeel”	Erroneous Entering badly formatted email address, should trigger validation.	Validation will trigger email formatting warning.	Validation trigger email formatting warning.	Pass
	Email	“Nabeel.com”				
	Password	“nabeel”				
	Confirm Password	“nabeel”				
	Contact No	0123435469				
TC_REG_DEL_03	Username	“Nabeel”	Erroneous Entering password below the minimum of 6 characters. Should trigger	Validation will trigger password minimum length warning.	Validation trigger password minimum length warning.	Pass
	Email	“Nabeel@gmail.com”				
	Password	“nab”				

	Confirm Password	“nab”	validation.			
	Contact No	0123435469				
TC_REG_DEL_04	Username	“Nabeel”	Erroneous Entering wrong confirm password. Should trigger validation.	Validation will trigger password confirmation was not matching.	Validation trigger password confirmation was not matching.	Pass
	Email	“Nabeel@gmail.com”				
	Password	“nabeel”				
	Confirm Password	“nab”				
	Contact No	0123435469				

4.6.3 Login (All)

A login form with a dark gray background. At the top left, the word "Login" is displayed in white. Below it, there are two white input fields. The first field is labeled "E-Mail Address" and the second is labeled "Password". Below the password field, there is a checkbox labeled "Remember Me". At the bottom, there is a blue button labeled "Login" and a link labeled "Forgot Your Password?" in blue text.

Login

E-Mail Address

Password

☐ Remember Me

Login [Forgot Your Password?](#)

Figure 4.6 – Login for Users

Login is a module that everyone will go through the same process. By entering the email address and password. This applies to all users. Below test is conducted on a “Customer” account of email “Nabeel@gmail.com” and password of “nabeel”.

Table 4.5 Login Decision Table

Test Condition ID	Test Condition
TCON_LOGIN_01	Valid Email & Format
TCON_LOGIN_02	Valid Password
TCON_LOGIN_03	Registered

Test Condition								
TCON_LOGIN_01	F	T	F	T	F	T	F	T
TCON_LOGIN_02	F	F	T	T	F	F	T	T
TCON_LOGIN_03	F	F	F	F	T	T	T	T
Output								
Login Succeed	F	F	F	F	F	F	F	T
Login Failed and Warning Message Pops Out	T	T	T	T	T	T	T	F

Table 4.6 – Test Case for Users Login

TEST CASE ID	PARAMETER – DATA		TEST TYPE	EXPECTED	ACTUAL	CONCLUSION		
TC_LOGIN_01	Email	“Nabeel@gmail.com”	Normal	Login successful.	Login successful.	Pass		
	Password	“nabeel”		Redirected to dashboard page.	Redirected to dashboard page.			
TC_LOGIN_02	Email	“Nabeel.com”	Erroneous Entering badly formatted email address.	Validation will trigger email formatting warning.	Validation trigger invalid email formatting.	Pass		
	Password	“nabeel”						
TC_LOGIN_03	Email	“Nabeel@gmail.com”	Erroneous Entering	Validation will trigger invalid password.	Validation trigger invalid password.	Pass		

	Password	“nab”	invalid password.			
4 TC_LOGIN_0	Email	“Nabil@gmail.co m”	Erroneous Entering invalid email address.	Validation will trigger invalid email.	Validation trigger invalid email.	Pass
	Password	“nabeel”				
5 TC_LOGIN_0	Email	“Nabil@gmail.co m”	Normal Entering valid values with remember flag true.	Login successful. Redirected to dashboard page. Next login will use remembered information.	Login successful. Redirected to dashboard page. Next login use remembered information.	Pass
	Password	“nabeel”				
	Remember Me	True				

4.6.4 Add New Product (Admin)

Add New Product

Name

Product Name

Description

Product Description

Price

Product Type

Fruit

Brand

Product Brand

Product Image

Browse...

No file selected.

Cancel

Add Product

Figure 4.7 – Adding New Product in Admin

Add new product is one of the manage product module. It is one of the main module to that requires higher attention since it involves in many part of the system.

Table 4.7 – Test Case for Add New Product

TEST CASE ID	TEST CONDITION			TEST TYPE	EXPEC TED	ACTU AL	CONCLUSI ON
TC_PROD_ADD _01	Name*	Black Grapes		Normal	Product successfully added.	Product successfully added.	Pass
	Description*	Juicy and Fresh Black Grapes for grapes lovers.					
	Price*	12.00					
	Type	Fruit					
	Brand						

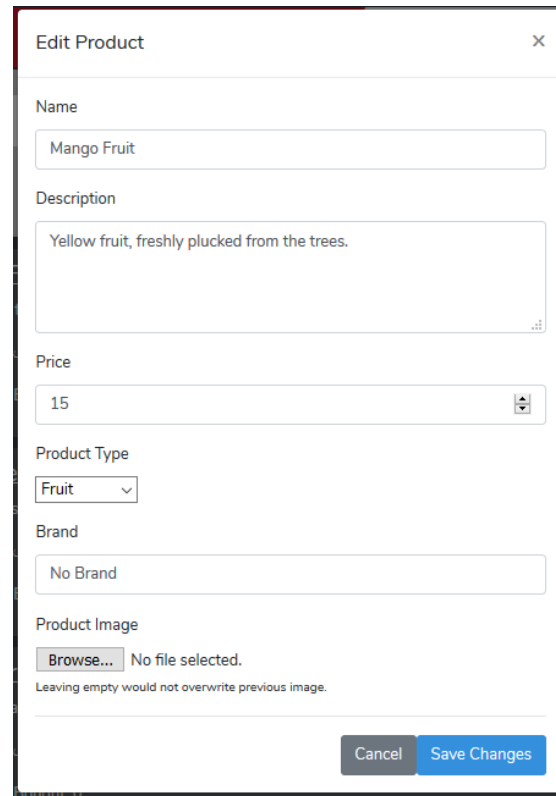
	Image*		JPG of 189KB				
TC_PROD_ADD _02	Name*			Erroneous Left a blank <i>name</i> in the form.	Product indicate missing value in input form.	Product indicate missing value in input form.	Pass
	Description *		Juicy and Strawberry for berries lovers.				
	Price*		20.00				

	Type	Fruit					
	Brand						
	Image*	.JPG of 138KB					
TC_PROD_ADD _03	Name*	Mango		Erroneous Left a blank <i>description</i> in the form.	Product indicate missing value in input form.	Product indicate missing value in input form.	Pass
	Description *						
	Price*	15.00					
	Type	Fruit					
	Brand						
	Image*	.JPG of 48KB					

TC_PROD_ADD _04	Name*	Mango		Erroneous Left a blank <i>price</i> in the form.	Product indicate missing value in input form	Product indicate missing value in input form	Pass
	Description*	Yellow fruit.					
	Price*						
	Type	Fruit					
	Brand						
	Image*	.JPG of 48KB					

TC_PROD_ADD _05	Name*	Mango		Erroneous Left a blank <i>image</i> in the form.	Product indicate missing value in input form	Product indicate missing value in input form	Pass
	Description*	Yellow fruit.					
	Price*	15.00					
	Type	Fruit					
	Brand						
	Image*						

4.6.5 Edit Product (Admin)



The screenshot shows a modal window titled "Edit Product" with a close button (X) in the top right corner. The form contains the following fields and controls:

- Name:** A text input field containing "Mango Fruit".
- Description:** A text area containing "Yellow fruit, freshly plucked from the trees." with a small icon in the bottom right corner.
- Price:** A text input field containing "15" with a spinner icon on the right.
- Product Type:** A dropdown menu with "Fruit" selected and a downward arrow.
- Brand:** A text input field containing "No Brand".
- Product Image:** A section with a "Browse..." button, the text "No file selected.", and a note "Leaving empty would not overwrite previous image." below it.

At the bottom right of the modal are two buttons: "Cancel" (grey) and "Save Changes" (blue).

Figure 4.8 – Edit Existing Product in Admin

Some users may need to change the product details from time to time, thus an option to edit the product added must be embedded. Since edit product and saving new product is totally different in term of the back end process, thus it must be tested along in a different test case. Below is the test case for edit product. The data to be edited is also shown below.

Data to be edited:

Table 4.8 Existing data to be edited

Name	Mango Fruit
Description	Yellow fruit freshly plucked from the trees.
Price	15.00
Type	Fruit
Brand	No Brand
Image	.JPG of 48KB

Table 4.9 – Test Case for Edit Product

TEST CASE ID	PARAMETER – DATA			TEST TYPE	EXPECTED	ACTUAL	CONCLUSION
TC_PROD_EDIT_01	Name (changed)	Ripe Mango Fruit		Normal Changed the name of the product.	Product's name successfully changed.	Product's name successfully changed.	Pass
	Description	Yellow fruit freshly plucked from the trees.					
	Price	15.00					
	Type	Fruit					
	Brand	No Brand					

	Image	.JPG of 48KB					
TC_PROD_EDIT _02	Name	Mango Fruit		Normal Changed the description of the product.	Product's description successfully changed.	Product 's description successfully changed.	Pass
	Description (changed)	Yellow fruit <removed>.					
	Price	15.00					
	Type	Fruit					

	Brand	No Brand					
	Image	.JPG of 48KB					
TC_PROD_EDIT _03	Name	Mango Fruit		Normal Changed the price of the product.	Product's price successfully changed.	Product's price successfully changed.	Pass
	Description	Yellow fruit freshly plucked from the trees.					
	Price (changed)	20.00					
	Type	Fruit					
	Brand	No Brand					
	Image	.JPG of 48KB					

TC_PROD_EDIT _04	Name*	<leave empty>		Erroneous Left <i>name</i> in the form blank.	Product indicate missing value in input form	Product indicate missing value in input form	Pass
	Description*	Yellow fruit freshly plucked from the trees.					
	Price*	15.00					
	Type	Fruit					
	Brand	No Brand					
	Image*	.JPG of 48KB					

TC_PROD_EDIT _05	Name*	Mango Fruit		Erroneous Left <i>description</i> in the form blank.	Product indicate missing value in input form	Product indicate missing value in input form	Pass
	Description*	<leave empty>					
	Price*	15.00					
	Type	Fruit					
	Brand	No Brand					
	Image*	.JPG of 48KB					

TC_PROD_EDIT _06	Name*	Mango Fruit		Erroneous Left <i>price</i> in the form blank.	Product indicate missing value in input form	Product indicate missing value in input form	Pass
	Description*	Yellow fruit freshly plucked from the trees.					
	Price*	<leave empty>					
	Type	Fruit					
	Brand	No Brand					
	Image*	.JPG of 48KB					
TC_PROD_EDIT _07	Name*	Mango Fruit		Normal Change the product's image.	Product's image successfully changed.	Product 's image successfully changed.	Pass
	Description*	Yellow fruit freshly plucked from the trees.					

	Price*	15.00					
	Type	Fruit					
	Brand	No Brand					
	Image* (changed)	.PNG of 253KB					
TC_PROD_EDIT _08	Name*	Mango Fruit		Erroneous Change the product's image over the limit of 2000KB.	Product's image failed to update, pops out warning message.	Product 's image failed to update, pops out warning message.	Pass
	Description*	Yellow fruit freshly plucked from the trees.					
	Price*	15.00					
	Type	Fruit					

	Brand	No Brand					
	Image* (changed)	.PNG of 3690KB					

TC_PROD_EDIT _09	Name*	Mango Fruit		Erroneous	Product's image failed to update, pops out warning message.	Product 's image successfully update.	Fail
	Description*	Yellow fruit freshly plucked from the trees.					
	Price*	15.00					
	Type	Fruit					
	Brand	No Brand					
	Image* (changed)	<leave empty>					

4.6.6 Hardware Tested

The testing has been done in hardware as stated in the table below:

Table 4.10 – Hardware Tested

Hard ware	Proc essor	R AM	Sy stem Type	Oper ating System	Manufac turer	Mo del	Bro wser
Lapto p 1	Intel ® Core™ i5- 2430M CPU @ 2.40GHz	4.0 0GB	64 -bit	Wind ow 7 Ultimate	Lenovo	Len ovo Laptop G570	Go ogle Chrom e, Mozilla Firefox
Lapto p 2	Intel ® Core™ i5- 3210M CPU @ 2.50GHz	4.0 0GB	64 -bit	Wind ows 10	Hewlett Packard (HP)	HP Pavilion g4 Noteboo k PC	Go ogle Chrom e, Mozilla Firefox

All of above hardware tested have no issue and run smoothly.

4.6.7 User Acceptance Test

User Acceptance Test (UAT) is the most important test as it reflect the client feedbacks toward developer. With UAT, developer can conduct changes or fixes to the system based on the client experience. UAT can be referred at the APPENDIX B.

4.7 User Manual

User manual is a guideline for the users to use the system. User manual must be clear and easy to follow with explanation and good understanding content. For details, refer APPENDIX C.

CHAPTER5

CONCLUSION

5.1 Introduction

This chapter is to conclude the whole process of the project from the requirement phase to the review phase based on the iterative model process. Through the end of the project, we have done many testing to ensure that the system fulfills the needs of the customer. This includes the System Testing and User Acceptance Test. Plus, we will also discuss on the challenges that we have faced throughout the project and what will be the future plan for the system.

5.2 User Acceptance Test (UAT) Results

The UAT that has been done to our client shows that they are satisfied by the system outcomes and approve the system specifications. Detailed UAT document can be referred in the appendix section.

5.3 Future of the System

Every system must cope with the current technologies of its era. As for Online Yemeni Agricultural Product Shopping System (OYAPSS), the plan for the system is to provide more options of products rather than agricultural product only. For example, the system can also allow users to publish clothing products, gadgets or any non-agricultural products.

Next, the system will be added alternative ways of payment and delivery. Instead of going through the process of cash-on-delivery (COD), the customers can also pay their orders online through the installment of payment gateways. This can improve the system usability for the users.

Furthermore, OYAPSS can also be improved by providing the users alternative accessing platform which is the mobile version. This is because the users will not get the notifications about the status of their orders since it is not synchronize with the computer used. With mobile version of OYAPSS, we can use the native push notification ability to provide customers with notifications on what currently happened to their orders.

5.4 Challenges Faced

Throughout the project, there were many challenges faced especially in term of communication with the client and commitments towards the project. Since the client stays in Yemen, it was a constraint to conduct meeting and perform reviews on the system. Most of the communications and reviews were conducted online. This was not the effective ways to get the feedbacks from the client as we might not fully understand what they experience.

Next, the commitment towards the project was a challenge because of time constraint. Other than to focus on this project, other projects must also be finished along with it as well as to allocate time to conduct reviews with the client and supervisor to ensure that the system progress goes with the flows. Time management helps to overcome this problem but it will be tough as not all we have planned will go according to it.

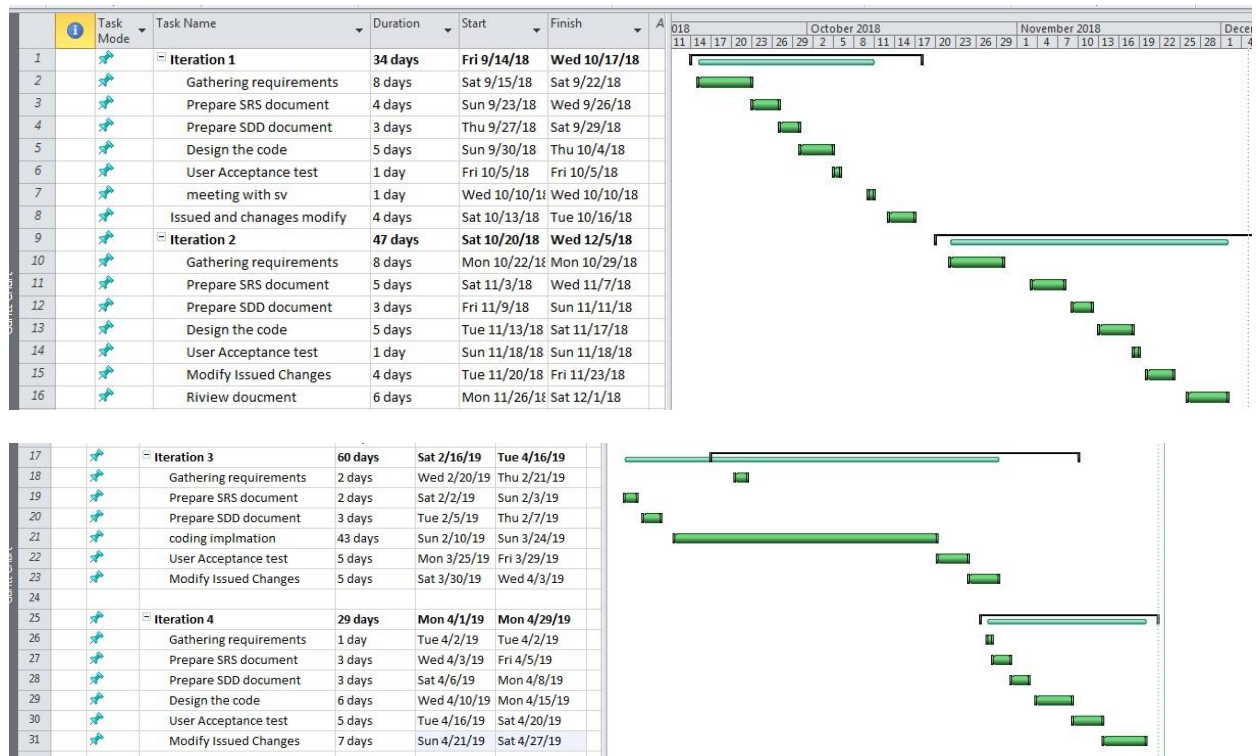
5.5 Commercialization

OYAPSS is an online shopping system, thus most likely the incomes can be gained from the revenues made from the purchase transaction. Although, the revenue can always be improved by receiving sponsors from companies and provide advertisement for them to promote their products in this system.

APPENDIX A

GANTT CHART

Gantt Chart for OYAPSS based on the Iteration Module



APPENDIX B

USER ACCEPTANCE TEST (UAT)

ONLINE YEMENI AGRICULTURAL PRODUCT SHOPPING SYSTEM

Faculty of Computer System & Software Engineering

USER ACCEPTANCE TEST

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1. TESTING REPORT

This document is specifically used for conducting user acceptance test. Users are required to operate the system and see whether the functionalities and modules are according to desired specifications as well as giving feedback if any mistakes or errors occur.

Instruction

1. Concurrently, fill the data input or follow the steps given while doing it in the system
2. Once done, circle one of the option in “Actual Result” column based on your observation towards the behaviour of the system.
 - a. Same – when the Expected Result and Actual Result is same by your observation
 - b. Diff – when the Expected Result and Actual Result is different by your observation
 - c. Error – when the Actual Result trigger error to the system
3. Then, circle any of the option in “Pass / Fail” column whether the module is pass or fail by your satisfaction.
 - a. Pass – if the result satisfies your requirement
 - b. Fail – if the result does not satisfy your requirement
4. Comment column is optional if you would like to indicates any problem or enhancement.

Example

Module	Data Input / Steps			Expected Result	Actual Result	Pass / Fail	Comment
Module 1	Input 1	Hello		Successful, redirect to home page.	a. Same	a. Pass	Fulfilled
	Input 2	World			b. Diff	b. Fail	
					c. Error		

1.1. Authentication for Customer

Module	Data Input / Steps		Expected Result	Actual Result	Pass / Fail	Comment
Register	Username		Successfully registered, redirect to dashboard.	d. Same e. Diff f. Error	c. Pass d. Fail	
	Email					
	Password					
	Confirm Password					
	Shipping Address					
	Postcode					
	State					
	Contact No					
Logout	Click "Logout" button		Logout and redirect to welcome page.	a. Same b. Diff c. Error	a. Pass b. Fail	
Login	Email		Successfully logged in, redirect to dashboard.	a. Same b. Diff c. Error	a. Pass b. Fail	
	Password					

1.2. Customer Cart Management

Module	Data Input/Steps	Expected Result	Actual Result	Pass / Fail	Comment
View Product Information	Click on any product in welcome page.	A box with product information pops-up.	a. Same b. Diff c. Error	a. Pass b. Fail	
Add Product to Cart	Click "Add to Cart" when viewing product information.	Confirmation box appear, proceed and item will be added to cart.	a. Same b. Diff c. Error	a. Pass b. Fail	
Cancel Product Order	Click "Cancel" of a product while in cart page.	Confirmation box appear, proceed and item will be removed to cart.	a. Same b. Diff c. Error	a. Pass b. Fail	
Checkout Product	Click "Checkout" in cart page.	Confirmation box appear, proceed and item will be removed to cart. Admin will receive notification.	a. Same b. Diff c. Error	a. Pass b. Fail	

1.3. Authentication for Deliver

Module	Data Input / Steps		Expected Result	Actual Result	Pass / Fail	Comment
Register	Username		Successfully registered, redirect to dashboard.	a. Same b. Diff c. Error	a. Pass b. Fail	
	Email					
	Password					
	Confirm Password					
	Contact No					
Logout	Click "Logout" button		Logout and redirect to welcome page.	a. Same b. Diff c. Error	a. Pass b. Fail	
Login	Email		Successfully logged in, redirect to dashboard.	a. Same b. Diff c. Error	a. Pass b. Fail	
	Password					

1.4. Deliver Order Management

Module	Data Input/Steps	Expected Result	Actual Result	Pass / Fail	Comment
View Customer Information	Click on any customer in dashboard.	A box with product information pops-up.	a. Same b. Diff c. Error	a. Pass b. Fail	
Accept responsible as deliver	Click "Accept Order" when viewing customer information.	Confirmation box appear, proceed and customer	a. Same b. Diff c. Error	a. Pass b. Fail	

		order status will beshown.			
Update order status	Click “Finish Stage” in order page.	Confirmation box appear, proceed and order stage will be increased, customer will received notification.	a. Same b. Diff c. Error	a. Pass b. Fail	

1.5. Authentication for Admin

Module	Data Input / Steps			Expected Result	Actual Result	Pass / Fail	Comment
Login	Email			Successfully logged in, redirect to dashboard.	a. Same b. Diff c. Error	a. Pass b. Fail	
	Password						
Logout	Click “Logout” button			Logout and redirect to welcome page.	a. Same b. Diff c. Error	a. Pass b. Fail	

1.6. Admin Product Management


Module	Data Input / Steps			Expected Result	Actual Result	Pass / Fail	Comment
Add Product	Name			Product added to list and displayed	a. Same b. Diff c. Error	a. Pass b. Fail	
	Description						
	Price						
	Type						

	Brand		in welcome page.			
	Image Size					
Delete product	Click “Delete” when viewing list of products.		Confirm box appear, proceed and product removed.	a. Same b. Diff c. Error	a. Pass b. Fail	
Edit Product	Name		Product info updated.	a. Same b. Diff c. Error	a. Pass b. Fail	
	Description					
	Price					
	Type					
	Brand					
	Image Size					


1.7. Admin Orders Management

Module	Data Input /Steps	Expected Result	Actual Result	Pass / Fail	Comment
Approve Awaiting Approval Orders	Click “Approve” for order in Awaiting Approval Category in Dashboard page	Successfully, customer and deliver will be notified.	a. Same b. Diff c. Error	a. Pass b. Fail	

2. SYSTEM TESTING APPROVAL

	Name	Date
Verified by: <hr/> Developer		
Approved by:  Sky Yemen Company (SYC) Client	Hani Naji Alasalami	2019/5/1

I am the manager of Sky Yemen (SYC) we have reviewed the system and it is fulfilling the requirements that has been requested. we are interested in the system and hoped that the system can grow from time to time.


2019/5/1

APPENDIX C

USER MANUAL

ONLINE YEMENI AGRICULTURAL PRODUCT SHOPPING SYSTEM

Faculty of Computer System & Software Engineering

USER MANUAL

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1. GENERAL INFORMATION

1.1. System Overview

Online Yemeni Agriculture Product Shopping System (OYAPSS) is an online website for purchasing agricultural related product from Yemen. The system as for now does not involve any online transaction but instead using the concept of cash-on-delivery (COD), where user with role as 'Deliver' can take responsibility of customers' orders and conduct the delivery. Below are the functionalities of OYAPSS

- Register or Login
- Product Publishing and Management
- Orders and Cart Management
- Notification upon each Order Process Stages
- Order Processing and Updating Stages

2. SYSTEM SUMMARY

2.1. System Configuration

OYAPSS is a small module website, hence the requirements are only an access to internet connection and ability to browse the internet using any internet browser.

2.2. User Access Levels

OYAPSS consists of four access levels which are:

- Guest – Can view published products information and general information only, else must be logged in
- Customer – Can view products information, add products to cart and checkout cart.
- Deliver – Can take responsibility of customer orders and conduct delivery, orders' status will be recorded and notified to the corresponding customer.
- Administrator – Can approve users' orders' upon checkout and monitor the whole delivery process conducted by delivers.

2.3. Contingencies and Alternate Modes of Operation

OYAPSS is deployed as a website. General issues that could happen are most likely can be handled

3. GETTING STARTED

3.1. Opening the System

- OYAPSS can be accessed through any web browsers such as Google Chrome or Mozilla Firefox
- The domain or address of the system will be informed.

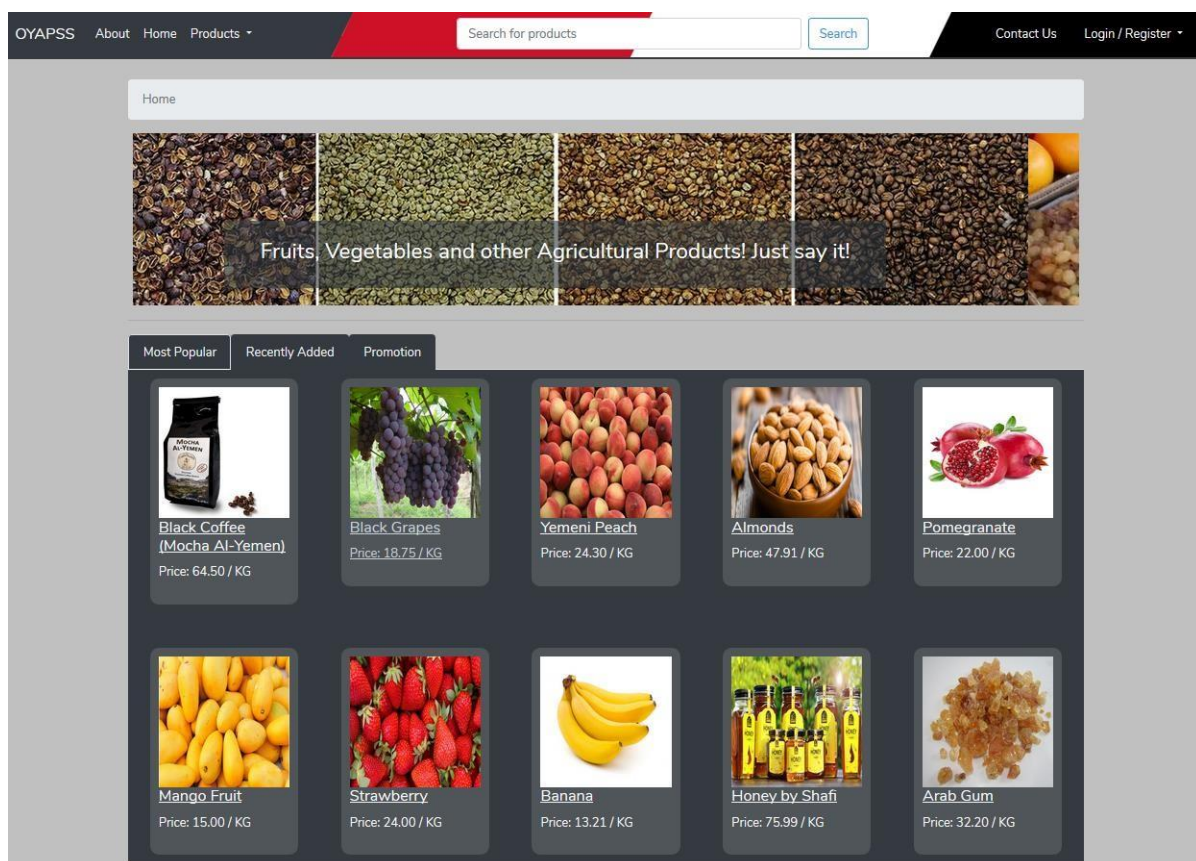
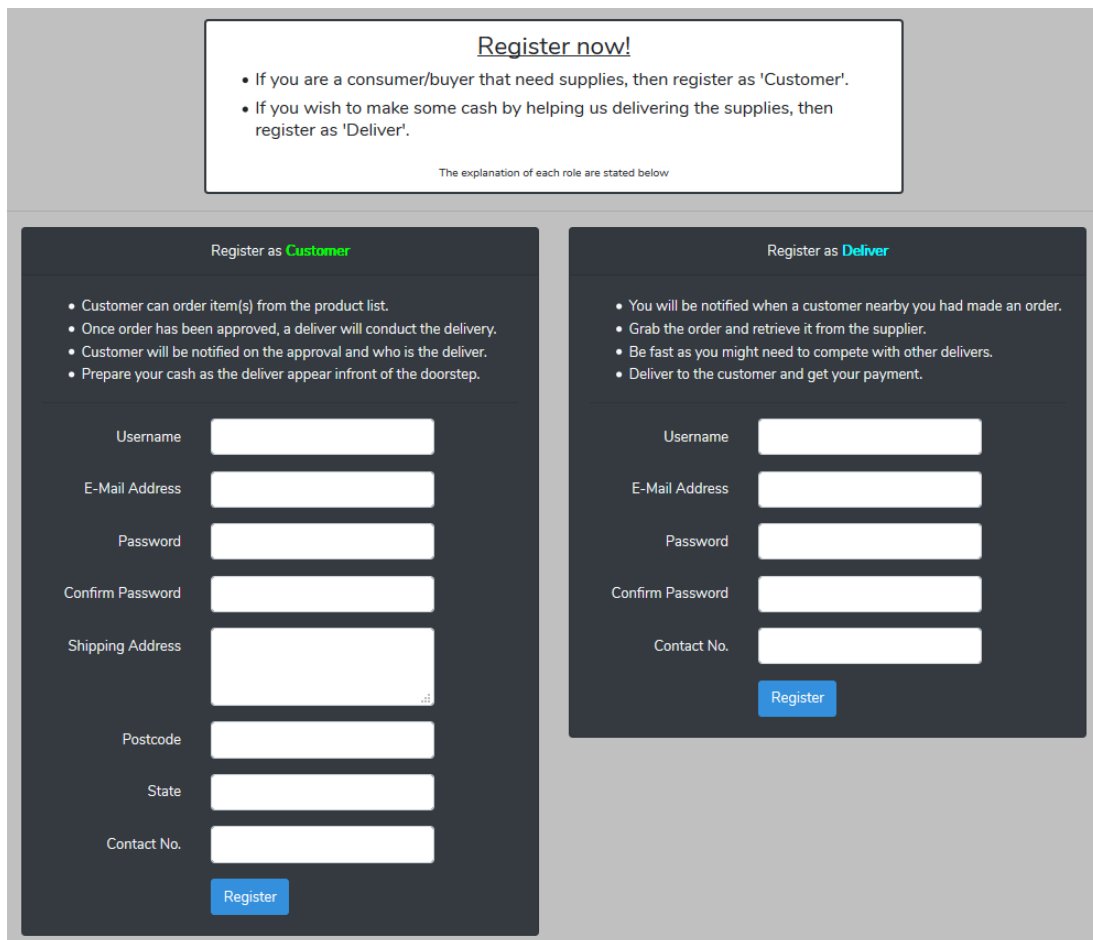


Figure 1.1 – OYAPSS Main Page

3.2. Registering an Account

1. In order to access OYAPSS, you must be registered.
2. There are two options of registration, as a 'Customer' or as a 'Deliver'
3. 'Customer' have the speciality to add products to the cart and checkout the cart which is then being delivered by 'Deliver'
4. 'Deliver' is the person who willingly conduct delivery against the order made by any of the 'Customer'.
5. The concept of the system will be cash-on-deliver (COD) where payment shall be made directly with cash when the 'Deliver' conduct the delivery for the order.
6. To register, click on the button with label 'Login / Register' at the top right corner of the main page (as in Figure 1.1).
7. Then, click 'Register' on the drop down menu. You should be redirected to the registration page as in Figure 1.2 below.



The screenshot shows a registration page with a light gray background. At the top, there is a white box with the heading "Register now!" and two bullet points: "If you are a consumer/buyer that need supplies, then register as 'Customer'." and "If you wish to make some cash by helping us delivering the supplies, then register as 'Deliver'." Below this box, the page is divided into two main sections: "Register as Customer" and "Register as Deliver".

Register as Customer: This section has a dark gray background. It lists four bullet points: "Customer can order item(s) from the product list.", "Once order has been approved, a deliver will conduct the delivery.", "Customer will be notified on the approval and who is the deliver.", and "Prepare your cash as the deliver appear in front of the doorstep." Below the text are input fields for Username, E-Mail Address, Password, Confirm Password, Shipping Address, Postcode, State, and Contact No. A blue "Register" button is at the bottom.

Register as Deliver: This section also has a dark gray background. It lists four bullet points: "You will be notified when a customer nearby you had made an order.", "Grab the order and retrieve it from the supplier.", "Be fast as you might need to compete with other delivers.", and "Deliver to the customer and get your payment." Below the text are input fields for Username, E-Mail Address, Password, Confirm Password, and Contact No. A blue "Register" button is at the bottom.

Figure 1.2 – Registration Page

8. All the instructions and features for each user role are stated in the page.

9. If you decided to become a 'Customer' and purchase products, fill the input for the 'Customer' and click register.
10. If you decided to become a 'Deliver' and willingly conduct delivery for 'Customer', fill the input for 'Deliver' and click register.
11. Once, all input is valid, you will be redirected to your dashboard page.

3.3. Login Into the System

1. For registered account, you can login into the system by clicking on the button with label 'Login / Register' at the top right corner of the main page (as in Figure 1.1).
2. Then, click 'Login' on the drop down menu. You should be redirected to the registration page as in Figure 1.3 below.

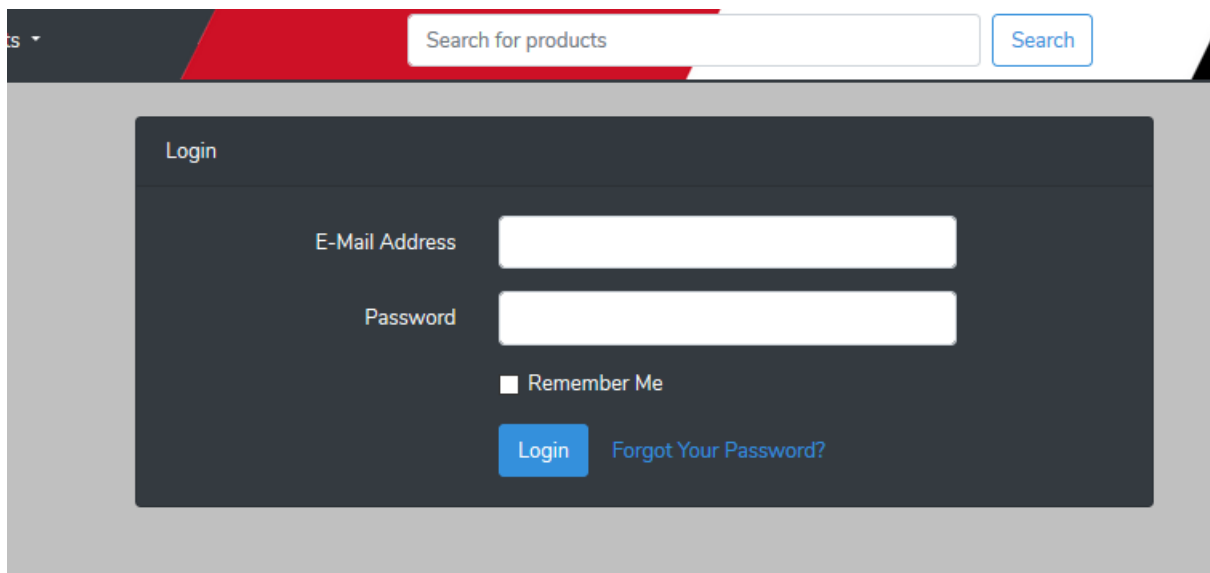
The image shows a web application interface. At the top, there is a red header bar with a search bar containing the text "Search for products" and a blue "Search" button. Below the header, there is a dark gray login form. The form has a title "Login" in the top left corner. It contains two input fields: "E-Mail Address" and "Password". Below these fields is a checkbox labeled "Remember Me". At the bottom of the form, there is a blue "Login" button and a link labeled "Forgot Your Password?".

Figure 1.3 – Login page

3. You will need to enter your registered email and password.
4. Press 'Login' to continue and if your credential is valid, you will be redirected to the dashboard.
5. Optional check box labelled 'Remember Me' can be checked if you want your credentials to be remembered every time you want to log in into the system.

3.4. Customer Guideline

1. As a 'Customer' you can conduct purchasing related features such as:
 - View product on display
 - Add product to your cart
 - Checkout your cart
 - Monitor progress of your order
 - Receive delivery (physically)
2. Before we go further into the step, you must be logged in as 'Customer' and is at the main page of the system as shown in figure below.

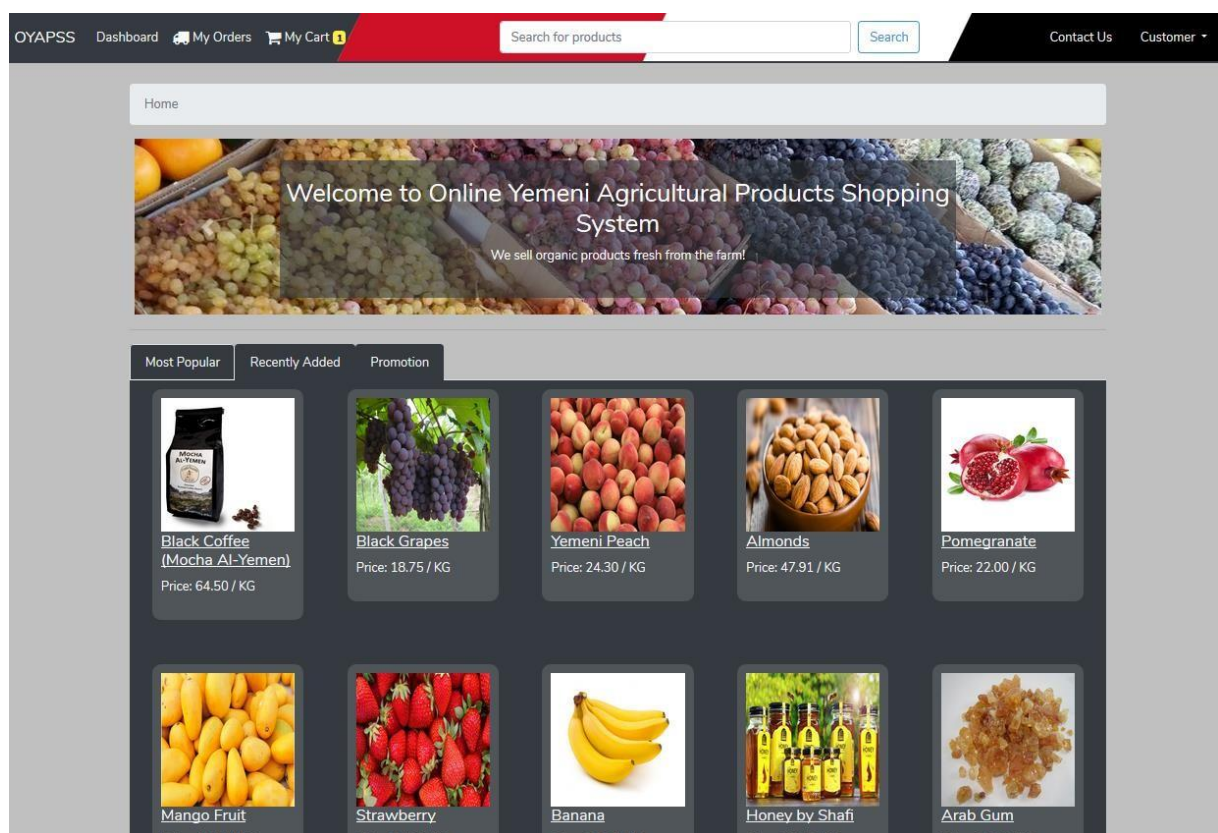


Figure 1.4 – Main Page

3. View Product – To view product, you can click on any of the product listed in the box below. A box will appear and shows the product details such as the description, brand, price and the weight you desire to buy.
4. Add Product to Cart – This can be done when the product detail box is opening, define the weight of the product you want to buy and click “Add to Cart” button in the box. It will automatically add the product into you cart upon confirmation.

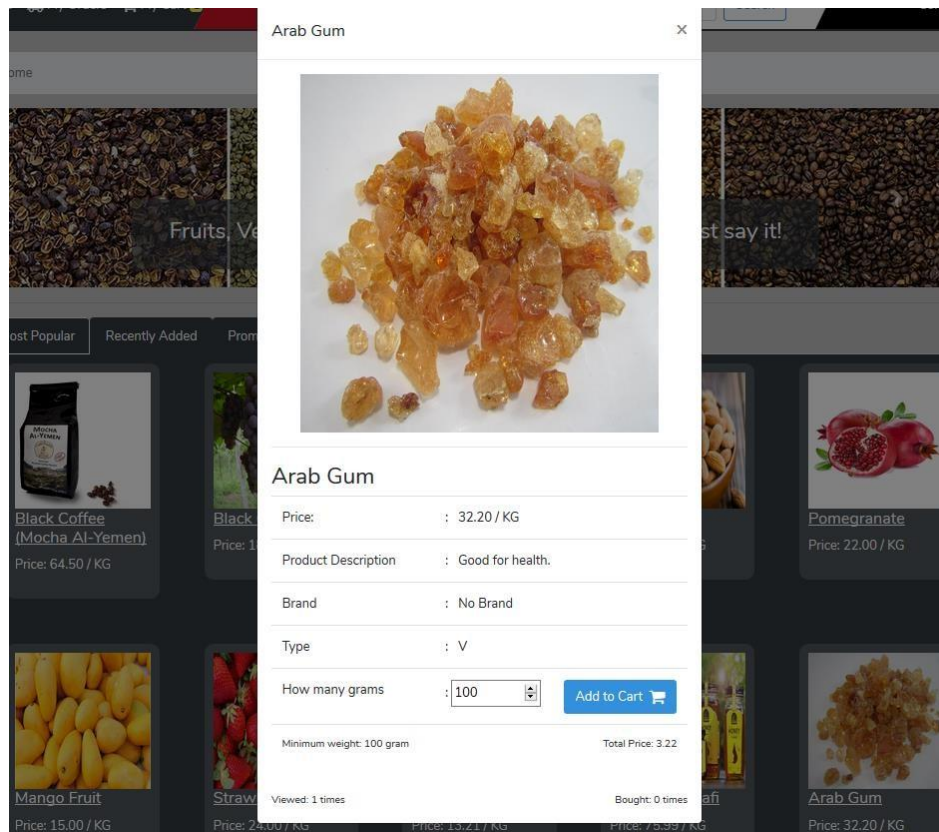


Figure 1.5 – Product Details Box

5. Checkout your Cart – Once you have satisfied with your cart, you must checkout the cart so that the administrator and 'Deliver' can focus on the next process. Note that once you have checkout, you can still cancel the order as long as the administrator has not approved it. While the cart is still not approved, you still can cancel the cart. Usually, administrator will take less than three hours to approved your cart. To checkout your cart:
 - Click on the 'My Cart' button on the top of the menu bar in the main page screen
 - You will be redirected to your cart page as in Figure 1.6
 - Click the button labelled 'Checkout' to checkout your cart

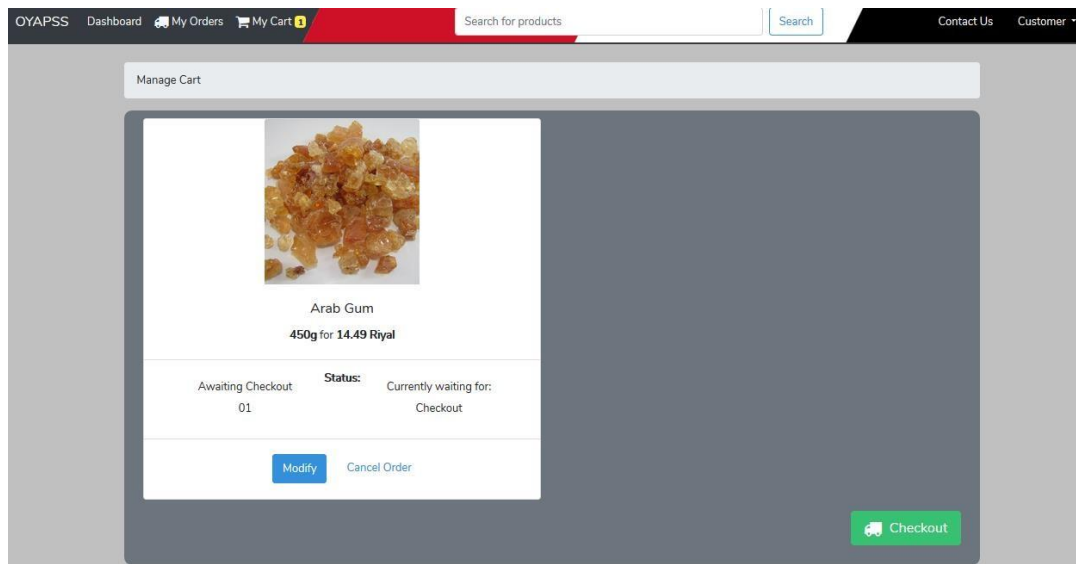


Figure 1.6 – Cart Page

6. Monitor Progress of your Order – You can monitor your order as soon as you have checked out your cart in the 'My Orders' page. Inside, the list of orders and products will be displayed along with the current status and stages of the orders. You also will be notified whenever there are any updates on your order.
7. Receive Delivery – Delivery is conducted by 'Deliver' who will send the items right in front of your house. We use the concept Cash-On-Delivery where you have to prepare payment cash upon the delivery.

3.5.Deliver Guideline

1. As a 'Deliver you can conduct delivery related features such as:
 - View customers' info
 - View customers' orders' info
 - Accept orders under your responsibility
 - Conduct delivery (physically)
 - Update orders' status and stages
2. Before we go further into the step, you must be logged in as 'Deliver and is at the main page of the system as shown in figure below.
3. View Customers' Info – You can look into the customer's info in your dashboard by the list of orders. Here, you can decide whether the customer is within your coverage or not.

4. View Customers' Orders' Info – You can look into the customer's order's info by click on the customer's order link.
5. Accept Orders Under Your Responsibility – If you decided to accept a customer's order, you can click 'Accept' to put the order under your responsibility. Once done, the customer will no longer appear in the list of orders demanded but will appear at the top of the dashboard for you to view and conduct the delivery.
6. Conduct Delivery – This is a physical delivery, where cash will be given upon arrival of the order to the customer's hand.
7. Update Order's Status and Stages – Every progress you did must be updated so that the customer knows whether the order has progress or not. This can be done in the dashboard by clicking 'Update and Forward Stage' for the current order.

3.6. Logging Out from the System

1. In order to Logout from the system, simple click on your username on the top right corner of any page and a drop down menu will appear. Click 'Logout' and you will be logged out from the system and redirected to the main guest page. Refer Figure 1.7 below.

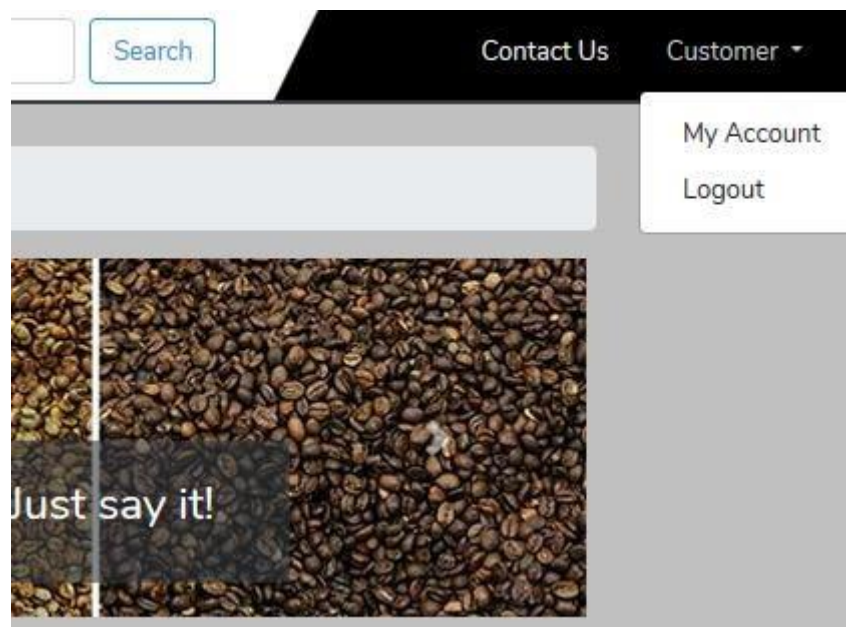


Figure 1.7 – Logout from the System

APPENDIX D

SYSTEM REQUIREMENT SPECIFICATIONS (SRS)

2019

SOFTWARE REQUIREMENT SPECIFICATION (SRS)

Online Yemeni Agriculture product
shopping system

NABIL MOHAMMED ALHAIMI | CB15188

To be submitted to the Software Planning & Requirement Workshop
Bachelor of Computer Science (Software Engineering)



DOCUMENT APPROVAL

	Name	Date
Authenticated by: _____ Project Manager	NABIL MOHAMMED MOHAMMED ALHAIMI	3/4/ 2019
Approved by: _____ Client		

Software : Microsoft PowerPoint, Rational Software Architecture and draw.io

Archiving Place : Google Drive

Copies Available : 2 Copy

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1. INTRODUCTION

Online Yemeni Agricultural Product Shopping System (OYAPSS) is an online website that provide Yemeni product to customer with different types of products. By using this website customer can choose their product that want to buy though online. Charging process is expected to be fully online. This system is a web-based system that allows the potential users to access to the system through internet.

In this project try to develop the Online Yemeni Agricultural Product Shopping System that have many features for the online services that can contribute for what the customers need as well as system is very flexible and understandable to the customers. It can make all of the customers use it easier through the internet. The system also free from the defects and errors. In addition, made the interfaces in the system in order to be understandable for the customers and desirable.

1.1 PURPOSE

A SRS document is a document that describes the Online Yemeni Agricultural Product Shopping System on what the software will do, how it is expected to website and what are the constraints of this system. This SRS document provides the requirement of Online Yemeni Agricultural Product Shopping System that is required for this system. This document written is to have them reviewed by stakeholder. The system module are able to do Registration and Login for the admin, Administer product, Manage product, view customer information and should support Email conformation.

1.2 SYSTEM IDENTIFICATION

System Identification : SYC-OYAPSS-XXXXX-VX

SYC : Sky Yemen Company, company name

OYAPSS : Online Yemeni Agricultural Product Shopping System,
system name

XXX : Document type

VX : Document Version X

The version of the system will be recorded as the format, SYC-OYAPSS-XXX-VX. The word “SYC” is the short form of company name, Sky Yemen Company that will develop system for it . The phrase of first 6 X is for the short form of system name such as OYAPSS, Online Yemeni Agricultural Product Shopping System. The phrase of second 3 X is the short form of document type which is Software Requirement Specification (SRS) and Software Design Development (SDD). The phrase of vX where v is referring to version, X is referring to what version it is. For an example, if the system is developed as version 1.0, the phrase of vX will be recorded as v1.

1.3 SYSTEM OVERVIEW

The system should be able to provide customer and deliver registration also they can update their information in their registration form. They can register to access the system that can be view the product they need. Then, customer and deliver can update their information to ease system flow such as location will be used for filtering, email address and contact number will be used to contact that person. Deliver can also login into the system when they want to view the customer information.

Customers can view the product in the system, then system will be able to display all the products to them. After that, customer can select the item that want to

buy. After that customer book his items that want and can cancel the selected product before send the conformation Email.

They system will received the information customer then notify the Admin to view the information and send conformation booking item to customer Email.

The system will notify deliver about the customer information to deliver the items to customer place.

Deliver will view the customer information after deliver give the items to customer their items send to the system conform that customer received and take the money the item as well as the customer.

1.4 DOCUMENT OVERVIEW

The first chapter describes the project and the software product being to be built. It describes the introduction of the project and the software functionality. The introduction includes the purpose of the developed software, the system identification, the overview of the system functionality.

In the next chapter, the section of Product Description, of this document gives an overview of the functionality of the product. It describes the product perspective, system interface, product functions, user characteristics and constraints. The document is used to establish a context for the technical requirements specification in the next chapter.

In the third chapter, the section of Specific Requirement, of this document is written primarily for the developers and describes in technical terms the details of the functionality of the product.

2. PRODUCT DESCRIPTION

2.1 Product Perspective

Figure 2.1 show context diagram of Online Yemeni Agricultural Product Shopping System (OYAPSS). There are three kind of user which is Admin, customer and deliver. Admin able to login, Administer product, view customer information and send Email conformation. Customer able to register selects product and book product.

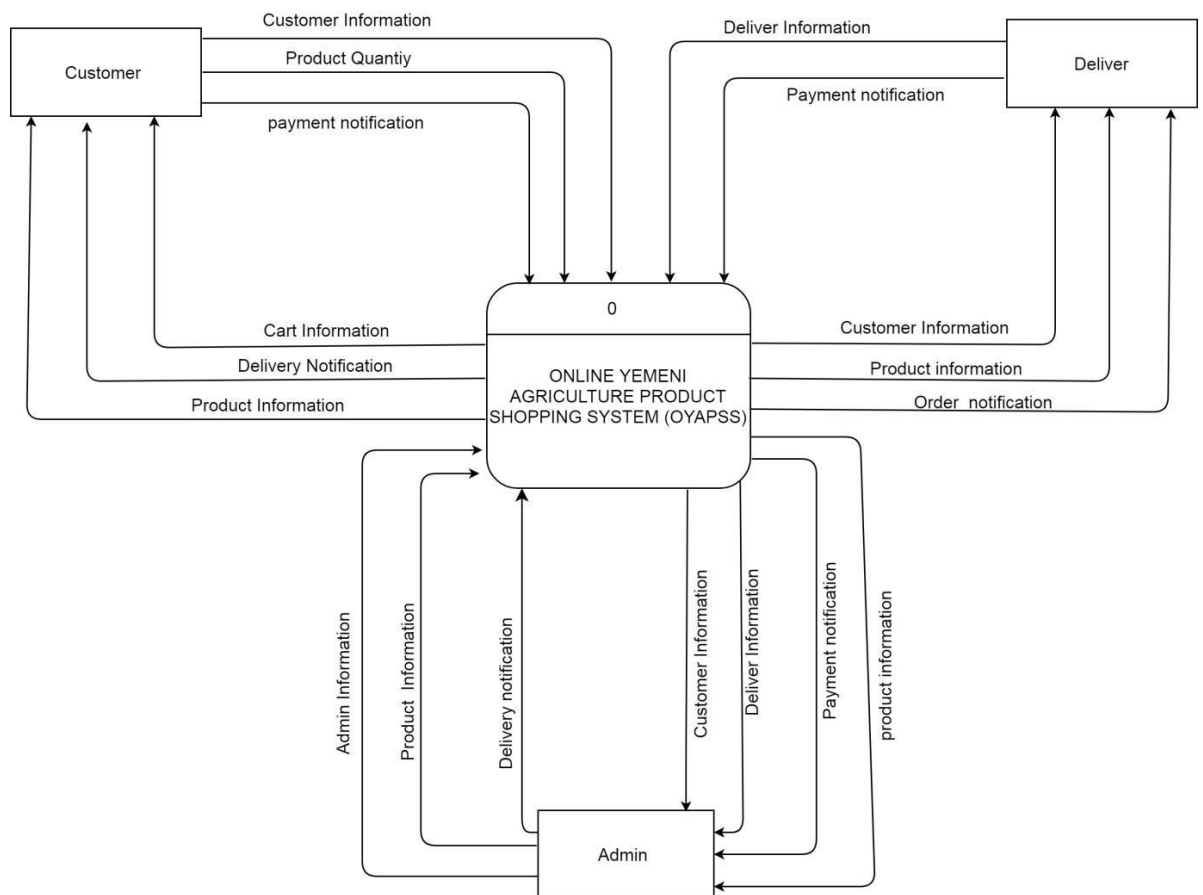


Figure 2.1 Context Diagram

The function of Online Yemeni Agricultural Product Shopping System (OYAPSS) is to provide Yemeni products to the customer. By using the website customer can choose to access the system online.

This system is a web-based system that allows the user to access to the system through internet. The function of the OYAPSS is to manage Yemeni product in details and view the products that have been updated from the Admin of the system.

Besides that, Online Yemeni Agricultural Product Shopping System (OYAPSS) is divide into 6 pages which is login, customer registration and deliver, Administer products, manage products, book products and conformation Email.

2.2 Product Functions

Figure 2.2 Online Yemeni Agricultural Product Shopping System (OYAPSS) use case diagram. This use case contains eight module which are registration, login, Administrate product , manage product, , view customer information, and conformation email.

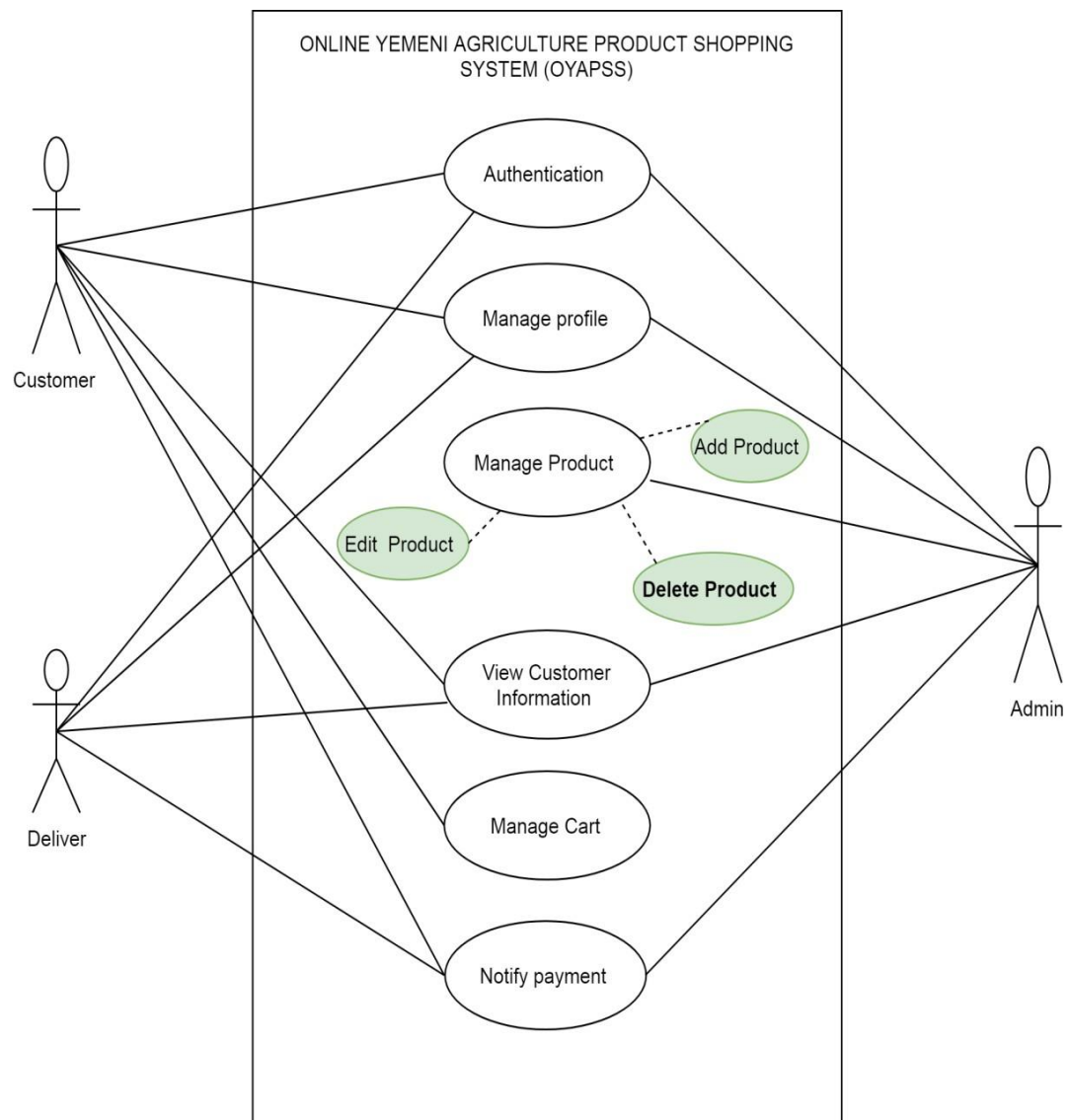


Figure 2.2 Use Case Diagram

With the website, the users will be able to select preferred service and go to the system. The result will be based on the criteria the user inputs. There are several manage of products criteria and it will be possible for the system to provider them to the customer and view them with options for those criteria have. The result of the manage products will be viewed by customer. The list view will have one list item for each product and show a all the information about each product. . The OYAPSS system will provide information about the system, for example show when there is a new update.

2.3 User Characteristics

Online Yemeni Agricultural Product Shopping System (OYAPSS) highlight three potential users to use the system which are Admin, customer, deliver.

Customer should have email address which can be used to booking item and send all the information through that email. They are also should be able to register into the system before they use the view items.

2.4 Constraints

There are constraints needed to attempt to the system:

(OYAPSS) also has it limits such as accessing to the system must not exceed 1500 persons at one time.

1. System shall be available 95% for any 24-hours period.
2. System should be encrypting user password when process to database.
3. System can be used by Yemen community only.
4. System interface must be user-friendly.

2.5 Assumptions and Dependencies

There are assumptions and dependencies needed to attempt to the system:

1. It is assumed that user can easily access the web based using computer or any devices.
2. It is assumed that the user is familiar with an internet browser and familiar with handling the keyboard and mouse.
3. Since the system is a website there is a need for the internet browser. It will be assumed that the users will possess good internet connectivity.

3. SPECIFIC REQUIREMENTS

3.1 Software Product Features

3.1.1 Authentications

Figure 3.1 shows Authentications use case diagram. In this use case describe how the user done the login in the OYAPSS Online shopping System (. There have 3 communities' categories that can be login which are admin, deliver and customer. Admin, deliver and customer need to use their username and password to be login.

Table 3.1 show login use case description. This use case description describes the flow of user authentication.

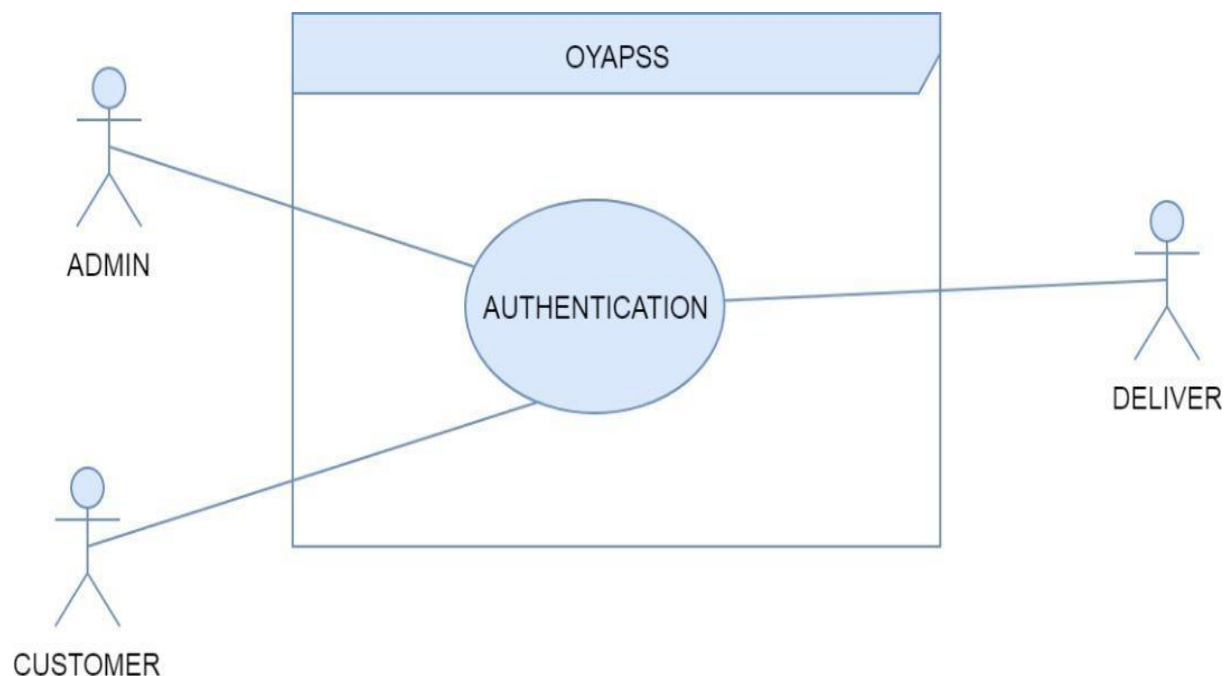


Figure 3.1 Authentications Use Case Diagram

Table 3.1 Authentication Use Case Description

Use Case ID	US_ OYAPSS_01
Brief Description	This use case describes how a user login to the OYAPSS System.
Actor	Admin, deliver and customer
Pre-Conditions	The users have been registered into the system.
Basic Flow	<p>This basic flow is applicable to all users.</p> <ol style="list-style-type: none"> 1. User access to OYAPSS using the web browser. 2. User enters to the login page. [A2] 3. User enters registered username. 4. User enters password that have been set. 5. User choose category of user. 6. User click “login” button. [A1] [E1] 7. The system allow user to enter main 8. The use case ends.
Alternative Flow	<p>A1 - User click ‘login’ button.</p> <ol style="list-style-type: none"> 1. User enters username and password. 2. User will then has to choose which category they wants to login for whether as customer or deliver. 3. System display category page.
Exception Flow	<p>A1. User click remember username.</p> <ol style="list-style-type: none"> 1. User check on the “remember me” checkbox. 2. The system provides session technique to

	<p>store the username and password for later login.</p> <p>3. Proceed step 6.</p> <p>A2. Auto-fill username and password.</p> <p>1. The system will get the username from session and fill in the username textbox.</p> <p>2. The system will get the password from session and fill in the password textbox.</p> <p>3. Proceed step 5.</p>
Post-Conditions	<p>E1. Invalid user categories, username or password.</p> <p>1. The system displays an error message.</p> <p>2. The system will inform user to try enter login data again.</p> <p>3. Proceed step 3.</p>
Rules	User logged into the system and access to main page.
Constraints	<p>R1. Password rules</p> <p>1. Password should be at least 8 characters.</p> <p>2. Password should be combination of upper and lower case.</p> <p>3. Password should consist numeric or special character.</p>
Activity Diagram	<p>Refer Appendix</p> <p>A-1 : Login sequence Diagram</p>

3.1.2 Figure 3.2 shows manage profile use case diagram. In this use case describe how the user done the manage profile in the OYAPSS Online shopping System (. There have 3 community categories that can be manage profile which are customer, admin and deliver. Customer, admin and deliver need to use their real name as their username when they do the manage profile.

Table 3.2 show manages profile use case description. This use case description describes the flow of user manage profile.

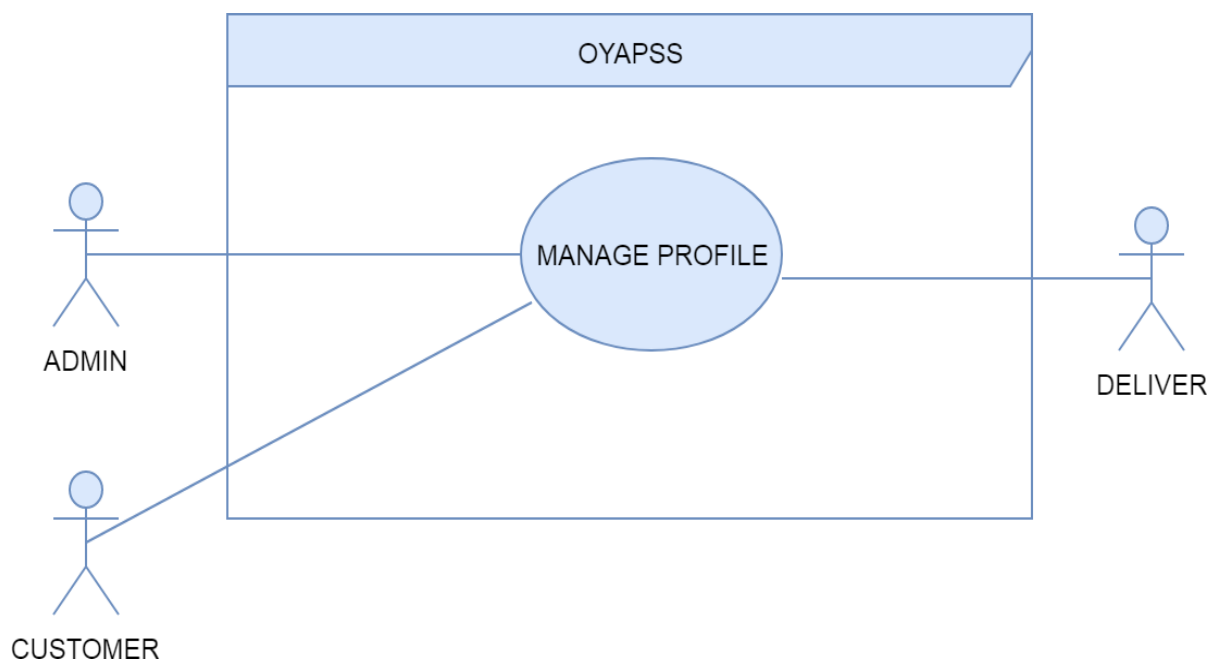


Figure 3.2 manage profile Use Case Diagram

Table 3.2 manage profile Use Case Description

Use Case ID	US_ OYAPSS_02
Brief Description	The use case is for customer and delivers to register an account into the OYAPSS system.
Actor	Customer, deliver
Pre-Conditions	The devices that are being used to register account must have an internet connection.
Basic Flow	<p>This basic flow is applicable to all users.</p> <ol style="list-style-type: none"> 1. This use case starts when user click “Sign Up” button. [A1 - Alternative] 2. User choose which category [customer or deliver]. 3. The system will display sign up form. 4. Next, user has to fill in all the personal information required and create a password for login purpose [C1- Constraint 1]. 5. Finally, user click on “Create Account” button. 6. System will verifies information entered and creates account. [E1 - Exception 1] 7 .The use case ends.
Alternative Flow	<p>A1 - User click ‘login’ button.</p> <ol style="list-style-type: none"> 1. Deliver enters username and password. 2. User will then has to choose which category they wants to login for whether as customer or

	<p>deliver.</p> <p>3. System display category page.</p>
Exception Flow	<p>E1 - Verification failure is executed</p> <ol style="list-style-type: none"> 1. The user not fills the personal information completely. 2. The system display error message 3. Continue with step 3 from basic flow.
Post-Conditions	<ol style="list-style-type: none"> 1. The user registered successfully. 2. Category page display.
Rules	Customer must register as customer and deliver must register as provider
Constraints	Password must be 8 characters long and consists of at least 1 capital letter and number.
Activity Diagram	<p>Refer Appendix</p> <p>A-2 :Registration sequence Diagram</p>

3.1.3 Manage product

Figure 3.3 Manage product are use-case which have types; Add product, delete product and Edit product. In add product, Admin can add new product to the system, as well as to edit and delete product. So only for Admin can manage the product in the system.

In table 3.3 Manage product use-case description where has basic flow , alternative flow and error flow.

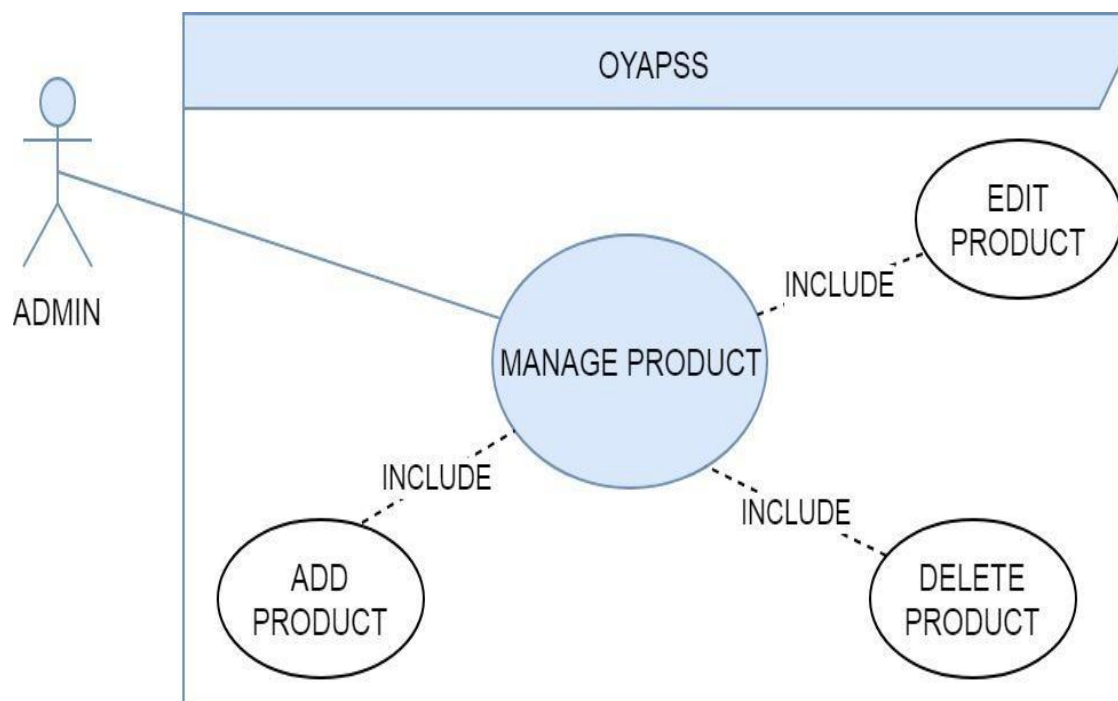


Figure 3.3 Manage products Use Case Diagram

Table 3.3 Manage product Use Case Description

Use Case ID	US_OYAPSS_03
Brief Description	The use case is describes Manage product. This section has Admin side only to manage the product for add, delete and edit in the system.
Actor	Admin
Pre-Conditions	<ol style="list-style-type: none"> 1. Admin must have account in OYAPSS. 2. They must log in to proceed their activity
Basic Flow	<ol style="list-style-type: none"> 1. The use case starts when admin click “manage product” button. 2. System display “Add Item” button, “delete Item” button and “Edit Item” button. 3. Admin click [A1 -“Add Item”] button or [A2-“delete Item”] button or [A3-“Edit Item”] button. 4.system display any item has been selected . 5.Admin do the mange for any part that selected . 4. System commit the data to database.[A1] 5. End use case.
Alternative Flow	<p>A1: Add Item</p> <ol style="list-style-type: none"> 1. The system display product types list. 2. Admin select the product type to add. 3. System display add Item form. 4. Admin fill the add product form with the product details and click “save” button. 5. system will goes to the basic flow [A1]. 6. End use case. <p>A2: Delete Item</p>

	<ol style="list-style-type: none"> 1. The system display product types list. 2. Admin select the product type to delete . 3. System display the product list. 4. Admin select the product and click “delete” button. 5. system display the product list after deleted. 6. system will goes to the basic flow [A1]. 7. End use case. <p>A3. Edit Item</p> <ol style="list-style-type: none"> 1. The system display product types list. 2. Admin select the product type to Edit. 3. System display edit Item form. 4. Admin fill the Edit product form with the product details and click “save” button. 5. system will goes to the basic flow [A1]. 6. End use case.
Exception Flow	None
Post-Conditions	The information has been updated into the system.
Rules	Admin only can perform mange product function.
Constraints	Product should be add or delete or edit according to the types of product.
Activity Diagram	<p>Refer Appendix</p> <p>A-3 : administrate product sequence Diagram</p>

3.1.4 Manage cart

Figure 3.4 are use-case diagram for Manage cart by the customer when they register to the system and do the shopping through the system. Customer can view the item, select item and cancel item for each product to buy what product that wants.

In table 3.4 are use-case description where has basic flow, alternative flow and exception flow for view product.

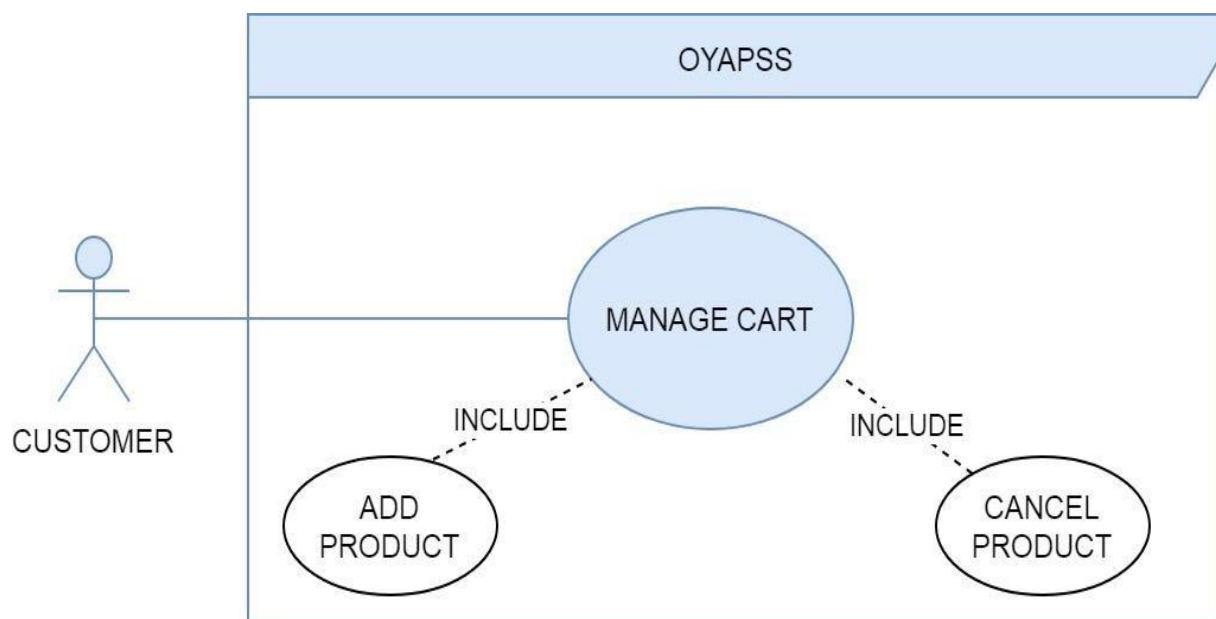


Figure 3.4 Manage cart **Case** Diagram

Table 3.4 manage cart Use Case Description

Use Case ID	US_OYAPSS _04
Brief Description	This use case describes how customer Manage cart in the OYAPSS through the browser.
Actor	Customer
Pre-Conditions	1. Customer must register in the system.
Basic Flow	<ol style="list-style-type: none"> 1. The use case starts when customer click “manage cart” button. 2. The system displays the OYAPSS products. 3. customer view items [A1] 4. System displays all the items to customer. 3. Customer select product that want..[A2] 4. System display the selected item. 5. Customer add the product to the chart or click cancel item .[A3] 6. This use case end.
Alternative Flow	<p>A1- View product</p> <ol style="list-style-type: none"> 1. Customer clicks view product. 2. System display customer request. 3. Customer view the information for any item. <p>A2- Click select</p> <ol style="list-style-type: none"> 1. Customer clicks select item. 2. System display customer request selected. <p>A3 - Click cancel</p>

	<ol style="list-style-type: none">1. Customer click “Cancel” button.2. Continue with step 2 from provider basic flow.
Exception Flow	<ol style="list-style-type: none">1. Customer failed to fill description detail completely.2. Systems display an error message.
Post-Conditions	None
Rules	Description must be filled correctly.
Constraints	Customer must wait for confirmation email.
Activity Diagram	Refer Appendix A-4 :manage product sequence diagram

3.1.5 view customer information

Figure 3.5 view customer information use case diagram which is to view customer information that have been insert it to book the item .The view for the customer information will be by Admin and deliver . Admin will view the information and send email conformation to the customer. Deliver will view the information to deliver the item to the address that has been given from customer.

Table 3.5 is view customer information use case description. This use case description is about the flow of this view customer information.

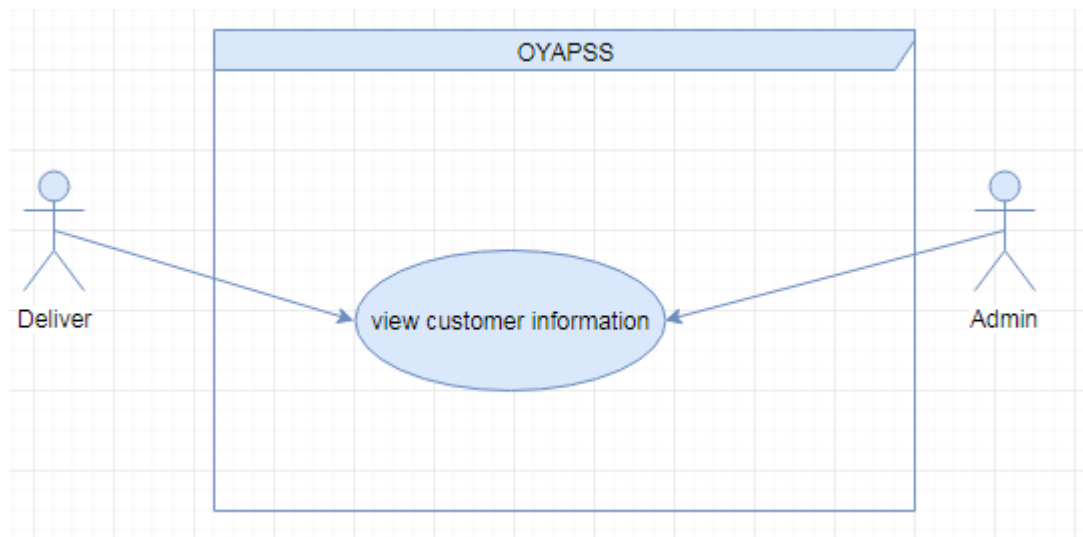


Figure 3.5 view customer information Use Case Diagram

Table 3.5 view customer information Use Case Description

Use Case ID	US_OYAPSS _05
Brief Description	The use case describes the process how to view customer information. Admin and deliver can view the information customer.
Actor	Admin , deliver
Pre-Conditions	1. Deliver need to a registered into OYAPSS.

	2. Admin need to login to OYAPSS.
Basic Flow	<p>Admin</p> <ol style="list-style-type: none"> 1. The use case start when user click “view customer information” button. 2. System displays customer information to the admin. 3. Admin approve customer information. 4. Use case end. <p>Deliver</p> <ol style="list-style-type: none"> 1. System sends notification to deliver. 2. Deliver click “view customer information” button. 3. System display customer information to deliver. 4. Use case end.
Alternative Flow	<ol style="list-style-type: none"> 1. Admin view customer requested for product. 2. Admin click “approve ” button. 3. Admin send approval status of requested product to system. 4. System Display successful approval information. 5. Deliver view customer information. 6. Use case end.
Exception Flow	
Post-Conditions	

Rules	
Constraints	None
Activity Diagram	Refer Appendix A-5 :View customer information sequence Diagram

3.1.6 notify payment

Figure 3.6 notify payment Use Case Diagram. In this use case is to describe how the notify payment transaction in the system will be done when the customer book the items from the system OYAPSS.

Table 3.6 notify payment use case description. This use case description describes the flow of user notify payment.

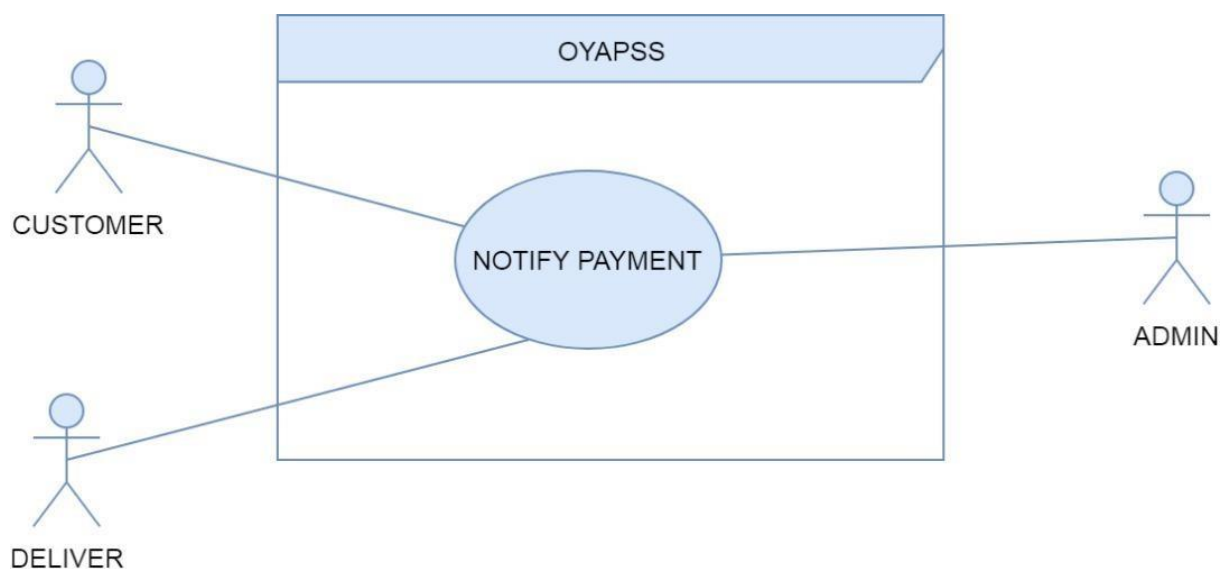


Figure 3.6 notify payment Use Case Diagram

Table 3.6 notify payment Use Case Description

Use Case ID	US_OYAPSS _06
Brief Description	This use case describes the notify payment of OYAPSS system .
Actor	Admin,deliver,customer.
Pre-Conditions	1. Admin login into the system. 2. deliver or customer login or register the system.
Basic Flow	<p>Admin</p> <ol style="list-style-type: none"> 1. Admin clicks the notify payment button. 2. System displays payment details page (items, quantity, total cost and customer information) to the admin. 3. Admin clicks send button. 4. System will notify customer already received request. <p>Deliver</p> <ol style="list-style-type: none"> 1. deliver click view customer information. 2. System display the information. 3. deliver send received confirmation. <p>Customer</p> <ol style="list-style-type: none"> 1. Click view email conformation. 2. System display details. 3. Customer send received product conforms. 4. The use case end.
Alternative Flow	1.send notify payment .

	2. Request information. 3. send conform received product. 4. use case end
Exception Flow	1. System displays the error message.
Post-Conditions	1. The system displays successful conformation email. 2. Payment has been received.
Rules	The customer must have email account.
Constraints	Only Admin can send notify payment.
Activity Diagram	Refer Appendix A-6 :sequence Diagram

3.2 Requirements Traceability

Table 3.1 is requirement traceability of OYAPSS. The requirement traceability can either reference the requirement identifiers (unique numbers for each requirement) or the actual requirement itself.

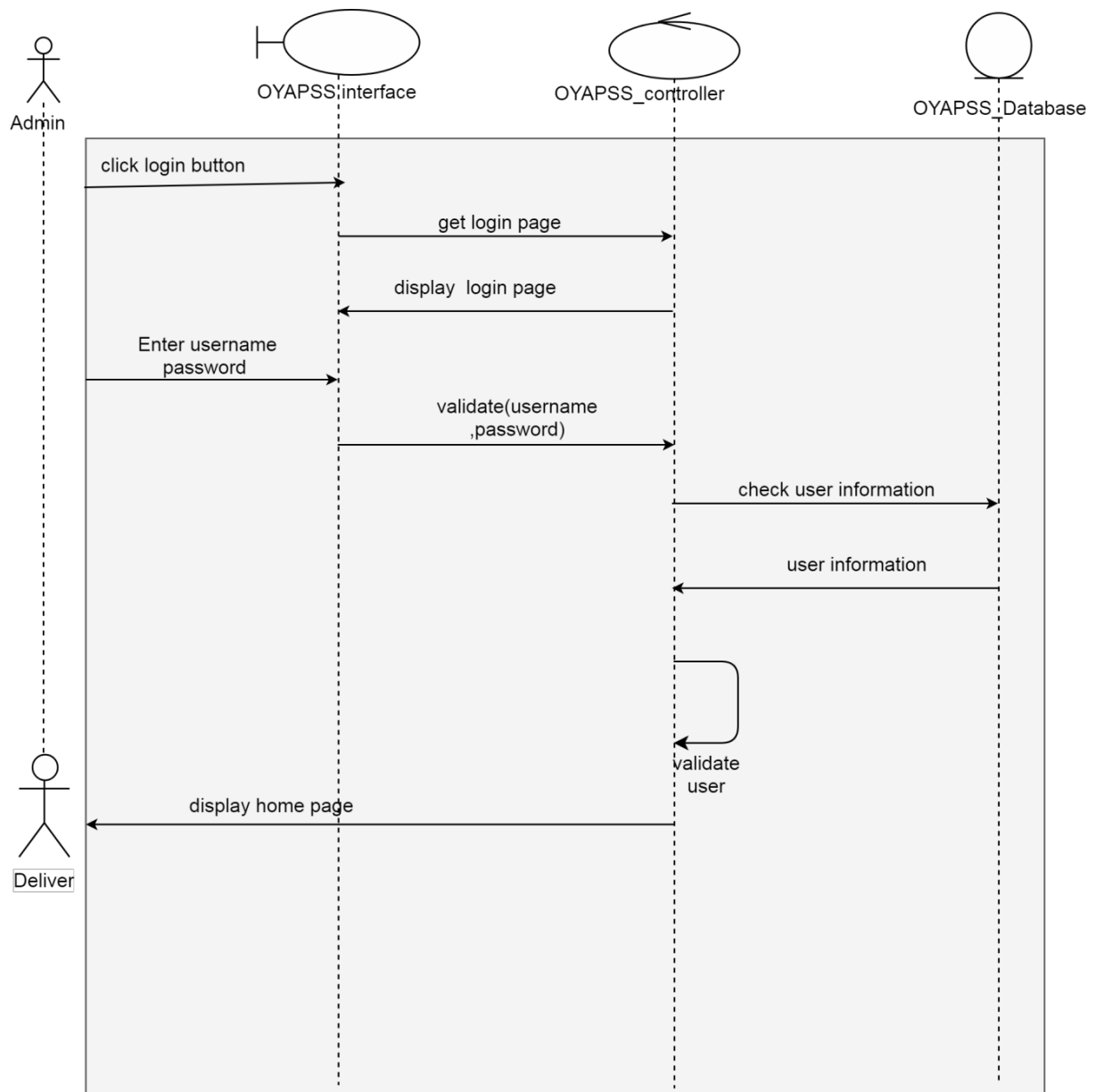
Table 3.1 Requirement Traceability

Requirement ID	Requirement name	Requirement details statement	Requirement sources
Req-1	Login	Allow user to login.	Stakeholders
Req-2	Mange profile	Mange profile	Stakeholders
Req-3	Manage product	Allow Admin to manage product	Stakeholders
Req-4	Manage cart	Allow customer to Manage	Stakeholders

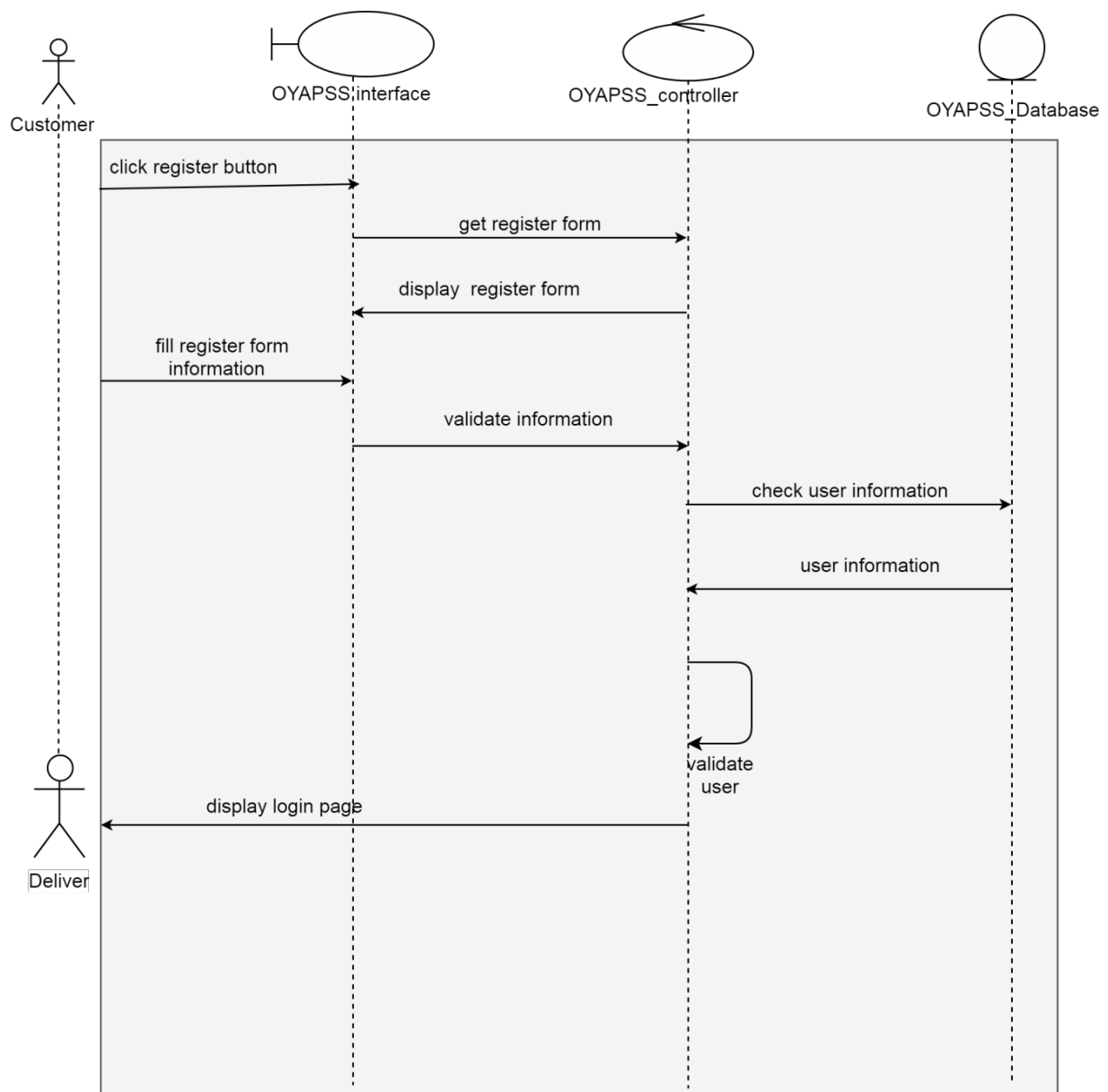
		cart	
Req-5	View customer information	Allow Amin and deliver to view customer information.	Stakeholders
Req-6	notify payment	Allow Admin to make con notify payment to customer.	Stakeholders

APPENDIX A

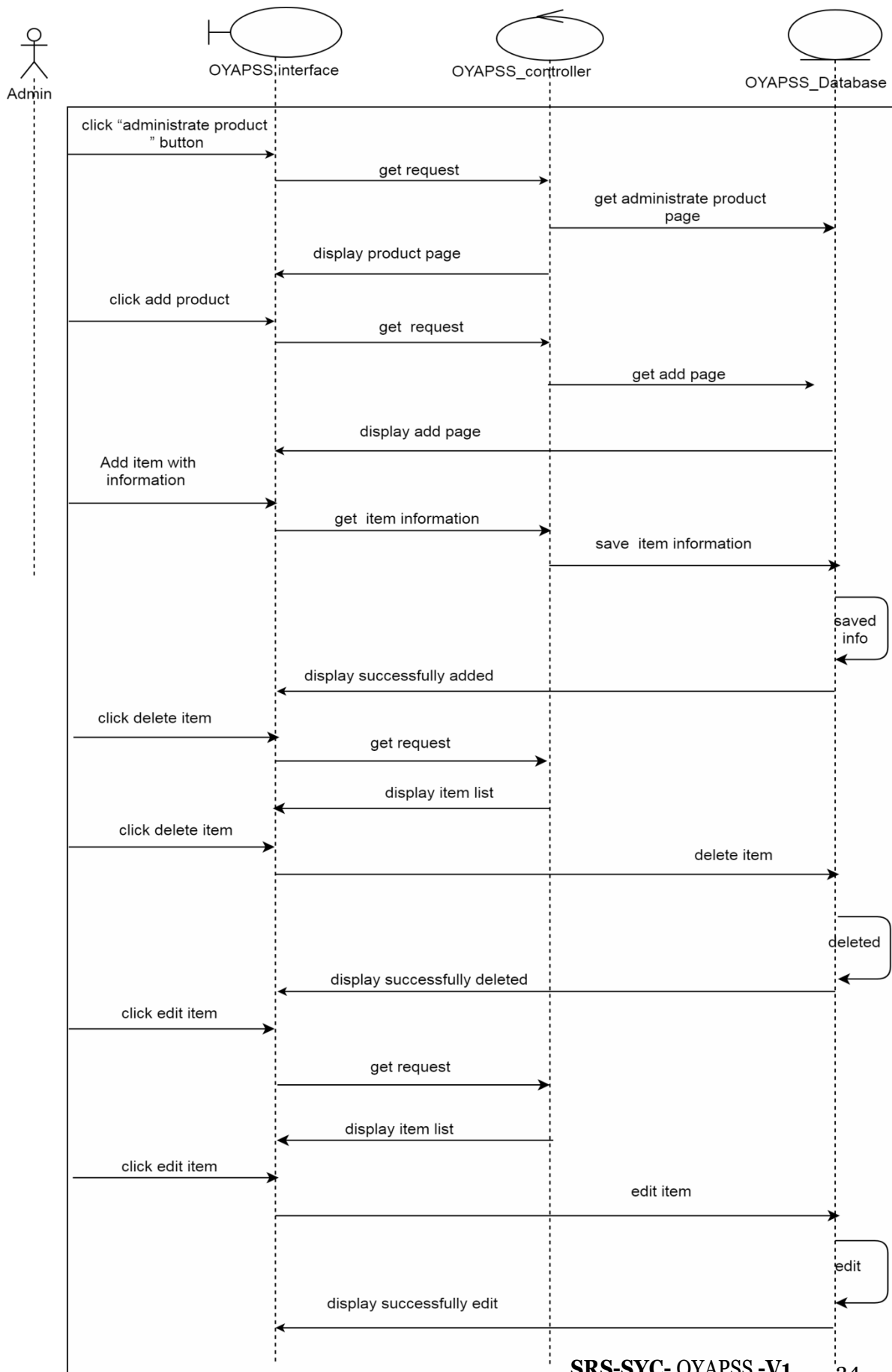
Sequence diagram



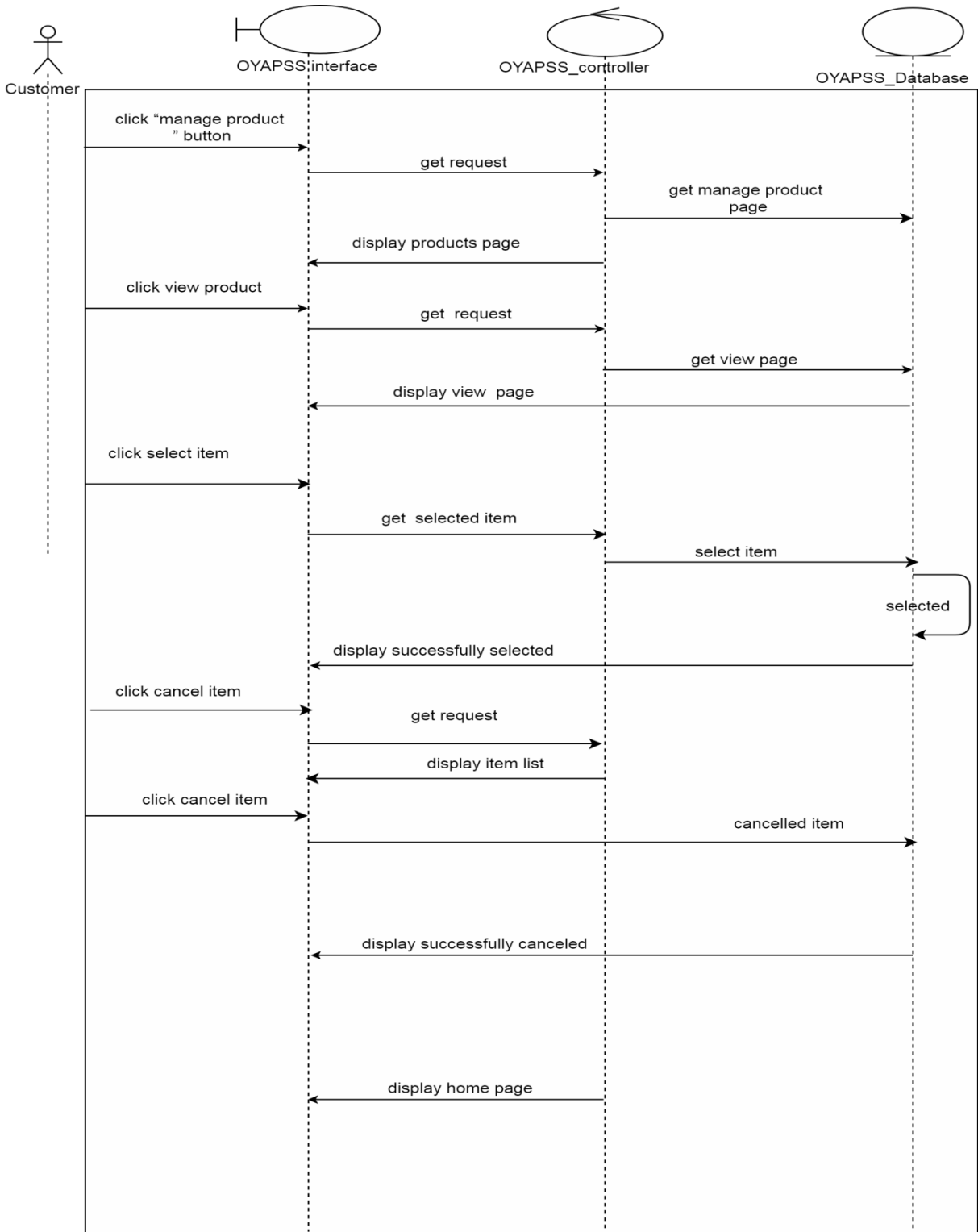
A-1: login sequencediagram



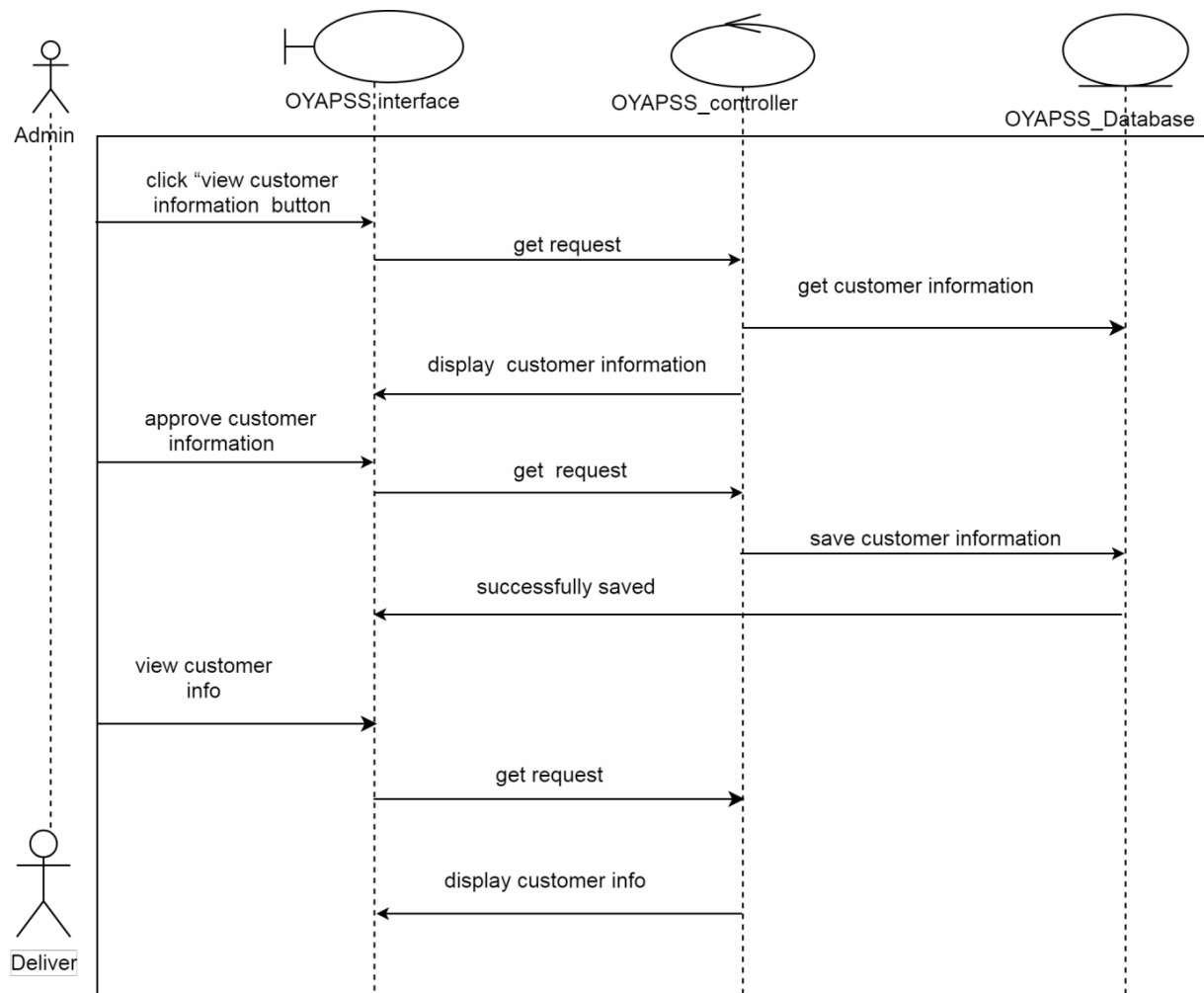
A-2: Registration sequencediagram



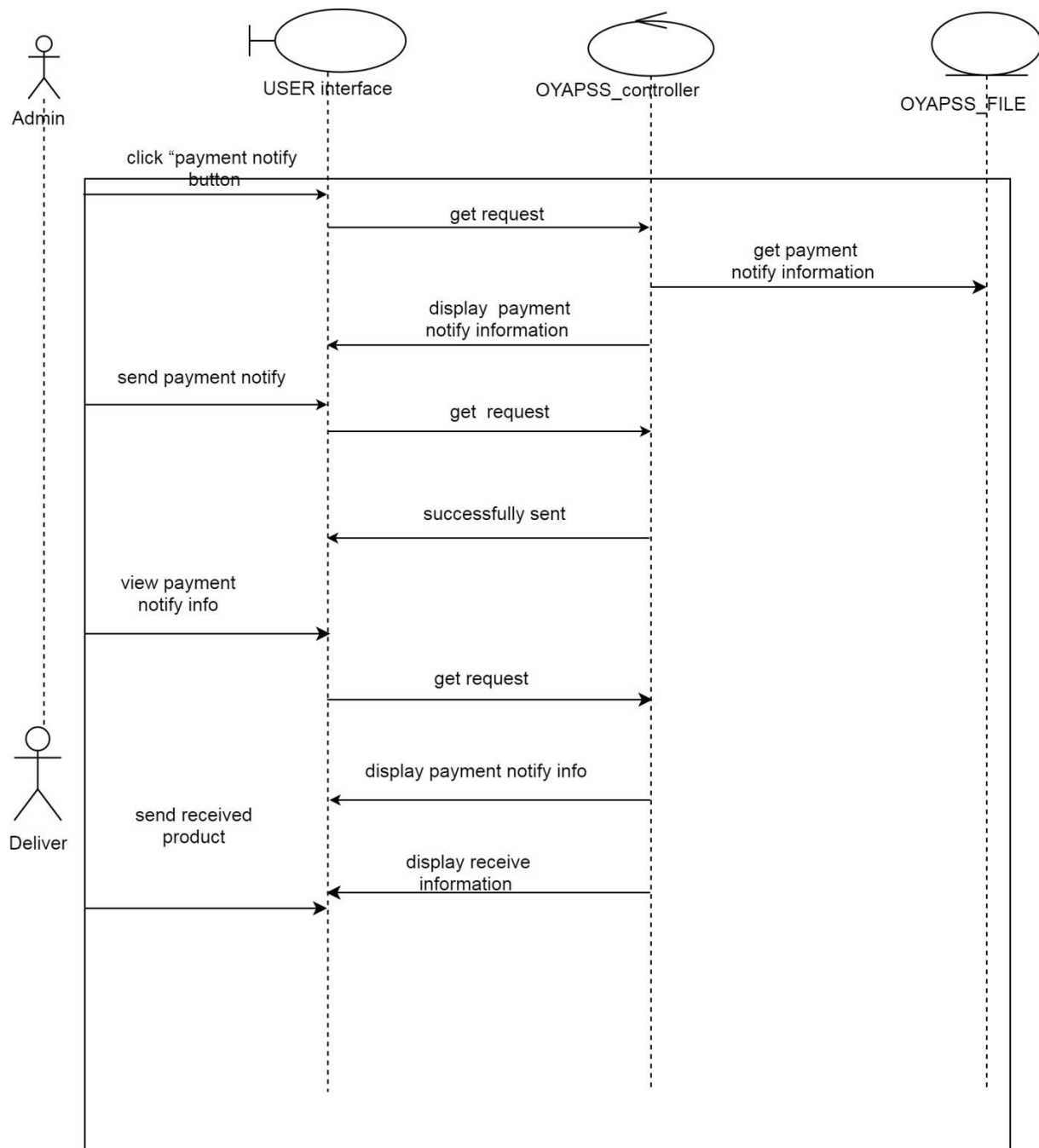
A-3: mange product sequence diagram



A-4: Manage cart sequence diagram



A-5: View customer information sequence Diagram



A - 6: notify payment sequence Diagram

APPENDIX E

SOFTWARE DESIGN DOCUMENT (SDD)

SOFTWARE DESIGN DOCUMENT (SDD)

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1.0 ARCHITECTURE DESCRIPTION

1.1.1 Application Layer

The application layer consists of the interfaces, representing the design elements. The interfaces enable interaction between users and the systems. The interfaces consist of users and home page.

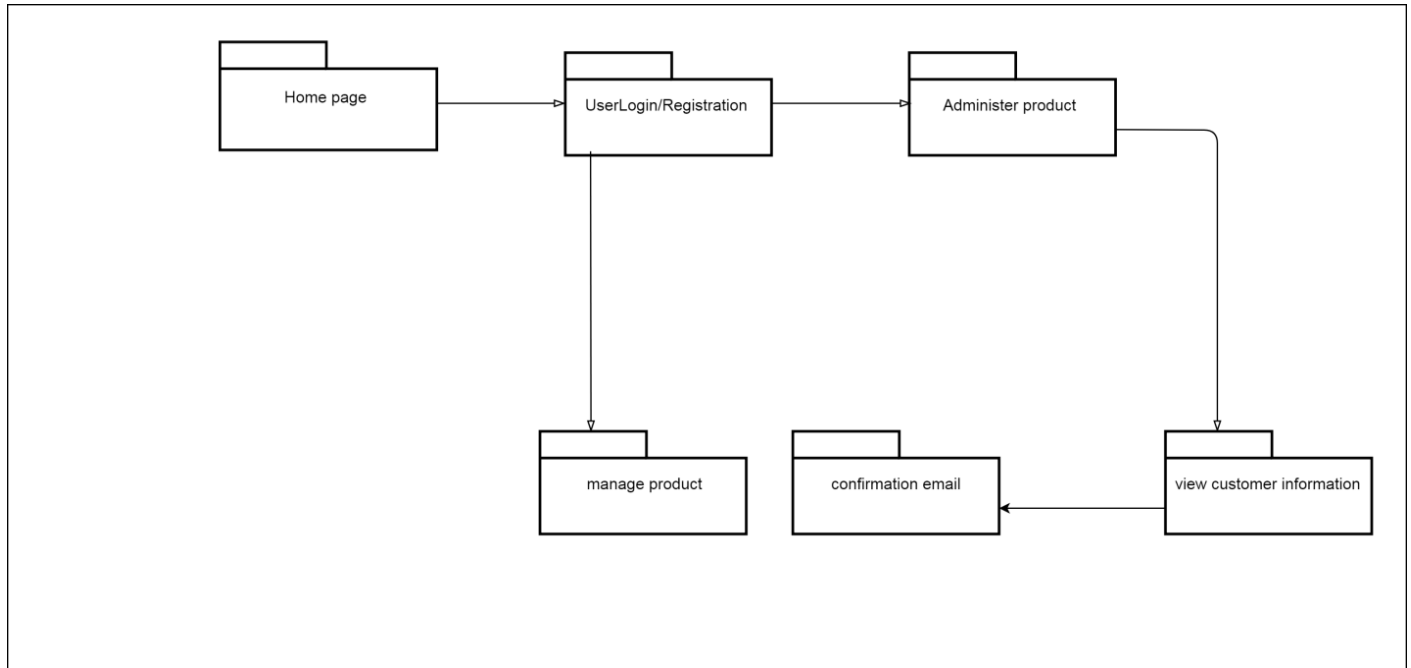


Figure 1.1: Application Layer Package

1.1.2 Business Services Layer

The Business Layer is the layer that controls the actions in the application layer. The Business Layer controls the applications functionality by performing detail processing. The Business Services layer consist business-specific elements that are used in several applications. There are Web Form package which called as Control Package and Data Store (DB class) package which called as Entity Package.

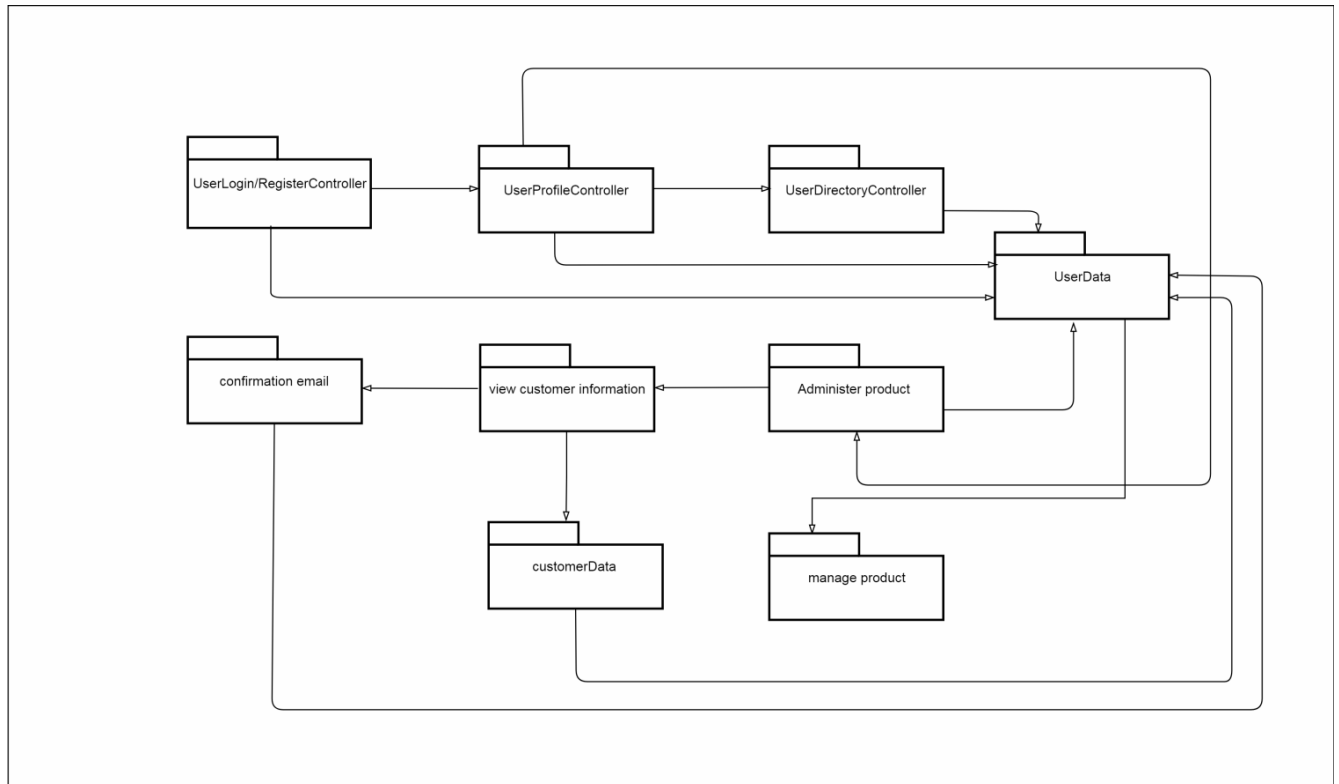


Figure 1.2: Business Services Layer Package

1.1.3Middleware

The Middleware consist of Database Sequel Server or script that connecting the IIS with the database. For example the connection for connect between SQL Server and SSIPC inside IIS server which are C# and ASP.Net code. This tier consists of database server, web server and provides services for enable communication and management of data between system and database server.

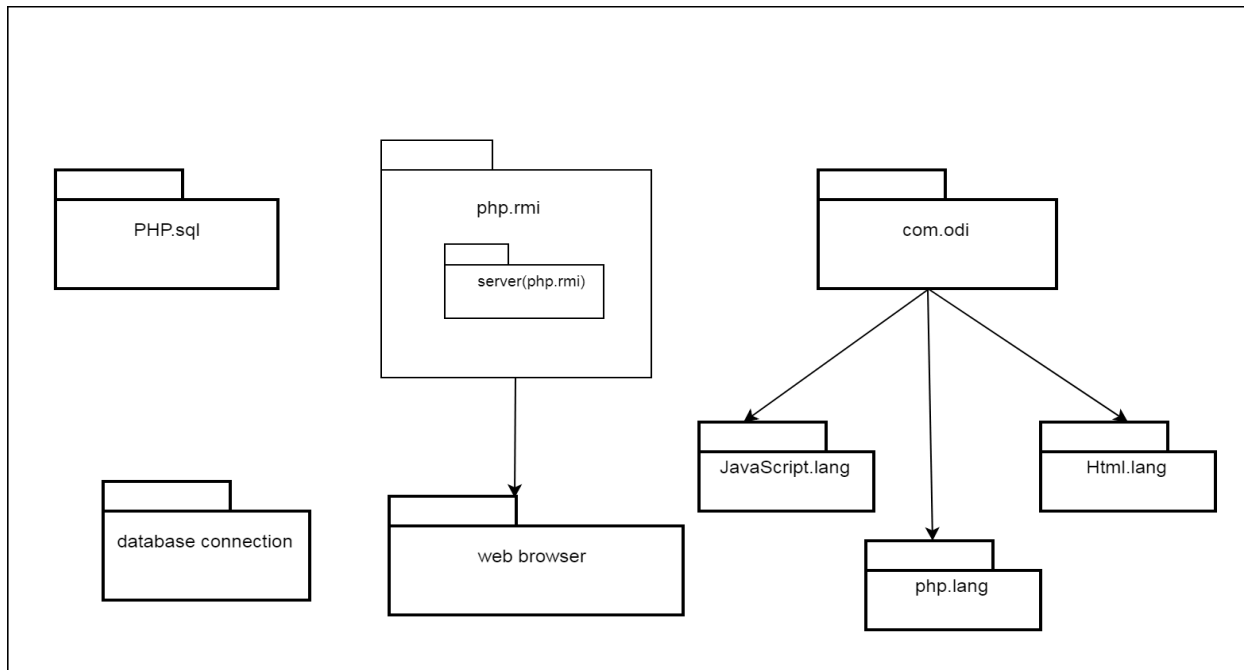


Figure 1.3 : Middleware Layer Package

2.1 Package Module

2.1.1 User Login/Register

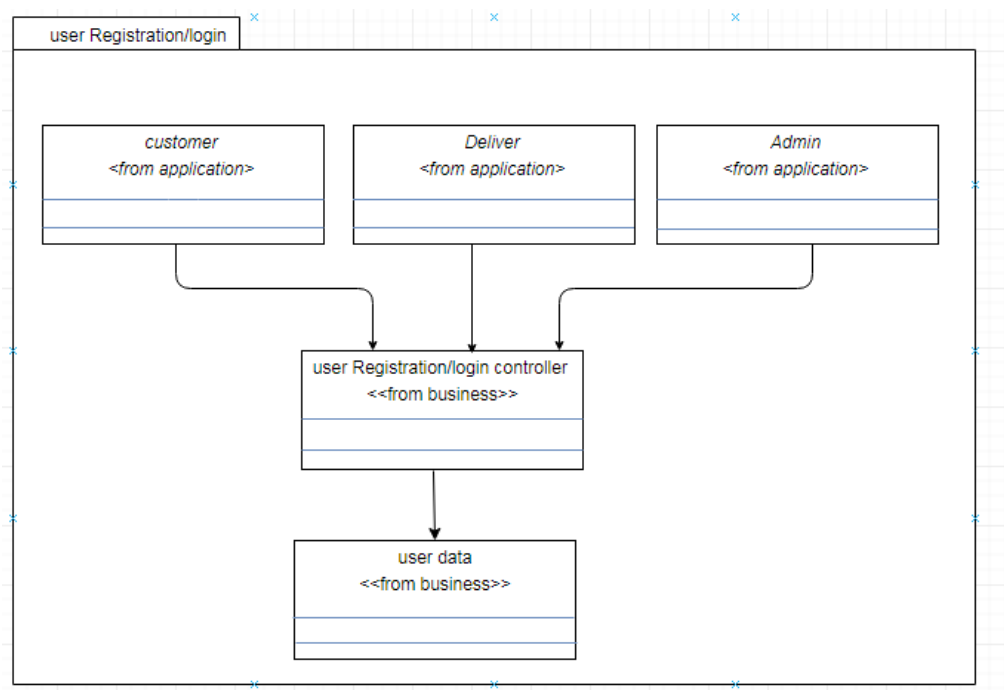


Figure2.1.1 User Login/Register

2.1.2 Manage product

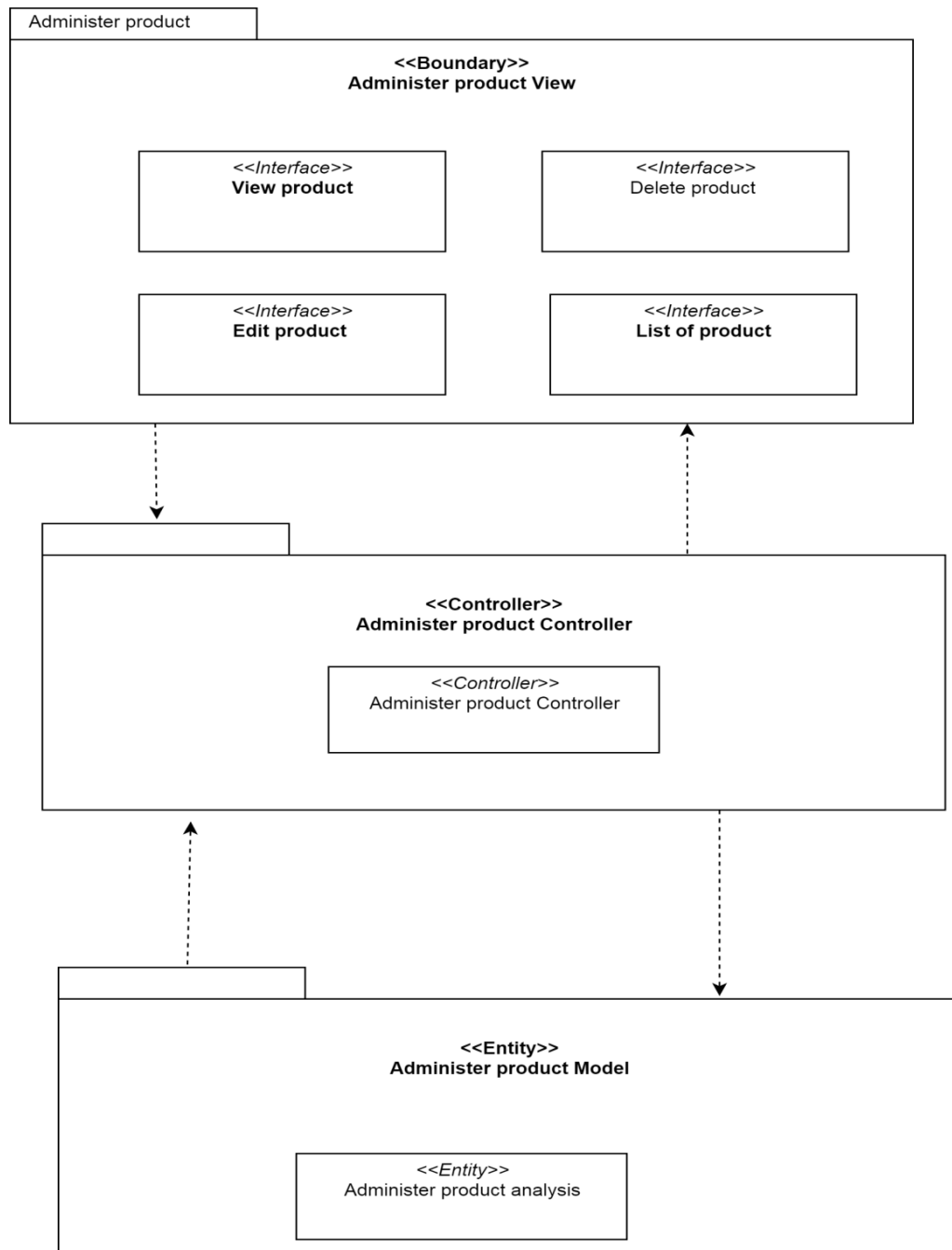


Figure2.1.2 Manage productPackage

2.1.3 product cart

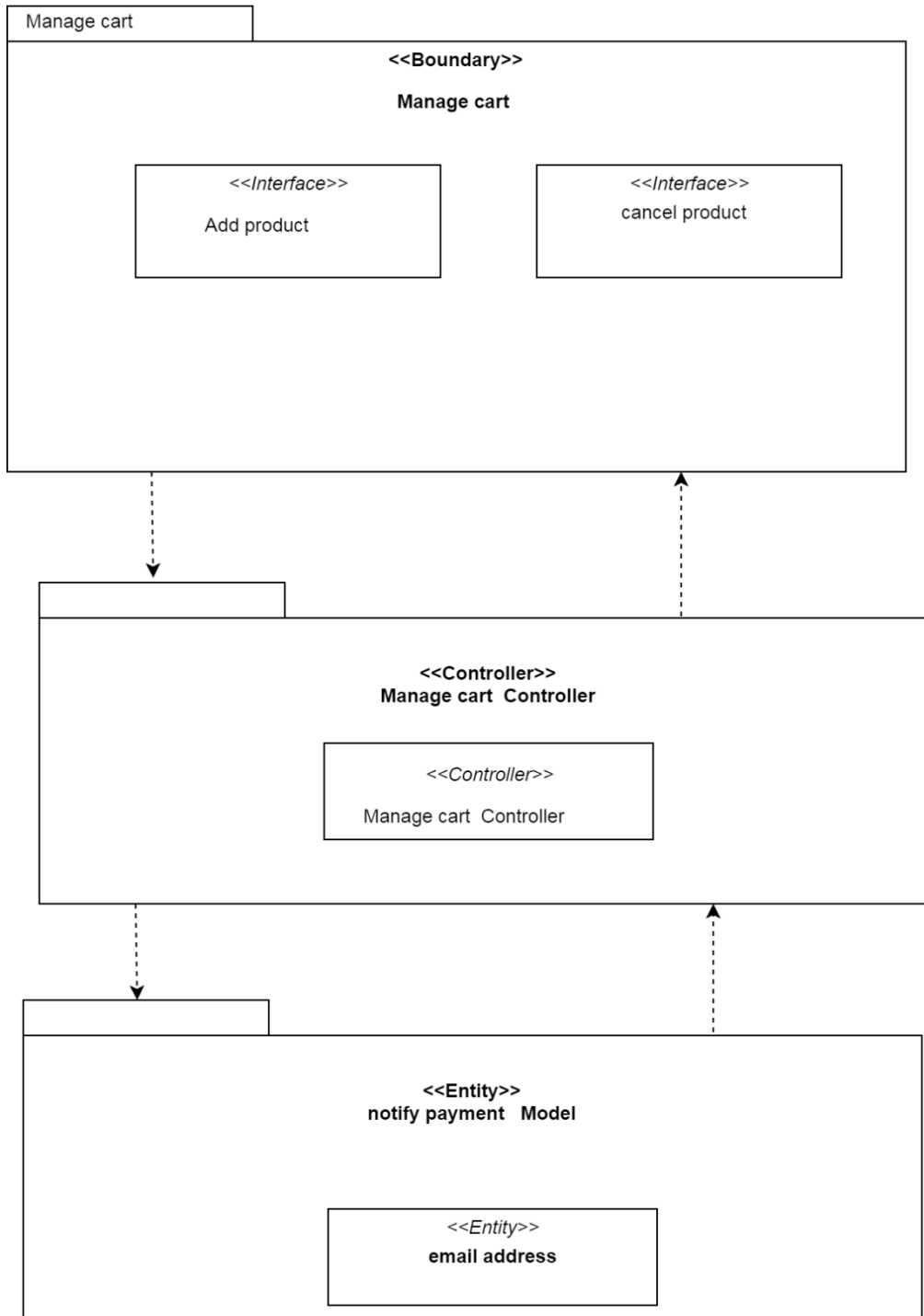


Figure2.1.3manage cart Package

2.1.4 View customer information

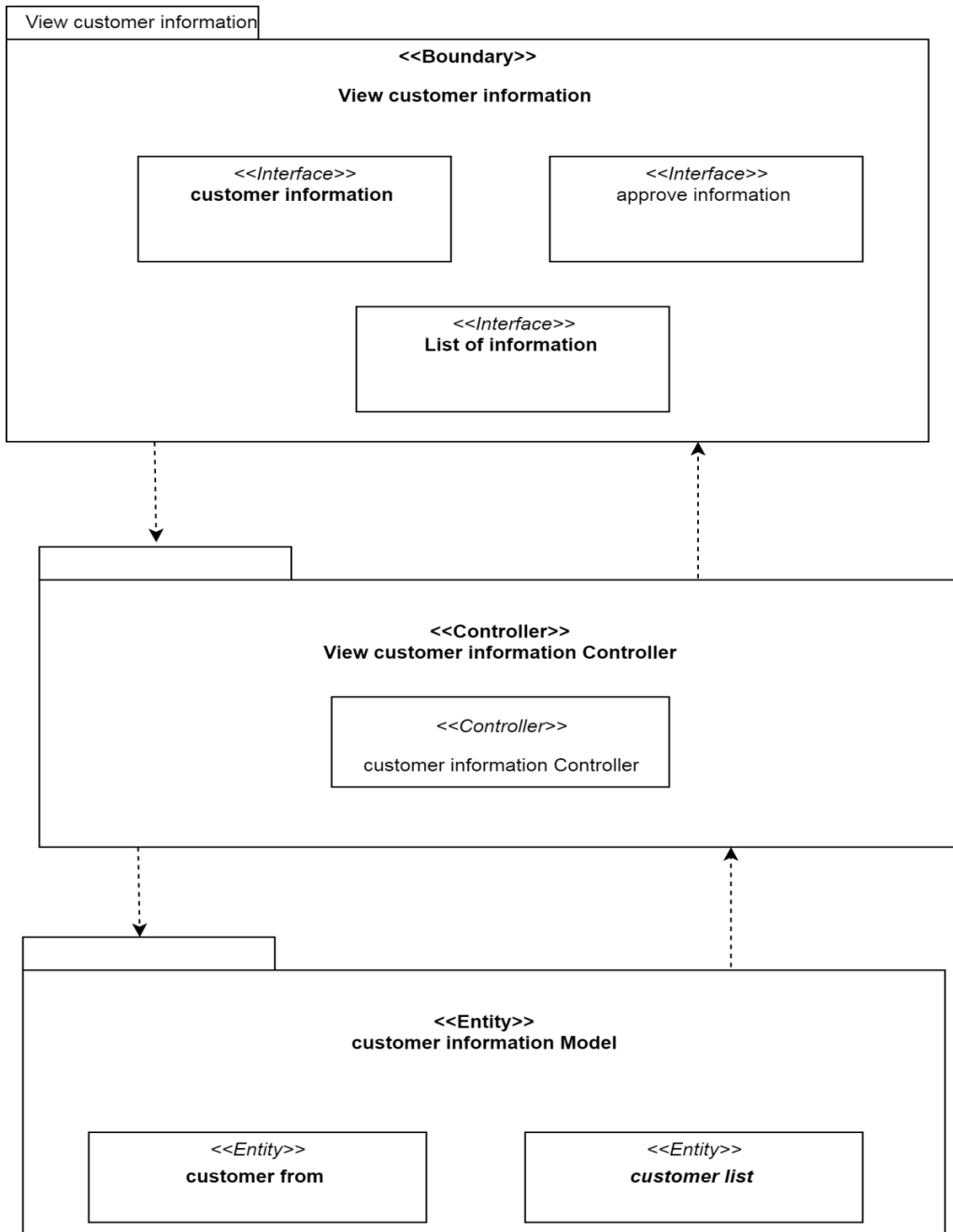


Figure2.1.4 view customer information Package

2.1.5 notify payment

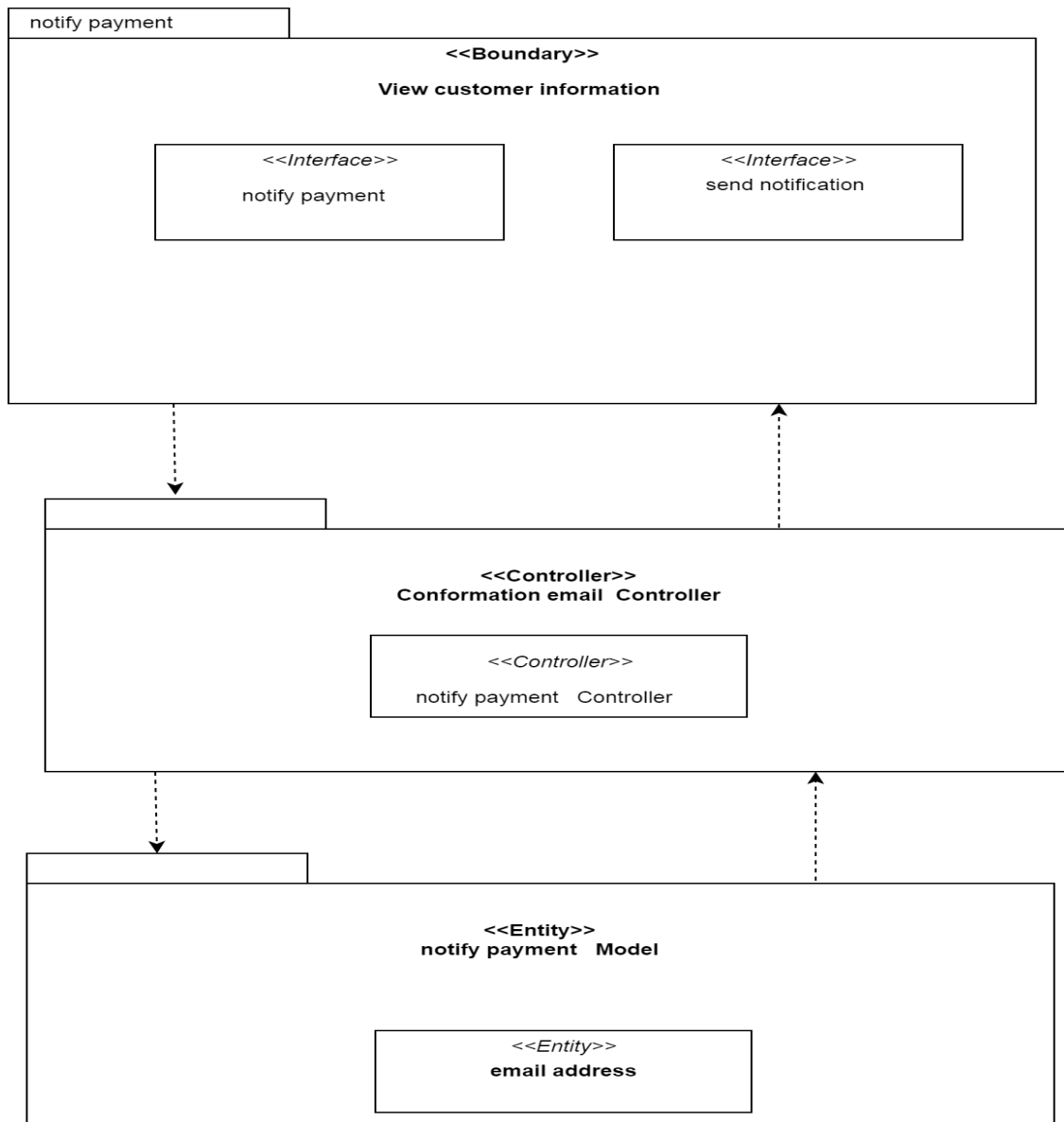


Figure2.1.5 conformation emailPackage

2.2 Data Dictionary

User

Table 2.2.1 User Dictionary

Field Name	Description	Data Type	Constraint
userID	User identification	VARCHAR (20)	PK
username	User name	VARCHAR (20)	
userType	Type of user	VARCHAR (20)	
userPhoneNum	User phone number	INTEGER	
userIcNum	User identification card number	INTEGER	
userAddress	User address	VARCHAR (50)	
userEmail	User email	VARCHAR (20)	

Login

Table 2.2.2 Login Dictionary

Field Name	Description	Data Type	Constraint
email	User email	VARCHAR (20)	PK
password	User password	VARCHAR (20)	

Register

Table 2.2.3 Register Dictionary

Field Name	Description	Data Type	Constraint
Email	User email	VARCHAR (20)	PK
Password	User password	VARCHAR (20)	
firstName	User first name	VARCHAR (20)	
lastName	User last name	VARCHAR (20)	
Phone number	User phone number	VARCHAR (20)	

Admin

Table 2.2.4 AdminDictionary

Field Name	Description	Data Type	Constraint
userID	Admin_ ID	VARCHAR (20)	PK
Admindata	Admin_data	INTEGER	

Customer

Table 4.2.5 Customer Dictionary

Field Name	Description	Data Type	Constraint
userID	Customer_ ID	VARCHAR (20)	PK
customerDateJoin	Customer join date	VARCHAR (20)	

Deliver

Table 2.2.6 Deliver Dictionary

Field Name	Description	Data Type	Constraint
userID	Deliver_ ID	VARCHAR (20)	PK
DeliverDateJoin	Deliver join date	VARCHAR (20)	

Administer product

Table 2.2.7 Manage product Dictionary

Field Name	Description	Data Type	Constraint
productID	Product_ ID	VARCHAR (20)	PK
Product_Name	Product_ name	VARCHAR (20)	
prouductType	Product_type	VARCHAR (20)	
Product_price	Product_price	VARCHAR (20)	

Manage cart

Table 2.2.8 Manage cart Dictionary

Field Name	Description	Data Type	Constraint
------------	-------------	-----------	------------

productID	Product_ID	VARCHAR (20)	PK
Product_Name	Product_name	VARCHAR (20)	
prouductType	Product_type	VARCHAR (20)	
Product_price	Product_price	VARCHAR (20)	

View customer information

Table 2.2.9 View customer information

Field Name	Description	Data Type	Constraint
infoID	info_ID	VARCHAR (20)	PK
info_type	Info-type	VARCHAR (20)	
Customer_id	Customer_id	VARCHAR (20)	Fk

Conformation email

Table 2.2.10 notify Dictionary

Field Name	Description	Data Type	Constraint
------------	-------------	-----------	------------

emailID	email_ID	VARCHAR (20)	PK
email_address	address-type	VARCHAR (20)	
Customer_id	Customer_id	VARCHAR (20)	Fk

2.3 DETAIL DESIGN

2.3.1 Login

Table 2.3.1 Login

Class Type	:	Controller Class	
Responsibility	:	To allow user to login to the system	
Attributes	:	Username Password	String (20) Char (10)
Methods	:	Login () getuserName () getPassword	To enter the system To get username of the user To get password of the user

Algorithm	<p>1. Login (User)</p> <p>BEGIN</p> <p>ENTER userName, Password</p> <p>PRESS “LOGIN” button</p> <p>READ Username</p> <p>READ Password</p> <p>IF (userName = True) && (Password = True)</p> <p> LOGIN SUCCESSFUL</p> <p>ELSE</p> <p> DISPLAY warning message “Your email or password entered are wrong”</p> <p> ENTER Email and Password AGAIN UNTIL LOGIN SUCCESSFUL</p> <p>END</p> <p>2. Forgot Password</p> <p>BEGIN</p> <p>PRESS “Forgot Password”</p> <p>ENTER email</p> <p>DISPLAY “Recovery password link has been sent to your email”</p> <p>END</p> <p>3. Recovery Password</p> <p>BEGIN</p>	
-----------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

		ENTER new password END	
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2.3.2 Registration

Table 2.3.2 Registration

Class Type	:	Controller Class	
Responsibility	:	To register new user. (customer, deliver)	
Attributes	:	firstName lastName Email address Password Phone number	String (20) String (20) Char (10) Char (10) Char (10) Int (10)
Methods		Register ()	To register new account to system
Algorithm		1 . BEGIN GET firstname FROM FORM; GET firstnme FROM FORM; GET email FROM FORM;	

	<div>GET phone number FROM FORM;</div> <div>GET address FROM FORM;</div> <div>GET password FROM FORM;</div> <div>IF</div> <div>password NOT EQUAL confirmationPassword,</div> <div>THEN</div> <div>DISPLAY ErrorMessagePwd AS</div> <div>MESSAGE DIALOG;</div> <div>ELSE IF</div> <div>FORM IS NOT COMPLETELY FILLED,</div> <div>THEN</div> <div>DISPLAY ErrorMessageForm AS</div> <div>MESSAGE DIALOG;</div> <div>ELSE</div> <div>INSERT</div> <div>firstname,lastname,</div> <div>email, password</div> <div>INTO DATABASE</div>	
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		<p>RECORD;</p> <p>DISPLAY SuccessMessage AS</p> <p>MESSAGE DIALOG;</p> <p>REDIRECT TO</p> <p>LOGIN PAGE;</p> <p>END</p>	
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2.3.3 Administer product

Table 2.3.3 Manage product

Class Type	:	Controller Class	
Responsibility	:	Allow Admin to add ,edit ,delete product information.	
Attributes	:	<p>Product name</p> <p>Product quantity</p> <p>Product price</p>	<p>String (20)</p> <p>Int(10)</p> <p>Float(10)</p>
Methods	:	<p>Addproduct(getproductid,getproductname,getproductquantity ,getproduct price)</p> <p>Editproduct(getproductid,getproductname,getproductquantity ,getproduct price)</p> <p>deleteproduct(getproductid,getproductname,getproductquantity ,getproduct price)</p>	<p>To Addproduct information</p> <p>To edit product information</p> <p>To delete product information</p>
Algorithm		<p>1. Addproduct (product)</p> <p>BEGIN</p>	

	<p>ENTER productID, productName, productquantity, getproduct price</p> <p>THEN DISPLAY success message</p> <p>“product information successfully added.”</p> <p>END</p> <p>2. 1. Editproduct (product)</p> <p>BEGIN</p> <p>ENTER productID, productName, productquantity, getproduct price</p> <p>THEN DISPLAY success message</p> <p>“product information successfully update.”</p> <p>3. 1. Delete product (product)</p> <p>BEGIN</p> <p>ENTER productID, productName, productquantity, getproduct price</p> <p>THEN DISPLAY success message</p> <p>“product information successfully deleted.”</p>	
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2.3.4 manage cart

Table 2.3.4manage cart

Class Type	:	View Class
Responsibility	:	Allow customer to view,select,cancel product information.

Attributes	:	Product name Product quantity Product price	String (20) Int(10) Float(10)
Methods	:	viewproduct(getproductid,getproduct name,getproductquantity ,getproduct price) selectproduct(getproductid,getproduct name,getproductquantity ,getproduct price) cancelproduct(getproductid,getproduct name,getproductquantity ,getproduct price)	To viewproduct information To select product information To cancel product information
Algorithm		1. viewproduct (product) BEGIN View product , THEN DISPLAY view “product information successfully view page.” END 2. selectproduct (product) BEGIN Select productID, productName, productquantity, getproduct price THEN DISPLAY success message “product successfully booked .” 3. 1. cancel product (product)	

		BEGIN Cancel product ; THEN DISPLAY success message “Product successfully cancelled.”	
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2.3.5 View customer information

Table 2.3.5 view customer information

Class Type	:	view Class	
Responsibility	:	To view customer information. (Amin, deliver)	
Attributes	:	firstName lastName Email address Phone number Product	String (20) String (20) Char (10) Char (10) Int (10) Char (10)
Methods		view customer information ()	To view customer information in the system.
Algorithm		1 . BEGIN GET firstname FROM registration; GET firstname FROM registration; GET email FROM registration; GET phone number FROM registration;	

		<p>GET address FROM registration;</p> <p>THEN</p> <p>DISPLAY customer information;</p> <p>FORM IS NOT COMPLETELY FILLED,</p> <p>THEN</p> <p>END</p>	
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2.3.6 Confirmation email

Table 2.3.6 notify payment

Class Type	:	Controller Class	
Responsibility	:	To notify payment (Amin)	
Attributes	:	<p>Email</p> <p>Address</p> <p>Product</p> <p>Total price</p>	<p>Char (10)</p> <p>Char (10)</p> <p>Char (10)</p> <p>Char (10)</p>
Methods		Notification ()	To Confirmation email to the customer.
Algorithm		<p>1 . BEGIN</p> <p>GET email FROM manage product;</p> <p>GET address FROM manage product;</p> <p>GET product FROM manage product;</p>	

		<p>GET total price FROM manage product;</p> <p>THEN</p> <p> DISPLAY product booking information;</p> <p> If</p> <p> Email address true;</p> <p> Send conform email;</p> <p> Else</p> <p> Display wrong email ;</p> <p>THEN</p> <p> END</p>	
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