SASYA BOUTIQUE MANAGEMENT SYSTEM

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA

BORANG PENGESAHAN STATUS TESIS

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SESI PENGAJIAN: 2-18/19

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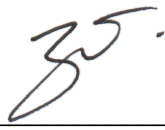

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SASYA BOUTIQUE MANAGEMENT SYSTEM

[NURZAKIYAH EMALDA ABDUL JAMAL]

This report is submitted in partial fulfillment of the requirements for the
Bachelor of Computer Science [Software Development]

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

[2019]

DECLARATION

I hereby declare that this project report entitled

SASYA BOUTIQUE MANAGEMENT SYSTEM

is written by me and is my own effort and that no part has been plagiarized

without citations.

STUDENT : _____ Date : 15/08/2019

NURZAKIYAH EMALDA ABDUL JAMAL

I hereby declare that I have read this project report and found

this project report is sufficient in term of the scope and quality for the award of

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SUPERVISOR : _____ Date : 15/08/2019

PN. ANIZA OTHMAN

DEDICATION

It is my genuine gratefulness and warmest regard that I dedicate this work to my beloved parents, Abdul Jamal Khamis and Herdawati Sukar who has been a constant source of support and encouragement during the challenges of completing this work. This work is also dedicated to my Final Year Project supervisor, Madam Aniza Othman for the consultations, advices, comments and support to make sure this project completed successfully. And a big thanks to all my friends who are always support and help me in completing the Final Year Project.

ACKNOWLEDGEMENT

Grateful to the Almighty for the countless blessing and grace that was given. I'm finally able to complete the Final Year project for this semester. First and foremost, I would like to gratitude to my supervisor Pn. Aniza Binti Othman who guide me to complete SASYA Boutique Management System and help in the writing report. Besides, I would like to thank my parents, lecturers and friends who helped me a lot in completing this project within the limited time.

ABSTRACT

SASYA Boutique Management System is proposed for SASYA Boutique which is located in Masjid Tanah, Melaka. The purpose of this system is to implement the computerization of the products inventory and sales. The current system that is used by SASYA Boutique is quite tedious. Data stored on papers is subject to loss due to physical damage. Furthermore, a large number of ledger books has to be maintained for each transaction. Sometime manual calculation may be incorrect thus, leading to the incorrect information. Besides, generating the daily sales and monthly sales manually is a time consuming task as the user need to go through one by one sales. SASYA Boutique Management System will be a great of help in order to reduce the problems. The staff details, customer details, item details, purchase, billing, and report generation can be maintained through the system. The system will keep the record of required information and will perform the operations such as computing calculations by scanning the barcode of the items, automatic report generation, adding, deleting, updating, and searching. The methodology that has been use for the project is Agile Methodology. This project is developed by using Notepad++ as front end and SQL Server as back end. As for the scripting, *Hypertext Preprocessor* (PHP) language, *JavaScript*, and *Hypertext Markup Langu*age (HTML) will be use.

ABSTRAK

SASYA Boutique Management System adalah sistem yang akan digunakan oleh SASYA Boutique yang terletak di Masjid Tanah, Melaka. Fungsi system ini ialah untuk mengaplikasikan pengkomputeran jualan dan inventori produk. System semasa yang digunakan oleh SASYA Boutique agak ketinggalan. Data yang disimpan di kertas adalah tertakluk kepada kerugian akibat kerosakan fizikal. Selain itu, sejumlah besar buku lejar perlu dikekalkan untuk setiap transaksi. Kadangkala pengiraan manual mungkin salah, yang membawa kepada maklumat yang salah. Selain itu, menjana jualan harian dan jualan bulanan secara manual adalah tugas yang memakan masa kerana pengguna perlu melalui satu demi satu jualan. SASYA Boutique Management System akan menjadi sangat membantu untuk mengurangkan masalah. Butiran kakitangan, butiran pelanggan, butiran item, pembelian, bil dan penjanaan laporan boleh dikekalkan melalui sistem. Sistem ini akan menyimpan rekod maklumat yang diperlukan dan akan melaksanakan operasi seperti pengiraan pengkomputeran dengan mengimbas kod bar item, penerbitan laporan automatik, menambah, memadam, mengemas kini, dan mencari. Metodologi yang digunakan untuk projek itu ialah Metodologi Agile. Projek ini dibangunkan dengan menggunakan Notepad++ sebagai rekabentuk antaramuka dan SQL Server sebagai pangkalan data. Bagi setiap skrip, bahasa pengaturcaraan yang digunakan ialah *Hypertext Preprocessor* (PHP), *JavaScript*, dan *Hypertext Markup Language* (HTML).

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FYP	-	Final Year Project

CHAPTER 1: INTRODUCTION

1.1 Introduction

SASYA Boutique Management System is proposed for SASYA Boutique which is located in Masjid Tanah Melaka. SASYA Boutique offers beautiful styles and designs of clothes whilst upholding the modest code attire. The business involves selling various apparels targeted for modern Muslimah Fashion. The products include jubah, baju kurung, blouse, palazzo pants, skirt, scarves and others.

The purpose of this system is to implement the computerization of the products inventory and sales. The current system that is used by SASYA Boutique is quite tedious. Data stored on papers is subject to loss due to physical damage. It may lead errors certain operations such as searching, adding, updating, and removing entries cannot be done efficiently. Furthermore, a large number of ledger books has to be maintained for each transaction. Sometime manual calculation may be incorrect thus, leading to the incorrect information. Lastly, generating the daily sales and monthly sales manually is a time consuming task as the user need to go through one by one sales.

In general, the SASYA Boutique Management System is based on computer technology that will gives services for users, manage by the staffs who give implementation of function relatively in effective times as well as will design for removing time wasting, saving resources, easy data access, security on data input and data access by removing almost manual based system.

1.2 Problem Statement

Working with the current system that is used by the SASYA Boutique is quite tedious. Data stored on papers is subject to loss due to physical damage. It may lead errors certain operations such as searching, adding, updating, and removing entries cannot be done efficiently. Furthermore, a large number of ledger books has to be maintained for each transaction. Sometime manual calculation may be incorrect thus, leading to the incorrect information. Lastly, generating the daily sales and monthly sales manually is a time consuming task as the user need to go through one by one sales.

1.3 Objective

This project embarks on the following objectives:

1. To study the current system and suggests a computerized system that can manage the database of the items in the boutique for searching, adding, updating and deleting data.

2. To develop a system that can calculate automatically the total payment for every purchasing items by using the barcode scanner.

3. To develop a system that can generate daily and monthly sales report.

1.4 Scope

The proposed system project is the SASYA Boutique Management System. The system will be used in SASYA Boutique by the staff to manage the boutique business and then storing that data for future usage. The user also can add or update data easily.

There are a few modules that have been proposed. These modules provide various reports and analysis, which would help the management. The modules are:

1. Items

   - The module will record all items in the boutique. It will capture the item name, code, size, quantity and price per unit. The system will notify which product that need to stock up.

2. Staff

   - The module will record the staff profile. It will record staff id, name, phone number, address, email, and password.

3. Customer

   - The module will keep track of customer information. It will record customer's name, address, phone number, gender, and email.

4. Purchase

   - The module keeps tracks of the day-to-day transactions. The user will scan the barcode of purchasing item and calculate the total price. The user also can retrieve the total payment of the product and print the receipt for the customer.

5. Report Analysis

   - The module will be able to generate report based on total collected per day or month.

1.5 Project Significance

SASYA Boutique Management System for SASYA Boutique is a system that will ease the staff who use the system since it will give an advantages to the user. On the other hand, the system will ensure the security in terms of keeping the record of product, customer and report safely in the database. Thus, it will keep the privacy and confidentiality of data such as daily purchasing and sales. The system also equipped

with manageability of data to be retrieved from the database. Furthermore, the system also enables the user to insert, update or delete the data easily for example if there is a changes of product price the user can edit the price according the setting price. Lastly, the system will help the manager in generate the report for monthly sales of the boutique.

1.6 Expected Output

The system will ensure the security in terms of keeping the record of product, customer and report safely in the database. Thus, it will keep the privacy and confidentiality of data such as daily purchasing and sales. The system also equipped with manageability of data to be retrieved from the database. Furthermore, the system also enables the user, which is the staff to insert, update or delete the data easily for example if there is a changes of product price the staff can edit the price according the setting price. The system also will provide an automatic calculation of total payment for every purchasing items by using barcode scanner. Lastly, the system will help the staff in generate the report for monthly sales of the boutique.

1.7 Conclusion

As a conclusion, SASYA Boutique Management System will be a great of help for the staff to manage the boutique. The system will ease the staff to perform the process of purchasing items and keep track of the sales report of the boutique. For the next chapter will show the literature review and project methodology. The methodology used for this project will be discussed. The project requirement such as software and hardware requirements also will be state in the next chapter.

CHAPTER 2: LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

This chapter is a preview to the literature review and project methodology of the project. This chapter provides summary and evaluation of the previous research that relate to the project which will be developed. The literature review will expose the important of the topic or the system to be developed. The system methodology used for this project is Agile methodology. This chapter also shows the system development technique for the project.

2.2 Facts and Findings

A web-based application is any application that uses a website as the interface or front-end. Users can easily access the application from any computer connected to the Internet using a standard browser. With web-based applications, users access the system via a uniform environment – the web browser. While the user interaction with the application needs to be thoroughly tested on different web browsers, the application itself needs only be developed for a single operating system.

Unlike traditional applications, web systems are accessible anytime, anywhere and via any PC with an internet connection. This puts the user firmly in charge of where and when they access the application. The user interface of web-based applications is easier customizing that is the case with desktop applications. This makes it easier to update the look and feel of the application or to customize the presentation of information to different user groups.

2.2.1 Domain

SASYA Boutique Management System is about to manage the product inventory, transaction process, and the report of the daily sales of the boutique by using the development of we based as a platform. The system will ensure the security in terms of keeping the record of product, customer and report safely in the database. The system also enables the user, which is the staff to insert, update or delete the data easily for example if there is a changes of product price the staff can edit the price according the setting price. The system will provide an automatic calculation of total payment for every purchasing items and help the staff in generate the report for monthly sales of the boutique.

2.2.2 Existing System

There are a few existing systems that have been developed in this world that closely related to the system that going to developed. In order to gain the better point that used to developing this system, those the existing system that can give good use for guiding and coming up the better ideas to improve the newly created system which is SASYA Boutique Management System.

2.2.2.1 Cash Register Express

Cash Register Express is trusted by over 70,000 merchants around the world. Designed by pcAmerica, Cash Register Express (CRE) works in almost any retail environment including markets, groceries, boutiques, liquor & wine stores, tobacco shops, apparel stores, and more. CRE offers a wide variety of point of sale features and is incredibly flexible and customizable. In Cash Register Express, there are a few features that are quite similar and can be follow by this project to improve the quality of the system. The features are Item Lookup, Run Transactions, and Reports.

No matter how large the inventory, CRE makes it very easy to keep it organized. From the main POS screen or within the inventory maintenance, items can be searched by Category, Department, or Vendor. CRE will always be able to find any item within inventory in a matter of seconds. Figure 2.1 shows the item lookup interface for CRE.

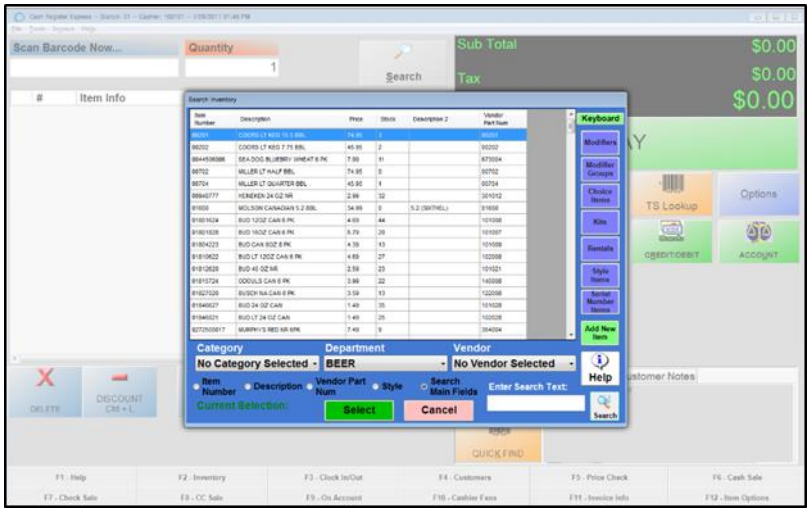


Figure 2.1: Item Lookup interface

Based on Figure 2.2, CRE claims to forget about long lines forming at business with CRE's fast checkout. CRE is developed to keep transaction times down to a minimum. Whether using scanning a barcode or using the touchscreen, transactions can be completed in a flash. Accept cash, check, integrated credit cards, gift cards, and more.

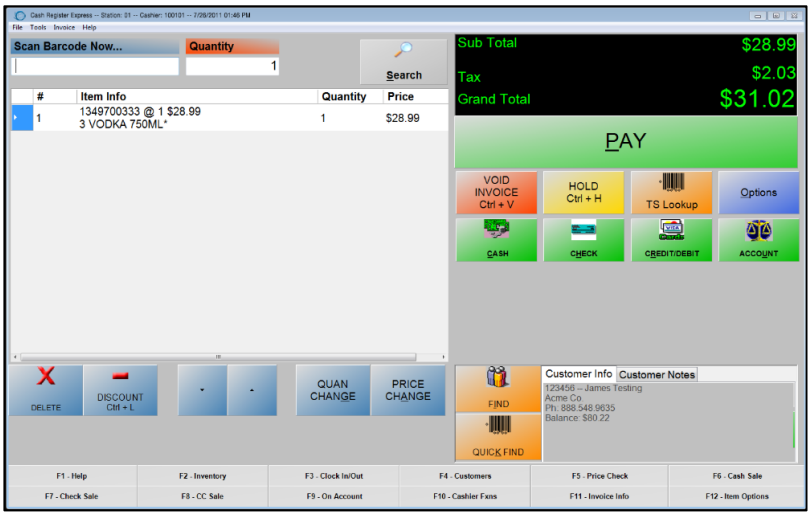


Figure 2.2: Run Transaction interface

Based on Figure 2.3, accessing accurate information about day-to-day operations is crucial to running a successful business. What items should re-order this week? How did this month's sales totals measure up to last month? Get this

information as well as shift summaries, z-reports, detailed and itemized sales listings, cost of goods sold, profit margin, employee time clock activity, voids and discounts tracking, and much more. With CRE and RPE, will have the insight necessary to make the right decisions for business.

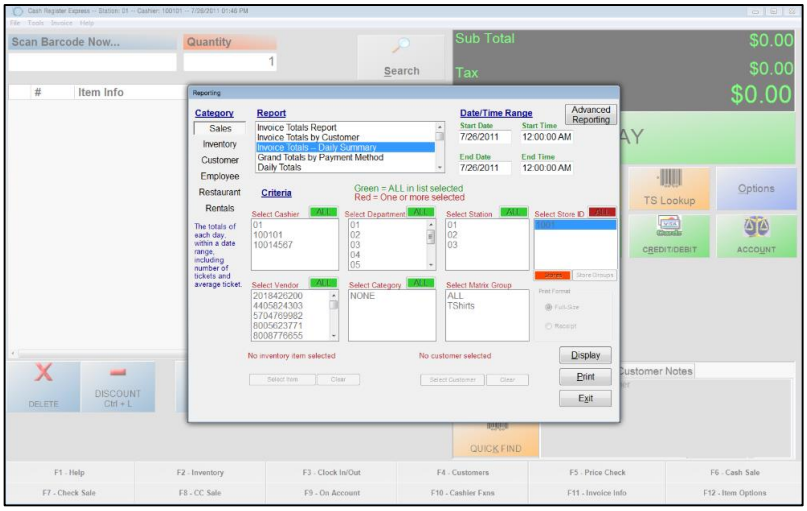


Figure 2.3: Reports interface

2.2.2.2 IRS Point of Sales Software

IRS Software offers POS system for sale throughout Malaysia. The retail POS system from IRS Software is cost-effective and simple to use, suitable for small to big businesses in the retail industry. Apart from customer service, Point of Sale system can help with stock control as well. Keep track of the best-selling items through Point of Sale system, so that will know which items bring the most revenue, and which ones bring the least. This way, will know how much to order for each item, giving full control of the inventory. The interface of IRS Point of Sales Software are shown in Figure 2.4 and Figure 2.5.

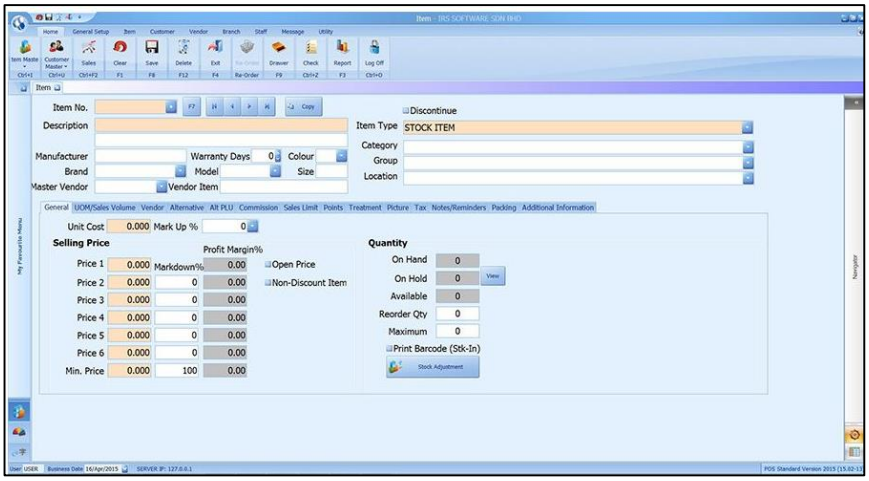


Figure 2.4: IRS Software interface

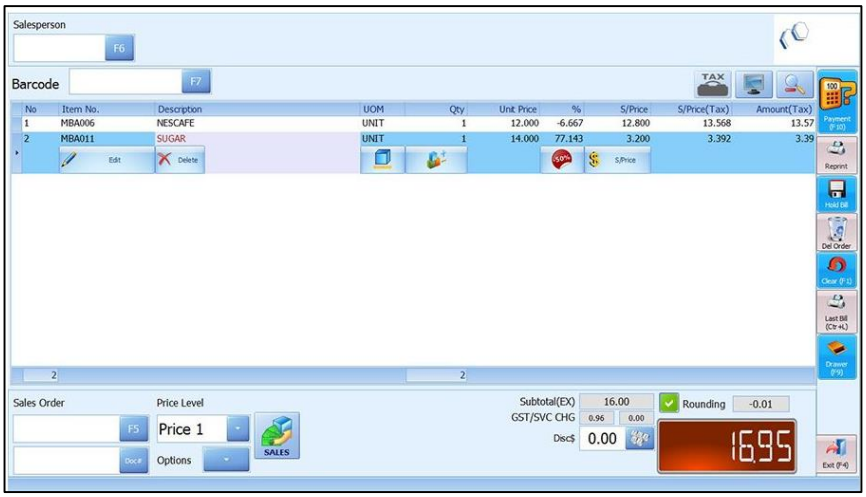


Figure 2.5: IRS Software interface

2.3 Project Methodology

In this SASYA Boutique Management System, the methodology applied is Agile model. Agile is a methodology that promotes continuous iteration of development and testing throughout the software development life cycle of the project.

There are many steps in agile development methods; most minimize risk by developing software in short amounts of time. Software developed during one unit of time is referred to as an iteration, which may last from one to four weeks. Each iteration is an entire software project: including planning, requirements analysis, design, coding, testing, and documentation.

An iteration may not add enough functionality to warrant releasing the product to market but the goal is to have an available release (without bugs) at the end of each iteration. At the end of each iteration, the team re-evaluates project priorities. The process of Agile Development is shown in Figure 2.6.

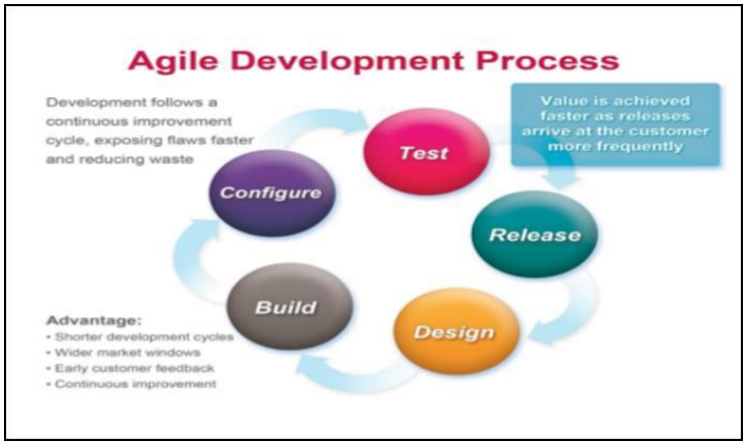


Figure 2.6: The process of Agile Development Process

This model contains 5 phases which include design, build, configure, test and release. In Agile, the first phase is design. The requirement specifications are studied and prepared. System design helps in specifying hardware and system requirements and also helps in defining overall system architecture. After that the team must plan the schedule or milestone, including the time plan the cost risk and the scope.

Second phase is build the system. With inputs from system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality which is referred to as configuration and testing.

The third and fourth phase is configuration and testing. All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.

If there are no any bugs, the final phase is deployment of system. Once the functional and non-functional testing is done, the product is deployed in the customer

environment or released into the market. Else, the cycle will back to the first phase and loop again.

2.4 Project Requirements

This section describes the types of software, hardware and briefs the descriptions. These requirements can collaborate to develop the project of SASYA Boutique Management System.

2.4.1 Software Requirement

The software requirement that have been used for this project are:

1. XAMPP v3.2.2: - Local server of development.
2. MySQL: - Relational database management system.
3. Notepad++: - Source code editor.
4. Adobe Photoshop CS6: - A raster graphic editor.

2.4.2 Hardware Requirement

The hardware requirement that have been used for this project are:

1. Personal Computer: - HP Pavilion Intel Core i5
2. Barcode Scanner

2.5 Project Schedule and Milestones

This section will list out the entire schedule while developing the project from the start until the end of the project. Milestone are needed to help the developer to know exactly the date to start or finish a certain process in the project. This can help the developer to finish the project on time. The project planning is important to plan the flow and the timeline of the project. The purpose is to ensure that every part of the project can be completed and do not delay the whole project. So with the milestone

the project plan will help to manage the time. Table 2.1 and Figure 2.7 shows the schedule of this project:

Table 2.1: Table Project Milestone

No.	Activities	Start Date	End Date
1.	Preparation of proposal and submission	18 February 2019	25 February 2019
2.	Planning and analysis	26 February 2019	22 March 2019
3.	Design and implementation phase	23 March 2019	10 May 2019
4.	Demonstration project to supervisor	13 May 2019	24 May 2019
5.	Final presentation to supervisor and evaluator	28 May 2019	28 May 2019
6.	Final report submission	28 May 2019	28 May 2019

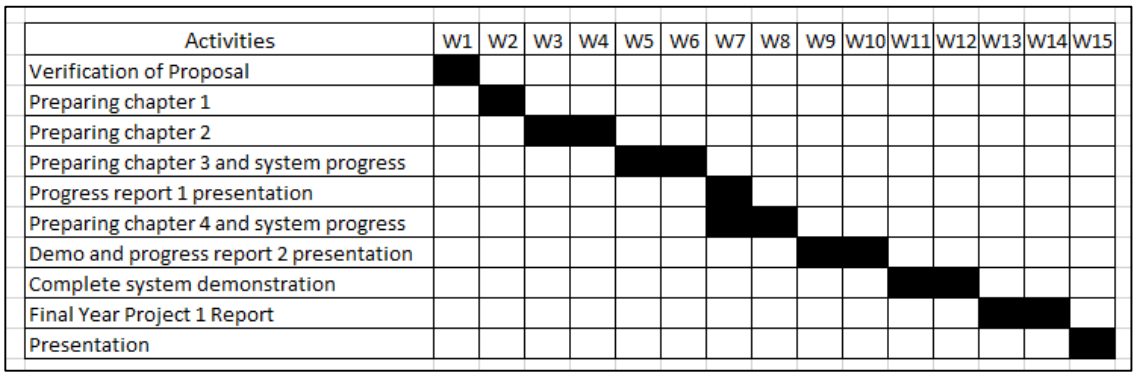


Figure 2.7: Project Schedule (Gantt Chart)

2.6 Conclusion

Literature review and methodology have been details in this chapter. The summary of the research papers has been discussed at this chapter as well. On the other hand, methodology consist the method or technique that used throughout the whole paper. A proper software development can bring the successful of development process. To develop this project, the Agile methodology has been choosing. The next chapter will explain about the analysis phases and how the system going to be develops and discuss. It included the problem analysis and requirement analysis.

CHAPTER 3: ANALYSIS

3.1 Introduction

The purpose of this document is to details the system analysis of the project. It will undergo the process which is the existing systems will be thoroughly analyzed to get the information that can be used as a new idea or innovation. The information obtained from the existing system will be a reference in building a new system. From the results and analysis information of the system, the new system can be better developed than the existing system.

3.2 Problem Analysis

Based on the problem statements that mentioned in Chapter I, the current boutique organization still used the old style in managing the business by using paper, log book, and also manual calculation which will lead to errors. Overview of the current system: -

- Uses paper, log book and pen.
- All purchasing detail are kept in a log book.
- The manager need to calculate manually all the sales and profit.
- Customer's information not be kept properly.
- The user need to insert and update the item details in the boutique manually.

Figure 3.1 below shows the flow diagram of current system used by SASYA Boutique.

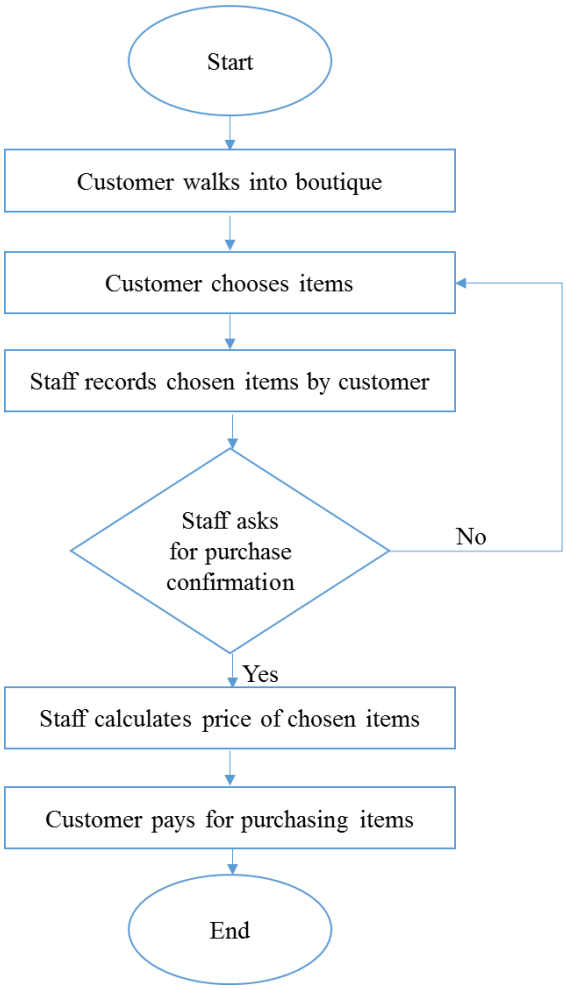


Figure 3.1: Flowchart diagram of current business SASYA Boutique

Therefore, SASYA Boutique Management System provide a solution to solve these problems. The system is developed for SASYA Boutique to help them manage the boutique. Other than focusing on the point of sales system, the system will help SASYA Boutique keep track of customer information and generating report. In order to gain the better point that used to develop this system, the existing system that can give good use for guiding and coming up the better ideas to improve the newly created system which is SASYA Boutique Management System.

3.2.1 Cash Register System

Figure 3.2.1 shows the use case diagram of Cash Register System.

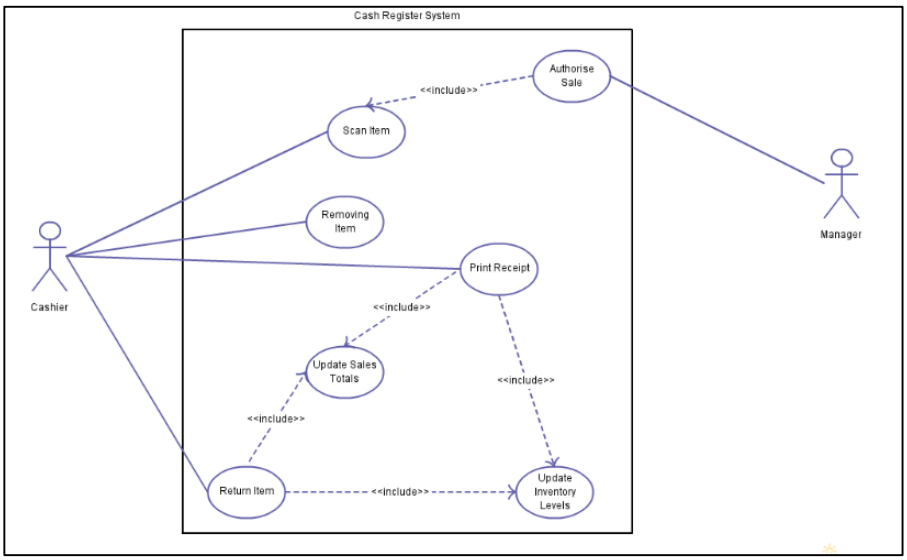


Figure 3.2: Use Case Diagram of Cash Register System

3.2.2 IRS Point of Sales Software

Figure 3.2.2 shows the sequence diagram of IRS Software.

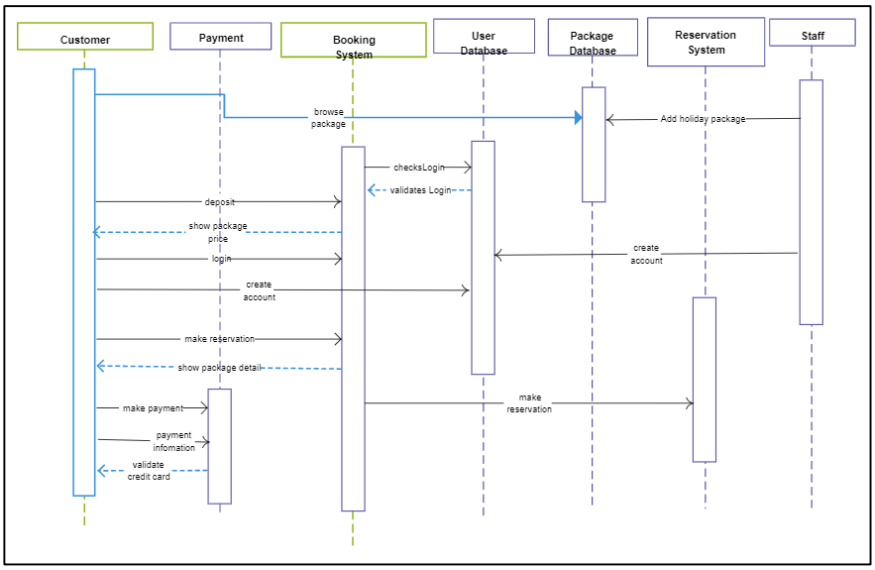


Figure 3.3: Sequence Diagram of IRS Software

3.3 Requirement Analysis

"Requirement can either functional or non-functional in the nature. A functional requirement relates directly to the process the system for the next step of the analysis process. This is because it defines the function that the system must have. Non-functional requirement refers to behavioral properties that the system need to have such as usability and performance." (Dennis and Wixom, 2003). The requirement analysis for this chapter for comprises of functional, software, hardware and network requirements.

3.3.1 Data Requirement

This section will describe the data that the system should input and output, as well as the data that need to store in the database. The data are illustrating in Table 3.1 until Table 3.5.

Table 3.1: Table data for Staff

Attribute	Description	Data Type	Sample Data	Constraint
staff_id	Id for staff	Int	1	Primary Key
staff_name	Name of the staff	Varchar	Nabil Ilham	
staff_contact	Contact number of staff	Varchar	0197751706	
staff_email	Email of staff	Varchar	nabil@gmail.com	
staff_address	Address of staff	Varchar	No.15, Jalan Desa Jaya 3, Taman Desa	

			Jaya, Bukit Baru 75150, Melaka.	
staff_password	Staff login password	Varchar	nabil@01	

Table 3.2: Table Data for Item

Attribute	Description	Data Type	Sample Data	Constraint
item_id	Code for item	Int	1	Primary Key
item_category	Category for item	Varchar	Kurung, Hijab, Jubah	
item_name	Name of the item	Varchar	Kurung Paloma	
item_size	Item category	Varchar	S, M, L, XL	
item_qty	Quantity stock of the item	Integer	10	
ori_price	Price of the item	Float	RM75.00	
retail_price	Retail price of the item	Float	RM89.00	
staffid	Id for staff	Varchar	S001	Foreign Key

Table 3.3: Table Data for Purchase

Attribute	Description	Data Type	Sample Data	Constraint
purch_id	Id for purchasing item	Int	1	Primary Key
purch_total	Total of purchase	Float	RM 168.00	
purch_date	Date of purchasing	Date	17/05/2019	
custid	Id for customer	Varchar	C001	Foreign Key

Table 3.4: Table Data for Purchase Details

Attribute	Description	Data Type	Sample Data	Constraint
pd_id	Id for purchase	Int	1	Primary Key
purch_id	Purchase id	Int	1	Foreign Key
item_id	Code for item	Int	1	Foreign Key
purch_qty	Quantity of purchase item	Integer	2	

Table 3.5: Table Data for Customer

Attribute	Description	Data Type	Sample Data	Constraint
cust_id	Id for customer	Int	1	Primary Key
cust_name	Name of customer	Varchar	Atiyah Nabihah	
cust_contact	Contact cumber of customer	Varchar	019-6561975	
cust_email	Email of customer	Varchar	atiyah@gmail.com	
cust_password	Customer login password	Varchar	atiyah@01	
street	Street address	Varchar	No.15, Jalan Desa Baru	
city	City address	Varchar	Bukit Katil Melaka	
longitude	Longitude	Float	Fetch data from google place API	
latitude	Latitude	Float	Fetch data from google place API	

3.3.2 Functional Requirement

The new system to be developed is planned and designed based on the customer needs and request. The system will be used in SASYA Boutique by the staff to manage the boutique. The user also can change or update data easily. The new system will easy to use. The requirements are illustrated in Table 3.6:

Table 3.6: Functional Requirement

Login	The system shall allow to log in to the system by supplying valid user identification and password.
	The system shall be able to exit from the system at any time after using the system for various functions.
Staff	The system shall record the staff profile. It will record staff id, name, phone number, address, email, and password.
Items	The system shall record all the item details in the boutique. It will capture the item name, code, size, quantity, price per unit and retail price. The system will notify which product that need to stock up.
Purchase	The system shall allow to keep the details data of every purchasing item in the boutique based on: • Item purchased • Quantity of the item purchased
	The system shall be able to scan the barcode and display the total payment of the purchasing item.
	The system shall be able to print the purchasing details as receipt.
Customer	The system shall be able to keep the record of customer information. It will record customer's name, id, phone number, email, address and gender.
Report Analysis	The system shall be able to generate detail report based on: • Daily/Monthly sales

3.3.2.1 Context Diagram

Figure 3.4 shows the context diagram of SASYA Boutique Management System.

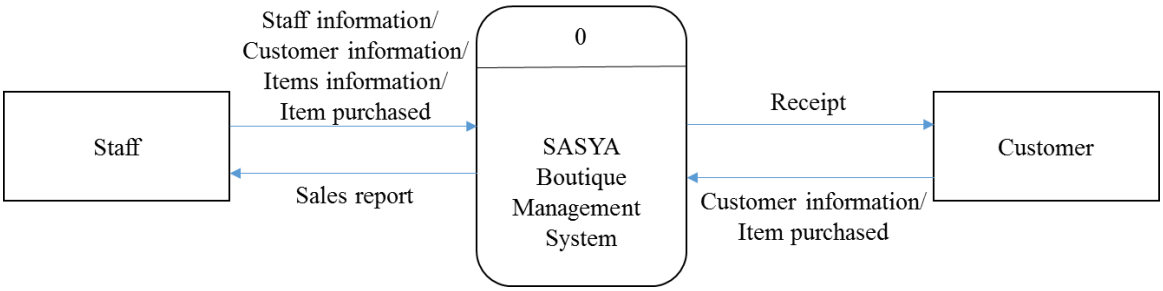


Figure 3.4: Context Diagram of SASYA Boutique Management System

3.3.2.2 Data Flow Diagram (DFD)

Figure 3.5 until Figure 3.10 shows the Data Flow Diagram of SASYA Boutique Management System.

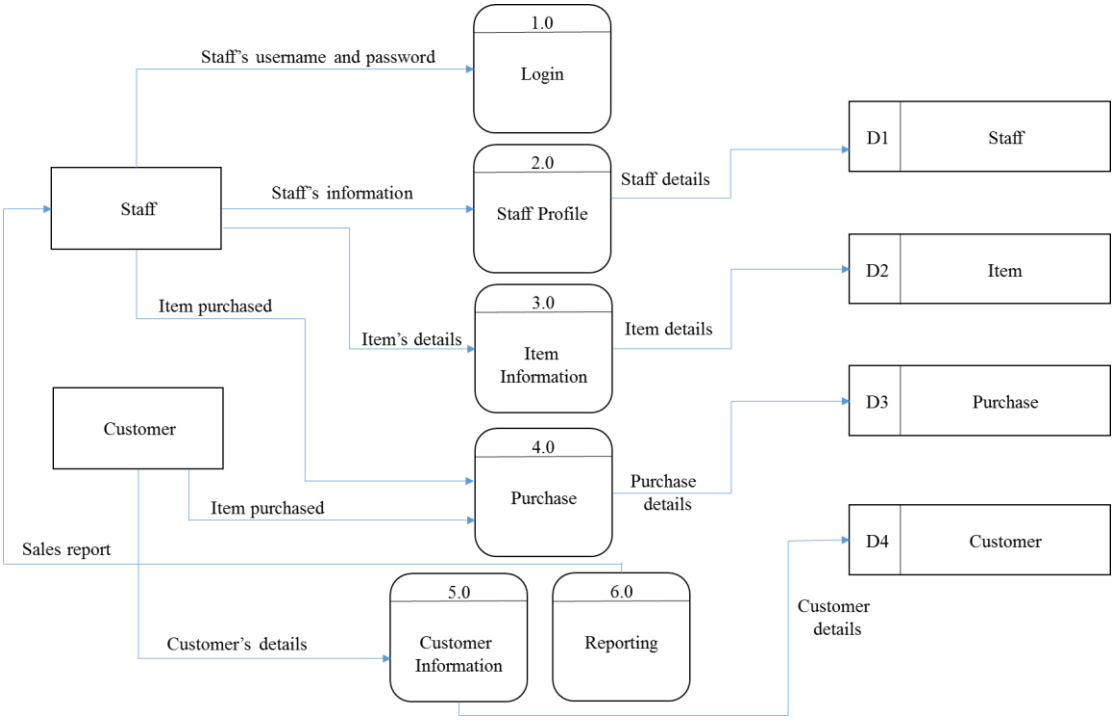


Figure 3.5: Level 0 of SASYA Boutique Management System

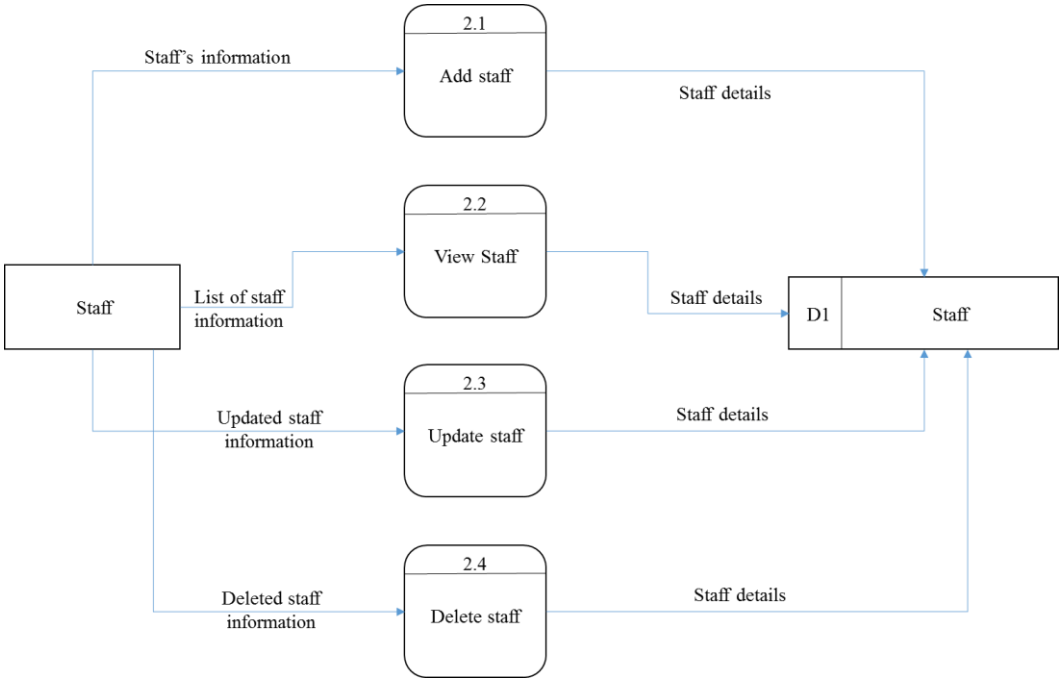


Figure 3.6: Level 1 process 2.0 Staff Profile

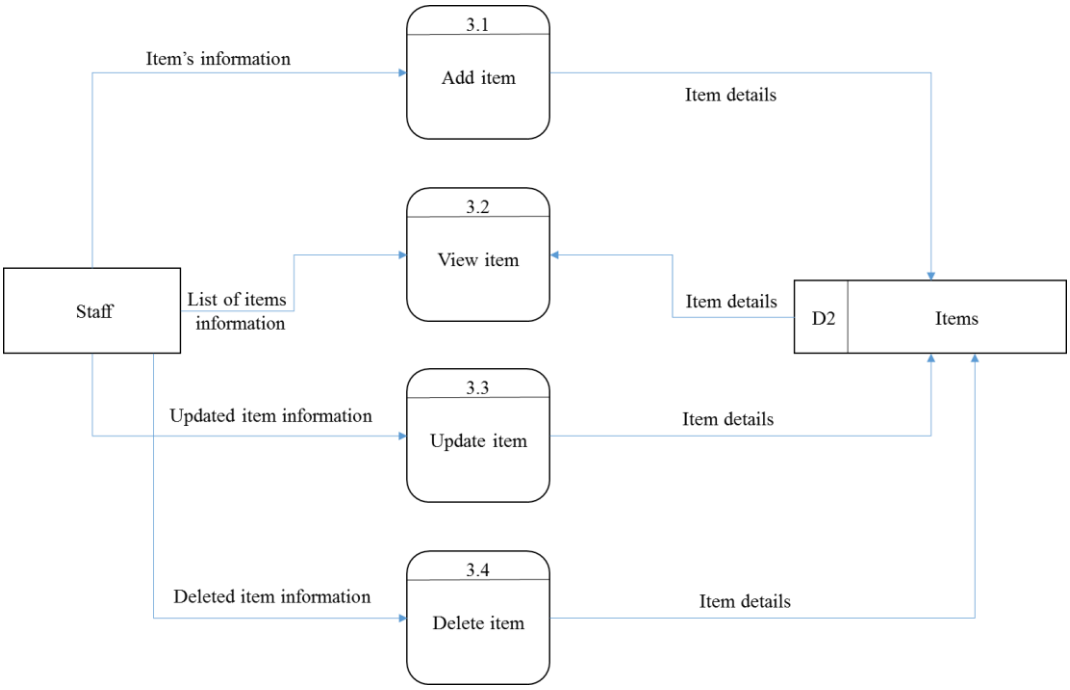


Figure 3.7: Level 1 process 3.0 Item Information

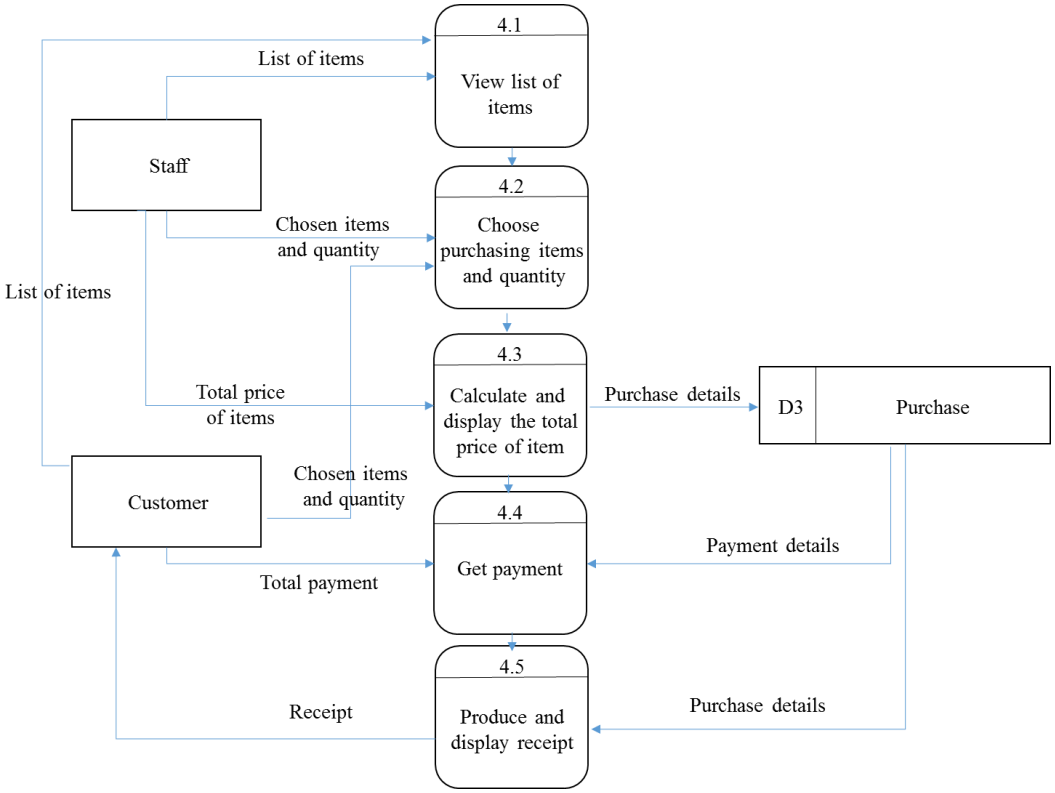


Figure 3.8: Level 1 process 4.0 Purchase

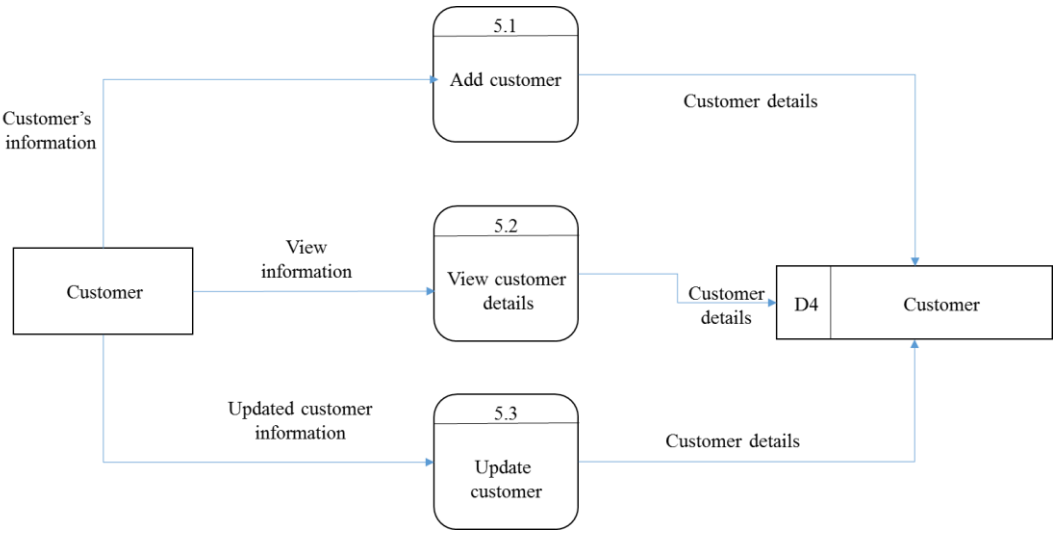


Figure 3.9: Level 1 process 5.0 Customer Information

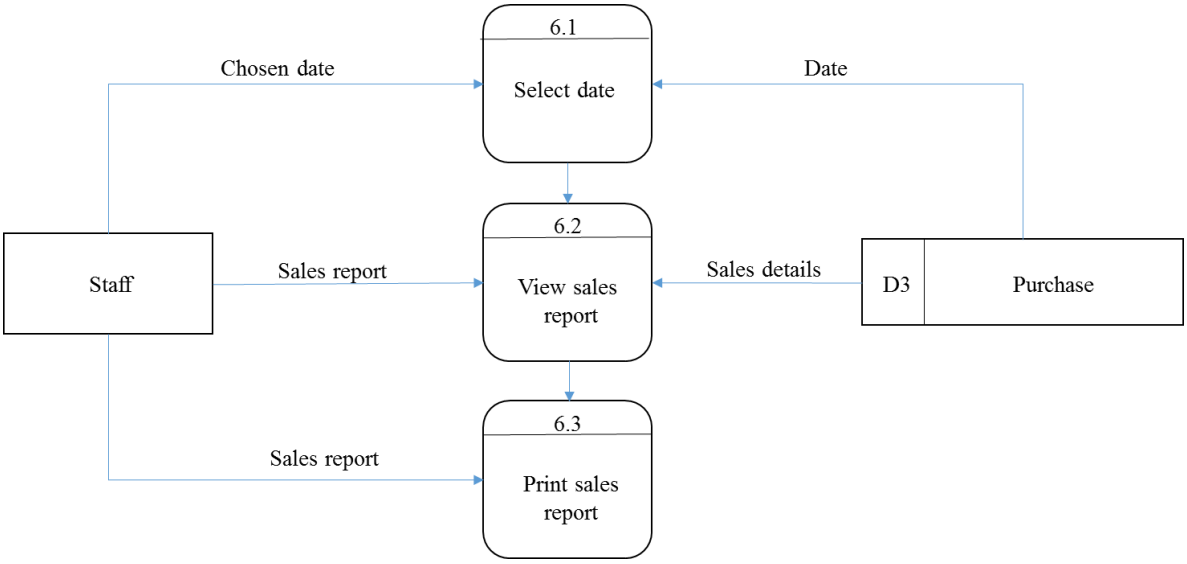


Figure 3.10: Level 1 process 6.0 Reporting

3.3.3 Non-functional Requirement

Non-functional requirement considered important because of their function in ensure that the system to function as expected and perform well without any error or other problem. The non-functional are illustrated in Table 3.7:

Table 3.7: Non-functional Requirement

Requirement	Description
Reliability	The system should be reliable and the function of the system should be work and functional.
Database Security	All data inside database need to be secure to ensure the integrity of the data and unauthorized access cannot access without privileged.

Simple GUI	The interface should be easy to understand to the user and the navigation through the system interface is user friendly.

3.3.4 Others Requirement

- **Software Requirement**

  The software requirement that have been used for this project are:

  1. XAMPP v3.2.2: - Local server of development.
  2. MySQL: - Relational database management system.
  3. Notepad++: - Source code editor.
  4. Adobe Photoshop CS6: - A raster graphic editor.

- **Hardware Requirement**

  The hardware requirement that have been used for this project are:

  1. Personal Computer: - HP Pavilion Intel Core i5
  2. Barcode Scanner

3.4 Conclusion

In this analysis phase system requirement was gather in order to ensure the functionality of the system before process to the next stages and in order to fit to the system scope. This chapter has provided several flow chart as early visual of the itinerary planning system. By visualizing through the flow chart the system process can be seen clearly.

CHAPTER 4: DESIGN

4.1 Introduction

In this stage, the outcomes from the analysis of the preliminary or high level design of the SASYA Boutique Management System was defined. Design need the process of defining solution to satisfy all requirement that was identified during the analysis stage. Design chapter is mostly related to the previous chapter which is analysis. Therefore, the design of the current system can effect by previous stage because the system must design according and more nicely that has been reached in the analysis stage.

In the architecture design, the logical or high-level design is a standard decomposition in the product developed. The specification was analyses and the result which is module structure that have functionality is formed. The output of this activity is the data that has been compiled. Low-level and high-level design based on the functionality that was covered in the previous chapter was shown in this chapter. High-level design more on overview of system layout, system architecture, raw data, graphical interface, database design and business function while low-level data more to both of physical database design and detailed design.

4.2 High-Level Design

In SASYA Boutique Management System, high-level design was focuses on find the needs in the project by add the classes by the terminal architecture in the project. High-level view of the system can be described and it was illustrated with the high-logical view that related analysis classes can be placed in a group according to package.

This high-level design contains input or output data for the system database, high-level logical view, high-level class diagram, static organization, and user interface design including navigation design, logical database design and input and output design.

4.2.1 System Architecture

System architecture is the structure of the program component and data that are required to build the computer-based system. Architecture is the style that the system can take the properties and structure of the component that establish the system and relationship that develop among all architectural components in that system.

4.2.1.1 Architecture View

The system architecture for SASYA Boutique Management System involve with two interface with is admin interface and user interface. Both of this interface is develop by HTML, PHP and CSS for design. From admin and user interface, the data that was been input will be post to the database that has been use which is MySQL. The structure of system architecture was shown in Figure 4.1.

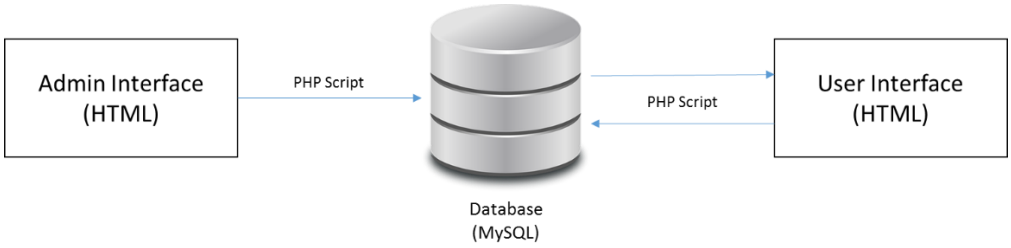


Figure 4.1: System Architecture for SASYA Boutique

4.2.1.2 Static View

The static view describes the structure of business objects that are sent as message arguments from the sender to the receiver of the message (Saurabh Kumar 2013). Static view of this system has been showed by using flowchart in Figure 4.2 and Figure 4.3.

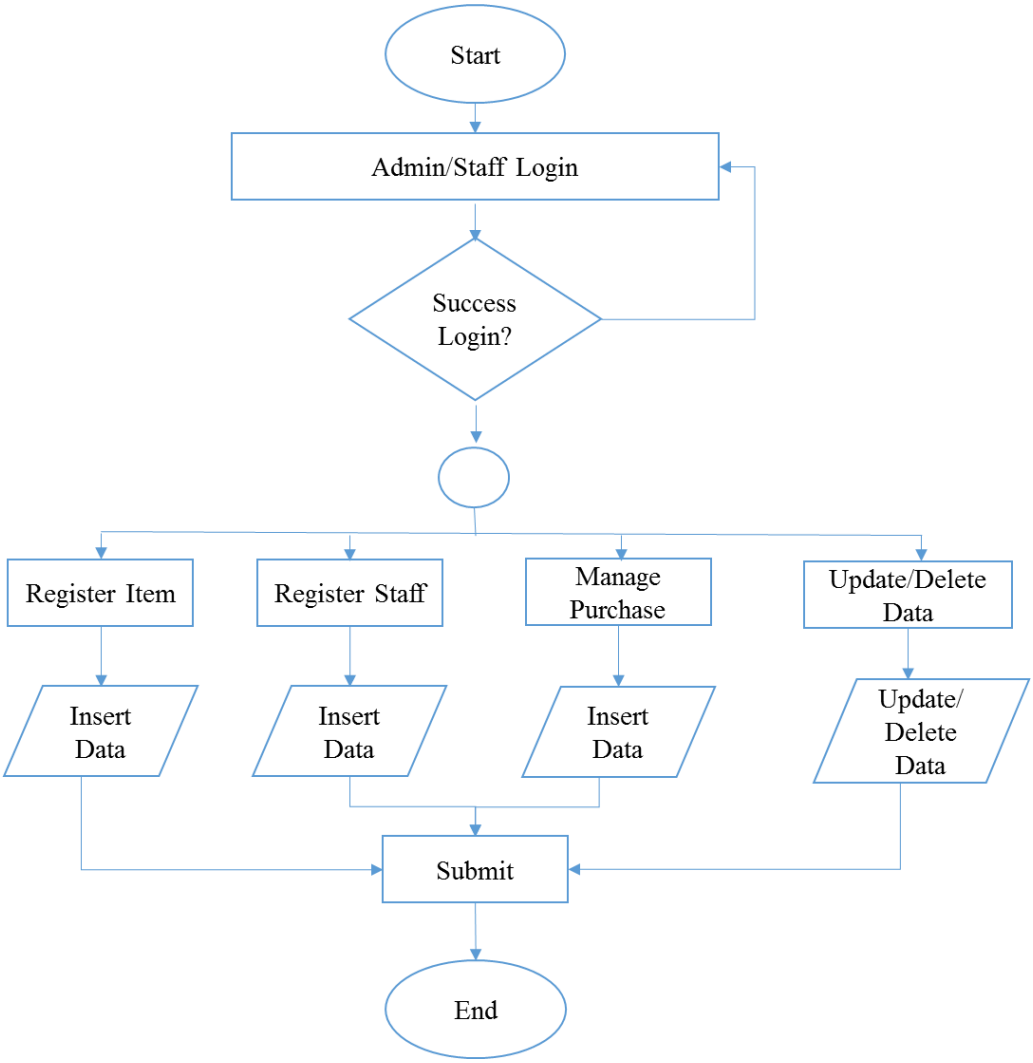


Figure 4.2: Flowchart of Admin/Staff Role

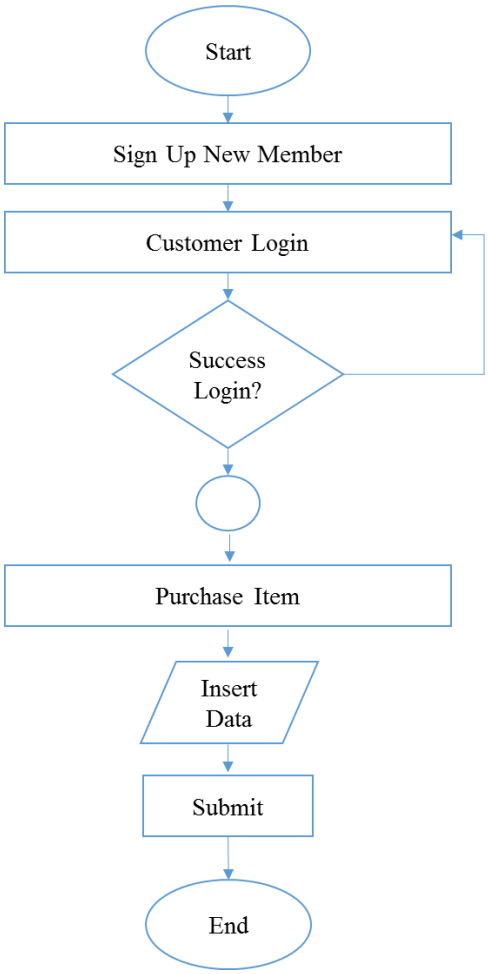


Figure 4.3: Flowchart of Customer Role

4.2.1.3 Dynamic View

Dynamic Modeling is used to represent the behavior of the static constituents of a software, here static constituents includes, classes, objects, their relationships and interfaces Dynamic Modeling also used to represent the interaction, workflow, and different states of the static constituents in a software. Interaction Diagram –The interaction diagrams are used to visualize the interactive behavior of the system. So to visualize the interactive behavior of the dynamic system there's a need to use: Work Breakdown Structure is a deliverable-oriented breakdown of a project into smaller components. Figure 4.4 is the Work Breakdown Structure for SASYA Boutique.

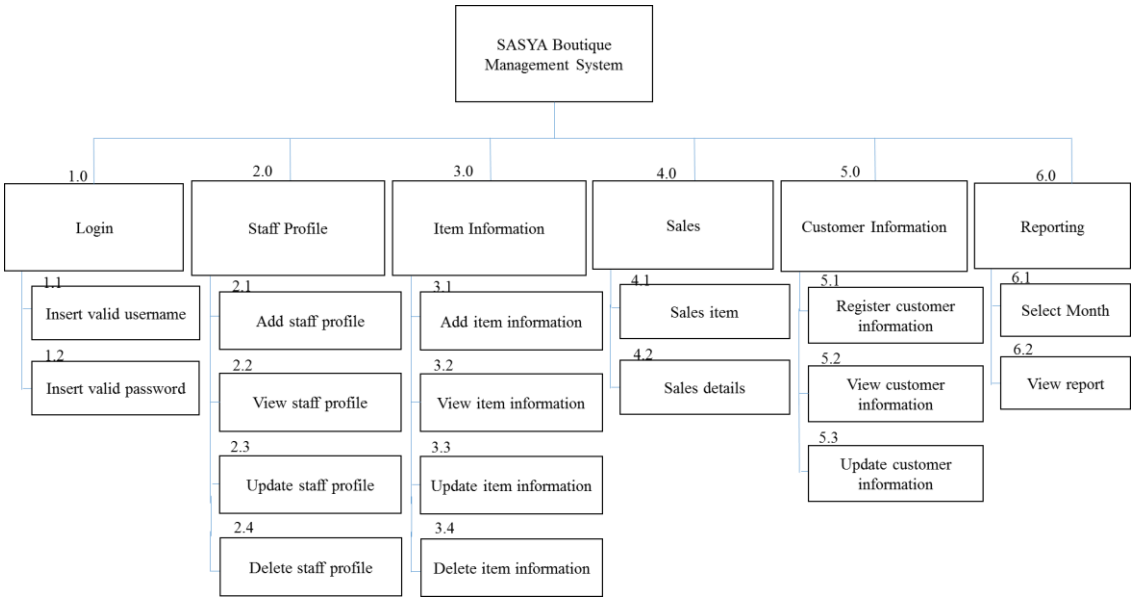


Figure 4.4: Work Breakdown Structure for SASYA Boutique

4.2.2 User Interface Design

This is a section that discuss about the interface design of the system that include the user interface design, navigation design, input and output design. Navigation design is for the developer to always keep on track with the activities. Input and output design is for developer to know what data will 'come' to the system and what will 'go' from the system. Database design is for developer to create the suitable database for the system.

4.2.2.1 Navigation Design

In navigational design flow of graphical user interface when user interacts with the system can be explains. Hence it shows that navigation design is important in every system that can be developed. The navigation design aims to help user understand the flow of the system, so the system navigation design should always direct and simple without any unnecessary function or interface. The navigation design defines and refines the navigation flow and type of navigation form that involves in the SASYA Boutique Management System are shown in Figure 4.5.

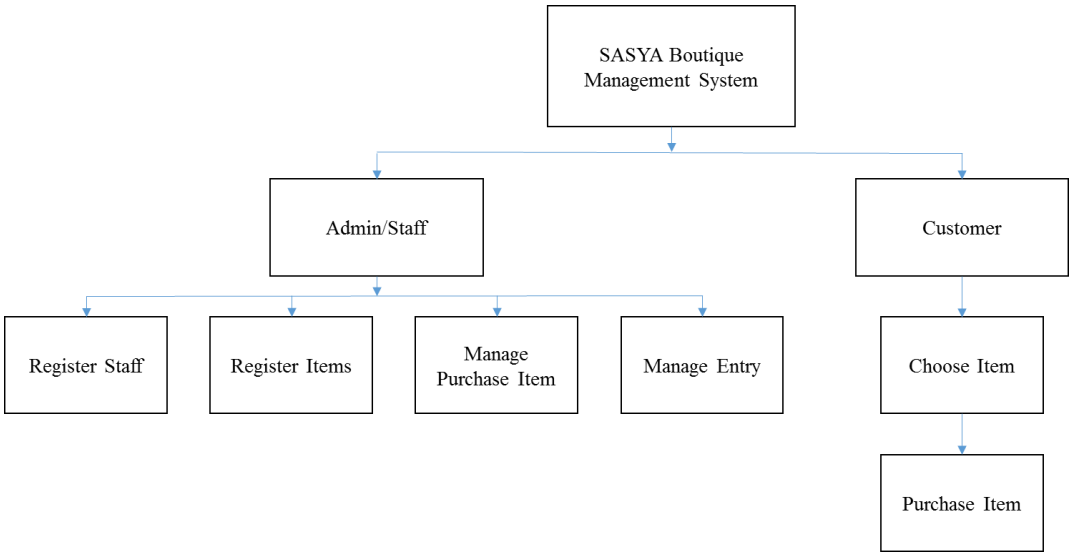


Figure 4.5: SASYA Boutique Management System Navigation Design

4.2.2.2 Input Design

Input design is the information produces by the user by the purpose of controlling the control diagram. The user can provide the input through the interface of the system. The input data may be test, numbers or other by Williams and Sawyers (2005). The interface can determine the kind of input that the program accept such as text type or control string with the mouse and keyboard clicks. The data are illustrated in Table 4.1 until Table 4.3.

Table 4.1: Input Design for Login

Attribute	Category	Hyperlink or Validation
Email	Text Field	Email type field
Password	Text Field	Password type field
Login	Button	Must click to login

Table 4.2: Input Design for Staff/Customer Registration

Attribute	Category	Hyperlink or Validation
Email	Text Field	Email type field
Password	Text Field	Password type field

Full Name	Text Field	Maximum 50 characters
Contact No	Text Field	Maximum 20 characters
Address	Text Field	Maximum 100 characters
Confirm	Button	Must click to register

Table 4.3: Input Design for Items

Attribute	Category	Hyperlink or Validation
Item Name	Text Field	Maximum 50 character
Item Category	Select Option	-
Item Size	Select Option	-
Original Price	Text Field	Float(10,6)
Retail Price	Text Field	Float(10,6)
Item Quantity	Number Field	Above 0
Item Photo	Upload file	png or jpg
Confirm	Button	Must click to add

4.2.2.3 Output Design

For this system output design is to define the types of outputs such as the list of the entry and map. Output is information gained by the system and the received by the admin. The user interface was defining the input acceptance and the output produces. Output is referring to the specifically for explicit output by something intentionally provided for user. The outputs are shown in Figure 4.6 until Figure 4.9.

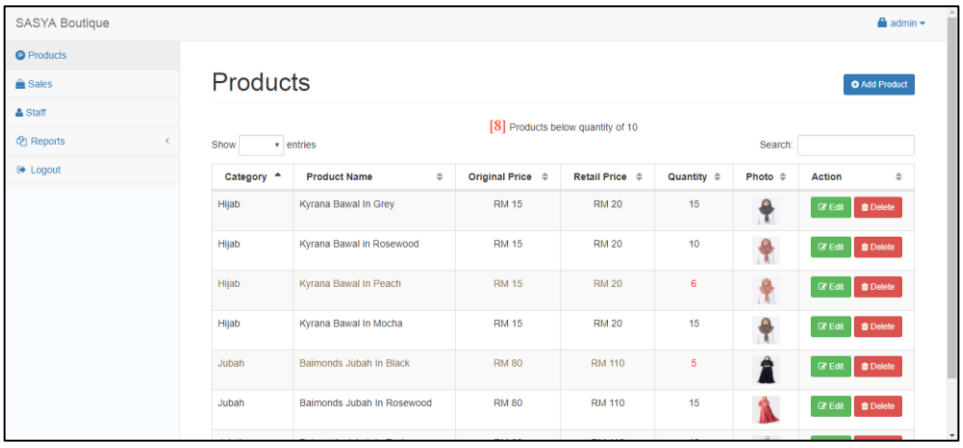


Figure 4.6: Output from product list

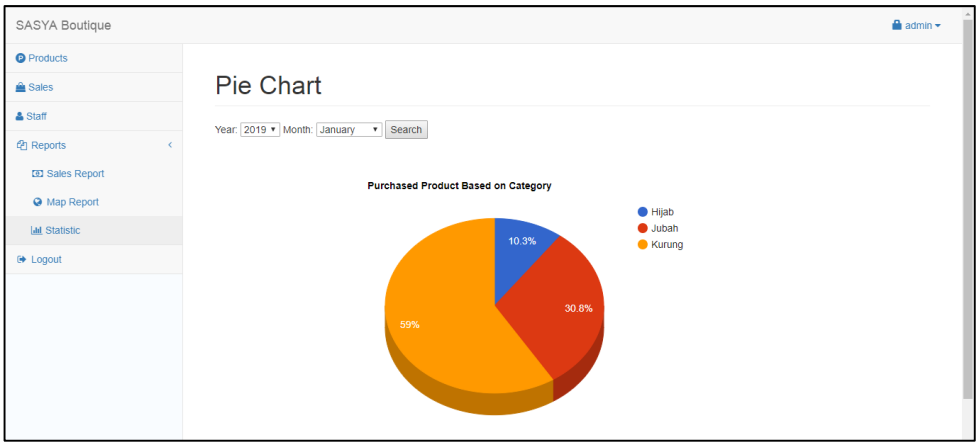


Figure 4.7: Output of product purchased

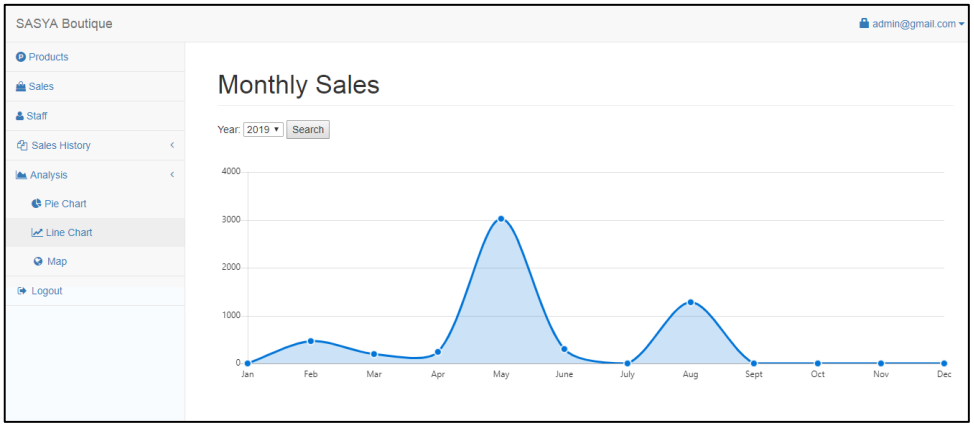


Figure 4.8: Output of monthly sales analysis

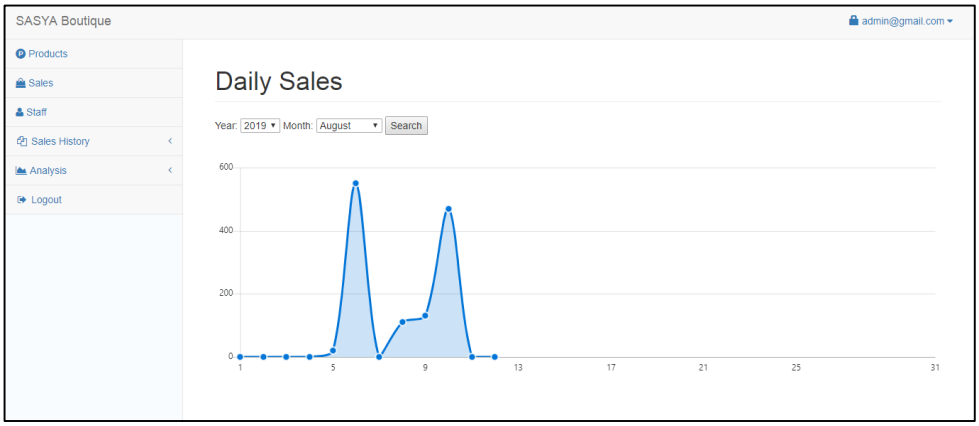


Figure 4.9: Output of daily sales analysis

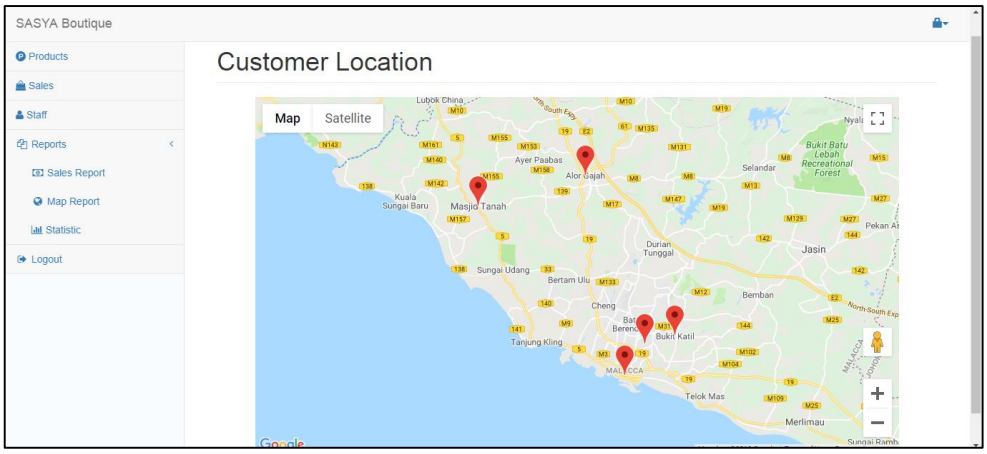


Figure 4.10: Output for customer location

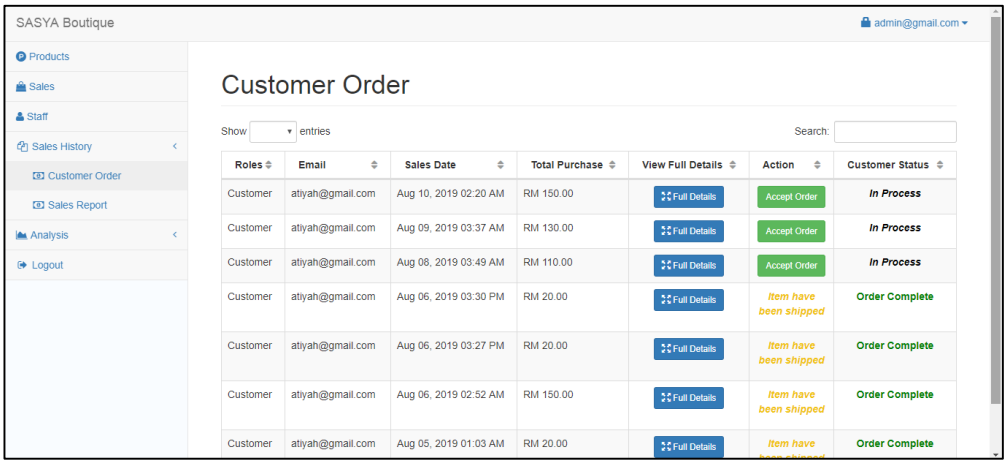


Figure 4.11: Output of customer order

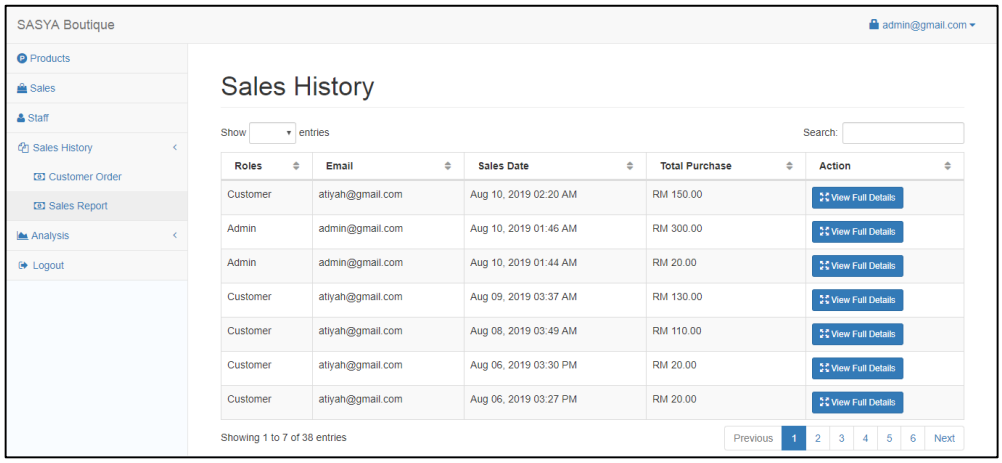


Figure 4.12: Output for sales report

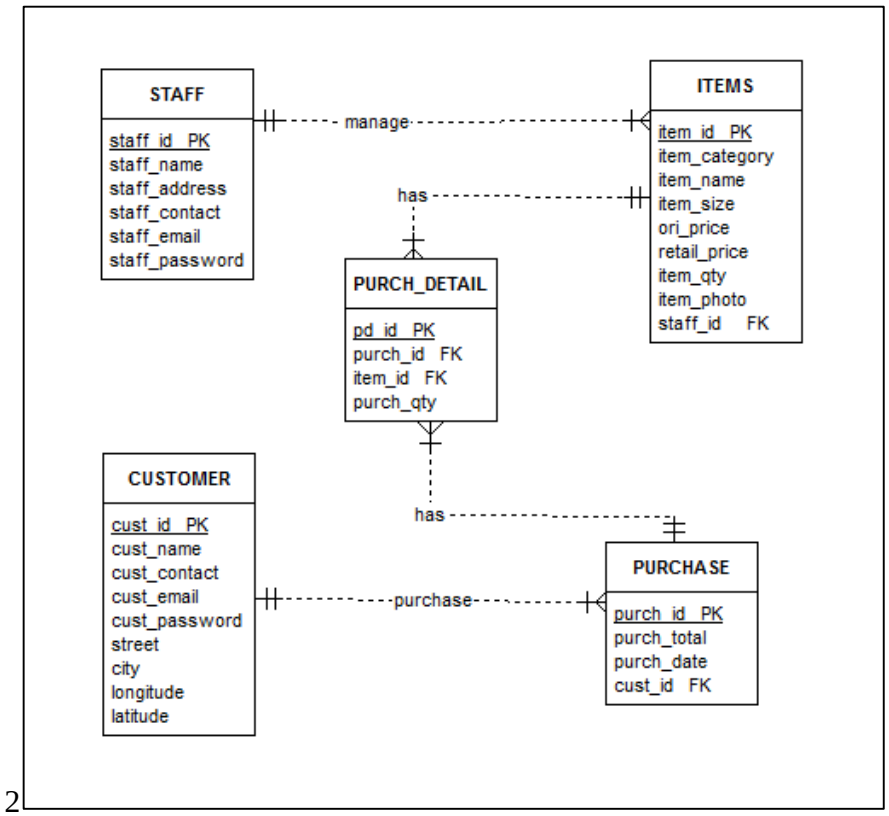
4.2.3 Database Design

Database design is used to show the data in the system and also the relationship between each other. A good design of database can improve the efficiency of the system. Besides, it also provided a data model that supports the operations that needs to be performed.

4.2.2.1 Conceptual and Logical Database Design

In this sub topic, the conceptual and logical database design will be discussed. The logical database design describes the functions required by the system. That is what to be done but not how it will be done. Logical design is not concern with the hardware and software requirement but rather with the process to be performed.

Term of the database design can be used to describe the difference part of the design in the overall database system. It can be thought design as the logical design of base data structure that used to save the data. However, the term database design also can be used for applying the overall process in designing. Figure 4.10 is the ERD of SASYA Boutique System.



2

Figure 4.13: ERD

4.2.4 Data Dictionary

Data dictionary of SASYA Boutique System are illustrated in Table 4.4 until Table 4.8.

Table 4.4: Table Staff

Field Name	Description	Type	Required	PK/FK	FK reference table
staff_id	Id for staff	Int	Yes	PK	-
staff_name	Name of the staff	Varchar	Yes	-	-
staff_contact	Contact number of staff	Varchar	Yes	-	-
staff_email	Email of staff	Varchar	Yes	-	-
staff_address	Address of staff	Varchar	Yes	-	-
staff_password	Staff login password	Varchar	Yes	-	-

Table 4.5: Table Items

Field Name	Description	Type	Required	PK/FK	FK reference table
item_id	Code for item	Int	Yes	PK	-
item_category	Category for item	Varchar	Yes	-	-
item_name	Name of the item	Varchar	Yes	-	-
item_size	Item category	Varchar	Yes	-	-

item_qty	Quantity stock of the item	Integer	Yes	-	-
ori_price	Price of the item	Float	Yes	-	-
retail_price	Retail price of the item	Float	Yes	-	-
staffid	Id for staff	Varchar	Yes	FK	Staff

Table 4.6: Table Purchase

Field Name	Description	Type	Required	PK/FK	FK reference table
purch_id	Id for purchasing item	Int	Yes	PK	-
purch_total	Total of purchase	Float	Yes	-	-
purch_date	Date of purchasing	Date	Yes	-	-
custid	Id for customer	Varchar	Yes	FK	Customer

Table 4.7: Table Purch_Details

Field Name	Description	Type	Required	PK/FK	FK reference table
pd_id	Id for purchase	Int	Yes	PK	-
purch_id	Purchase id	Int	Yes	FK	Purchase
item_id	Code for item	Int	Yes	FK	Items
purch_qty	Quantity of purchase item	Integer	Yes	-	-

Table 4.8: Table Customer

Field Name	Description	Type	Required	PK/FK	FK reference table
cust_id	Id for customer	Int	Yes	PK	-
cust_name	Name of customer	Varchar	Yes	-	-
cust_contact	Contact cumber of customer	Varchar	Yes	-	-
cust_email	Email of customer	Varchar	Yes	-	-
cust_password	Customer login password	Varchar	Yes	-	-
street	Street address	Varchar	Yes	-	-
City	City address	Varchar	Yes	-	-
Longitude	Longitude	Float	Yes	-	-
Latitude	Latitude	Float	Yes	-	-

4.3 Detailed Design

In detailed design, the specification may be further elaborate. The highlighting should be on the logic of the design and the approach to satisfy the requirement. Each module task of the system can be specified clearly in the detail design. The proposed algorithm can also be elaborate. At the end result is the complete design for SASYA Boutique Management System.

4.3.1 Software Design

4.3.1.1 Login

Program Name:

login_1001

Purpose:

To log in as a user and get a verification to access in the system.

Input/Output:

Input – need to enter an email and password to access the system.

Output – home page of the system.

Screen/report format:

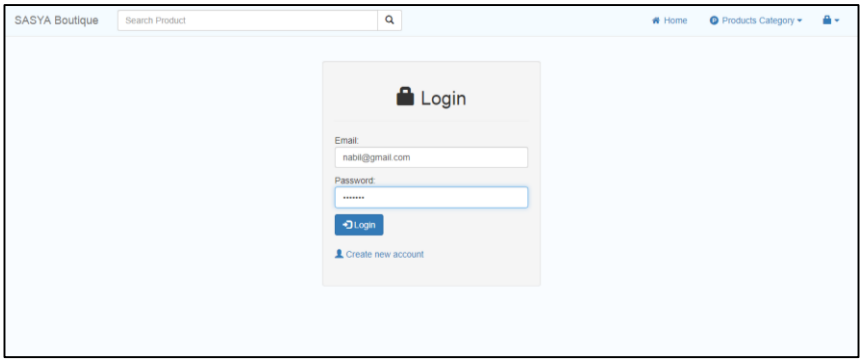


Figure 4.14: Login page

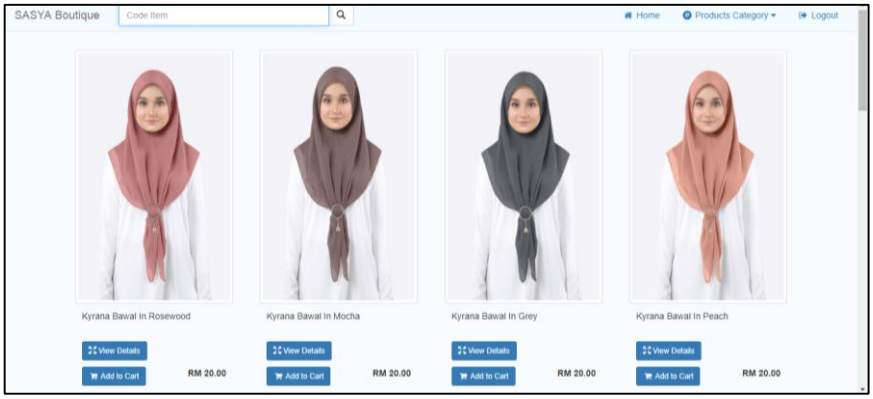


Figure 4.15: Home page

Logic/pseudo code:

Step 1: Enter the username.

Step 2: Enter password.

Step 3: Click the login button. The system will direct to the home page of the system.

4.3.1.2 Staff

Program Name:

staff_2001

Purpose:

To create a new staff to access in the system.

Input/Output:

Input – need to enter a staff detail such as staff name, phone number, address, email, username, and password to login the system.

Output – create a new staff page.

Screen/report format:

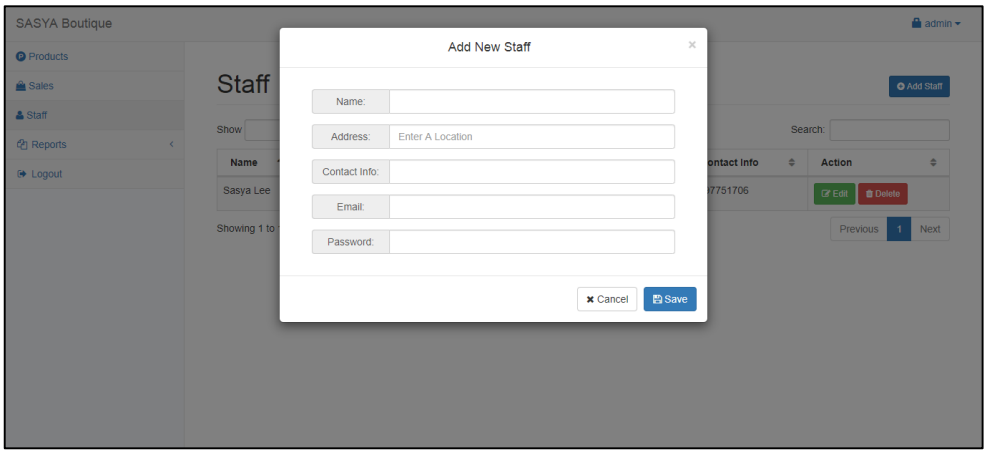


Figure 4.16: Add new staff page

Logic/pseudo code:

Step 1: Insert the staff profile.

Step 2: Insert username and password.

Step 3: When the main window is loaded, set cursor focus and click the Save button. The system will acknowledge whether the data is inserted or not.

When the CANCEL button is click:

The system will go directly to the list of staff.

Program Name:

staff_2002

Purpose:

To update staff details.

Input/Output:

Input – select staff that need to update and insert updated details.

Output – staff update page.

Screen/report format:

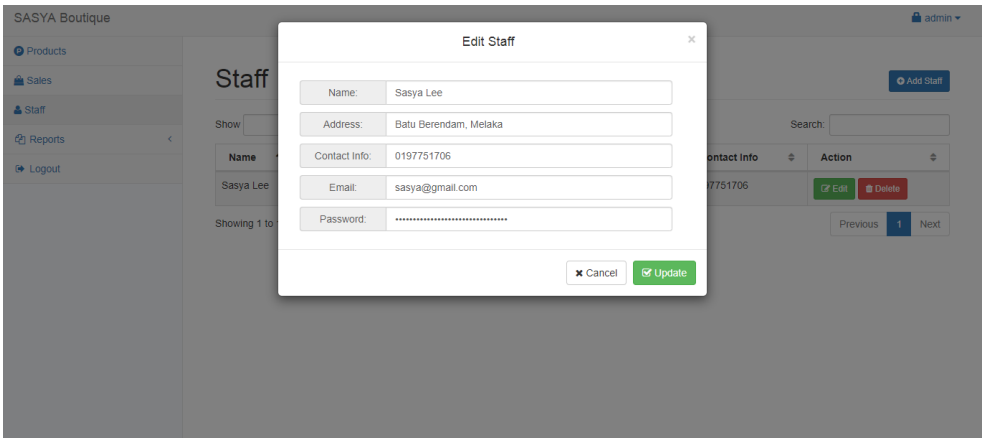


Figure 4.17: Update staff page

Logic/pseudo code:

Step 1: Select the staff that want to edit details.

Step 3: When the main window is loaded, set cursor focus and click the Edit button.

The system will direct to the staff update form.

When the CANCEL button is click:

1. The system will go directly to the list of staff.

WHEN the Edit button is click:

1. The system will go directly to the staff update form.

2. Insert the updated staff details and click UPDATE button.

The system will acknowledge whether the data is updated or not.

Program Name:

staff_2003

Purpose:

To delete staff inventory

Input/Output:

Input – select the staff that need to delete.

Output – staff delete page.

Screen/report format:

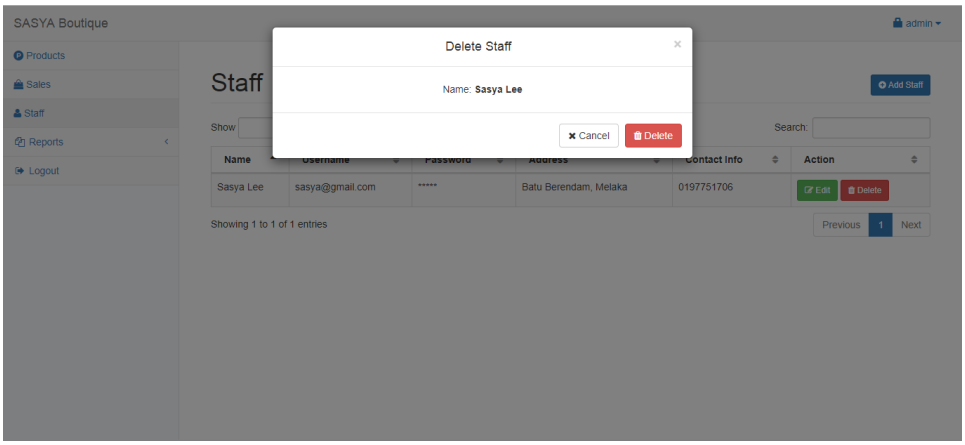


Figure 4.18: Delete staff page

Logic/pseudo code:

Step 1: Select the staff.

Step 3: When the main window is loaded, set cursor focus and click the Delete button. The system will pop up delete confirmation message.

When the CANCEL button is click:

1. The system will go directly to the list of staff.

WHEN the Delete button is click:

The system will acknowledge whether the data is deleted or not.

4.3.1.3 Items

Program Name:

item_3001

Purpose:

To insert the inventory of the item.

Input/Output:

Input: insert the item details such as code item, item name, quantity, price and retail price.

Output: item information page.

Screen/report format:

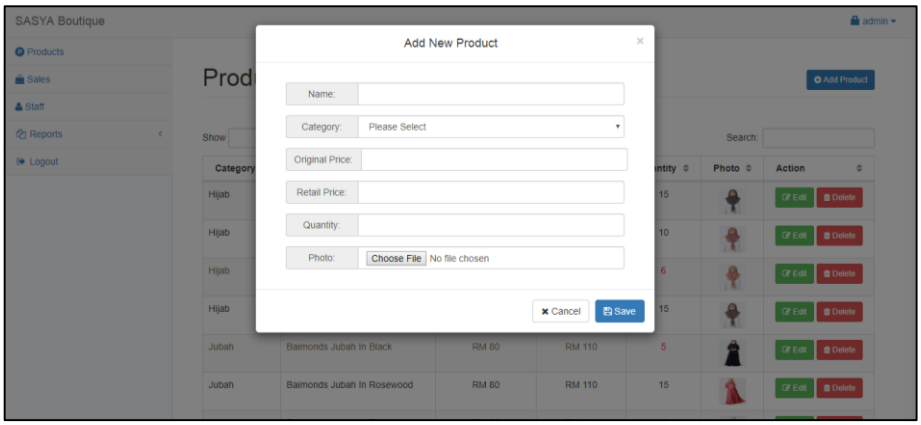


Figure 4.19: Add new item page

Logic/pseudo code:

Step 1: Insert the item details.

Step 2: When the main window is loaded, set cursor focus and click Insert button. The system will acknowledge whether data is inserted or not.

When the RESET button is click:

1. The item form will be cleared and need to fill in again.

Program Name:

item_3002

Purpose:

To update the item inventory.

Input/Output:

Input – select item that need to update and insert updated details.

Output – item update page.

Screen/report format:

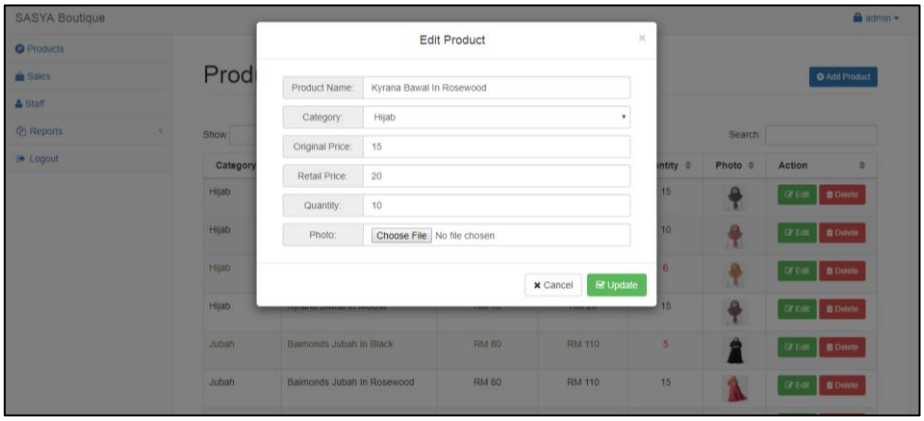


Figure 4.20: Update item page

Logic/pseudo code:

Step 1: Select the item that want to edit details.

Step 3: When the main window is loaded, set cursor focus and click the Edit button.

The system will direct to the item update form.

When the CANCEL button is click:

1. The system will go directly to the list of item.

WHEN the Edit button is click:

1. The system will go directly to the item update form.

2. Insert the updated item details and click UPDATE button.

The system will acknowledge whether the data is updated or not.

Program Name:

item_3003

Purpose:

To delete item inventory

Input/Output:

Input – select the item that need to delete.

Output – item delete page.

Screen/report format:

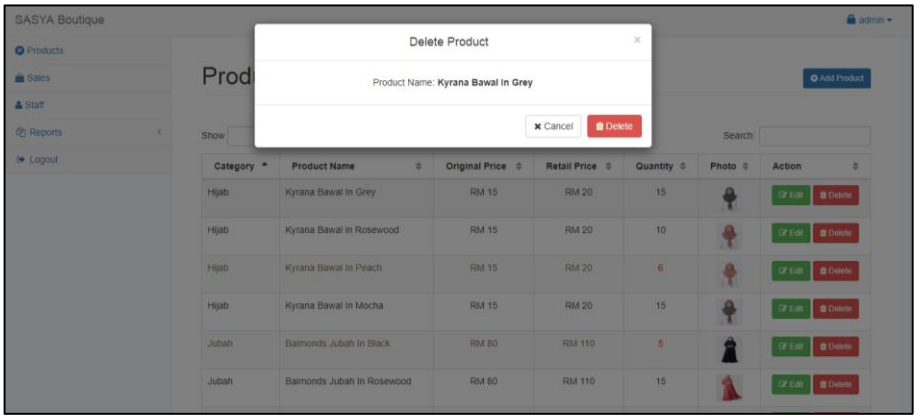


Figure 4.21: Delete item page

Logic/pseudo code:

Step 1: Choose the item that need to delete.

Step 3: When the main window is loaded, set cursor focus and click the Delete button. The system will pop up delete confirmation message.

When the CANCEL button is click:

1. The system will go directly to the list of item.

WHEN the Delete button is click:

The system will acknowledge whether the data is deleted or not.

4.3.1.4 Purchase

Program Name:

purch_4001

Purpose:

To make a purchasing.

Input/Output:

Input: choose the purchasing item.

Output: purchase item page.

Screen/report format:

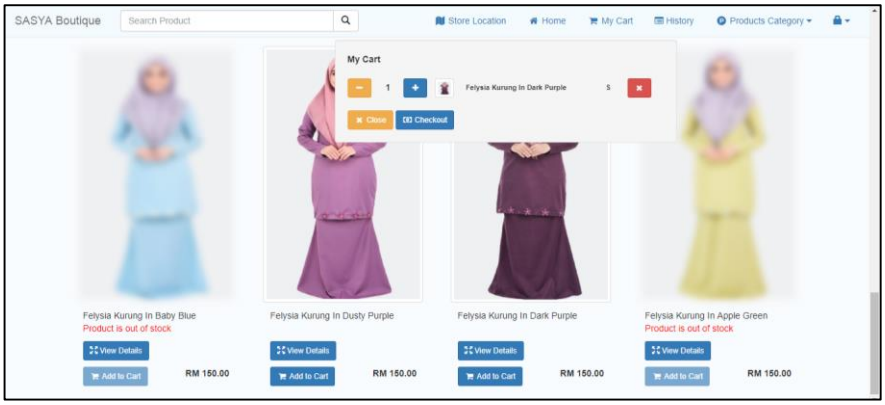


Figure 4.22: Purchase item page

Logic/pseudo code:

Step 1: Choose or scan barcode of the purchase item.

Step 2: Click Add to Cart button. The system will display preview of the selected item.

When the CART picture button is click:

1. The purchase item page display a preview of the selected item.
2. Choose the quantity needed for the purchase item.
3. Click the X button to cancel item.
4. Click the Checkout button to confirm purchase.

Program Name:

purch_4002

Purpose:

To confirm a purchase.

Input/Output:

Input: Click Payment to confirm purchase and print receipt.

Output: view purchasing item page.

Screen/report format:

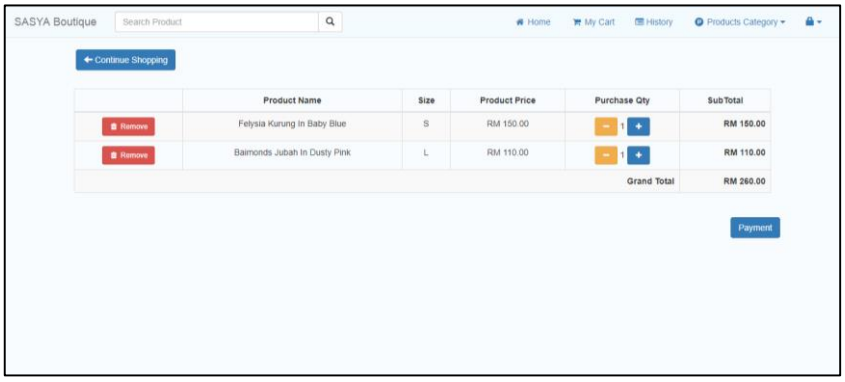


Figure 4.23: Checkout item page

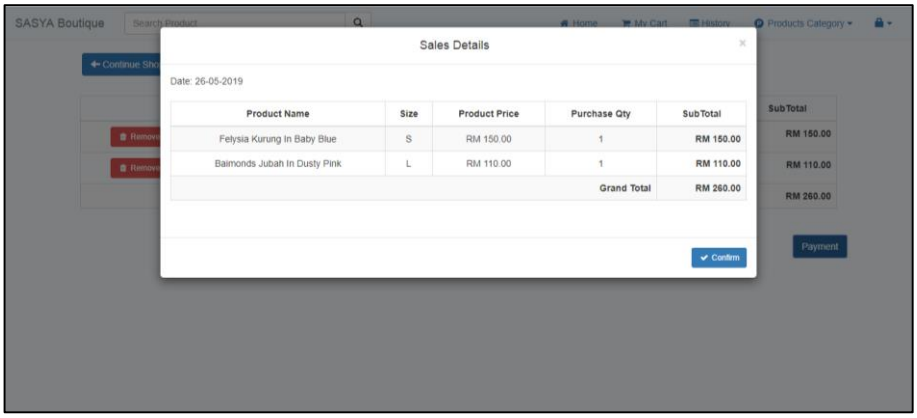


Figure 4.24: Print receipt page

Logic/pseudo code:

Step 1: Click the Payment to make payment and display receipt.

Step 2: Click the Confirm button to confirm payment and print receipt.

When the Continue Shopping button is click:

The system will go to the purchase item page.

4.3.1.5 Customer

Program Name:

cust_5001

Purpose:

To create a new user to access in the system.

Input/Output:

Input – need to enter a profile detail such as name, phone number, address, email, username, and password to login the system.

Output – direct to login page.

Screen/report format:

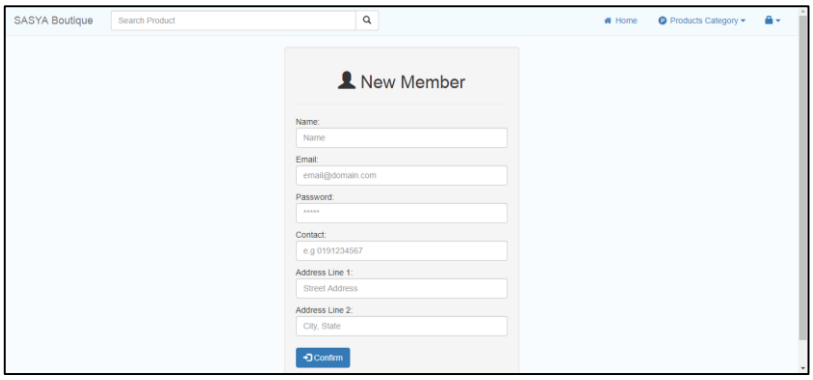


Figure 4.25: New member page

Logic/pseudo code:

Step 1: Insert profile details.

Step 2: Insert email and password.

Step 3: Click the INSERT button. The system will acknowledge whether the data is inserted or not.

Program Name:

cust_5002

Purpose:

To update user account and details.

Input/Output:

Input – need to update a profile detail such as name, phone number, address, email, and password.

Output – update profile details page.

Screen/report format:

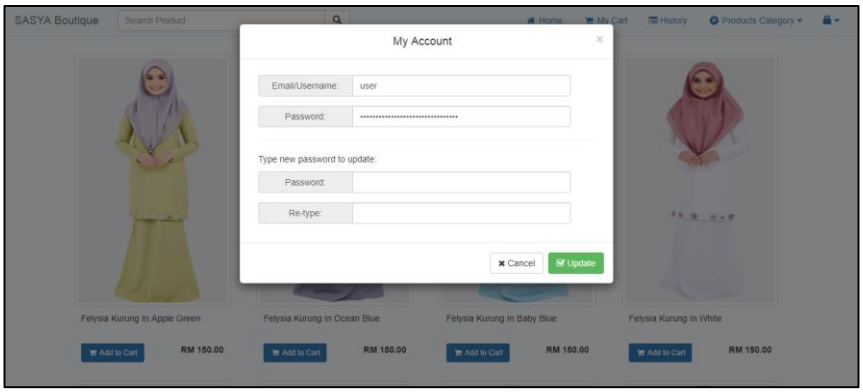


Figure 4.26: Update account details page

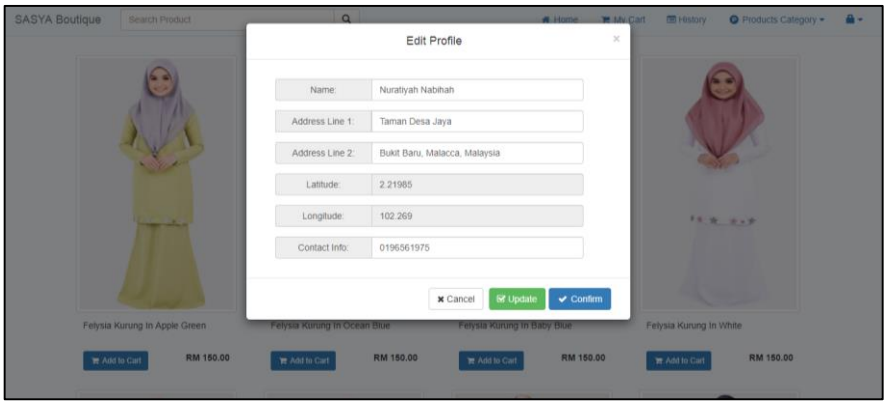


Figure 4.27: Update profile details page

Logic/pseudo code:

Step 1: Click my account and my profile.

Step 2: Update details.

Step 3: Click the UPDATE button. The system will acknowledge whether the data is updated or not.

4.3.2 Physical Database Design

In physical database design, the data model that gathered and defined during the logical design phase are transformed into physical data structure. The schemas of data are translated into actual database structures. The entities turned into tables, attributes to columns and primary unique identifiers changed to the primary. Thus, the data definition language is used as it is the standard command to transform the database from logical to physical design. Common DDL statements are CREATE, ALTER, and DROP. Below are the DDL command that written in the application to create the MySQL based database.

Create Table: STAFF

```
CREATE TABLE IF NOT EXIST `staff` (
        `staff_id` int(11) NOT NULL,
        `staff_name` varchar(50) NOT NULL,
        `staff_address` varchar(100) NOT NULL,
        `staff_contact` varchar(20) NOT NULL,
        `staff_email` varchar(50) NOT NULL,
        `staff_password` varchar(50) NOT NULL,
        PRIMARY KEY (‘staff_id’)
)
```

Create Table: CUSTOMER

```
CREATE TABLE IF NOT EXIST `customer` (
        `cust_id` int(11) NOT NULL,
        `cust_name` varchar(50) NOT NULL,
        `cust_contact` varchar(20) NOT NULL,
        `cust_email` varchar(50) NOT NULL,
        `cust_password` varchar(50) NOT NULL,
        `street` varchar(150) NOT NULL,
        `city` varchar(150) NOT NULL,
        `longitude` float NOT NULL,
        `latitude` float NOT NULL,
        PRIMARY KEY (‘cust_id’)
)
```

Create Table: ITEMS

```
CREATE TABLE IF NOT EXIST `items` (
        `item_id` int(11) NOT NULL,
        `item_category` varchar(20) NOT NULL,
        `item_name` varchar(150) NOT NULL,
        `item_size` varchar(10) NOT NULL,
         `ori_price` double NOT NULL,
         `retail_price` double NOT NULL,
         `item_qty` int NOT NULL,
         `item_photo` varchar(200) NOT NULL,
         PRIMARY KEY (‘item_id’),
         FOREIGN KEY (‘staff_id’) REFERENCES staff(staff_id)
)
```

Create Table: PURCHASE

```
CREATE TABLE IF NOT EXIST `purchase` (
        `purch_id` int(11) NOT NULL,
        `purch_total` float NOT NULL,
        `purch_date` date NOT NULL,
         PRIMARY KEY (‘purch_id’),
         FOREIGN KEY (‘cust_id’) REFERENCES customer(cust_id)
)
```

Create Table: PURCH_DETAIL

```
CREATE TABLE IF NOT EXIST `purchase` (
        `pd_id` int(11) NOT NULL,
        `purch_qty` int(11) NOT NULL,
         PRIMARY KEY (‘pd_id’),
         FOREIGN KEY (‘purch_id’) REFERENCES purchase(purch_id),
         FOREIGN KEY (‘item_id’) REFERENCES items(item_id)
)
```

4.4 Conclusion

Design is the one of the most importance stages in the developing the project. Design is needed to avoid major problem while doing implementation and included of user interface, which comprises of navigation, input and output design and system architecture. It gives a picture of real output for the final design. Design of the project is a continuous stage from the previous analysis. The next chapter will explain about the implementation of SASYA Boutique Management System

CHAPTER 5: IMPLEMENTATION

5.1 Introduction

The system development is based on the requirements and architectural design. Implementation chapter will describe the way that to do the implementation activity, these activities consist of Software development environment setup, software configuration management and implementation status.

SASYA Boutique Management System architecture is illustrated using the deployment diagram. There have been much activities stated in the development phase that addresses the thing that make up the system but this Implementation phase also put on place of the software, hardware and other important elements of this system. Several configurations are described here to develop the system.

5.2 Software Development Environment Setup

Software development environment setup is part from implementation used to assembling system application and makes sure the system can work effectively. The programming language has been selected to create SASYA Boutique Management System is PHP, HTML, CSS, and JavaScript. XAMPP has been used as the web server and MySQL as the database. The environment setup involves the software setup. There is setup and development tools in Notepad++ and phpMyAdmin. This software need to be install before setup the database.

SASYA Boutique Management System is an application that implements web based technology and the three-tier architecture has been chosen. The figure 5.1 below

is mentioned the three-tier architecture included presentation layer, logic layer and data tier.

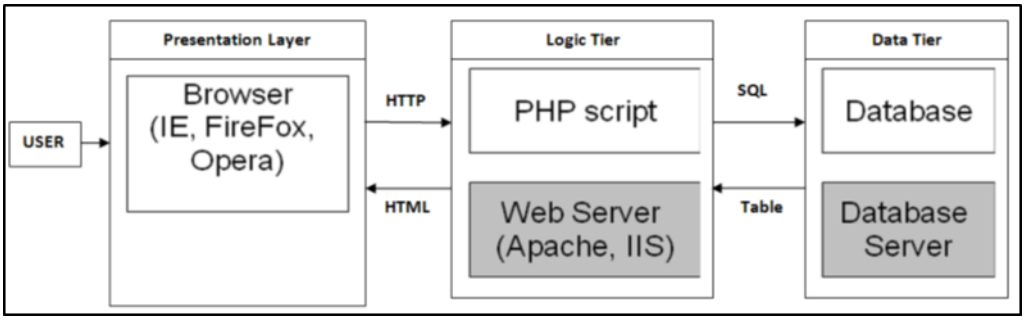


Figure 5.1: Three-tier Architecture

5.3 Configuration Environment Setup

The implementation phase related software configuration management, which are database setup, requires configuring properly. The XAMPP Server required to creating the server, MySQL database has been used to create and store data. Other than that, for the implementation web design, it used PHP language and using Notepad++ to help code the system. The steps configuration of each software development will explain at the configuration setup.

5.3.1 Software Configuration Management

5.3.1.1 Setup for XAMPP

i. Set up PHP for Windows

1. Go to the other website that provide installer package XAMPP and download the installer and install in Windows. Choose the Basic package installer.

2. Need to close all application on computer, and double-click the installer package downloaded.

3. Accept the default installation and click “Next”. The Dialog box will open as shown in Figure 5.2.

4. Click install after made a choice. The installation process takes a few minutes.

5. At the end of the installation process, click “Yes” to start the XAMPP control panel.

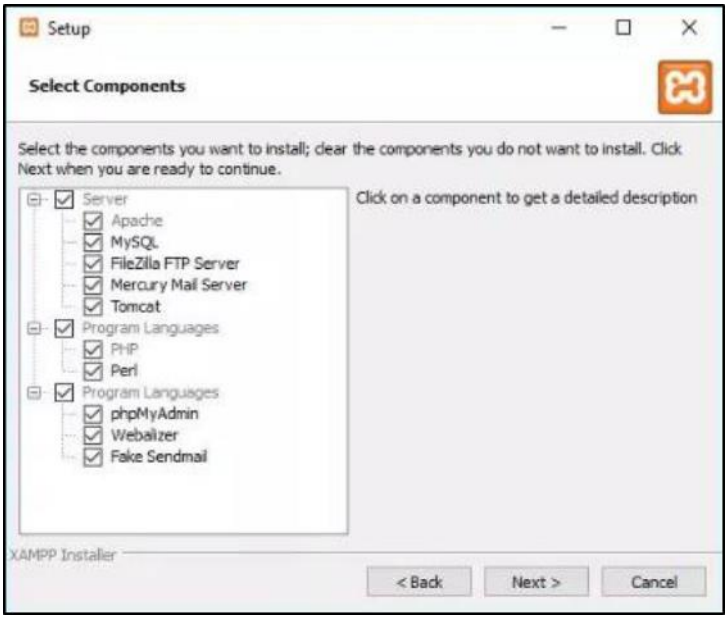


Figure 5.2: Dialog Box for XAMPP

ii. Start the server

To start the Apache and MySQL servers, click at the Start button alongside Apache and MySQL in the XAMPP control panel. MySQL usually starts quickly, but it might take a little longer (less than a minute) for Apache to start. Confirmation that they have started successfully is displayed alongside, and the label on the Start button changes to Stop, as shown in Figure 5.3.

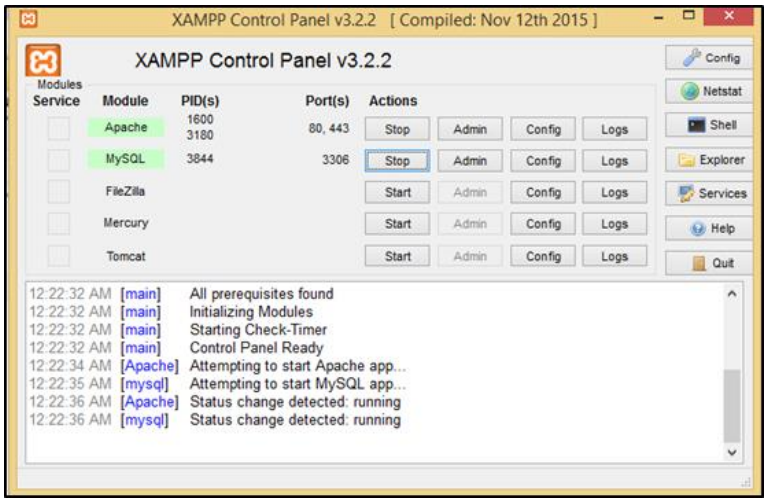


Figure 5.3: XAMPP Control Panel

5.3.1.2 Configuration Setup for SASYA Boutique

i Set up PHP for Brackets for Windows.

a. Go to the official website that provide installer package Notepad++. Choose the link to download the setup for Windows. Right click on the download and select "Install". Or, just double click on it.

b. Find Notepad+ installer npp.6.3.3.Installer.exe. Double-click on it, or right click and select open.

c. Verify the default installation location and click Next. Then, Click Install. Finally, verify installation has completed. Click Finish.

d. Select English as the language and click OK. Click Next on the Welcome Page. Then, click "I Agree" on license agreement.

e. Verify the destination and click Next. Verify components (just use defaults under custom). There is no need to change anything. Click Next.

f. Check the box to add a shortcut to your desktop. Otherwise do not change anything. Click Install. Verify Notepad++ is installing.

g. Click Finish when Notepad completes installation. Notepad++ should open. There is no need to update unless you want to.

h. Notepad++ should now have been installed in computer. Launch the Notepad++ and can start the coding on the Notepad++ text interface as shown in Figure 5.4.

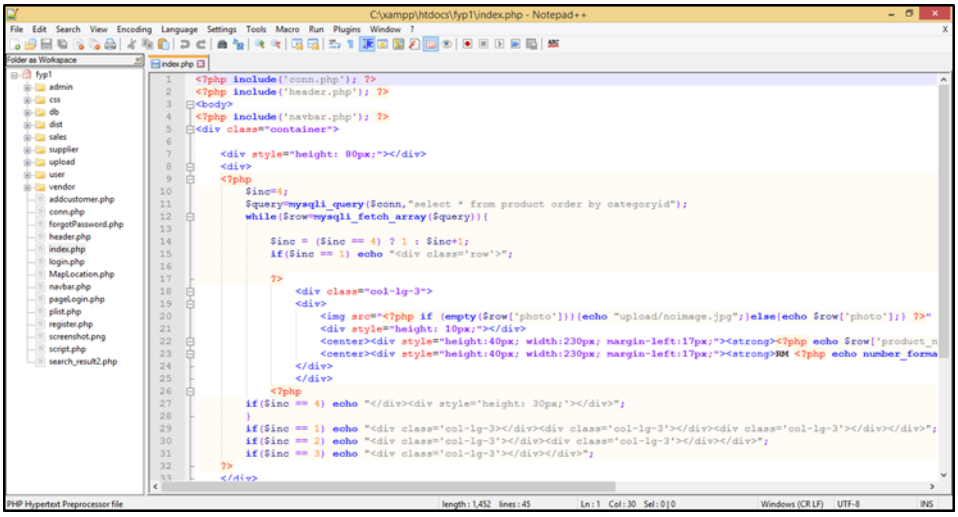


Figure 5.4: Interface for Notepad++

5.3.2 Version Control Procedure

A version control procedure is to ensure every enhancement that has been made to the system is recorded. Table 5.1 show the version of SASYA Boutique Management System.

Table 5.1: Version Control Procedure

Version	Description
SBS V1.0	This version only consist of interfaces without working function.
SBS V1.1	This version has started to include functions in modules stage by stage.

SBS V1.2	This version is for unit testing. The function in each module are tested and error being corrected.
SBS V1.3	This is for system testing. The SBS V1.2 is corrected with better specifications. The whole system is being tested.
SBS V1.4	The full version of system is complete.

5.4 Implementation Status

Implementation is the status is the milestone for the whole project. It is used to see the status and also the progress of the project in a specific time. Table 5.2 below are the modules for the project:

Table 5.2: Implementation Status

Module Name	Description	Status	Duration
Login Module	Login for the admin and staff of the system.	100% Complete	1 Week
Staff Profile Module	Admin add new staff into the system.	100% Complete	1 Week
Item Information Module	Admin and staff add new item data into the system.	100% Complete	2 Weeks
Sales Module	The item data has been added and will be display to make a purchasing.	100% Complete	3 Weeks
Customer Information Module	Customer register information to the system.	100% Complete	1 Week
Reporting Module	Admin can view the sales report and statistic.	100% Complete	2 Weeks

5.5 Conclusion

This chapter explains the entire required setup environment to show the deployment of the system during the implementation process. The software required and environment setup has been shown in this chapter along with the installation steps.

In software development environment setup, the step to install all required software has been shown. Database configuration is also mentioned in order to setup MySQL database in phpMyAdmin. The version control procedure also shows the latest version of the system and the details of backup management process. At the end, the system can be ready for testing. Testing and integration of the system can be carried out later to make improvement.

In the next chapter, it can be the system testing phase which test plan, test strategy, test design and test result can be discussed.

CHAPTER 6: TESTING

6.1 Introduction

This chapter is about the testing of SASYA Boutique Management System. Testing phase is the last phase in the system development. This phase is important to ensure the system functionally and to ensure that the SASYA Boutique meets the specification. This chapter will focus on the test cases and the testing result.

Basically testing process will start from the small component to large component. The early stage of testing, developer only focused on single component called unit. Then the integration test will conduct by integration two or more units into a module. Finally, the complete test will be done to detect any errors before delivering the system to end user.

6.2 Test Plan

A test plan is a document describing the scope, approach, resources and schedule of intended test activities. It is crucial in this portion and should be carefully planned by studying the system's features and characteristics. Test plan is used to define appropriate test instances that best represent the system's stability and reliability. Besides, the test plan comprises of the test organization, test environment and test schedule.

6.2.1 Test Organization

The developer of the system can be the tester and observer each of the testing along with chosen critical thinking students. This outcome of the test can evaluate and analyzed by developer. The observer ensures that the tester or developer carries the testing procedures according have been planned and get the satisfaction of the outcomes. Table 6.1 shows the test organization of the system.

Table 6.1: Test Organization

Tester ID	Type of Test	Tester
Tester01	System Developer - Unit Testing - Integration Testing - System Testing - User Acceptance Testing	Nurzakiyah Emalda Binti Abdul Jamal
Tester02	Programmer - Unit Testing - Integration Testing - System Testing	Nur Afiqah Binti Radzali
Tester03	User - System Testing - User Acceptance Testing	Nor Anisa Binti Kamal

6.2.2 Test Environment

In the test environment consist of the location and the environment of the testing task in term of software and hardware that prepared regarding to the test. For the testing purpose, the suitable environment is created for the SASYA Boutique system component. The development environment is located in one logical partition unit of the operating system Windows 8. Table 6.2 shows the test environment.

Table 6.2: Test Environment

System Configuration	Requirement
Operating System	Windows 8
Database	MySQL
Web Server	Apache
Software	• Notepad++ • phpMyAdmin • XAMPP v3.2.2 • Web Browser (Chrome)
Hardware	• Laptop • Barcode Scanner
Database Directory	C:\xampp\htdocs\SasyaBoutiqueMelaka

6.2.3 Test Schedule

A The developer's computer can do testing activities. The system can process under all basic testing necessary and the time taken distribution for each activity are identified in Table 6.3:

Table 6.3: Test Schedule

Module	Test Cycle	Duration	Start Date	End Date
Test the login of admin, staff, and customer into the system.	3	1 days	29th July 2019	29th July 2019
Test the staff details profile, and update the details.	4	1 days	30th July 2019	30th July 2019
Test the item inventory management and update inventory.	5	1 days	31st July 2019	31st July 2019
Test the purchase item process of the system for staff, admin, and customer.	10	2 days	1st August 2019	2nd August 2019
Test the customer details information and update account.	4	1 days	3rd August 2019	3rd August 2019
Test the report analysis of the system.	3	1 days	4th August 2019	4th August 2019

6.3 Test Strategy

The chosen approach made by this testing phases black-box testing. The testing technique will be use to design the test cases to verify and validate the system correctness.

Black-box testing is a testing technique that will verify and validate the specification of the system and requirement of the system. This testing technique are highly focus on input and output the system. Black-box testing can be classified into

two different approach which is positive testing and negative testing. For positive testing, tester will use test data as input and expecting the system will produce a good result and still followed the system specification. Under other condition, negative testing involve with invalid input or unexpected action on input of the system.

White-box testing is test cases are derived from the program structure. There are many techniques available in this testing because the problem or intractability is eased by specific attention and knowledge on the structure of the system under test.

6.3.1 Classes of Test

Class of test use to in this phase are focus more on white-box testing which is ensuring the software are documented and coded following standard. It also improves system capability to be able to maintain in the future and allow development update run smoothly.

I. Unit Testing

Unit testing is testing performed to verified source code. Source code will be tested for validation and verification purpose, functionality requirement implementation, performance satisfaction and exceptional handling situation. One of the most part in the unit testing is code inspection. Code inspection will check either code implementation able to solve the problem or not. This process also checks mismatch of implementation and incorrect use of logical, relational operator, or arithmetic.

II. Integration Testing

Integration is part of combining the part of the system into one complete system. This integration must be test to check there are no system defect during execution. The test involved with top – level that corresponds to the full system and invocation of system part module.

III. System Testing

After integration of the full system are complete, system testing will be carried out to test full system. The purpose of this testing are to ensure the system able to perform same as specified requirement.

IV. Acceptance Testing

The acceptance testing involved external person to test the system operationally. It also checks system capability to run on real environment. Subset of test case use during system testing can be use in acceptance testing.

6.4 Test Design

Test design is creating a set of inputs for given software that will provide a set of expected outputs. The idea is to ensure that the system is working good enough and it can be released with as few problems as possible for the average user.

6.4.1 Test Description for SASYA Boutique System

All the test case available in the system has been identified and documented in form type. Tester can do the testing based on the script given and the report can be record in a document.

6.4.1.1 Test Design Unit Testing

Test design unit testing for SASYA Boutique Management System are illustrated in Table 6.5 and Table 6.6.

Table 6.5: Test Design Password Pattern Unit Testing

Project Name:	SASYA Boutique Management System
Module Name:	Password Pattern
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali

Test Case ID	Test Case	Test Steps	Test Data	Expected Result
PASS_01	Open database server and open password attribute at database to ensure information is encrypt or not.	1. Enter password.	NA	Data that inserted into password attribute at database is all encrypted
PASS_02	Validate password field is hidden for user see when it input the data	1. Enter username. 2. Enter password. 3. Click "Login" button.	**Password:** admin@01	The system will show the password field with star pattern.
PASS_03	Validate retype matched new password.	1. Fill in new password. 2. Retype new password.	**New Password:** admin@02 **Re-type:** admin@02	The system will display a message "Account updated successfully!".

PASS_04	Validate retype unmatched new password.	1. Fill in new password. 2. Retype new password.	**New Password:** admin@02 **Re-type:** admin@01	The system will display a message "Required passwords did not match. Account not updated!

Table 6.6: Test Design Email Pattern Unit Testing

Project Name:	SASYA Boutique Management System
Module Name:	Email Pattern
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali

Test Case ID	Test Case	Test Steps	Test Data	Expected Result
EMAIL_01	Validate valid email pattern	1. Enter email.	**Email:** aida@yahoo.com	The system will display a message data added successfully.
EMAIL_02	Validate invalid email pattern.	1. Enter email.	**Email:** aidayahoo.com	The system will display a message "Please include an "@" in the email address. "a" is missing an "@""
EMAIL_03	Validate invalid email pattern.	1. Enter email.	**Email:** aida@yahoo	The system will display a message "Please enter a part following "@". "a@" is incomplete".

6.4.1.2 Test Design Integration Testing

Test design integration testing for SASYA Boutique Management System are illustrated in Table 6.7 and Table 6.8.

Table 6.7: Test Design Login Integration Testing

Project Name:	SASYA Boutique Management System
Module Name:	User Login
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali

Test Case ID	Test Case	Test Steps	Test Data	Expected Result
LOG_01	Enter valid email and valid password.	1. Enter email. 2. Enter password. 3. Click "Login" button.	**Username:** admin@gmail.com **Password:** admin@01	The system will display a message "Login Success, Welcome Admin".
LOG_02	Enter valid username and invalid password.	1. Enter username. 2. Enter password. 3. Click "Login" button.	**Username:** admin@gmail.com **Password:** admi@01	The system will display a message "Login Failed, Invalid Input!".
LOG_03	Enter invalid username	1. Enter username. 2. Enter password.	**Username:** admin@gmail.com **Password:** admi@01	The system will display a message "Login Failed, Invalid Input!".

	and valid password.	3. Click "Login" button.		
LOG_04	Enter invalid username and invalid password.	1. Enter username. 2. Enter password. 3. Click "Login" button.	**Username:** admin@gmail.com **Password:** admi@01	The system will display a message "Login Failed, Invalid Input!".

Table 6.8: Test Design User Registration Integration Testing

Project Name:	SASYA Boutique Management System
Module Name:	User Registration
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali

Test Case ID	**Test Case**	**Test Steps**	**Test Data**	**Expected Result**
REG_01	Leave empty to all registration form field.	1. Click "Save" button.	Null	The system will display a message data added successfully.
REG_02	Fill in all text field with invalid	1. Enter user details field. 2. Enter email.	**Email:** aidayahoo.com/ aida@yahoo/ aida/	The system will display a message "Please include an "@" in the email

	email pattern.			address. “a” is missing an “@””
REG_03	Fill in all text field.	1. Enter user details field.	**Staff name:** Aida Azilah **Address:** Jasin **Contact Info:** 0192345678 **Email:** aida@yahoo.com **Password:** aida@01	The system will display a message data is inserted successfully.

6.4.1.3 Test Design System Testing

Test design system testing for SASYA Boutique Management System are illustrated in Table 6.9 and Table 6.14.

Table 6.9: Test Design Login System Testing

Project Name:	SASYA Boutique Management System
Module Name:	Login
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali & Nor Anisa Binti Kamal

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result
LOGIN_01	Verify the login	Enter valid email and	1. Enter email. 2. Enter password.	**Username:** admin@gmail.com	The system will display a message

	of the system.	valid password.	3. Click "Login" button.	**Password:** admin@01	"Login Success, Welcome Admin".
LOGIN_02	Verify the login of the system.	Enter valid username and invalid password.	1. Enter username. 2. Enter password. 3. Click "Login" button.	**Username:** admin@gmail.com **Password:** admi@01	The system will display a message "Login Failed, Invalid Input!".
LOGIN_03	Verify the login of the system.	Enter invalid username and valid password.	1. Enter username. 2. Enter password. 3. Click "Login" button.	**Username:** admin@gmail.com **Password:** admi@01	The system will display a message "Login Failed, Invalid Input!".
LOGIN_04	Verify the login of the system.	Enter invalid username and invalid password.	1. Enter username. 2. Enter password. 3. Click "Login" button.	**Username:** admin@gmail.com **Password:** admi@01	The system will display a message "Login Failed, Invalid Input!".

Table 6.10: Test Design Staff System Testing

Project Name:	SASYA Boutique Management System
Module Name:	Staff
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali & Nor Anisa Binti Kamal

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result
STAFF _01	Insert New Staff	Fill in all staff details field.	1. Enter staff name, address, contact info, email, and password. 2. Click "Save" button.	**Staff name:** Aida Azilah **Address:** Jasin **Contact Info:** 0192345678 **Email:** aida@yahoo.com **Password:** aida@01	The system will display a message "Staff added successfully".
STAFF _02	Insert New Staff	Did not fill in some staff details field.	1. Enter staff name, address, contact info, email, and password. 2. Click "Save" button.	**Staff name:** Aida Azilah **Address:** - **Contact Info:** 0192345678 **Email:** aida@yahoo.com **Password:** aida@01	The system will display a message "Please fill out this field".
STAFF _03	List of Staff (Update	Edit staff details	1. Click "Edit" button.	NA	The system will show edit staff details form.

	staff details)				
STAFF _04	List of Staff (Update staff details)	Edit staff details	1. Edit staff details field. 2. Click "Update" button.	**Staff name:** Aida Azilah Adnan **Address:** Jasin **Contact Info:** 0192345678 **Email:** aida@yahoo.com **Password:** aida@01	The system will display a message "Staff updated successfully!".
STAFF _05	List of Staff (Delete staff)	Delete staff from list.	1. Click "Delete" button.	NA	The system will pop up a delete confirmation message.

Table 6.11: Test Design Item System Testing

Project Name:	SASYA Boutique Management System
Module Name:	Item
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali & Nor Anisa Binti Kamal

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result
ITEM _01	Insert New Item	Fill in all item details field.	1. Enter item name, category, original price, retail price, quantity, and description. 2. Choose file from folder for photo field. 3. Click "Save" button.	**Item Name:** Kyrana Bawal in Red **Category:** Hijab **Original Price:** RM 15 **Retail Price:** RM 20 **Quantity:** 15 **Description:** Comfortable cotton voile square scarf with diamonds and eyelash hemming detailing. **Photo:** Kyrana Bawal Red.png	The system will display a message "Product added successfully".
ITEM _02	Insert New Item	Did not fill in some	1. Enter item name, category,	**Item Name:** Kyrana Bawal in Red	The system will display a message

		item details field.	original price, retail price, quantity, and description. 2. Choose file from folder for photo field. 3. Click "Save" button.	**Category:** Hijab **Original Price:** RM 15 **Retail Price:** RM 20 **Quantity:** 15 **Description:** - **Photo:** Kyrana Bawal Red.png	"Please fill out this field".
ITEM _03	Insert New Item	Choose invalid file format	1. Enter item name, category, original price, retail price, quantity, and description. 2. Choose file from folder for photo field. 3. Click "Save" button.	**Item Name:** Kyrana Bawal in Red **Category:** Hijab **Original Price:** RM 15 **Retail Price:** RM 20 **Quantity:** 15 **Description:** Comfortable cotton voile square scarf with diamonds and eyelash hemming detailing. **Photo:** Kyrana Bawal Red.svg	The system will display a message "Photo not added. Please upload JPG or PNG photo only!".
ITEM _04	List of Item (Update item details)	Edit item details	1. Click "Edit" button.	NA	The system will show edit item details form.

ITEM _05	List of Item (Update item details)	Edit item details	1. Edit item details field. 2. Click "Update" button.	**Item Name:** Kyrana Bawal in Red **Category:** Hijab **Original Price:** RM 15 **Retail Price:** RM 20 **Quantity:** 30 **Description:** Comfortable cotton voile square scarf with diamonds and eyelash hemming detailing. **Photo:** Kyrana Bawal Red.png	The system will display a message "Item updated successfully!".
ITEM _06	List of Item (Delete item)	Delete item from list.	1. Click "Delete" button.	NA	The system will pop up a delete confirmation message.

Table 6.12: Test Design Purchase System Testing

Project Name:	SASYA Boutique Management System
Module Name:	Purchase
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali & Nor Anisa Binti Kamal

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result
PURCH_01	Purchase Item (Staff/ Admin use)	Scan barcode of item	1. Scan barcode of item.	NA	The system will show a list of scanned item.
PURCH_02	Purchase Item (Staff/ Admin use)	Cancel scanned item from the list.	1. Click "Remove" button.	NA	The system will remove the scanned item from the list.
PURCH_03	Purchase Item (Staff/ Admin use)	Reduce the quantity of scanned item.	1. Click "-" button.	NA	The system will reduce the quantity of scanned item from the list.
PURCH_04	Purchase Item (Staff/ Admin use)	Add the quantity of scanned item.	1. Scan the barcode again or click "+" button.	NA	The system will add the quantity of scanned item from the list.

PURCH_05	Purchase Item (Staff/ Admin use)	Validation of adding the quantity of scanned item if product is out of stock.	1. Scan the barcode again or click "+" button.	NA	The system will not inserted the scan item and disable the "+" button in the list.
PURCH_06	Purchase Item (Staff/ Admin use)	Proceed with payment.	1. Click "Payment" button.	NA	The system will show a preview of receipt.
PURCH_07	Purchase Item (Staff/ Admin use)	Print receipt.	1. Click "Receipt".	NA	The system will print the receipt.
PURCH_08	Purchase History (Staff/ Admin use)	View and accept customer order that have been shipped.	1. Click "History". 2. Click "View Details" 3. Click "Accept Order".	NA	The system will show "Item have been shipped" status in the customer order list.
PURCH_09	Purchase Item (Online Customer)	View product details	1. Click "View Details" button.	NA	The system will show the details of the product.
PURCH_10	Purchase Item	Purchase item.	1. Click "Add to Cart" button.	**Size:** S	The system will show the add to cart item in "My Cart".

	(Online Customer)		2. Choose size for the item. 3. Click cart icon button to confirm selection.		
PURCH_11	Purchase Item (Online Customer)	Cancel selected item.	1. Click “Remove” button.	NA	The system will remove the selected item from the list.
PURCH_12	Purchase Item (Online Customer)	Add the quantity of selected item.	1. Click “+“ button.	NA	The system will add the quantity of selected item from the list.
PURCH_13	Purchase Item (Online Customer)	Validation of adding the quantity of item if product is out of stock.	1. Click “+“ button.	NA	The system will disable the “+” button in the list.
PURCH_14	Purchase Item (Online Customer)	Reduce the quantity of selected item.	1. Click “-“ button.	NA	The system will reduce the quantity of selected item from the list.
PURCH_15	Purchase Item (Online Customer)	Confirm purchase.	1. Click “Checkout” button from My Cart.	NA	The system will show a list of selected item.

PURCH_16	Purchase Item (Online Customer)	Proceed with payment.	1. Click “Payment” button.	NA	The system will show a preview of payment details.
PURCH_17	Purchase Item (Online Customer)	Confirm payment.	1. Click “Confirm” button.	NA	The system will print the receipt.
PURCH_18	Purchase History (Online Customer)	View purchase and history and give feedback if the parcel is received.	1. Click “History”. 2. Click “View Details” button to view transaction full details. 3. Click “Received Parcel” button if “Item have been shipped” status appear.	NA	The system will show “Order Complete” in the transaction history list.

Table 6.13: Test Design Customer System Testing

Project Name:	SASYA Boutique Management System
Module Name:	Customer
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali & Nor Anisa Binti Kamal

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result
CUST _01	Customer Registration	Fill in all customer details field.	1. Enter name, email, password, contact, address line 1, and address line 2. 2. Click "Confirm" button.	**Name:** Hawa Fatihah **Email:** hawa@yahoo.com **Password:** hawa@01 **Contact Info:** 0192345678 **Address Line 1:** No.15, Jalan Mutiara **Address Line 2:** Durian Tunggal Melaka	The system will display a message "Registration success. Please login.".
CUST _02	Customer Registration	Did not fill in some customer details field.	1. Enter name, email, password, contact, address line 1, and	**Name:** Hawa Fatihah **Email:** hawa@yahoo.com **Password:** hawa@01	The system will display a message "Please fill out this field".

			address line 2. 2. Click "Confirm" button.	**Contact Info:** 0192345678 **Address Line 1:** No.15, Jalan Mutiara **Address Line 2: -**	
CUST _03	Update Profile	Edit profile.	1. Click lock icon. 2. Click "My Profile".	NA	The system will show edit profile form.
CUST _04	Update Profile	Edit profile.	1. Edit profile details field. 2. Click "Update" button.	**Name:** Hawa Fatihah Zurey **Email:** hawa@yahoo.com **Password:** hawa@01 **Contact Info:** 0192345678 **Address Line 1:** No.15, Jalan Mutiara **Address Line 2:** Durian Tunggal Melaka	The system will display a message "Profile updated successfully!".
CUST _05	Update Account	Edit account.	1. Click lock icon. 2. Click "My Account".	NA	The system will show my account edit form.
CUST _06	Update Account	Validate retype matched	1. Edit email. 2. Fill in new password.	**Email:** hawa@gmail.com **Password:**	The system will display a message

		new password.	3. Retype new password. 4. Click "Update" button.	hawa@02 **Re-type:** hawa@02	"Account updated successfully!".
CUST _07	Update Account	Validate retype unmatched new password.	1. Edit email. 2. Fill in new password. 3. Retype new password. 4. Click "Update" button.	**Email:** hawa@gmail.com **Password:** hawa@02 **Re-type:** hawa@01	The system will display a message "Required passwords did not match. Account not updated!

Test 6.14: Test Design Report Analysis System Testing

Project Name:	SASYA Boutique Management System
Module Name:	Report Analysis
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali & Nor Anisa Binti Kamal

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result
REP_01	Pie Chart Analysis	Show pie chart for most of the product purchase based on selected year and month.	1. Choose year. 2. Choose month. 3. Click "Search" button.	**Year:** 2019 **Month:** August	The system will show the pie chart analysis based on selected year and month.
REP_02	Line Chart Analysis	Show monthly sales report based on selected year.	1. Choose year. 2. Click "Search" button.	**Year:** 2019	The system will show the line chart analysis based on selected year.
REP_03	Line Chart Analysis	Show daily sales report based on selected year and month.	1. Choose year. 2. Choose month. 3. Click "Search" button.	**Year:** 2019 **Month:** August	The system will show the line chart analysis based on selected year and month.

6.4.1.4 System Design User Acceptance Testing

Test design user acceptance testing for SASYA Boutique Management System are illustrated in Table 6.15 and Table 6.20.

Table 6.15: Test Design Login User Acceptance Testing

Project Name:	SASYA Boutique Management System
Module Name:	Login
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali & Nor Anisa Binti Kamal

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result
LOGIN_01	Verify the login of the system.	Enter valid email and valid password.	1. Enter email. 2. Enter password. 3. Click "Login" button.	**Username:** admin@gmail.com **Password:** admin@01	The system will display a message "Login Success, Welcome Admin".
LOGIN_02	Verify the login of the system.	Enter valid username and invalid password.	1. Enter username. 2. Enter password. 3. Click "Login" button.	**Username:** admin@gmail.com **Password:** admi@01	The system will display a message "Login Failed, Invalid Input!".
LOGIN_03	Verify the login of the system.	Enter invalid username	1. Enter username. 2. Enter password.	**Username:** admin@gmail.com **Password:** admi@01	The system will display a message "Login Failed, Invalid Input!".

		and valid password.	3. Click "Login" button.		
LOGIN_04	Verify the login of the system.	Enter invalid username and invalid password.	1. Enter username. 2. Enter password. 3. Click "Login" button.	**Username:** admin@gmail.com **Password:** admi@01	The system will display a message "Login Failed, Invalid Input!".

Table 6.16: Test Design Staff User Acceptance Testing

Project Name:	SASYA Boutique Management System
Module Name:	Staff
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali & Nor Anisa Binti Kamal

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result
STAFF_01	Insert New Staff	Fill in all staff details field.	1. Enter staff name, address, contact info, email, and password. 2. Click "Save" button.	**Staff name:** Aida Azilah **Address:** Jasin **Contact Info:** 0192345678 **Email:** aida@yahoo.com **Password:** aida@01	The system will display a message "Staff added successfully".

STAFF _02	Insert New Staff	Did not fill in some staff details field.	1. Enter staff name, address, contact info, email, and password. 2. Click "Save" button.	**Staff name:** Aida Azilah **Address:** - **Contact Info:** 0192345678 **Email:** aida@yahoo.com **Password:** aida@01	The system will display a message "Please fill out this field".
STAFF _03	List of Staff (Update staff details)	Edit staff details	1. Click "Edit" button.	NA	The system will show edit staff details form.
STAFF _04	List of Staff (Update staff details)	Edit staff details	1. Edit staff details field. 2. Click "Update" button.	**Staff name:** Aida Azilah Adnan **Address:** Jasin **Contact Info:** 0192345678 **Email:** aida@yahoo.com **Password:** aida@01	The system will display a message "Staff updated successfully!".
STAFF _05	List of Staff (Delete staff)	Delete staff from list.	1. Click "Delete" button.	NA	The system will pop up a delete confirmation message.

Table 6.17: Test Design Item User Acceptance Testing

Project Name:	SASYA Boutique Management System
Module Name:	Item
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali & Nor Anisa Binti Kamal

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result
ITEM _01	Insert New Item	Fill in all item details field.	1. Enter item name, category, original price, retail price, quantity, and description. 2. Choose file from folder for photo field. 3. Click "Save" button.	**Item Name:** Kyrana Bawal in Red **Category:** Hijab **Original Price:** RM 15 **Retail Price:** RM 20 **Quantity:** 15 **Description:** Comfortable cotton voile square scarf with diamonds and eyelash hemming detailing. **Photo:** Kyrana Bawal Red.png	The system will display a message "Product added successfully".
ITEM _02	Insert New Item	Did not fill in some	1. Enter item name, category,	**Item Name:** Kyrana Bawal in Red	The system will display a message

		item details field.	original price, retail price, quantity, and description. 2. Choose file from folder for photo field. 3. Click "Save" button.	**Category:** Hijab **Original Price:** RM 15 **Retail Price:** RM 20 **Quantity:** 15 **Description:** - **Photo:** Kyrana Bawal Red.png	"Please fill out this field".
ITEM _03	Insert New Item	Choose invalid file format	1. Enter item name, category, original price, retail price, quantity, and description. 2. Choose file from folder for photo field. 3. Click "Save" button.	**Item Name:** Kyrana Bawal in Red **Category:** Hijab **Original Price:** RM 15 **Retail Price:** RM 20 **Quantity:** 15 **Description:** Comfortable cotton voile square scarf with diamonds and eyelash hemming detailing. **Photo:** Kyrana Bawal Red.svg	The system will display a message "Photo not added. Please upload JPG or PNG photo only!".
ITEM _04	List of Item (Update item details)	Edit item details	1. Click "Edit" button.	NA	The system will show edit item details form.

ITEM _05	List of Item (Update item details)	Edit item details	1. Edit item details field. 2. Click "Update" button.	**Item Name:** Kyrana Bawal in Red **Category:** Hijab **Original Price:** RM 15 **Retail Price:** RM 20 **Quantity:** 30 **Description:** Comfortable cotton voile square scarf with diamonds and eyelash hemming detailing. **Photo:** Kyrana Bawal Red.png	The system will display a message "Item updated successfully!".
ITEM _06	List of Item (Delete item)	Delete item from list.	1. Click "Delete" button.	NA	The system will pop up a delete confirmation message.

Table 6.18: Test Design Purchase User Acceptance Testing

Project Name:	SASYA Boutique Management System
Module Name:	Purchase
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali & Nor Anisa Binti Kamal

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result
PURCH_01	Purchase Item (Staff/ Admin use)	Scan barcode of item	1. Scan barcode of item.	NA	The system will show a list of scanned item.
PURCH_02	Purchase Item (Staff/ Admin use)	Cancel scanned item from the list.	1. Click "Remove" button.	NA	The system will remove the scanned item from the list.
PURCH_03	Purchase Item (Staff/ Admin use)	Reduce the quantity of scanned item.	1. Click "-" button.	NA	The system will reduce the quantity of scanned item from the list.
PURCH_04	Purchase Item (Staff/ Admin use)	Add the quantity of scanned item.	1. Scan the barcode again or click "+" button.	NA	The system will add the quantity of scanned item from the list.

PURCH_05	Purchase Item (Staff/ Admin use)	Validation of adding the quantity of scanned item if product is out of stock.	1. Scan the barcode again or click "+" button.	NA	The system will not inserted the scan item and disable the "+" button in the list.
PURCH_06	Purchase Item (Staff/ Admin use)	Proceed with payment.	1. Click "Payment" button.	NA	The system will show a preview of receipt.
PURCH_07	Purchase Item (Staff/ Admin use)	Print receipt.	1. Click "Receipt".	NA	The system will print the receipt.
PURCH_08	Purchase History (Staff/ Admin use)	View and accept customer order that have been shipped.	1. Click "History". 2. Click "View Details". 3. Click "Accept Order".	NA	The system will show "Item have been shipped" status in the customer order list.
PURCH_09	Purchase Item (Online Customer)	View product details	1. Click "View Details" button.	NA	The system will show the details of the product.
PURCH_10	Purchase Item	Purchase item.	1. Click "Add to Cart" button.	**Size:** S	The system will show the add to cart item in "My Cart".

	(Online Customer)		2. Choose size for the item. 3. Click cart icon button to confirm selection.		
PURCH_11	Purchase Item (Online Customer)	Cancel selected item.	1. Click “Remove” button.	NA	The system will remove the selected item from the list.
PURCH_12	Purchase Item (Online Customer)	Add the quantity of selected item.	1. Click “+“ button.	NA	The system will add the quantity of selected item from the list.
PURCH_13	Purchase Item (Online Customer)	Validation of adding the quantity of item if product is out of stock.	1. Click “+“ button.	NA	The system will disable the “+” button in the list.
PURCH_14	Purchase Item (Online Customer)	Reduce the quantity of selected item.	1. Click “-“ button.	NA	The system will reduce the quantity of selected item from the list.
PURCH_15	Purchase Item (Online Customer)	Confirm purchase.	1. Click “Checkout” button from My Cart.	NA	The system will show a list of selected item.

PURCH_16	Purchase Item (Online Customer)	Proceed with payment.	1. Click "Payment" button.	NA	The system will show a preview of payment details.
PURCH_17	Purchase Item (Online Customer)	Confirm payment.	1. Click "Confirm" button.	NA	The system will print the receipt.
PURCH_18	Purchase History (Online Customer)	View purchase and history and give feedback if the parcel is received.	1. Click "History". 2. Click "View Details" button to view transaction full details. 3. Click "Received Parcel" button if "Item have been shipped" status appear.	NA	The system will show "Order Complete" in the transaction history list.

Table 6.19: Test Design Customer User Acceptance Testing

Project Name:	SASYA Boutique Management System
Module Name:	Customer
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali & Nor Anisa Binti Kamal

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result
CUST _01	Customer Registration	Fill in all customer details field.	1. Enter name, email, password, contact, address line 1, and address line 2. 2. Click "Confirm" button.	**Name:** Hawa Fatihah **Email:** hawa@yahoo.com **Password:** hawa@01 **Contact Info:** 0192345678 **Address Line 1:** No.15, Jalan Mutiara **Address Line 2:** Durian Tunggal Melaka	The system will display a message "Registration success. Please login.".
CUST _02	Customer Registration	Did not fill in some customer details field.	1. Enter name, email, password, contact, address line 1, and	**Name:** Hawa Fatihah **Email:** hawa@yahoo.com **Password:** hawa@01	The system will display a message "Please fill out this field".

			address line 2. 2. Click "Confirm" button.	**Contact Info:** 0192345678 **Address Line 1:** No.15, Jalan Mutiara **Address Line 2: -**	
CUST _03	Update Profile	Edit profile.	1. Click lock icon. 2. Click "My Profile".	NA	The system will show edit profile form.
CUST _04	Update Profile	Edit profile.	1. Edit profile details field. 2. Click "Update" button.	**Name:** Hawa Fatihah Zurey **Email:** hawa@yahoo.com **Password:** hawa@01 **Contact Info:** 0192345678 **Address Line 1:** No.15, Jalan Mutiara **Address Line 2:** Durian Tunggal Melaka	The system will display a message "Profile updated successfully!".
CUST _05	Update Account	Edit account.	1. Click lock icon. 2. Click "My Account".	NA	The system will show my account edit form.
CUST _06	Update Account	Validate retype matched	1. Edit email. 2. Fill in new password.	**Email:** hawa@gmail.com	The system will display a message

		new password.	3. Retype new password. 4. Click "Update" button.	**Password:** hawa@02 **Re-type:** hawa@02	"Account updated successfully!".
CUST _07	Update Account	Validate retype unmatched new password.	1. Edit email. 2. Fill in new password. 3. Retype new password. 4. Click "Update" button.	**Email:** hawa@gmail.com **Password:** hawa@02 **Re-type:** hawa@01	The system will display a message "Required passwords did not match. Account not updated!

Test 6.20: Test Design Report Analysis User Acceptance Testing

Project Name:	SASYA Boutique Management System
Module Name:	Report Analysis
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali & Nor Anisa Binti Kamal

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result
REP_01	Pie Chart Analysis	Show pie chart for most of the product purchase based on selected year and month.	1. Choose year. 2. Choose month. 3. Click "Search" button.	**Year:** 2019 **Month:** August	The system will show the pie chart analysis based on selected year and month.
REP_02	Line Chart Analysis	Show monthly sales report based on selected year.	1. Choose year. 2. Click "Search" button.	**Year:** 2019	The system will show the line chart analysis based on selected year.
REP_03	Line Chart Analysis	Show daily sales report based on selected year and month.	1. Choose year. 2. Choose month. 3. Click "Search" button.	**Year:** 2019 **Month:** August	The system will show the line chart analysis based on selected year and month.

6.4.2 Test Data

Test data is the data that is used in tests of a software system. In order to set a software application, data for testing must be entered. Table 6.21 show the test data for the system.

Table 6.21: Test Data

Module	Cycle
Login	3
Staff Profile	5
Item Inventory	6
Customer Profile	6
Purchase Item	20
Report	5

6.5 Test Result and Analysis

Throughout the test that have been carried out, all module that were developed worked well as planned. In short, smaller tests were conducted earlier and continuously followed level by level or module by module to find defects or bugs then fix them. After the repetitive process, the quality of the system continues to be improved. Table 6.22 until Table 6.27 shows the Test Case of SASYA Boutique Management System.

Table 6.22: Test Case for Login Module

Project Name:	SASYA Boutique Management System
Module Name:	Login
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Status	Comment
LOGIN _01	Verify the login of the system.	Enter valid email and valid password.	1. Enter email. 2. Enter password. 3. Click "Login" button.	**Username:** admin@gmail.com **Password:** admin@01	The system will display a message "Login Success, Welcome Admin".	Success to login.	Success	

LOGIN _01	Verify the login of the system.	Enter valid username and invalid password.	1. Enter username. 2. Enter password. 3. Click “Login” button.	**Username:** admin@gmail.com **Password:** admi@01	The system will display a message “Login Failed, Invalid Input!”.	Failed to login.	Success	
LOGIN _03	Verify the login of the system.	Enter invalid username and valid password.	1. Enter username. 2. Enter password. 3. Click “Login” button.	**Username:** admin@gmail.com **Password:** admi@01	The system will display a message “Login Failed, Invalid Input!”.	Failed to login.	Success	
LOGIN _04	Verify the login of the system.	Enter invalid username and invalid password.	1. Enter username. 2. Enter password. 3. Click “Login” button.	**Username:** admin@gmail.com **Password:** admi@01	The system will display a message “Login Failed, Invalid Input!”.	Failed to login.	Success	
$\frac{total\ success\ test\ case}{total\ test\ case} \times 100 = success\ rate$ $\frac{1}{1} \times 100 = 100\%$ Login module 100% pass the test based on four different test case.							Success Rate: 100%	

Table 6.23: Test Case for Staff Module

Project Name:	SASYA Boutique Management System
Module Name:	Staff
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Status	Comment
STAFF _01	Insert New Staff	Fill in all staff details field.	1. Enter staff name, address, contact info, email, and password. 2. Click "Save" button.	**Staff name:** Aida Azilah **Address:** Jasin **Contact Info:** 0192345678	The system will display a message "Staff added successfully".	Success insert staff details.	Success	

				Email: aida@yahoo.com **Password:** aida@01				
STAFF _02	Insert New Staff	Did not fill in some staff details field.	1. Enter staff name, address, contact info, email, and password. 2. Click "Save" button.	**Staff name:** Aida Azilah **Address:** - **Contact Info:** 0192345678 **Email:** aida@yahoo.com **Password:** aida@01	The system will display a message "Please fill out this field".	Failed to insert staff details.	Success	
STAFF _03	List of Staff (Update staff details)	Edit staff details	1. Click "Edit" button.	NA	The system will show edit staff details form.	Edit staff details form.	Success	
STAFF _04	List of Staff (Update staff details)	Edit staff details	1. Edit staff details field.	**Staff name:** Aida Azilah Adnan	The system will display a message "Staff	Success to update staff details.	Success	

			2. Click “Update” button.	**Address:** Jasin **Contact Info:** 0192345678 **Email:** aida@yahoo.com **Password:** aida@01	updated successfully!”.			
STAFF _05	List of Staff (Delete staff)	Delete staff from list.	1. Click “Delete” button.	NA	The system will pop up a delete confirmation message.	Success to delete staff from staff list.	Success	
$\frac{total\ success\ test\ case}{total\ test\ case} \times 100 = success\ rate$ $\frac{1}{1} \times 100 = 100\%$ Staff module 100% pass the test based on five different test case.						Success Rate: 100%		

Table 6.24: Test Case for Item Module

Project Name:	SASYA Boutique Management System
Module Name:	Item
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Status	Comment
ITEM_01	Insert New Item	Fill in all item details field.	1. Enter item name, category, original price, retail price, quantity, and description.	**Item Name:** Kyrana Bawal in Red **Category:** Hijab **Original Price:** RM 15	The system will display a message "Product added successfully".	Success insert item details.	Success	

			2. Choose file from folder for photo field. 3. Click “Save” button.	**Retail Price:** RM 20 **Quantity:** 15 **Description:** Comfortable cotton voile square scarf with diamonds and eyelash hemming detailing. **Photo:** Kyrana Bawal Red.png				
ITEM_02	Insert New Item	Did not fill in some item details field.	1. Enter item name, category, original price, retail price, quantity, and description.	**Item Name:** Kyrana Bawal in Red **Category:** Hijab **Original Price:** RM 15 **Retail Price:** RM 20	The system will display a message “Please fill out this field”.	Failed to insert item details.	Success	

			2. Choose file from folder for photo field. 2. Click “Save” button.	**Quantity:** 15 **Description:** - **Photo:** Kyrana Bawal Red.png				
ITEM_03	Insert New Item	Choose invalid file format	1. Enter item name, category, original price, retail price, quantity, and description. 2. Choose file from folder for photo field. 3. Click “Save” button.	**Item Name:** Kyrana Bawal in Red **Category:** Hijab **Original Price:** RM 15 **Retail Price:** RM 20 **Quantity:** 15 **Description:** Comfortable cotton voile square scarf with diamonds and	The system will display a message “Photo not added. Please upload JPG or PNG photo only!”.	Failed to insert item photo.	Success	

				eyelash hemming detailing. **Photo:** Kyrana Bawal Red.svg				
ITEM_04	List of Item (Update item details)	Edit item details	1. Click “Edit” button.	NA	The system will show edit item details form.	Edit item details form.	Success	
ITEM_05	List of Item (Update item details)	Edit item details	1. Edit item details field. 2. Click “Update” button.	**Item Name:** Kyrana Bawal in Red **Category:** Hijab **Original Price:** RM 15 **Retail Price:** RM 20 **Quantity:** 30 **Description:** Comfortable cotton voile square scarf	The system will display a message “Item updated successfully!”.	Success to update item details.	Success	

				with diamonds and eyelash hemming detailing. **Photo:** Kyrana Bawal Red.png				
ITEM_06	List of Item (Delete item)	Delete item from list.	1. Click “Delete” button.	NA	The system will pop up a delete confirmation message.	Success to delete item from item list.	Success	
$\frac{total\ success\ test\ case}{total\ test\ case} \times 100 = success\ rate$ $\frac{1}{1} \times 100 = 100\%$ Item module 100% pass the test based on six different test case.						Success Rate: 100%		

Table 6.25: Test Case for Purchase Module

Project Name:	SASYA Boutique Management System
Module Name:	Purchase
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Status	Comment
PURCH_01	Purchase Item (Staff/ Admin use)	Scan barcode of item	1. Scan barcode of item.	NA	The system will show a list of scanned item.	Success to show the list of item.	Success	
PURCH_02	Purchase Item (Staff/ Admin use)	Cancel scanned item from the list.	1. Click “Remove” button.	NA	The system will remove the scanned item from the list.	Success to remove scanned item.	Success	

PURCH _03	Purchase Item (Staff/ Admin use)	Reduce the quantity of scanned item.	1. Click "-" button.	NA	The system will reduce the quantity of scanned item from the list.	Success to reduce the quantity of scanned item.	Success	
PURCH _04	Purchase Item (Staff/ Admin use)	Add the quantity of scanned item.	1. Scan the barcode again or click "+" button.	NA	The system will add the quantity of scanned item from the list.	Success to add the quantity of scanned item.	Success	
PURCH _05	Purchase Item (Staff/ Admin use)	Validation of adding the quantity of scanned item if product is out of stock.	1. Scan the barcode again or click "+" button.	NA	The system will not inserted the scan item and disable the "+" button in the list.	Success to validate the adding of quantity if product is out of stock.	Success	

PURCH _06	Purchase Item (Staff/ Admin use)	Proceed with payment.	Click “Payment” button.	NA	The system will show a preview of receipt	Success to show the preview of receipt	Success	
PURCH _07	Purchase Item (Staff/ Admin use)	Print receipt.	1. Click “Receipt”.	NA	The system will print the receipt.	Success to print receipt.	Success	
PURCH _08	Purchase History (Staff/ Admin use)	View and accept customer order that have been shipped.	1. Click “History”. 2. Click “View Details”. 3. Click “Accept Order”.	NA	The system will show “Item have been shipped” status in the customer order list.		Success	
PURCH _09	Purchase Item (Online Customer)	View product details	1. Click “View Details” button.	NA	The system will show the details of the product.	Success to view product details.	Success	
PURCH _10	Purchase Item	Purchase item.	1. Click “Add to Cart” button.	**Size:** S	The system will show the add to	Success to show	Success	

	(Online Customer)		2. Choose size for the item. 3. Click cart icon button to confirm selection.		cart item in “My Cart”.	selected item.		
PURCH _11	Purchase Item (Online Customer)	Cancel selected item.	1. Click “Remove” button.	NA	The system will remove the selected item from the list.	Success to remove selected item.	Success	
PURCH _12	Purchase Item (Online Customer)	Add the quantity of selected item.	1. Click “+“ button.	NA	The system will add the quantity of selected item from the list.	Success to add the quantity of selected item.	Success	
PURCH _13	Purchase Item (Walk-in Customer)	Validation of adding the quantity of	1. Click “+“ button.	NA	The system will disable the “+” button in the list.	Success to validate the adding of quantity if	Success	

		item if product is out of stock.				product is out of stock.		
PURCH _14	Purchase Item (Online Customer)	Reduce the quantity of selected item.	1. Click "-" button.	NA	The system will reduce the quantity of selected item from the list.	Success to reduce the quantity of selected item.	Success	
PURCH _15	Purchase Item (Online Customer)	Confirm purchase.	1. Click "Checkout" button from My Cart.	NA	The system will show a list of selected item.	Success to show the list of selected item.	Success	
PURCH _16	Purchase Item (Online Customer)	Proceed with payment.	1. Click "Payment" button.	NA	The system will show a preview of payment details.	Success to show the preview payment details.	Success	

PURCH _17	Purchase Item (Online Customer)	Confirm payment.	1. Click “Confirm” button.	NA	The system will print the receipt.	Success to make purchase.	Success	
PURCH _18	Purchase History (Online Customer)	View purchase and history and give feedback if the parcel is received.	1. Click “History”. 2. Click “View Details” button to view transaction full details. 3. Click “Received Parcel” button if “Item have been shipped” status appear.	NA	The system will show “Order Complete” in the transaction history list.	Success to give feedback received parcel.	Success	
$\frac{total\ success\ test\ case}{total\ test\ case} \times 100 = success\ rate$ $\frac{1}{1} \times 100 = 100\%$ Purchase module 100% pass the test based on eighteen different test case.							Success Rate: 100%	

Table 6.26: Test Case for Customer Module

Project Name:	SASYA Boutique Management System
Module Name:	Customer
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Status	Comment
CUST_01	Customer Registration	Fill in all customer details field.	1. Enter name, email, password, contact, address line 1, and address line 2. 2. Click "Confirm" button.	**Name:** Hawa Fatihah **Email:** hawa@yahoo.com **Password:** hawa@01	The system will display a message "Registration success. Please login.".	Success register customer details. The system directly go	Success	

				Contact Info: 0192345678 **Address Line 1:** No.15, Jalan Nuri **Address Line 2:** Durian Tunggal Melaka		to login page.		
CUST_02	Customer Registration	Did not fill in some customer details field.	1. Enter name, email, password, contact, address line 1, and address line 2. 2. Click “Confirm” button.	**Name:** Hawa Fatihah **Email:** hawa@yahoo.com **Password:** hawa@01 **Contact Info:** 0192345678 **Address Line 1:** No.15, Jalan Nuri **Address Line 2: -**	The system will display a message “Please fill out this field”.	Failed to register customer details.	Success	

CUST_03	Update Profile	Edit profile.	1. Click lock icon. 2. Click “My Profile”.	NA	The system will show edit profile form.	Edit profile form.	Success	
CUST_04	Update Profile	Edit profile.	1. Edit profile details field. 2. Click “Update” button.	**Name:** Hawa Fatihah **Email:** hawa@yahoo.com **Password:** hawa@01 **Contact Info:** 0192345678 **Address Line 1:** No.15, Jalan Nri **Address Line 2:** Durian Tunggal Melaka	The system will display a message “Profile updated successfully!”.	Success to update item details.	Success	
CUST_05	Update Account	Edit account.	1. Click lock icon. 2. Click “My Account”.	NA	The system will show my account edit form.	Edit account form.	Success	

CUST_06	Update Account	Validate retype matched new password.	1. Edit email. 2. Fill in new password. 3. Retype new password. 4. Click "Update" button.	**Email:** hawa@gmail.com **Password:** hawa@02 **Re-type:** hawa@02	The system will display a message "Account updated successfully!".	Success to update account.	Success	
CUST_07	Update Account	Validate retype unmatched new password.	1. Edit email. 2. Fill in new password. 3. Retype new password. 4. Click "Update" button.	**Email:** hawa@gmail.com **Password:** hawa@02 **Re-type:** hawa@01	The system will display a message "Required passwords did not match. Account not updated!	Failed to update account.	Success	
$\frac{total\ success\ test\ case}{total\ test\ case} \times 100 = success\ rate$ $\frac{1}{1} \times 100 = 100\%$ Customer module 100% pass the test based on seven different test case.							Success Rate: 100%	

Table 6.27: Test Case for Report Analysis Module

Project Name:	SASYA Boutique Management System
Module Name:	Report Analysis
Created By:	Nurzakiyah Emalda Binti Abdul Jamal
Date of Creation:	10/7/2019
Date of Review:	5/8/2019
Review By:	Nur Afiqah Binti Radzali

Test Case ID	Test Scenario	Test Case	Test Steps	Test Data	Expected Result	Actual Result	Status	Comment
REP_01	Pie Chart Analysis	Show pie chart for most of the product purchase based on selected	1. Choose year. 2. Choose month. 3. Click "Search" button.	**Year:** 2019 **Month:** August	The system will show the pie chart analysis based on selected year and month.	Success to show pie chart analysis.	Success	

		year and month.						
REP_02	Line Chart Analysis	Show monthly sales report based on selected year.	1. Choose year. 2. Click "Search" button.	**Year:** 2019	The system will show the line chart analysis based on selected year.	Success to show line chart analysis.	Success	
REP_03	Line Chart Analysis	Show daily sales report based on selected year and month.	1. Choose year. 2. Choose month. 3. Click "Search" button.	**Year:** 2019 **Month:** August	The system will show the line chart analysis based on selected year and month.	Success to show line chart analysis.	Success	
$\frac{total\ success\ test\ case}{total\ test\ case} \times 100 = success\ rate$ $\frac{1}{1} \times 100 = 100\%$ Report Analysis module 100% pass the test based on three different test case.						Success Rate: 100%		

6.6 Conclusion

In this chapter, the entire test plan, test strategies and test phase has been discussed. The test was tested based on the six module which is login module, staff module, item module, purchase module, customer module, and report analysis module.

The test result is shown and all of the result is success for the test phase. This proves that the testing phase is a useful phase in order to determine the error or mistakes in the system. The result can be used in the future to make corrections. It also can give contribution in further system development.

For the next chapter, it will be the conclusion for the whole project which include the project strength and weakness, plans for future development, and the contribution of the project.

CHAPTER 7: CONCLUSION

7.1 Observation on Weakness and Strengths

This chapter will present the summary of the whole previous chapter. SASYA Boutique Management System will be developed as a web-based application that will manage about SASYA Boutique inventory and manage sales. The system has their strength and weakness.

7.1.1 System Strength

The strength of the system are:

1. Only an authorized user can access the system and manage the items inventory and manage sales.

2. Easy dealing with the computerized system. All of the transaction will be save in the database and can be manipulate rather than using a logbook.

3. Can calculate every purchasing item by scanning barcode of the item bought by the customer and print the receipt.

4. Can generate a sales report analysis based on user selection.

5. Data storage is more secure by putting all the data in a centralized database. The database is provided to allow storage and retrieval of data to be generated.

7.1.2 System Weakness

The weakness of the system are:

1. The system does not have a security on the database which is there is no backup and recovery if the database is crashed.

2. The system does not have real online payment process for the online customer.

3. The system does not have the recovery password for customer if customer forgot the password.

7.2 Propositions for Improvement

There are some suggestions on how to improve the system. System development is an extremely element process, which requires the developer to reliably check the system to guarantee that it is running smoothly. Some future upgrades that developer would like to consider are:

1. Provide a backup and recovery of the database for the system.

2. Enhance a real online payment process for customer to make payment.

3. Provide a recovery password for customer by sending to email.

7.3 Project Contribution

1. Contribution for an individual: For the individual who do this project, it let them to gain knowledge on procedure to create a web-based system.

2. Contribution to user: This system can be used to help the management of SASYA Boutique to manage boutique especially in handling item inventory and sales.

7.4 Conclusion

As a conclusion, this system has been successfully developed and have met the requirements mentioned at the earlier stage of the system. The system has succeeded in achieving its objectives. The system has successfully achieved the first objectives by computerized the system that can manage the database of the items in the boutique for searching, adding, updating and deleting data. The system also succeeds developed a system that can calculate automatically the total payment for every purchasing items by using the barcode scanner. The last objectives of the system also have been achieving where the system that can generate daily and monthly sales report.

However, there are still a few weaknesses that need to be improved in the future. The improvement makes the system better and more comprehensive. Nevertheless, as long as this system has achieved the entire objectives, this implies that the purpose for this project has been reached and will be helpful to user.

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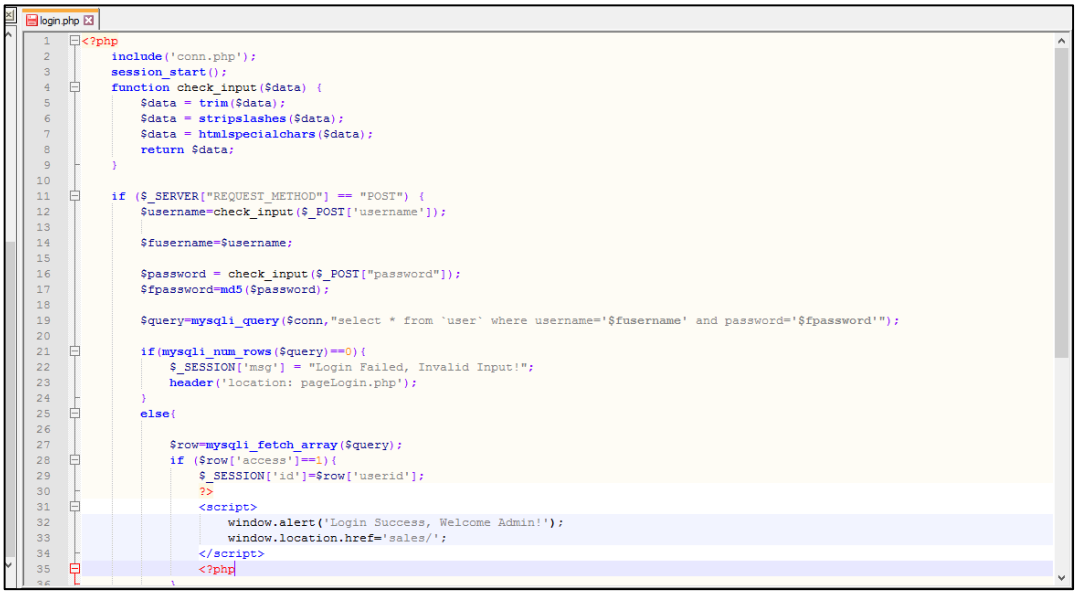
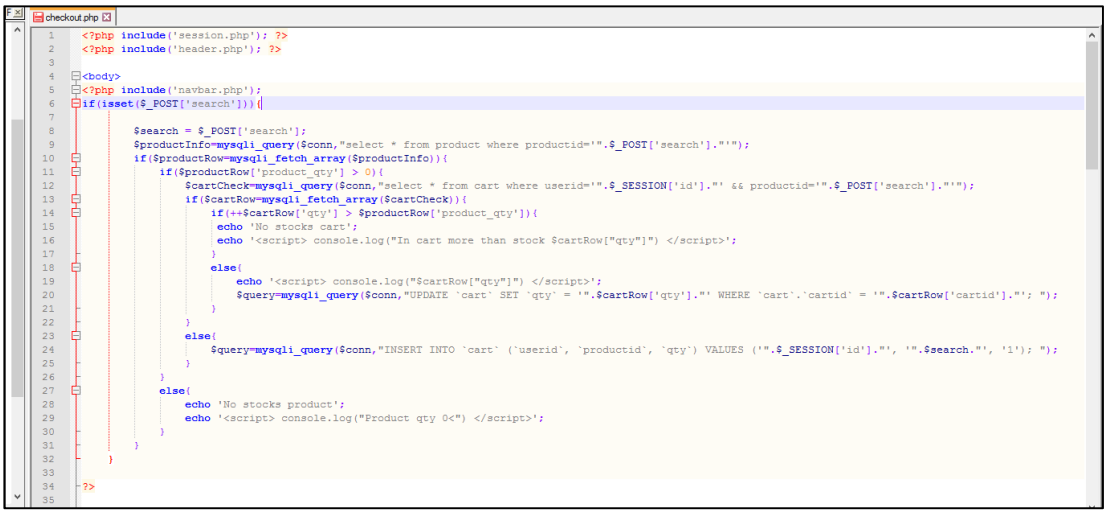
APPENDICE A: SAMPLE CODES



```php
<?php
    include('conn.php');
    session_start();
    function check_input($data) {
        $data = trim($data);
        $data = stripslashes($data);
        $data = htmlspecialchars($data);
        return $data;
    }

    if ($_SERVER["REQUEST_METHOD"] == "POST") {
        $username=check_input($_POST['username']);

        $fusername=$username;

        $password = check_input($_POST["password"]);
        $fpassword=md5($password);

        $query=mysqli_query($conn,"select * from `user` where username='$fusername' and password='$fpassword'");

        if(mysqli_num_rows($query)==0){
            $_SESSION['msg'] = "Login Failed, Invalid Input!";
            header('location: pageLogin.php');
        }
        else{

            $row=mysqli_fetch_array($query);
            if ($row['access']==1){
                $_SESSION['id']=$row['userid'];
                ?>
                <script>
                    window.alert('Login Success, Welcome Admin!');
                    window.location.href='sales/';
                </script>
                <?php
```

Figure A.1: Sample Code for Login

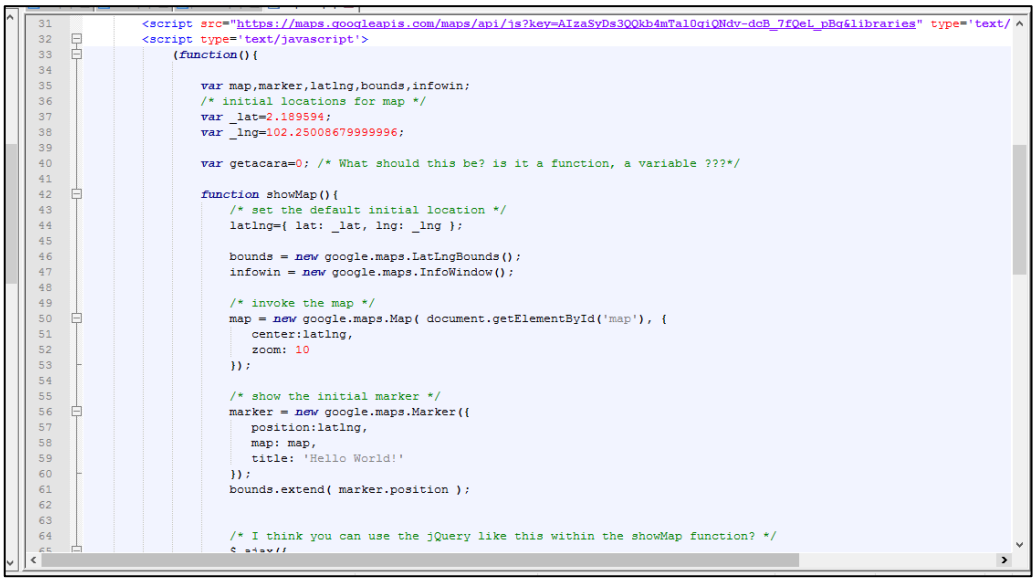


```php
<?php include('session.php'); ?>
<?php include('header.php'); ?>

<body>
<?php include('navbar.php');
if(isset($_POST['search'])){

        $search = $_POST['search'];
        $productInfo=mysqli_query($conn,"select * from product where productid='".$_POST['search']."'");
        if($productRow=mysqli_fetch_array($productInfo)){
            if($productRow['product_qty'] > 0){
                $cartCheck=mysqli_query($conn,"select * from cart where userid='".$_SESSION['id']."' && productid='".$_POST['search']."'");
                if($cartRow=mysqli_fetch_array($cartCheck)){
                    if(++$cartRow['qty'] > $productRow['product_qty']){
                     echo 'No stocks cart';
                     echo '<script> console.log("In cart more than stock $cartRow["qty"]") </script>';
                    }
                    else{
                        echo '<script> console.log("$cartRow["qty"]") </script>';
                        $query=mysqli_query($conn,"UPDATE `cart` SET `qty` = '".$cartRow['qty']."' WHERE `cart`.`cartid` = '".$cartRow['cartid']."'; ");
                    }
                }
                else{
                    $query=mysqli_query($conn,"INSERT INTO `cart` (`userid`, `productid`, `qty`) VALUES ('".$_SESSION['id']."', '".$search."', '1'); ");
                }
            }
            else{
                echo 'No stocks product';
                echo '<script> console.log("Product qty 0<") </script>';
            }
        }
    }

?>
```

Figure A.2: Sample Code for Purchase

```
history.php
</thead>
<tbody>
    <?php
        $h=mysqli_query($conn,"select * from sales where userid='".$_SESSION['id']."' order by sales_date desc ;");
        while($hrow=mysqli_fetch_array($h)){
            ?>
                <tr>
                    <td class="hidden"></td>
                    <td><?php echo date("M d, Y - h:i A", strtotime($hrow['sales_date']));?></td>
                    <td>RM <?php echo number_format($hrow['sales_total'],2); ?></td>
                    <td>
                        <a href="#detail<?php echo $hrow['salesid']; ?>" data-toggle="modal" class="btn btn-primary btn-sm">
                        <span class="glyphicon glyphicon-fullscreen"></span> Full Details</a>
                        <?php include ('modal_hist.php'); ?>
                    </td>
                    <td><?php if ($hrow['status']=='Item have been shipped')
                                {echo "<p style='color: #F1C40F; font-weight: bold; font-style: italic;'>".$hrow['status']."</p>";}
                                else{echo "<p style='color: black; font-weight: bold; '>". $hrow['status']."</p>";} ?>
                    </td>
                    <td>

                    <?php
                        if ($hrow['statuscust']=='In Process'){
                        ?>
                        <a href="custreceived.php?salesid=<?php echo $hrow['salesid'];?>" class="btn btn-success btn btn-sm">
                        Received Parcel</a>
                        <?php
                        }
                        else{?>
                            <?php echo "<p style='color: green; font-weight: bold; font-style: italic;'>". $hrow['statuscust']."</p>"; ?><?php
                        }
                    ?>

                    </td>
```

Figure A.3: Sample Code for History



```
<script src="https://maps.googleapis.com/maps/api/js?key=AIzaSyDs3QQkb4mTal0qiQNdv-dcB_7fQeL_pBq&libraries" type='text/
<script type='text/javascript'>
    (function(){

        var map,marker,latlng,bounds,infowin;
        /* initial locations for map */
        var _lat=2.189594;
        var _lng=102.25008679999996;

        var getacara=0; /* What should this be? is it a function, a variable ???*/

        function showMap(){
            /* set the default initial location */
            latlng={ lat: _lat, lng: _lng };

            bounds = new google.maps.LatLngBounds();
            infowin = new google.maps.InfoWindow();

            /* invoke the map */
            map = new google.maps.Map( document.getElementById('map'), {
               center:latlng,
               zoom: 10
            });

            /* show the initial marker */
            marker = new google.maps.Marker({
               position:latlng,
               map: map,
               title: 'Hello World!'
            });
            bounds.extend( marker.position );


            /* I think you can use the jQuery like this within the showMap function? */
```

Figure A.4: Sample Code for Map