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DESIGN AND IMPLEMENTATION OF AN ONLINE SHOPPING SYSTEM (A CASE STUDY OF MAHADI MEGA SHOPS, KADUNA)

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Declaration

I, SADEEQ MUSA, declare this project titled " ONLINE SHOPPING SYSTEM", is the product of my own research efforts, undertaken under the supervision of "MALLAMA HAFSA KABIR AHMAD" and has not been presented and will not be presented elsewhere for the award of degree or certificate. All sources have been dully acknowledged.

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Sadeeq Musa

Certification

This is to certify that this project titled "ONLINE SHOPPING SYSTEM" conducted by SADEEQ MUSA has been carefully read and approved, having satisfied the requirement for Bachelor of Science in Computer Science, in the Department of Computer Science, Faculty of Computer Science and Information Technology, Bayero University, Kano.

Hafsa Kabir Ahmad 15/10/2021

(Project Supervisor) Date

This report is dedicated to My family for their endless love, prayers, and support towards me. May ALLAH (SWT) continue to guide and protect them every day, Ameen.

Acknowledgment

I am thankful to Almighty Allah and his beloved prophet S.A.W for the guidance, Protection, and assistance for giving me the courage to complete this project. My sincere appreciation also goes to my honored supervisor Malama Hafsa Kabir for her diligent guidance, support, corrections, and encouragement toward the completion of this project. A lot of gratitude also goes to My lovely family, who gave me all the support both morally and financially to achieve the goal, May Allah reward and protect you all, amen. May ALLAH bless you All.

Abstract

Online shopping is a form of e-commerce (electronic commerce) that allows people to directly purchase items from sellers over the internet using a web browser. This brings us to the term "e-commerce. This project's aim is to design and implement an Online Shopping System by identifying the requirements of the system and conducting a system analysis which leads to the designing of the proposed system based on the identified requirements. In the process of carrying out this project, the software development life cycle model that was adopted is Waterfall. Use case diagram was used to depict the functional requirements of the system, the system was modeled using a sequence diagram and activity diagram. The primary sources of data were Observation and interviews and also secondary sources such as reviews of past records, books, and journals. The system was implemented using a 3-tier approach, with a backend MySQL database, a middle tier apache server, and a web browser as the frontend client. In order to develop an online shopping application using HTML, CSS, JAVA Script, server-side scripting language PHP, and relational database MySQL Initially the system intended to cover more aspects of online shopping, but due to limited time, the scope was limited to just a few functionalities. I recommend a 1-click ordering method, providing moderators more control over products so that each moderator can maintain their own products and providing classes for customers so that different offers can be given to each class.

TABLE OF CONTENTS

CHAPTER ONE

1.1 Preamble

This chapter gives an insight into the background of the study, significance, aims and objectives, the methodology, and a statement of the problem of the online shopping system.

1.2 Background of the Study

The buying and selling of products over the Internet is not something new. With the advent of technology, people have moved from conventional shopping to electronic shopping, known as “Online Shopping”, “e-tail” from "electronic retail" or “e-shopping”. It is a form of electronic commerce which allows consumers to directly purchase goods or services from a seller over the Internet using a web browser. More and more business houses are implementing websites providing functionality for performing commercial transactions over the web. It is reasonable to say that the process of shopping on the web is becoming a commonplace. The objective of this project is to develop a general-purpose e-commerce store where products like Clothes, Electronics and Furniture can be bought from the comfort of home through the Internet. An online shopping system is a virtual store on the Internet where customers can browse the catalog and select products of interest. At payment time, more information will be needed to complete the transaction. Usually, the customer will be asked to fill or select a billing address, a shipping address, a shipping option, and payment information such as a credit card number.

1.3 Statement of Problem

The existing challenges of the current system are the use of a manual system in storing staff and customer details, Customer can only order at the company counter or via phone call and need to wait in the queue which may cause unpleasantness and can consume time and energy, Drawback to advertisement and information to new product items, or improve products and loss of Data due to Natural Disasters i.e Fire, Flood, etc.

1.4 Aims and Objectives

The aim of this project is to design and implement an Online Shopping System. The objectives are:

1. To identify the requirements of the system by conducting a system analysis.

2. To design the proposed system based on the identified requirements.
3. To implement the online shopping system.
4. To test the online shopping system.

1.5 Motivation

Mahadi Mega Shops adopts a manual system which is believed to be a primitive and inefficient method with the advancements in Online shopping. It is necessary to embark upon this project with the division of easing manual method which is quite tedious, frustrating, time-consuming, error-prone large storage space as well as the labor required. The above problem stated can be reduced using the proposed system.

1.6 Methodology

In the process of carrying out this project, the software development life cycle model to be adopted is Waterfall. In the course of this project development, the primary sources of data will be Observation and interviews and also secondary sources such as reviews of past records, books, and journals. Use case diagram will be used to depict the functional requirements of the system, the system will be modeled using a sequence diagram and activity diagram. In the design of the system, the software will be developed using HTML5 and CSS for layout and design, JavaScript for client-side validation, PHP and MYSQL for server-side validation as well as database management.

1.7 Scope and Limitation

The Online shopping system will enable customers to view products and their various prices. It will also allow them to log in and place orders by paying for them using online payment. However, Customers won't be able to negotiate on the price of a product or track their orders, and the website will be a standalone website.

1.8 Significance of the Study

The Study is designed to bring efficiency to the Shopping System. Clear advantages of Internet information processing over those of traditional manual systems are higher yields. Online shopping system allows users to check product information, new or improved products, price change, discounts, etc. There are many other advantages of an online shopping system and some of them are listed below:

1 It is very convenient to use right from the bedroom, office or anywhere in the World.

2 Information processing is very fast and delays can be avoided.

3 To increase customer satisfaction by speeding up online shopping delivery.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter gives an insight into online shopping. From its background, history, evolution, and related works of online shopping.

2.2 Background of the Study

Online Shopping is a concept that is growing more and more every day, almost every person that has surfed the web before must have come across the word “Online shopping” or “Online store” at some point. From the words, one can have an idea of what it’s all about but let us take a good look.

Online shopping is a form of e-commerce (electronic commerce) that allows people to directly purchase items from sellers over the internet using a web browser. This brings us to the term “e-commerce”. What does it mean?

E-commerce (electronic commerce) is the conducting of business activities (e.g., distribution, buying, selling, marketing, and servicing of products or services) electronically over computer networks

2.3 History and Evolution of Online Shopping

Online shopping was first introduced in the year 1979 by English entrepreneur Michael Aldrich, before the advent of the internet and the World Wide Web. He was working with Redifon Computers, which was part of the United Kingdom Rediffusion Group of companies. The company was based in Crawley in Southern England. It manufactured minicomputers and designed systems for companies including Inland Revenue, British Aerospace, and Harrods. At the time, Michael Aldrich was the Board Director in charge of marketing and he became CEO on August 1st, 1980.

One day in the summer of 1979, he was walking with my wife and wishing that they could avoid the boring weekly shopping expedition. He then suddenly remembered a modified television that had been sent to their company for evaluation. The television contained a chipset with a chip modem, a character generator, and an auto-dialer that could hold four telephone numbers. He thought about hooking it up to the supermarket and getting the supermarket to deliver the groceries.

Michael Aldrich then created a system with the modified television, Prestel (press the television), using Videotex technology. The Videotex technology was based on connecting a modified domestic television via a telephone line to a real-time multiuser transaction processing computer. This first led to business-to-business online shopping such as for holiday travel, vehicle and spare parts, sales, loan finance, and credit ratings. Finally, in 1984, Michael Aldrich's idea of home shopping came to fruition in the north of the English city of Gateshead, whereby customers in the city had access to the machine in the social center attached to their housing or in their homes.

Later on, in 1990, Tim Berners-Lee created the first world wide web server and browser, which opened in the year 1991 for commercial use. After the creation of the world wide web, subsequent technological innovations emerged in 1994. These included online banking, the opening of an online pizza shop by Pizza Hut, and Intershop's first online shopping system. The first secure retail transaction over the web was either by NetMarket or Internet Shopping Network, which were both online markets, in 1994. Then immediately after, amazon.com and eBay both launched their online shopping sites in 1995, with the former launching first. Alibaba's sites on Taobao and Tmall were launched in 2003 and 2008, respectively.

Today, online shopping is practiced all over the globe with numerous websites for one to choose from. Popular online stores in the world today include Amazon, eBay, Alibaba, Walmart, Bestbuy, Target, etcetera. Popular online stores visited by Nigerians include Jumia, Konga, DealDey, etcetera

2.4 Review of Related Works

Usman (2013) presented research that aim is to develop an online shopping website for the firm, Velcroz Designs and Couture, which would enable users to view Velcroz products, see their prices, and order for the products online, based on cash on delivery payment method. The

methodology used in the research is interview and observation. Future works include Implementing payment using a debit card, implementing a discount code for regular customers, and Adding a module to enable customers to rate and comment on products

Shreetoma and Kamakshi (2014) presented research that developed an online shopping site to manage the items in the shop and also help customers purchase them online without having to visit the shop physically. The internet was used as the sole method for selling goods to its consumers. Shopping will be highly personalized and the mall will provide lower prices than most competitors. The methodology used in developing the project was the prototyping model, it was implemented using .NET C# and MYSQL as the entity framework.

Shibin et al. (2014) presented research that aim is to deliver the online shopping application into an android platform, it is an attempt to provide the advantages of online shopping to customers of a real shop. It helps buy the products in the shop anywhere on the internet by using an android device. The Methodology used was the Iterative and Incremental models. HTML, CSS, JAVASCRIPT, and android were used in developing the application

ResearchClue (2015) presented research that aimed at implementing an online shopping cart system for a mobile phone that will exclusively display goods and services in the store and automate every sale effectively. The methodology of the work relies on experiences and case studies, the application was implemented on a relational database system (MySQL). Html, CSS, and JavaScript were used to design the interface, PHP was used to link the interface and the database, and Ajax technology for automation of the cart system. This research work was undertaken to solve the various challenges encountered in showcasing and delivering goods and services to different clients around the globe.

Mehadi (2016) presented research that aims to develop a basic website where the consumer is provided with a shopping cart application when shopping online. The Methodology used was the waterfall model. HTML, CSS, JAVA Script, server-side scripting language PHP, and relational database MySQL were used in developing the application. Future works include developing the project in such a way that credit card validation will be added, and the administrator of the website can be given more functionalities such as looking for a specific customer and generating invoices.

Ram (2016) presented research to help the ongoing user attain an easy way to navigate the customer details and solve offline store problems. It is basically a very instant processing System by which customers can get the product at the right time. The methodology used is Waterfall Model. It's basically built in the platform of Php & Html which makes the application quite flexible and easy to be operated.

Table 2.1 shows the related works of the system

Table 2.1: Related Works

Ref No.	Year	Research Problems/issues	Objective(s) of the research	Methodology	Future Work
1	2013		The main aim of this project is to develop an online shopping website for the firm, Velcroz Designs and Couture, which would enable users to view Velcroz products, see their prices, and order for the products online, based on a cash on delivery payment method	The methodology used in collecting data of this research was interview and observation. Also, the waterfall model was used in developing the website.	Future works include Implementing payment using debit cards, implementing a discount code for regular customers, and Adding a module to enable customers to rate and comment on products
2	2014		This project's aim is to design an online shopping site to manage the items in the shop and also help customers purchase them online without having to visit the shop physically	The project was developed using prototyping model, the project was implemented using .NET C# and MYSQL as the entity framework.	

3	2014		The objective is to develop a basic website where the consumer is provided with a shopping cart application when shopping online	The project was developed using the traditional waterfall model, HTML, CSS, JAVA Script, server-side scripting language PHP, and relational database MySQL were used in developing the application.	
4	2014		The project objective is to deliver the online shopping application to the android platform.	The project was developed using Iterative and Incremental methods of SDLC, HTML, CSS, JAVASCRIPT, and android were used in developing the application.	A number of features can be added to this system in the future like providing moderator more control over products so that each moderator can maintain their own products. Another feature we wished to implement was providing classes for customers so that different offers can be given to each class. The system may keep track of the history of purchases of each customer and provide suggestions based on their history.

5	2015	This research work was undertaken to solve the various challenges encountered in showcasing and delivering goods and services to different clients around the globe. Where every business transaction involves a presence for the transaction to be successfully executed	This project is aimed at implementing an online shopping cart system for a mobile phone that will exclusively display goods and services in the store and automate every sale effectively.	This research work "Design and implementation of computerized shopping cart system for a GSM/ Mobile and AJAX for the automation of the cart system.	
6	2016		The main objective of the Online Shopping System project is to help the ongoing user attain an easy way to navigate the customer details and solve the offline store problems.	The project was developed using the traditional waterfall model, HTML, CSS, JAVA Script, server-side scripting language PHP, and relational database MySQL were used in developing the application.	

CHAPTER THREE

SYSTEM ANALYSIS AND DESIGN

3.1 Introduction

This chapter describe how the proposed system was analyzed, the design, the software development lifecycle that is being used, and the analysis of the requirement of the system as well as the description of how the system function.

3.2 Approach of the Development of Online Shopping System.

Waterfall Model is the system development life cycle (SDLC) that is being chosen for the development of the Online shopping system. The model is being selected because a usable product is being released at the end of each cycle, with each release providing additional functionality. In this model Customers and developers specify as many requirements as possible and prepare a System Requirement Specification (SRS) document, Customers and developers then prioritized this requirement and Developers implement the specified requirements in one or more cycles of design, implementation, and test based on the defined priorities. The progress of the system development in the waterfall model is constantly quantifiable, since the project phase is sequential in nature, the development process is always strictly controlled. This ensures that the project is delivered in an accurate shape. The waterfalls model does not require a high expertise developer, hence, a lesser expertise developer can easily get used to the system (ISTQB, 2015).

Fig 3.1 shows the flow of the Waterfall model.

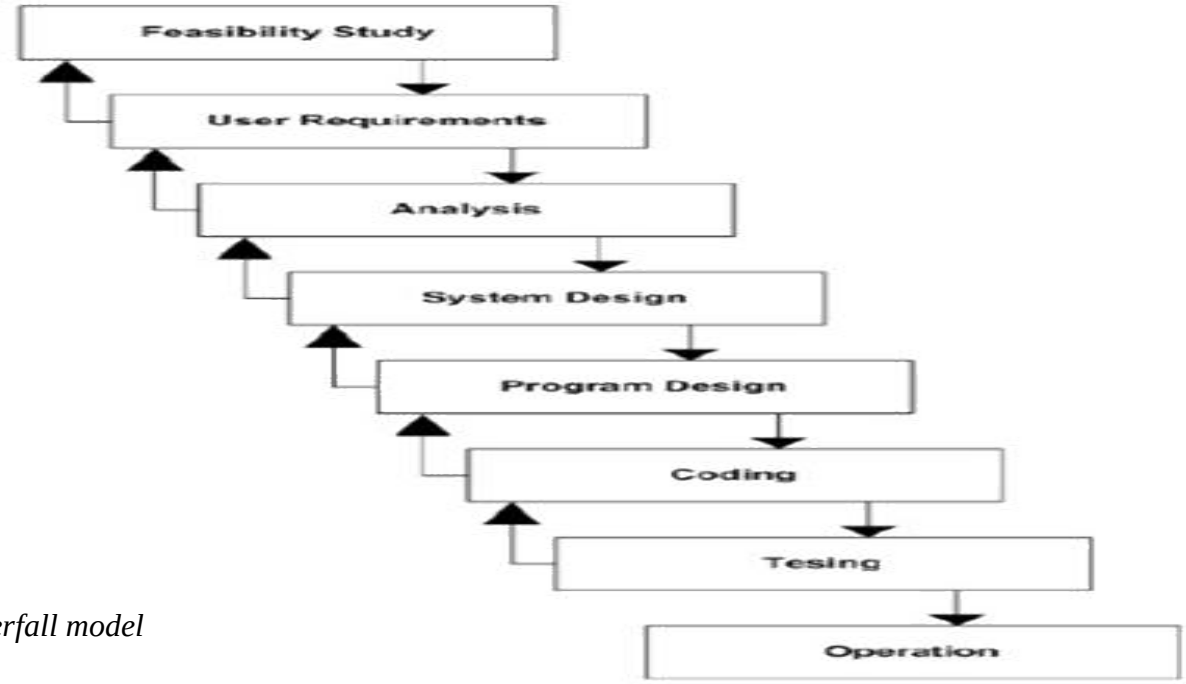

Fig 3.1; Waterfall model

3.3 System Analysis

This is a systematic approach to the analysis and design of online shopping. it involves the application of a sequence of analysis, documentation, and design tasks concerned with the analysis of the current system logical data design, logical process design, etc. The research methodology used helps us to ensure that a thorough study of the present system is effectively carried out thus helping the project research team to completely understand the modus operandi of the present system so as to know how the new system should be structured and the functionalities needed in it to address the seemingly existing problems discovered. This helps to know if there should be a total overhauling of the existing system or if only modifications should be made. From the research carried out the existing system is a manual system which gives the option of overhauling the manual system the Structured System Analysis and Design Methodology (SSADM) is adopted to create an entirely new system.

3.3.1 Requirement Elicitation:

Requirement Elicitation is a way of obtaining the requirement of the system from users. There are different types of techniques used for elicitation and each varies depending on the type of information (KK Aggarwal&Yogesh Singh 2007).

The data used for this project was acquired from different sources that include:

i. Internet surfing for some existing online shopping system projects.
ii. Personal experience and insight from some shop managers.

3.3.2 Requirement Analysis

The requirements were analyzed based on two categories. They are the functional and non-functional requirements of the system.

3.3.3 Functional Requirements

The functional requirements describe what the software has to do. They are often product features (KK Aggarwal & Yogesh Singh 2007). The functional requirements of the system are as follows;

1. The system should allow users to be able to register and create their individual accounts in the system
2. The system should allow the user to make payment of products ordered before or after the delivery, it can be made before the delivery online through PayPal or using a MasterCard debit card.
3. The system should allow the online shopping management to log in as an admin to view, add, update or delete products.

3.3.3.1 Non-Functional Requirement

1. Availability: The system should be available to the users at all times.

2. Security: The system should be secured to avoid unwanted access.

3. Reliability: The system should be reliable in such a way that it performs its tasks properly at all times without producing any ambiguous results.

4. Scalability: The system should be able to handle the task as the number of items in the store increases and also the number of users of the system.

3.4 Use Case

The use case diagram captures the different functions to be performed by the system as well as the initiations of these functions but not how they will ultimately be implemented. It also captures all the functional aspects of the system.

Fig 3.2 shows the use case diagram of the proposed system.

Fig 3.2; use case diagram

3.5 System Design

Software design is the process of transforming all the requirements gathered through system analysis into some suitable form that describes the complete structure of the system. The major goal of the design process is to describe the system in a diagrammatic form that programmers can easily implement by writing code into a working system. There are two main approaches to software design:

1. **Object Oriented Approach:** Focuses its attention on the data manipulated by the program instead of the functions performed by the program.
   The steps in this approach are
   i. Class Diagram

ii. Context Diagram

iii. Sequence Diagram etc.

2. **Functional Oriented Approach:** In this approach, the system is comprised of many smaller sub-systems known as functions. The most important tool in this chapter is the structure chart which also consists of Data Entry, Entity type, and Database.

For this project, Object Oriented approach will be adopted and sequence and context diagrams will be used.

3.5.1 Database Structure

The implementation of the database was used at the back-end or server side of the system, which is MySQL. It can be accessed in the (*phpMyadmin) system* interface. The database structure for MMS data tables in the database is explained below:

- ✔ Admin
- ✔ Users
- ✔ Cloths
- ✔ Contact Us

3.5.2 Entity Relationship Diagram of the System

Entity Relationship Diagram gives a clear view of the entities and their corresponding attributes and also shows the relationship between the entities.

Fig 3.3 shows the entity relationship diagram of the system

fig 3.3; entity relationship

3.5.3 System Context Diagram

Context diagram is a Context –Level Data Flow Diagram or a Level-0 Data Flow Diagram, it shows the system under consideration as a single high-level process, it also show the relationship the system has with other external entities, like the external data stores, groups in the restaurant, customer, etc. (Chris Adams, 2015).

fig 3.4 shows the system context diagram of the system

fig 3.4; System context diagram

3.6 Behavioral Diagrams for the System Design

SEQUENCE DIAGRAM

Fig 3.5 shows the Sequence diagram for placing an order

Fig 3.5; Sequence diagram for placing an order

SEQUENCE DIAGRAM FOR MAKING PAYMENT

fig 3.6 shows the sequence diagram for making payment

fig 3.6; Sequence diagram for making payment

This page prompt the customer to make the payment for items the customer selected, either via Visa or Master Card in making the payment, after selecting the card, he then asked to input card & PIN number. After the provision of the card detail, the payment is made and the customer receives a receipt and a reference number.

3.7 Activity Diagram

fig 3.7 shows the 3.7activity diagram of the system

fig 3.7 Activity diagram

CHAPTER FOUR

SYSTEM IMPLEMENTATION AND TESTING

4.1 Introduction

This chapter discussed the possible requirements needed for the system implementation such as hardware, software, and testing of the program and screen snapshots of the interfaces.

4.2 System Implementation

This refers to the actualization of the design into a working system that fulfills the requirements arrived at the last stage of the system development which involves the conversion of the system requirement into an executable system (Aggarwal, et al, 2007).

4.2.0 Implementation Choice

CATEGORY	SOFTWARE USED
OPERATING SYSTEM	Windows
Programming Language	HTML 5, PHP, JavaScript, CSS.
IDE	Xamp
.Net Framework	ADO.Net
Database	Microsoft SQL

Before any website could be designed, decisions needed to be made on which programming language should be used. In implementing the website, Xamp was used as the IDE, and to ensure a standardized object-oriented program in its entire ramification, HTML 5, PHP, JavaScript, and CSS were used, after Microsoft ADO.Net was used to connect to the database which was created using Microsoft SQLto perform all the

Functionalities. Table 4.1 shows the implementation choices

Table 4.1; implementation choices.

4.2.1 Demonstration and Description of Coding

The system implementation is presented in this section

4.2.2 Customer Registration Screen

After the customer loads the website, this screen will appear to the user. it allows the user to enter his/her information in the form provided. And then a register button that stores the information in the local host server system.

Fig 4.1 shows the system interface for the test of successful customer registration

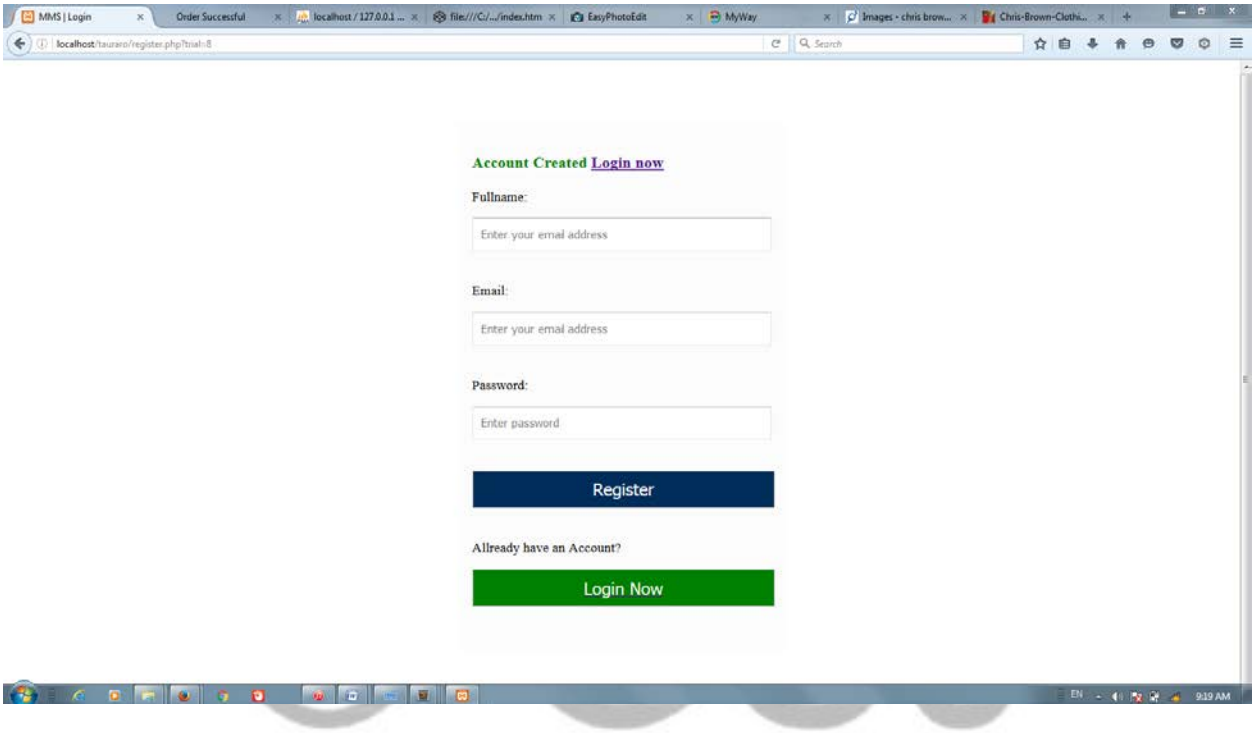

fig 4.1; customer registration screen

4.2.3 Log in Screen

After the user loads the website, This Screen will appear with two textboxes and a button, and the user is allowed to enter his/her email and password. And then a sign-in button that allows the user to go to the next page.

Fig 4.2 shows the system interface for the test of the successful log in

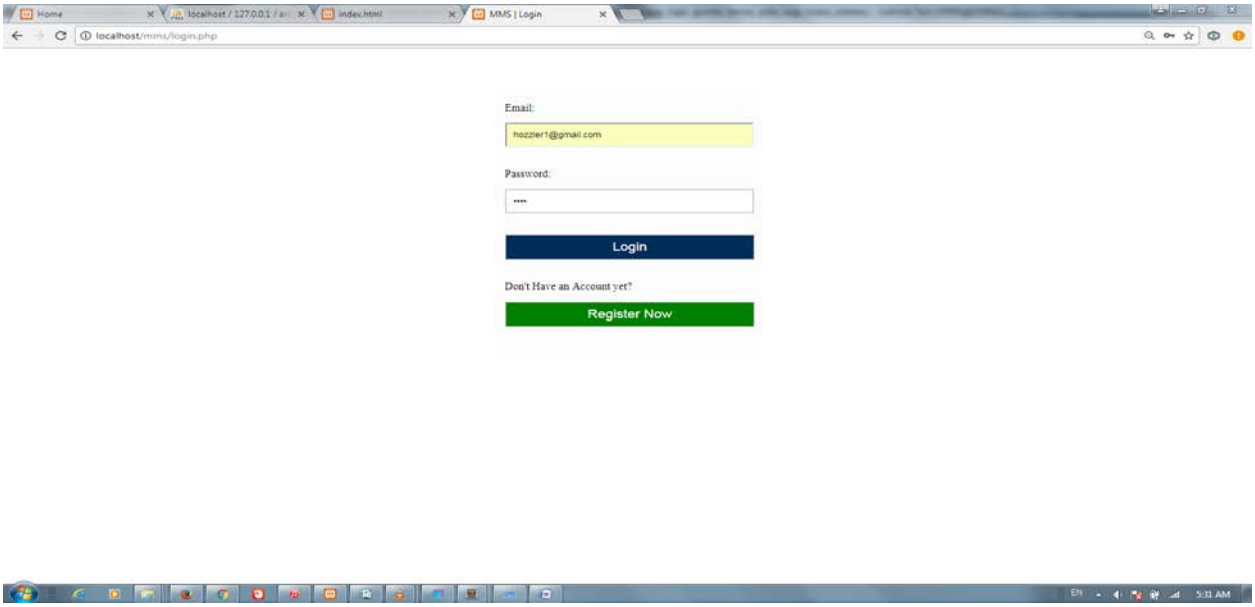

fig 4.2; log-in screen

4.2.4 Home Screen

This Screen appears when the user clicks the sign-in button from the login screen so that it allows the user to do several activities that appear on the screen.

Fig 4.3 shows the system interface for the home screen

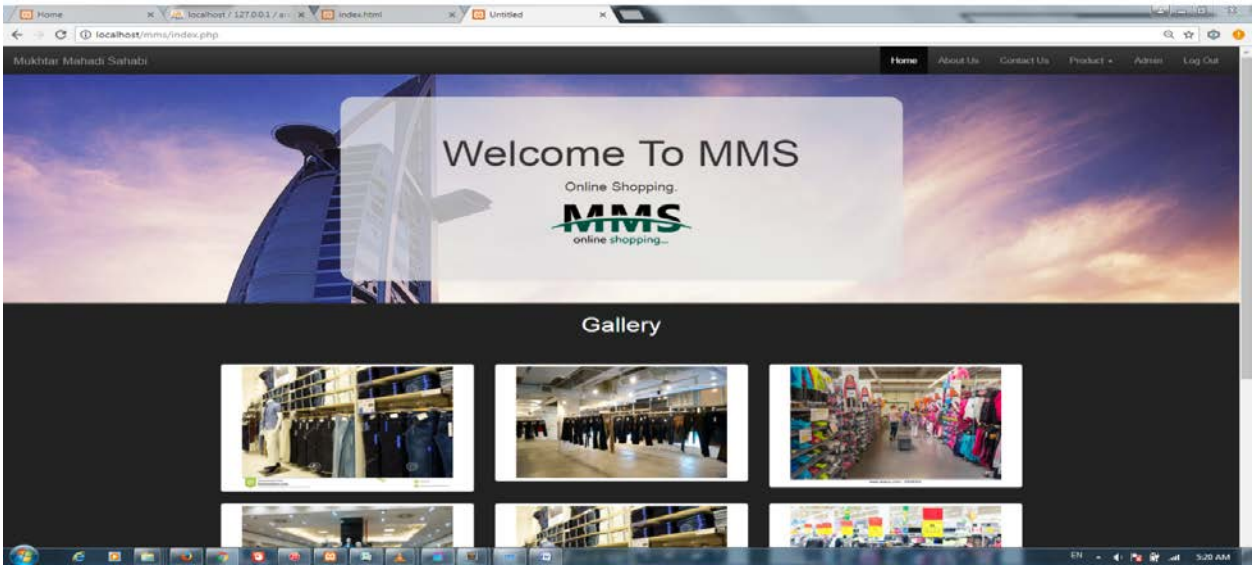

fig 4.3 home screen

4.2.5 Product Screen

This Screen appears when the user wants to see the products in the store, it allow the user to navigate between the items in the store and make a selection.

Fig 4.4 shows the system interface of the products screen

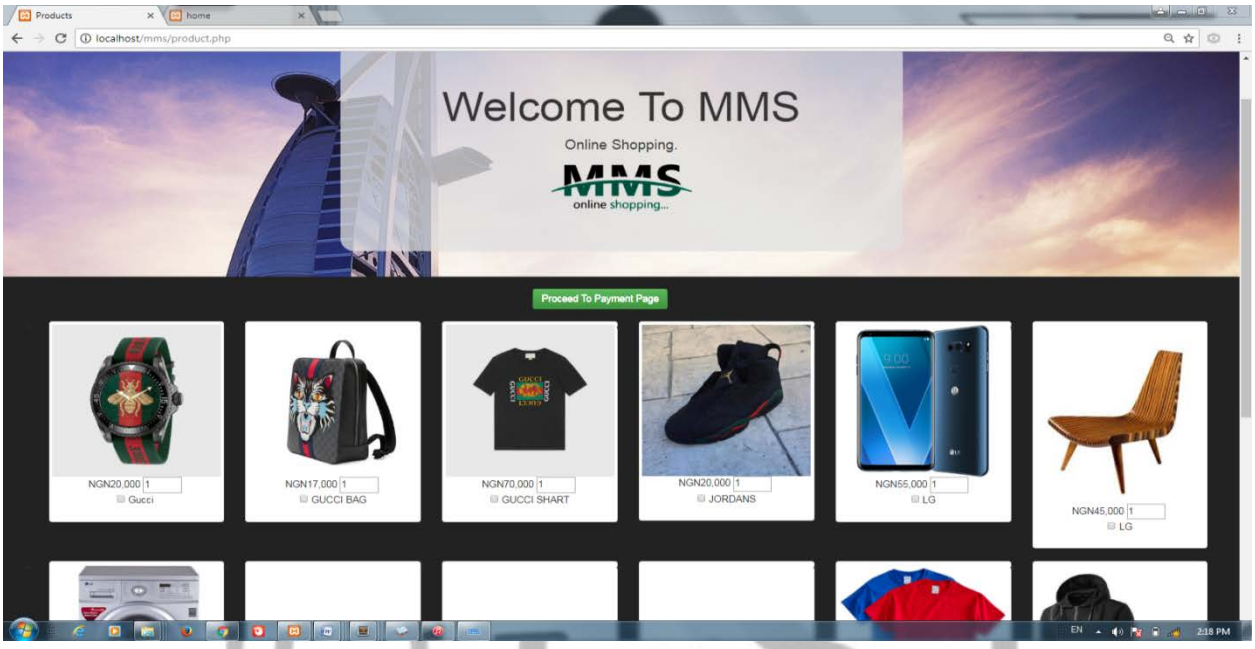

fig 4.4 product screen

4.2.6 Placing Order Screen

This Screen appears when the user wants to place an order, it allows the user to place an order of a product of his/her liking. Fig 4.5 shows the system interface of the successful order

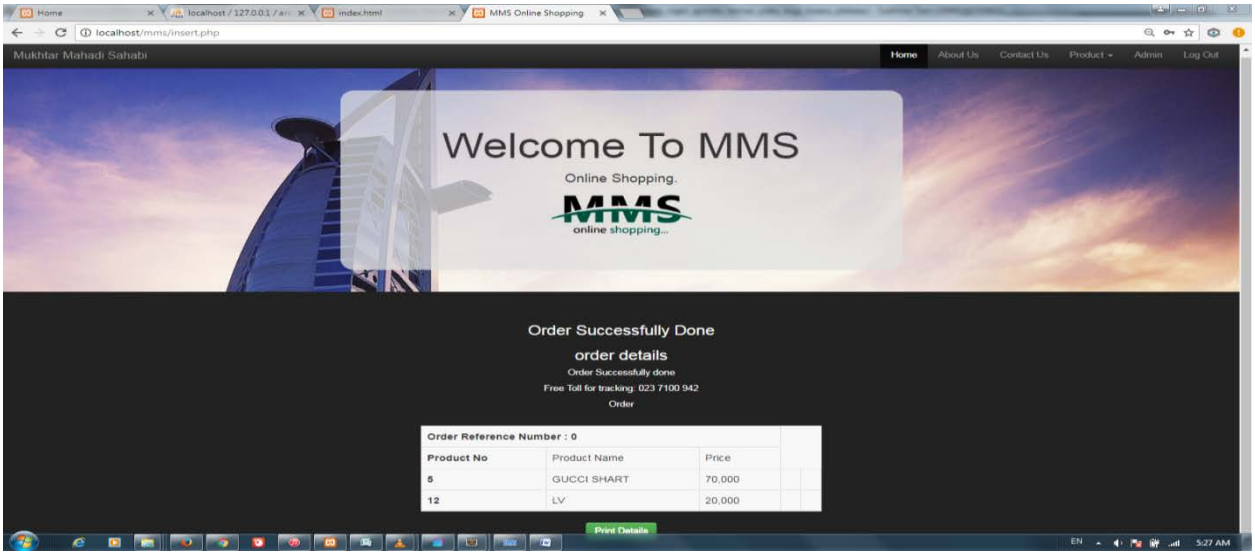

fig 4.5 placing order screen

4.2.7 Customer Feedback Screen

This Screen appears when the user wants to leave feedback, it allows the customer to leave a remark or a complaint which will be read by the staff.

Fig 4.6 shows the system interface of the customer feedback

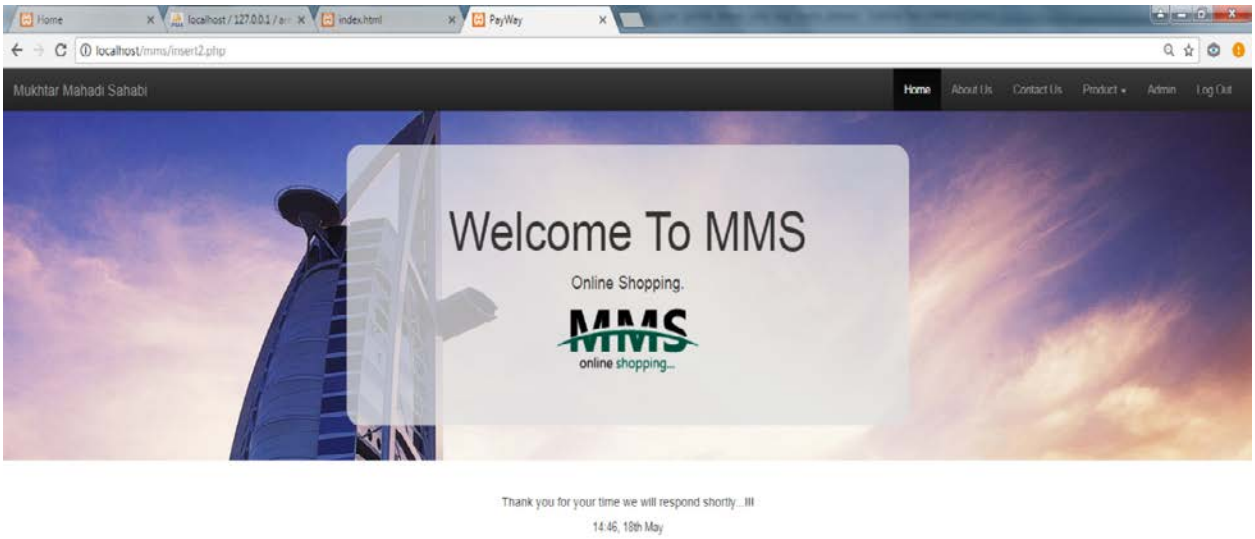

fig 4. 6 customer feedback screens

4.2.8 Contact us Page Screen

This Screen appears when the customer wants to contact the shop for an inquiry, it allows the user to ask his or her questions or make an inquiry of a product.

Fig 4.7 shows the system interface of the contact us screen.

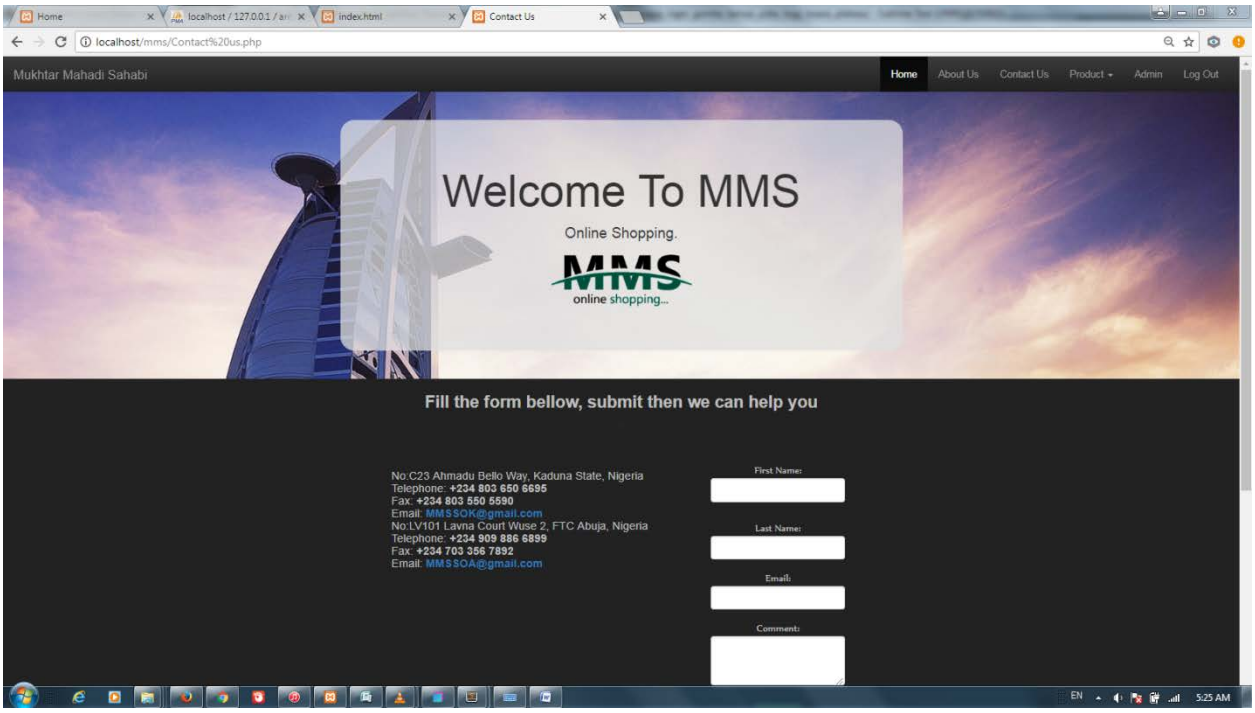

fig 4.7contact us page screen

4.2.9 Admin Login Screen

After the Admin loads the website, this Screen will appear with two textboxes and a button it allows the admin to enter his/her username and password, and then a sign-in button that allows the admin to go to next page. Fig 4.8 shows the system interface of the admin login screen

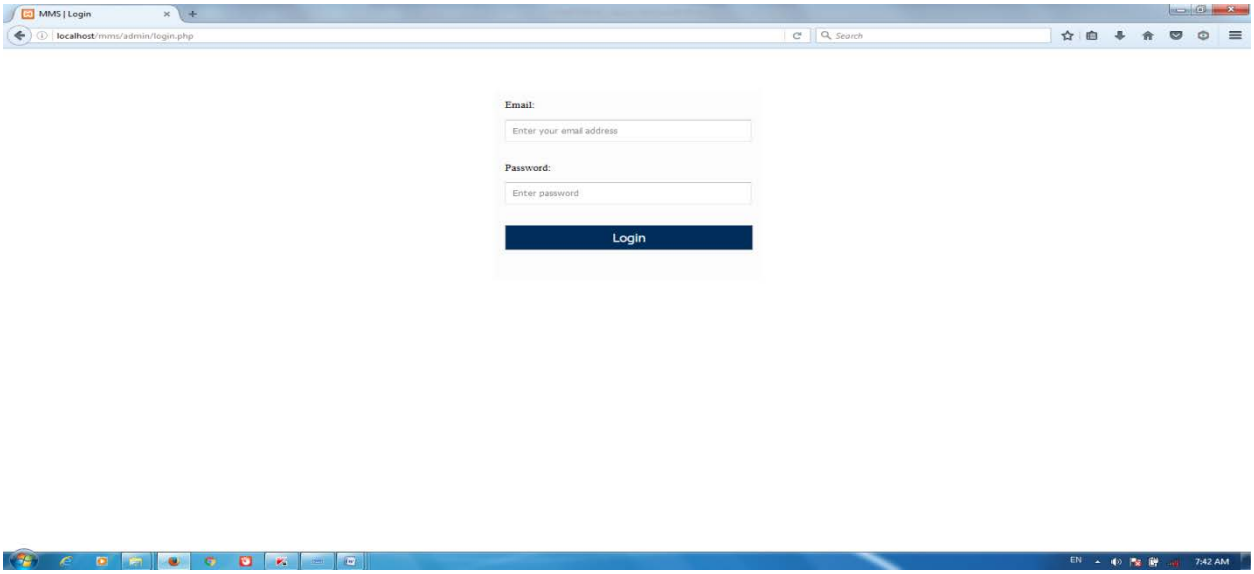

fig 4.8 admin login screen

4.2.10 Admin Screen

After the admin successful login, this screen will allow him/her to add, update, or delete a product ad may other functionalities regarding managing the website.

Fig 4.9 shows the system interface of the admin screen

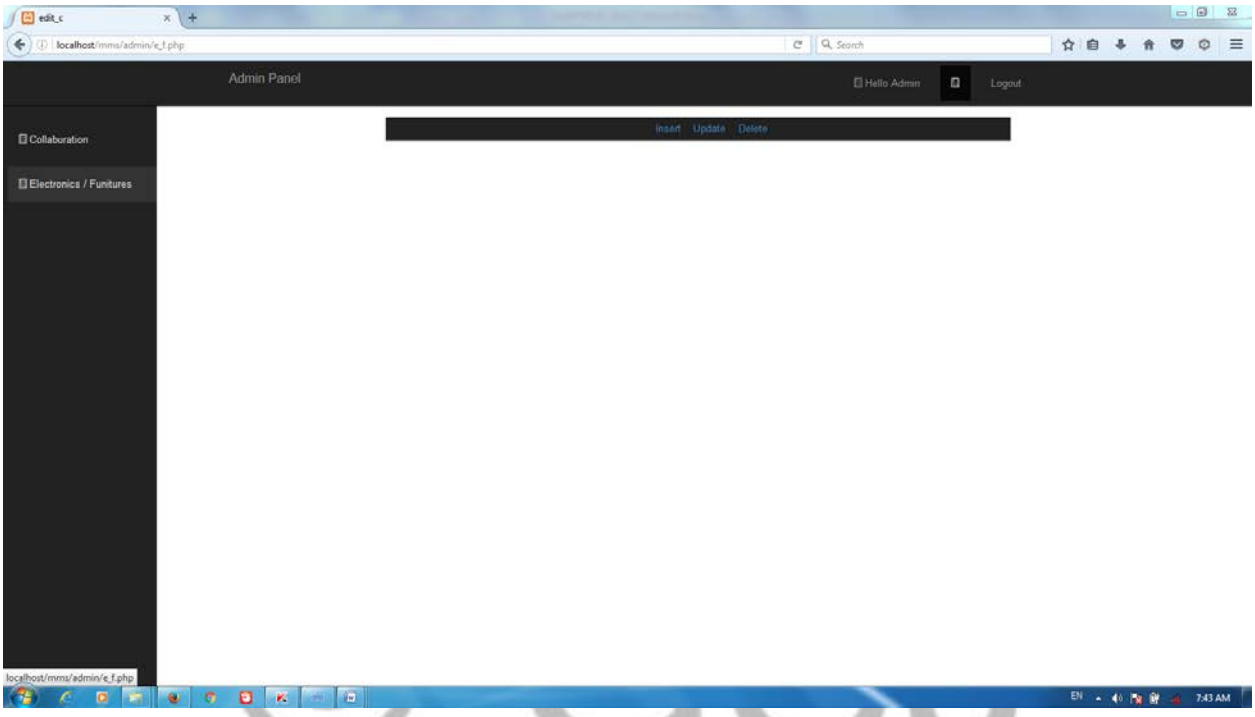

fig 4.9 admin screen

4.3 System Testing

To ensure the workability of the system, three tests were conducted. One was unit testing and the other is integration testing. The procedures and the results of the tests are presented in this section.

4.3.1 Unit Testing

Various components that make up the system were tested to ensure the efficiency of functions. The web application was tested on HP. The function that was tested are described below:

TESTING FOR CUSTOMER REGISTRATION

Table 4.2 shows the test for the customer registration

Table 4.2; customer registration test

Purpose of the test	The test will check if the customer can fill out a registration form and register with the MMS Online Shopping system.
Test data	The user's name, email, phone no, password, and address is entered.
Test condition	User information entered will be stored in the local host server system.
Expected outcome	User details will be stored in the reservation interface of the system once a valid email and password are entered correctly.
Actual outcome	Access and information will be saved in the system as a potential customer.
Remark	The customer registration was successful.

TEST FOR CUSTOMER LOG IN

Table 4.3 shows the test for the customer login

Table 4.3; customer login

Purpose of the test	The test will check if the customer can fill out a registration form and register with the MMS Online Shopping system.
Test data	The user's name, email, phone no, password and address are entered.
Test condition	User information entered will be stored in the local host server system.
Expected outcome	User details will be stored in the reservation interface of the system once a valid email and password are entered correctly.
Actual outcome	Access and information will be saved in the system as a potential customer.

Remark	The customer registration was successful.

TEST FOR PLACING AN ORDER

Table 4.4 shows the test for placing an order

Table 4.4; placing an order

Purpose of the test	The test will check how customer place an order in the MMS Online Shopping system.
Test data	Customer enters the type of product, the quantity, name, address, phone number, and card details.
Test condition	User information entered will be stored and processed in the local host server system.
Expected outcome	The customer will have a notification of the order's success, and an order reference number to verify ownership.
Actual outcome	Access and information will be saved in the system as an order is placed.
Remark	The order was successful.

TESTING FOR CUSTOMER FEEDBACK

Table 4.5 shows the test for customer feedback.

Table 4.5 customer feedback

Purpose of test	The test will check how to send feedback to the MMS System..
Test data	Customer enters name, telephone, email, and writes a message to the company.
Test condition	User information entered will be stored and processed in the local host server system and accessed by the MMS Staffs..

Expected outcome	The customer will get reply from the company after the staffs read the message or complaint.
Actual outcome	Access and information will be saved in the system as customer feedback message.
Remark	The feedback was submitted successfully.

Table 4.6 shows the responses of the participants of the questionnaire

Table 4.6; questionnaire data

Participant	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	SUS SCORE
1	**3**	**4**	**3**	**4**	**3**	**3**	**4**	**4**	**3**	**4**	**87.5**
2	**4**	**3**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**1**	**90.0**
3	**4**	**4**	**3**	**3**	**4**	**4**	**4**	**0**	**4**	**4**	**85.0**
4	**4**	**0**	**4**	**3**	**3**	**4**	**4**	**4**	**4**	**0**	**75.0**
5	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**3**	**4**	**97.5**
6	**4**	**4**	**4**	**4**	**4**	**3**	**4**	**1**	**3**	**4**	**87.5**
7	**3**	**4**	**3**	**3**	**4**	**4**	**4**	**4**	**4**	**3**	**90.0**
8	**4**	**4**	**4**	**4**	**4**	**4**	**3**	**4**	**4**	**4**	**97.5**
9	**3**	**3**	**3**	**4**	**3**	**4**	**4**	**3**	**3**	**4**	**85.0**
10	**4**	**3**	**4**	**3**	**4**	**4**	**4**	**4**	**4**	**4**	**95.0**
11	**4**	**2**	**4**	**3**	**4**	**3**	**4**	**4**	**3**	**3**	**85.0**
12	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**100.0**
13	**4**	**3**	**2**	**3**	**4**	**3**	**2**	**3**	**4**	**4**	**80.0**
14	**4**	**4**	**3**	**4**	**4**	**4**	**3**	**4**	**3**	**4**	**92.5**
15	**4**	**3**	**3**	**1**	**4**	**4**	**4**	**3**	**4**	**0**	**75.0**
16	**3**	**3**	**4**	**3**	**4**	**4**	**3**	**4**	**3**	**1**	**80.0**

17	**4**	**3**	**3**	**3**	**3**	**4**	**3**	**4**	**3**	**3**	**82.5**
18	**3**	**2**	**3**	**1**	**3**	**2**	**3**	**2**	**1**	**4**	**72.5**
19	**4**	**3**	**3**	**4**	**3**	**2**	**3**	**2**	**4**	**1**	**67.5**
20	**3**	**2**	**3**	**3**	**4**	**4**	**3**	**2**	**3**	**0**	**60.0**
21	**4**	**0**	**4**	**1**	**4**	**1**	**4**	**1**	**4**	**1**	**82.5**
22	**4**	**4**	**3**	**2**	**4**	**4**	**4**	**0**	**4**	**4**	**87.5**
23	**4**	**4**	**4**	**3**	**4**	**4**	**4**	**0**	**4**	**4**	**80.0**
24	**4**	**2**	**4**	**1**	**3**	**3**	**3**	**2**	**3**	**0**	**100.0**
25	**4**	**3**	**4**	**1**	**2**	**3**	**4**	**0**	**4**	**1**	**80.0**

Table 4.7 shows the participant's individual score

Table 4.7; participant's individual score

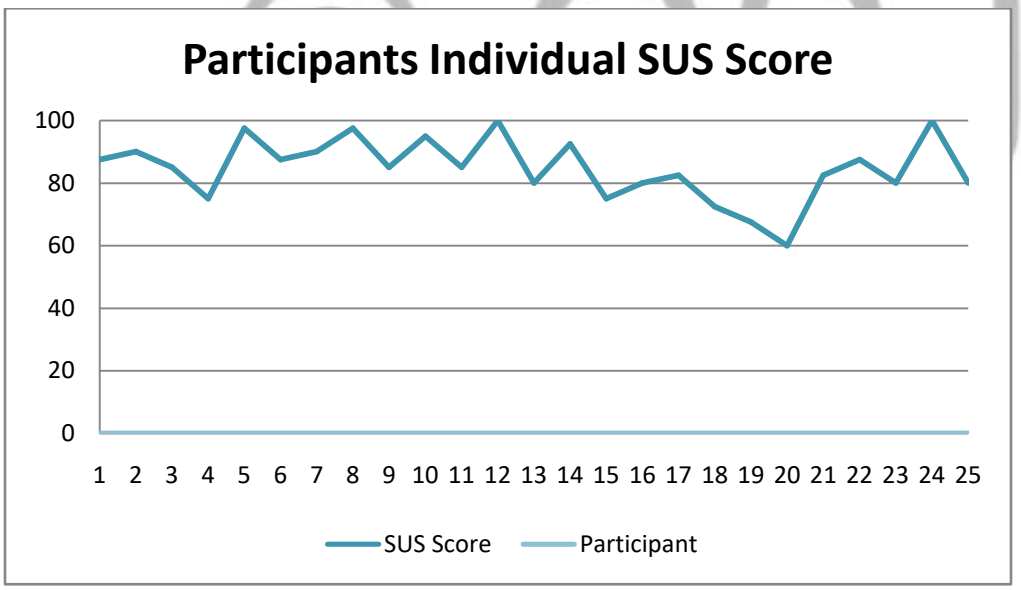

Table 4.8 shows the participant SUS score in percentage

Table 4.8; participant SUS score in percentage

SUS score from 0-4	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10		Participant response in %
0	0	2	0	2	0	0	0	4	1	5		5.3%
1	0	0	0	4	0	2	0	3	1	0		4.7%
2	0	4	1	3	1	2	2	4	0	0		6.3%
3	6	9	11	11	7	6	8	4	9	5		28.7%
4	19	10	13	5	17	15	15	10	14	15		55.0%
	25	25	25	25	25	25	25	25	25	25		100.0%

This shows that 83.7% of the participant are satisfied and that the system is working without errors.

CHAPTER FIVE
SUMMARY CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter presents a brief summary of the project followed by a conclusion drawn from the project. It also offers some recommendations based on the analysis conducted and the literature reviewed.

5.1 Summary

The business-to-consumer aspect of electronic commerce (e-commerce) is the most visible Business use of the World Wide Web. The primary goal of an Online shopping system is to sell goods and services online. This project deals with developing an e-commerce website for online shopping. It provides the user with a catalog of different products available for purchase in the store. This is a project with the objective of designing and implementing an Online Shopping System by identifying the requirements of the system and conducting a system analysis which leads to the designing of the proposed system based on the identified requirements. In the process of carrying out this project, the software development life cycle model that was adopted is Waterfall. The primary sources of data were Observation and interviews and also secondary sources such as reviews of past records, books, and journals. Use case diagram was used to depict the functional requirements of the system, the system was modeled using a sequence diagram and activity diagram. The system was implemented using a 3-tier approach, with a backend MySQL database, a middle tier apache server, and a web browser as the front-end client. In order to develop online shopping application use HTML, CSS, JAVA Script, server-side scripting language PHP, and relational database MySQL. This is a project with the objective of designing and implementing an Online Shopping System by identifying the requirements of the system and conducting a system analysis which leads to the designing of the proposed system based on the identified requirements. In the process of carrying out this project, the software development life cycle model that was adopted is Waterfall. The primary sources of data were Observation and interviews and also secondary sources such as reviews of past records, books, and journals. Use case diagram was used to depict the functional

requirements of the system, the system was modeled using a sequence diagram and activity diagram.

5.2 Conclusion

The project entitled **Design and Implementation of an Online Shopping System** were completed successfully.

The system has been developed with much care and at the same time, it is efficient and less time-consuming. The purpose of this project was to develop a website for purchasing items from a shop. This project helped us in gaining valuable information and practical knowledge on several topics like designing web pages using HTML & CSS, usage of responsive templates, and management of databases using MySQL. The entire system is secured. Also, the project helped us understand the development phases of a project and the software development life cycle. We learned how to test different features of a project.

This project has given us great satisfaction in having designed a website that can be implemented in any nearby shops or branded shops selling various kinds of products with simple modifications.

5.3 Recommendations

Initially the system intended to cover more aspects of online shopping, but due to limited time, the scope was limited to just a few functionalities. Therefore, I suggest the following recommendations:

1. I recommend a 1-click ordering method; this method works when you place your first order and enter a payment method and shipping address, 1-Click ordering is automatically enabled. When you click **Buy now with 1-Click** on any product page, your order will be automatically charged to the payment method and shipped to the address associated with your 1-Click settings.

2. Providing moderators more control over products so that each moderator can maintain their own products.
3. Another recommendation is in providing classes for customers so that different offers can be given to each class. The system may keep track of the history of purchases of each customer and provide suggestions based on their history.

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Appendix

Bayero University Kano

Faculty of Computer Science and Information Technology

This evaluation is part of the validation of the undergraduate project titled: Online Shopping System. This questionnaire aims to evaluate the website in terms of its usability.

Part 1 Personal information

1. Gender
   Male Female

2. Current role in the Organization

   Sales rep Customer

Part 2

Based on your experience of using the Online Shopping System, please answer questions 1-10. You can choose one answer for each question.

Please mark (x) on your answer.

0 1 2 3 4

Strongly Disagree Disagree Not Sure Agree Strongly Agree

Question	**Rating**				
	0	**1**	**2**	**3**	**4**
1. I would like to use this system					
2. I found the system unnecessarily complex					
3. The system is easy to use					
4. I would need the support of a technical person to be able to use this system					
5. The various functions in the system are well integrated					
6. There is too much inconsistency in this system					
7. Most people would learn to use this system very quickly					

8. The system is very cumbersome to use					
9. I felt very confident using system					
10. I needed to learn a lot of things before I could use this system					

Thank you very much for your feedback.

Appendix ii

```
 switch ($theType) {
   case "text":
     $theValue = ($theValue != "") ? "'" . $theValue . "'" : "NULL";
     break;
   case "long":
   case "int":
     $theValue = ($theValue != "") ? intval($theValue) : "NULL";
     break;
   case "double":
     $theValue = ($theValue != "") ? doubleval($theValue) : "NULL";
     break;
   case "date":
     $theValue = ($theValue != "") ? "'" . $theValue . "'" : "NULL";
     break;
   case "defined":
     $theValue = ($theValue != "") ? $theDefinedValue : $theNotDefinedValue;
     break;
 }
 return $theValue;
}
}


mysql_select_db('mms');
```

```
$query_menu = "SELECT * FROM clouths ORDER BY clouths.productname";
$menu = mysql_query($query_menu) or die(mysql_error());
$row_menu = mysql_fetch_assoc($menu);
$totalRows_menu = mysql_num_rows($menu);
?>
<html>
<head>
<link rel="stylesheet" href="style.css">
<link rel="stylesheet" type="text/css" href="bootstrap.css">
<link rel="stylesheet" href="assets/bootstrap/css/bootstrap.min.css">
<link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Cookie">
<link rel="stylesheet" href="assets/fonts/font-awesome.min.css">
<link rel="stylesheet" href="assets/css/styles.css">
<link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/lightbox2/2.10.0/css/lightbox.min.css">
<link rel="stylesheet" href="assets/css/Pretty-Footer.css">
<style type="text/css">
  #main1 {
   position: relative;
   left: -30px;
  }
</style>
</head>
<title>Products</title></title>
<body>
<?php include "header.php";?><br>

<center>
<div id="main1">
```

```
<form action="add2.php" method="post" name="addto">
<input name="order" type="submit" value="Proceed To Payment Page" class="btnbtn-default btn-success">
<ul class="list-menu" <li
<br>
<?php
   $count=1;
   do { ?>

<div id="main">
<div class="row-fluid">
<ul class="">
<li class="col-md-2">
<article class="thumbnail">

</h4><imgsrc="assets/img/<?php echo $row_menu['img']; ?>" />
<span>NGN<?php echo $row_menu['price']; ?></span>
<input name="qty['qty']" type="text" size="3" placeholder="Qty" value="1">
<br>
<input name="meals[]" type="checkbox" value="<?php echo $row_menu['id']; ?>">
<?php echo $row_menu['productname']; ?><br><br>

</article>
</li>
</ul>
</div>

<?php
    $count++;
```

```
    } while ($row_menu = mysql_fetch_assoc($menu)); ?>

<div class="clear"></div>
</li>
</ul>

</form>

if(isset($_POST["login"])){
                                                    $email =
mysql_real_escape_string($_POST['email']);
                                                    $password =
mysql_real_escape_string(sha1($_POST['password']));

                                                    $find = 'SELECT * FROM users
where email = "'.$email.'" and password = "'.$password.'"';
                                                    $query = mysql_query($find);

                                                   $row= mysql_fetch_assoc($query);

                                                  if($row > 0){
$_SESSION["user_id"] = $row["id"];
SESSION["user_fullname"] = $row["fullname"];
SESSION["user_email"] = $row["email"];SESSION["user_type"] = $row["user_type"];
$_SESSION["user_city"] = 1;
if($_SESSION["user_type"] == "a"){
SESSION["user_currency"] = '&pound;';
$_SESSION["user_curr"] = 'GBP;';
header("Location:index.php");
```

```
                                        }else {
header("Location:index.php");                   }
}else {
echo '<h3 style="color: red;">Invalid Login details</h3>';
  }
}
?>
<label for="email">Email:</label>
<p>
<input type="text" placeholder="Enter your email address" id="email" class="login_input"
name="email" required /></p>
<label for="password">Password:</label>
<p>
<input type="password" placeholder="Enter password" id="password" class="login_input"
name="password" required /></p>
<p><input type="submit" value="Login" class="login_inputlogin_button"  name="login" /></p>
Don't Have an Account yet?<br/><p>
<ahref="register.php"><input type="button" value="Register Now"
class="login_inputlogin_button"  /></a></p>

</form>
</div><BODY style="background-color: #222">

<?php include "header.php";?>

<center>
<h3><font color=silver size=5><b>Fill the form bellow, submit then we can help
you</b></font></h3><

<div class="cont">
```

<form role="form" method="POST" action="insert2.php">

<table class="address">

<tr class="address3"><td>No:C23 Ahmadu Bello Way, Kaduna State, Nigeria</td></tr>

<tr class="address3"><td>Telephone: +234 803 650 6695</td></tr>

<tr class="address3"><td>Fax: +234 803 550 5590</td></tr>

<tr class="address3"><td>Email: MMSSOK@gmail.com</td></tr>

<tr class="address2"><td>No:LV101 Lavna Court Wuse 2, FTC Abuja, Nigeria</td></tr>

<tr class="address2"><td>Telephone: +234 909 886 6899</td></tr>

<tr class="address2"><td>Fax: +234 703 356 7892</td></tr>

<tr class="address2"><td>Email: MMSSOA@gmail.com</td></tr>

</table>

First Name:

<input type="text" name="firstname" class="form-control">

```
<div class="form-group">
<font color=silver size=3 face="nyala">Last Name:</font>
<input type="text" name="lastname" class="form-control">
</div>

<div class="form-group">
<font color=silver size=3 face="nyala">Email:</font>
<input type="email" name="email" class="form-control">
</div>

<div class="form-group">
<font color=silver size=3 face="nyala">Comment:</font>
<textarea name="comment" rows="3" cols="20" class="form-control"></textarea><br>
</div>
<br>
<input type="submit" value="Submit" class="btnbtn-default btn-success">
</div>
</div>
<br>
</FORM>
</div>

</div>
</div>
</center>
```

```
<?php include "header3.php";?>


<?php include "footer.php";?>
<script src="jquery.min.js" ></script>
<script src="bootstrap.min.js" ></script>
<script src="assets/js/jquery.min.js"></script>
<script src="assets/bootstrap/js/bootstrap.min.js"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/lightbox2/2.10.0/js/lightbox-plus-
jquery.min.js"></script>


</BODY>
</HTML>
```