DESIGN AND DEVELOPMENT OF AN E-SHOP

BY

MD. ANIK ISLAM
ID: 131-15-2339

This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering

Supervised By

Anup Majumder
Lecturer
Department of CSE
Daffodil International University

Masud Rabbani
Lecturer
Department of CSE
Daffodil International University

DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

DECEMBER 2018

APPROVAL

This Projecttitled "DESIGN AND DEVELOPMENT OF AN E-SHOP", submitted by Md. Anik Islam, ID No: 131-15-2339 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 10th December 2018.

BOARD OF EXAMINERS

_____

Dr. Syed AkhterHossain — **Chairman**
Professor and Head
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

_____

Narayan Ranjan Chakraborty — **Internal Examiner**
Assistant Professor
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

_____

Md. Tarek Habib — **Internal Examiner**
Assistant Professor
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

_____

Dr. Mohammad ShorifUddin — **External Examiner**
Professor
Department of Computer Science and Engineering
Jahangirnagar University

© Daffodil International University

DECLARATION

I hereby declare that, this project has been done by me under the supervision of **Anup Majumder, Lecturer, Department of CSE** in Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

Supervised by:

_____

Anup Majumder
Lecturer
Department of CSE
Daffodil International University

Co-Supervised by:

_____

Mr. Masud Rabbani
Lecturer
Department of CSE
Daffodil International University

Submitted by:

_____

Md. Anik Islam
ID: -131-15-2339
Department of CSE
Daffodil International University

© Daffodil International University

ACKNOWLEDGEMENT

First I express my heartiest thanks and gratefulness to almighty God for His divine blessing makes me possible to complete the final year project/internship successfully.

I fell grateful to**Anup Majumder, Lecturer,** Department of CSE, Daffodil International University, Dhaka having Deep Knowledge & keen interest of my supervisor in the field of web design and development to carry out this project. His endless patience ,scholarly guidance ,continual encouragement , constant and energetic supervision, constructive criticism , valuable advice ,reading many inferior draft and correcting them at all stage have made it possible to complete this project.

I would like to express my heartiest gratitude to **Anup Majumder**, Lecturer and **Prof. Dr. Syed Akhter Hossain,** Head**,** Department of CSE, for his kind help to finish my project and also to other faculty member and the staff of CSE department of Daffodil International University.

I would like to thank our entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Finally, I must acknowledge with due respect the constant support and patients of my parents.

© Daffodil International University

ABSTRACT

This project title name is"**DESIGNAND DEVELOPMENT OF AN E-SHOP**" which is online electronics shop. Where user can buy any electronics in various brand from home. Here anyone can see our product without login or registration. If anyone want to buy anything he/she must be login. Before login user must be registration. After registration user have email and password. After login user have a profile, where he/she can update his/her profile and billing address which is must for buy our product. Only Admin can add or remove product. This site is only for sell. So user cannot add product or remove product. But any visitor can see our all product. We have an option for coupon. Which is not always available. Sometimes we provide coupon. If user are interested, they can buy coupon by coupon subscription. After buy coupon user have a coupon code. They can use it for shopping for a big amount discount.
We have a filter option too which is easy to define product among user amount range. This helpful for all category user. We hope this site is too much helpful for all electronics lover.

TABLE OF CONTENTS

CONTENTS	PAGE
Approval	i
Declaration	ii
Acknowledgements	iii
Abstract	iv
Table Of Content	v-vi
List Of Figure	vii
CHAPTER 1: INTRODUCTION	**01-03**
1.1 Introduction	01
1.2 Motivation	01-02
1.3 Objectives	02
1.4 Expected Outcome	02-03
CHAPTER 2: BACKGROUND	**04-06**
2.1 Introduction	04
2.2 Related Works	04
2.3 Comparative Studies	04
2.4 Scope of the Problem	04-05
2.5 Challenges	06
CHAPTER 3: REQUIREMENT SPECIFICATION	**07-10**
3.1 Business Process Modeling	07
3.2 Requirement Collection and Analysis	08
3.3 Use Case Modeling and Description	08
3.4 Logical Data Model	09

3.5 Design Requirements 10

CHAPTER 4: DESIGN SPECIFICATION 11-18

4.1 Front-end Design 11-16

4.2 Back-end Design 16

4.3 Interaction Design and UX 17

4.4 Implementation Requirements 18

CHAPTER 5: IMPLEMENTING AND TESTING 19-23

5.1 Implementation of Database 19

5.2 Implementation of Front-end Design 20-21

5.3 Implementation of Interactions 20-21

5.4 Testing Implementation 22

5.5 Test Results and Reports 23

CHAPTER 6: CONCLUSION AND FUTURE SCOPE 24-24

6.1 Discussion and Conclusion 24

6.2 Scope for Further Developments 24

REFERENCES 25

LIST OF FIGURE

FIGURES	PAGE NO
Figure 3.1: Data flow diagram of the system	07
Figure 3.2: Use Case diagram of the system	08
Figure 3.3: Entity Relationship Model	09
Figure 4.1: Home page of the site	12
Figure 4.2: User login and registration page	13
Figure 4.3: Cart page	14
Figure 4.4: Checkout page	15
Figure 4.5: Order success message	16
Figure 4.6: Database sample	17
Figure 5.1: Database Processing	19
Figure 5.2: Database and all table used in project	20
Figure 5.3: Front end design of homepage	21

CHAPTER 1
INTRODUCTION

1.1 Introduction

E Commerce stands for electronic commerce and caters to commercialism in product and services through the electronic medium like web, mobile or the other electronic network. It involves the employment of data and Communication Technology (ICT) and Electronic Funds Transfer (EFT) in creating commerce between shoppers and organizations, organization and organization or shopper and shopper.

Electronic commerce, normally written as e-commerce or ecommerce, is that the commercialism or facilitation of commercialism in merchandise or services victimization laptop networks, like the web or on-line social networks. Electronic commerce attracts on technologies like mobile commerce, electronic funds transfer, provide chain management, web selling, on-line dealing process, electronic knowledge interchange (EDI), inventory management systems, and automatic knowledge assortment systems. fashionable electronic commerce usually uses the planet Wide net for a minimum of one a part of the transaction's life cycle though it should conjointly use alternative technologies like e-mail.

1.2 Motivation

We all learned things from people United Nations agency we have a tendency tore willing to share their data with America within the same manner we share our data with others. during this new genaration,we all realize {the online the we have a tendency tob|the net} looking preocess.in our country even have some ecommerce web site wherever we will obtain simply each product via on-line network. But the most downside is those don't seem to be terribly trustable. Also those web site don't seem to be commercialism some distinctive natural philosophy appliance and product that individuals ar wish. For this reason all individuals are visit different country web site as such as you understand amazon.com alibaba.com ebay.com etc. Some of my friends visit amazon.com to shop for some product, at that point we have a tendency to saw a shipping

downside. If we have a tendency to obtain product then we want to rent a 3rd party for shipping. Then few days later we have a tendency to all discuss to every different concerning the passivity to form AN ecommerce web site. Then i used to be determined to form a web site wherever individuals not face any trouble for shipping product.so i made a decision to form AN ecommerce web site as my final project.

1.3 Objectives

1. Brand Recognition: Getting our brand recognized is an important aspect especially if we crawled recently in the market.
2. Generating Leads: Getting targeted visitors that are interested in what we sell.
3. Conversion: Converting targeted traffic so that the potential customers end up buying your products.
4. Retention: Making our customers repeat the orders and retaining them to our business alone in the industry.
5. Customer satisfaction:Customer is the main part of any E-commerce business so it's very important to make your customer happy and satisfied. By providing quality and desirable products, it is one of the main objectives of E-commerce.
6. Social popularity - Unless and until you are not famous and popular among people you cannot establish your brand. Digital marketing is essential for any E-commerce business.

1.4 Expected Outcome

- Enable Easier access to information
- Provide new products or services to customers
- Increase the flexibility of information request
- Improve customer relationship
- Enhance the credibility and prestige of the organization

- Provide better products or services to customer
- Increase volume of information output
- Align well with stated organizational goals
- Enable the organization to respond more quickly to change
- Enable faster retrieval or delivery of information or reports
- Help establish useful linkages with other organizations
- Save money by reducing communication costs.

.

CHAPTER 2
BACKGROUND

2.1 Introduction

This is a web based e-shop which will deal with the customers for intimating them the new electronics and upcoming electronic products and their features. At present marketing system is relying on online system. People realize on saving their important times. In this web based service people can easily have an account for buying their wishingelectronics [1]. There's an add to cart option which will help them to gather their necessary things to one place. Also the bill paying system is very simple. Customer can pay their bills via Debit card credit card and also pay via Bkashaccount. Registered customer will get emails about any upcoming offers and upcoming products. There isalso facebook page which will also notify the customer about products. This will be the place for saving customers valuable time.

2.2 Related Works

- Hiring for Customer Service specialist.
- Email Customer Care Representative (Remote)
- Hiring IMMEDIATELY! Sales and Service Consultants
- Content Development Specialist (remote position)
- IT Business Analyst.

2.3 Comparative Studies

Market research and data are the basic tool in the marketers' hands. Without them it is not possible to analyze the market position, plan advertising budgets, or build development strategies. However, the challenge is to get access to data from the whole market, which is a must in comparative analysis. This is the way to obtain the actual picture of market position and to draw conclusions effectively.

Global markets are varied in terms of the quality of data analysis, depending on the market segment or industry. In some, a mature approach in adapted, where competitors agree to share information, usually through a third party (moderator, research company, industry association, etc. In other cases, players act on their own, struggling for access to much limited data and try to draw conclusions from information. Sometimes this is the effectible of the inability to work side by side, of the anxiety about sensitive information leakage, or of the challenge that a building a reliable research tool poses. A tool that would utilize Big Data, gather information and conduct comparative analysis.

2.4 Scope of the Problem

Scopes of the Problems in my project was including program compilation system, also thinking of the system design and develop the system targets and features in my website.
Access to such data and analytical tools may then be a crucial issue for business development. Widely available information, in form of reports and studies published by the industry may prove insufficient. The conclusions they offer are frequently incomplete and based on declarative research. Which is certainly not enough to conduct a reliable comparative analysis.

A true effective solution is moderated exchange. The model is based on the idea that all players on a market make their data available to others, according to a pre-arranged scheme. The moderator here will be a research company who is not directly involved in the market and takes care of protecting the shared information, guards the quality requirements and standards. What is more, the same moderator provides identical tools to all participants, so that they can browse and analyze the gathered data. In other word- tap into the outcomes of the whole project.

2.5 Challenges

Requirement: Most important challenging was to make the support system (chatting), and design part of program compilation and also implementation of different type of compiler.

Time scheduling: It was the difficult challenge because it was the main thing in which my project will be completed. If i am unable to complete on time it would be great danger for me.So i just divide my time and project work to complete each one of the task to complete the whole project.

Poor Communication:

In this project I took alone, so always I discus project supervisor. Project Supervisor provide direction at every step of the project and I tried to complete every step carefully for that reason I always try to continue communicate project supervisor, Effective communication is important to its successful completion.

Skills for the Project:

A project sometimes requires skills that by the project's go on. A project leader determines the needed skills and other team members also should have determine to do some for the project to complete it[2]. In this project I have no team member but some hidden team members are always with me and I always take decision discus with them.

CHAPTER 3
REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

In this project, the model we used is given below. Business process modeling is a technique for representing the workflow of a system. A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system, modelling its process aspects. A DFD is often used as a preliminary step to create an overview of the system [4]. We can also link up our DFD and business process diagram (BPD) for connecting our system processes and business activities. Our system DFD is shown

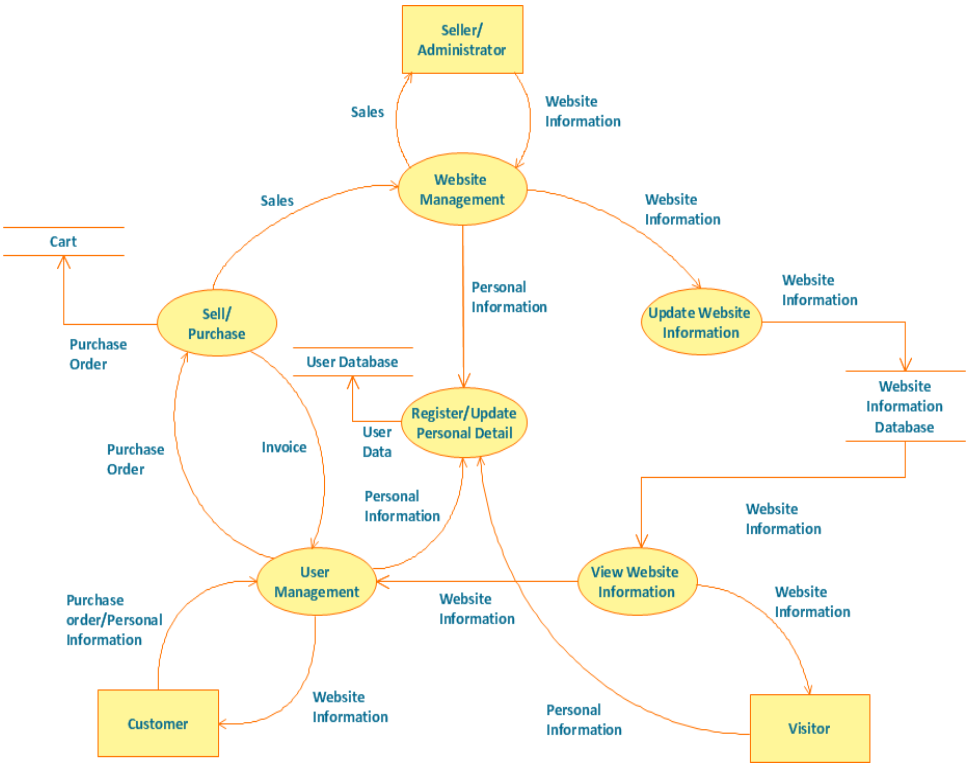

Figure 3.1: Data flow diagram of the system

3.2 Requirement collection and analysis

Requirement collection and analysis is one of the primary conditions of application development. For deployment, there are two type of requirement, one is the functional requirement and the other is nonfunctional requirement. Functional requirement is those activities that's the application software can perform. On the other hand, Non-functional requirements define the personality of an application, as like the application is how much efficient, performance issue of the application and many more.

Functional Requirement: From the point of view of our system, it should have many functional requirements like, order product section, a login section where only authenticate person can access, a cart section for check the ordered product and price of that product.

Non-functional Requirement: Non-functional requirements are help to being more efficient; optimize performance, memory consuming, smoother operation, and local on quickly as possible to our application. Application UI should be user friendly and gorgeous for excellent user experience[5].

3.3 Use Case Modeling and description

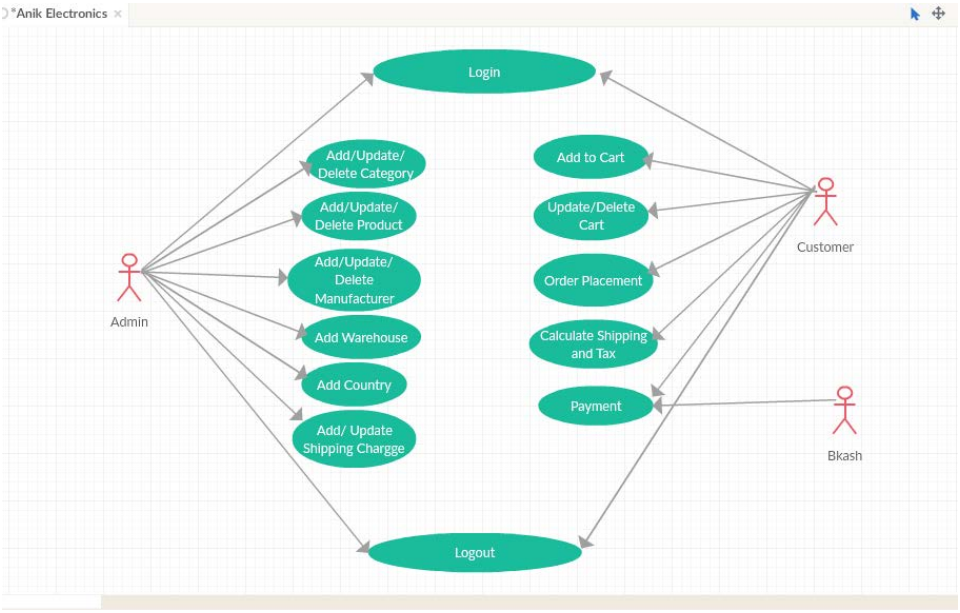

Figure 3.2: Use case diagram of the system

A customer visits the online shopping portal. The customer can select the product for purchasing. The process can be repeated for more items. Once the client finishes choosing the product the cart will be viewed, If the client needs to edit the ultimate cart it will be done here, For payment customer should login the portal, If the client is visiting for the first time he should register with the positioning, else the client should use the login page to proceed. Final cart is submitted for payment and card details and address are be confirmed by the customer. Customer is confirmed with a shipment Id and delivery of goods in 15days

3.4 Logical Data Model

An entity relationship diagram (ERD) shows the relationships of entity sets hold on in a very info. An entity during this context may be a part of knowledge. In order words, ER diagrams illustrate the logical structure of databases, Logical data model describes data those are stored in database as deep as possible. It includes all entities and relationship among them. Actually Logical data model presents the Entity Relationship Diagram called ER diagram, In E-R diagram all attributes for each entity are specified. The primary key, foreign key and other attributes are specified in the diagram.in figure below shown ER diagram of the system:

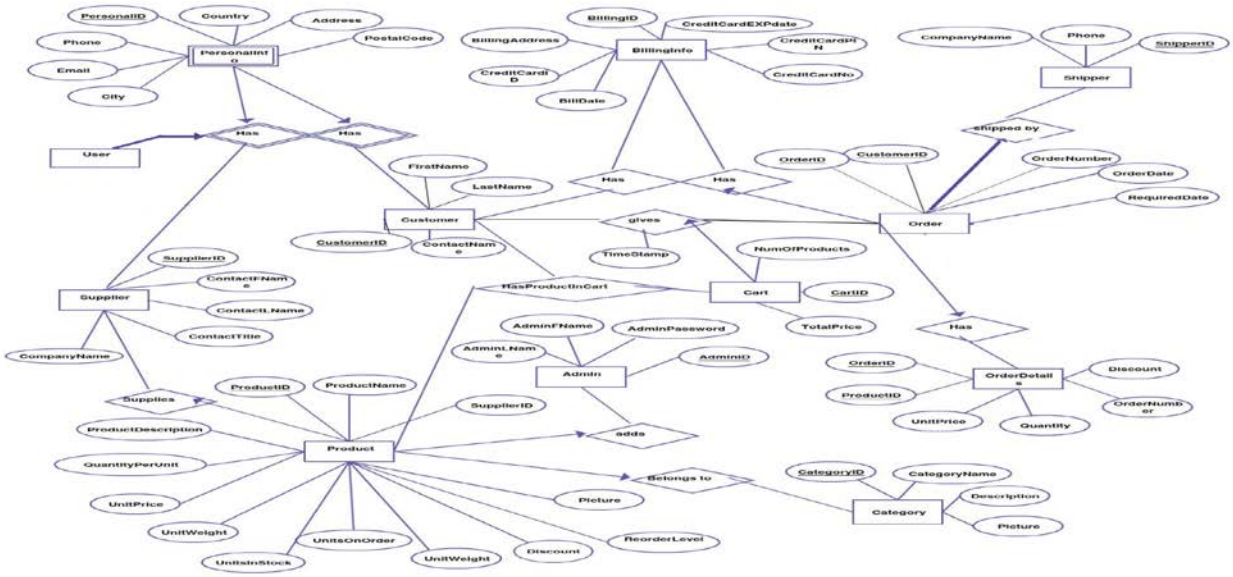

Figure 3.3: Entity Relationship Model of the system

3.5 Design Requirements

When designing systems or software, following issues must be considered that reproduce the overall design of the goals that the system expected to achieve. The following goals were unbroken in mind whereas coming up with the system. We have followed below points:

User Friendly: The application must be user friendly so that the user browse the website easily and buy their product.

Compatible to various web browser: There are a lots of web browser, we don't know which version or which one is our user will be using. So we have to implement our website such a way that it can be access from any browser.

Efficient: To run faster I have tried to keep this application as light as possible. Now we are going to discuss some extra feature:

- This system will contain two types of users like admin and customer.
- Admin will upload all the product.
- Only admin can create edit or delete product
- Customer can order after successfully login.
- They can create product watch list so can buy those product later.
- User don't need to install this application to buy product.
- Customer will get the product very easily without any hassle.

CHAPTER 4
DESIGN SPECIFICATION

4.1 Front-End Design

The frontend commonly consists of two parts: The web design and frontend web development.

Frontend designs entangle creating the HTML, CSS, and presentational JavaScript, Bootstrap and jQuery code that make up a user interface. Coding design patterns are about forming a set of relationships between elements. By codifying these relationships as a set of ethics instead of a single, stand-alone template, I try to make it possible for other developers to extend my work while remaining faithful to its core ideas.

The thing that is visible while using a website is a combination of HTML, CSS, Bootstrap, and JavaScript all being controlled by your computer's browser. These include things like fonts, home, drop-down menus, buttons, effects, tabs, forms of different types like register, login etc. I have basically used the HTML, CSS, Bootstrap, and Java-Script to design my site. I will discuss with my supervisor about the each and every element that I have used in my project. I use HTML for creating the structure of the page. Then I use CSS for style the page. I use Bootstrap for make the page responsive. I also use some plugin for designing the front-end part. JavaScript play's an important role for design the front-end[6]. I make this website as responsive as possible for the user so that they can access the website from any web browser without any problem.

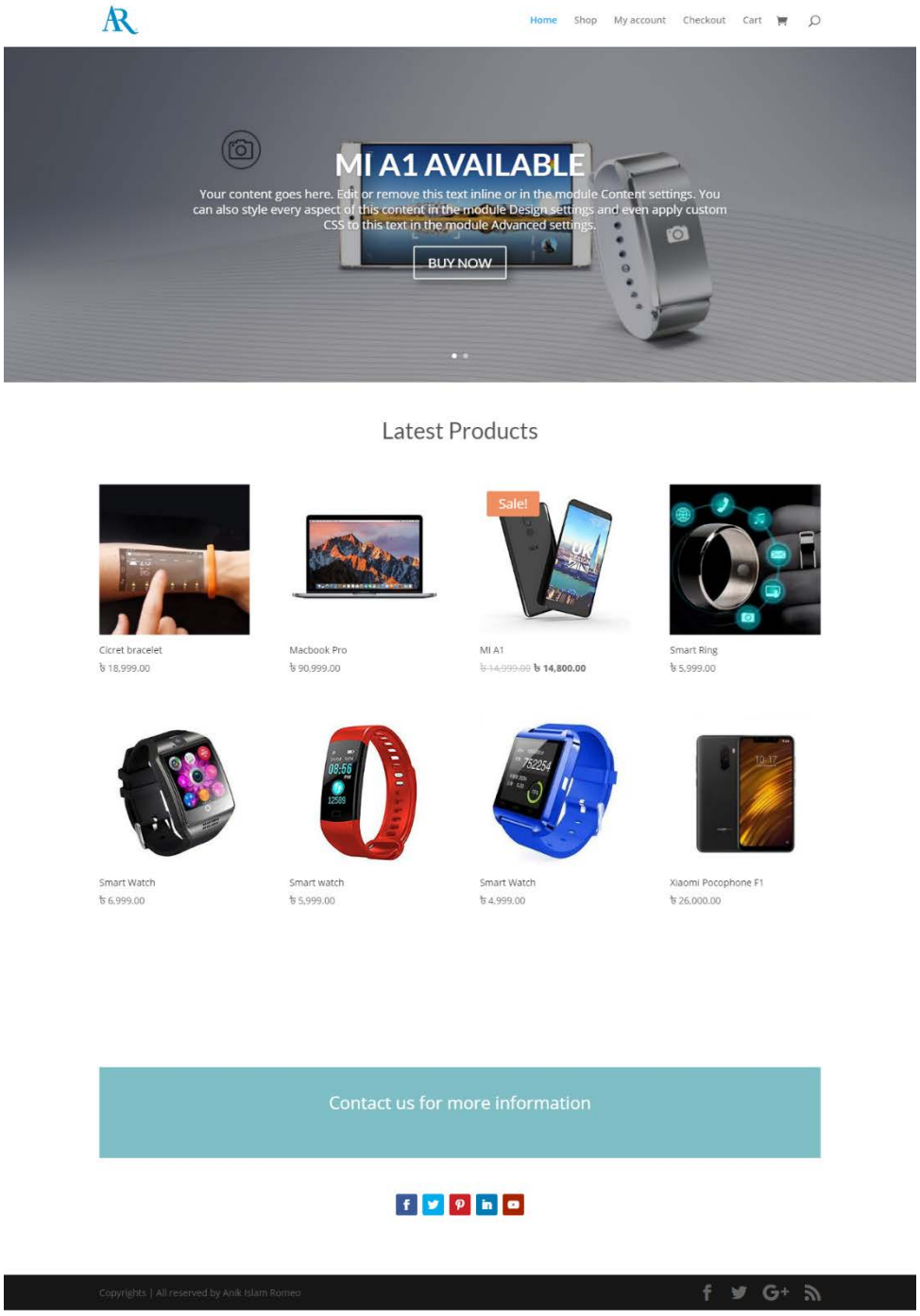

Figure 4.1: Homepage of the website

This is the home page of the project, here user can see the product feature product and new product, product category, contact information and other necessary information. Their also a slider for the latest hot product or the company give any offer, they get an over wall idea about the website here.

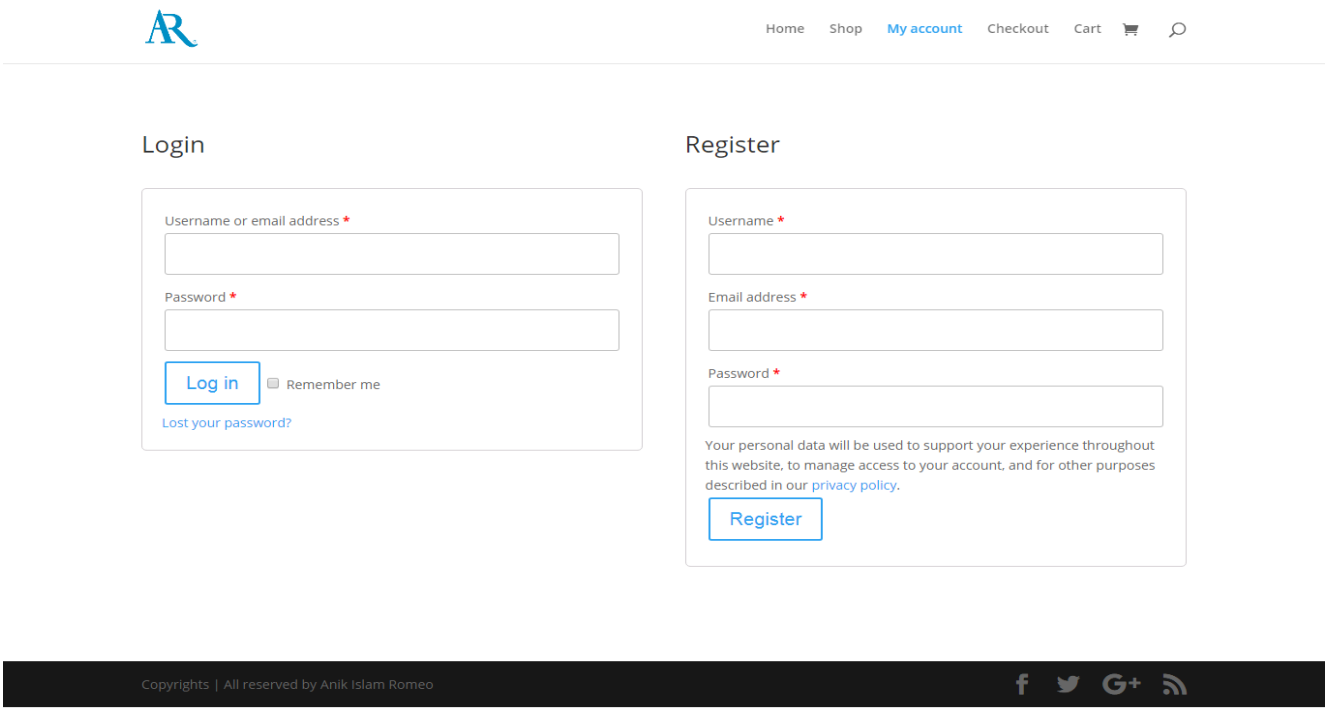

Figure 4.2: User login and registration page

The login and registration page. If the user is an existing user then they can login here using their unique username and password. If they are new customer they can create a new account using their information. If they provide any wrong information like username and password they get an error message like username or password isn't correct. After providing correct information they can successfully login into the system. They can use the system without login but if they want to purchase any product or they want to save any product to their watch list to purchase later purpose later they need to create an account. It is an easy process, anyone can create or login into this system very easily.

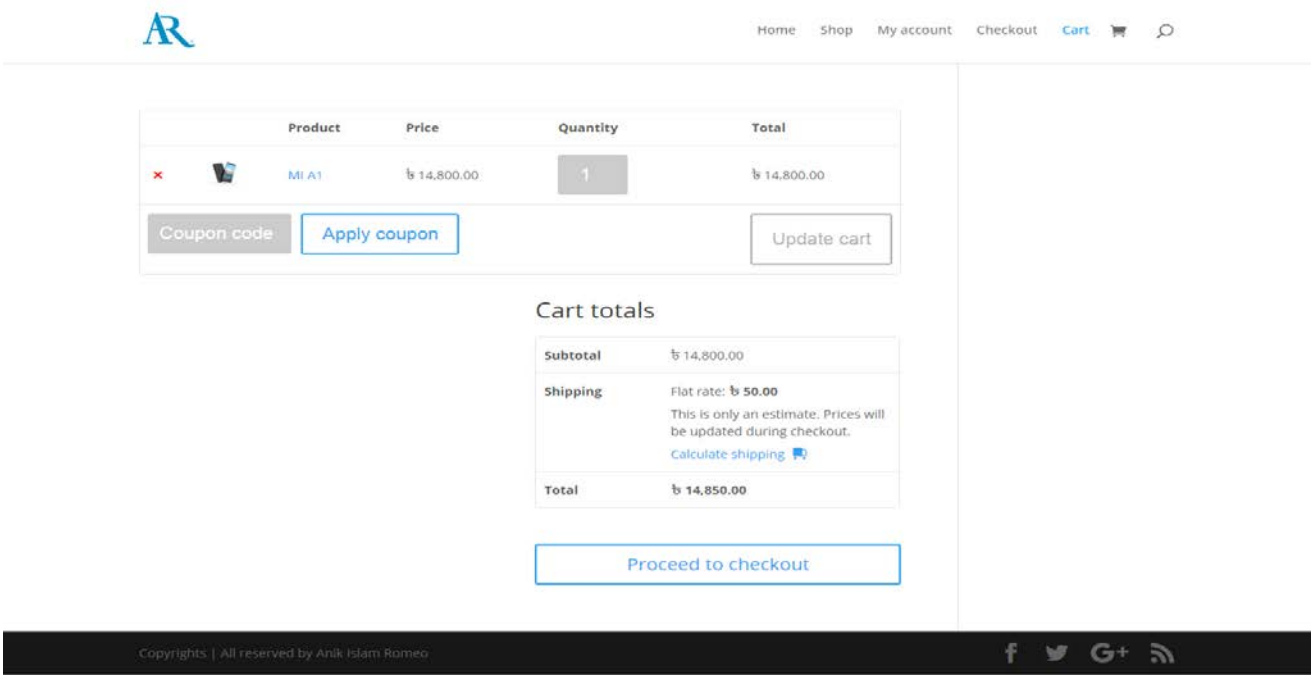

Figure 4.3: cart page

When you add a product on cart, you can see that product on Cart page. For Example, here I add a product that is show our cart page.Under that we have an option for coupon. If you have a coupon then you must have a coupon code. If you enter that code you got a discount for this coupon. You can update your cart. And see cart totals and process to checkout. When you click process to checkout, then it move Checkout page

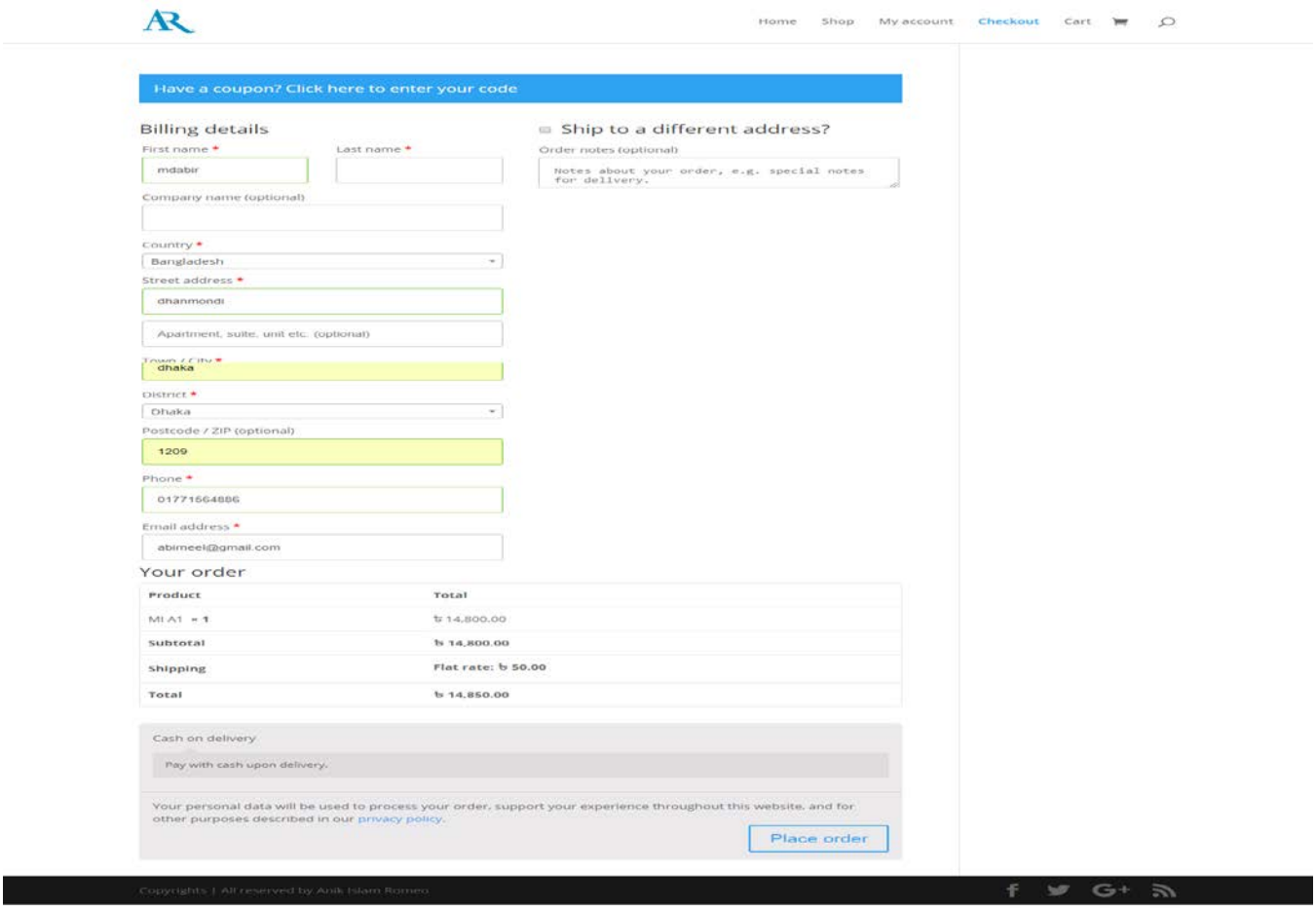

Figure 4.4: Checkout Page

After Add to Cart now we can check out by Checkout page. Here you must need billing address for checkout. For Checkout we have three method.

- Direct Bank Transfer
- Check Payments
- Cash On Delivery

After checkout you got an order receive. Here an order number which is unique. By showing this order receive you can receive your product.

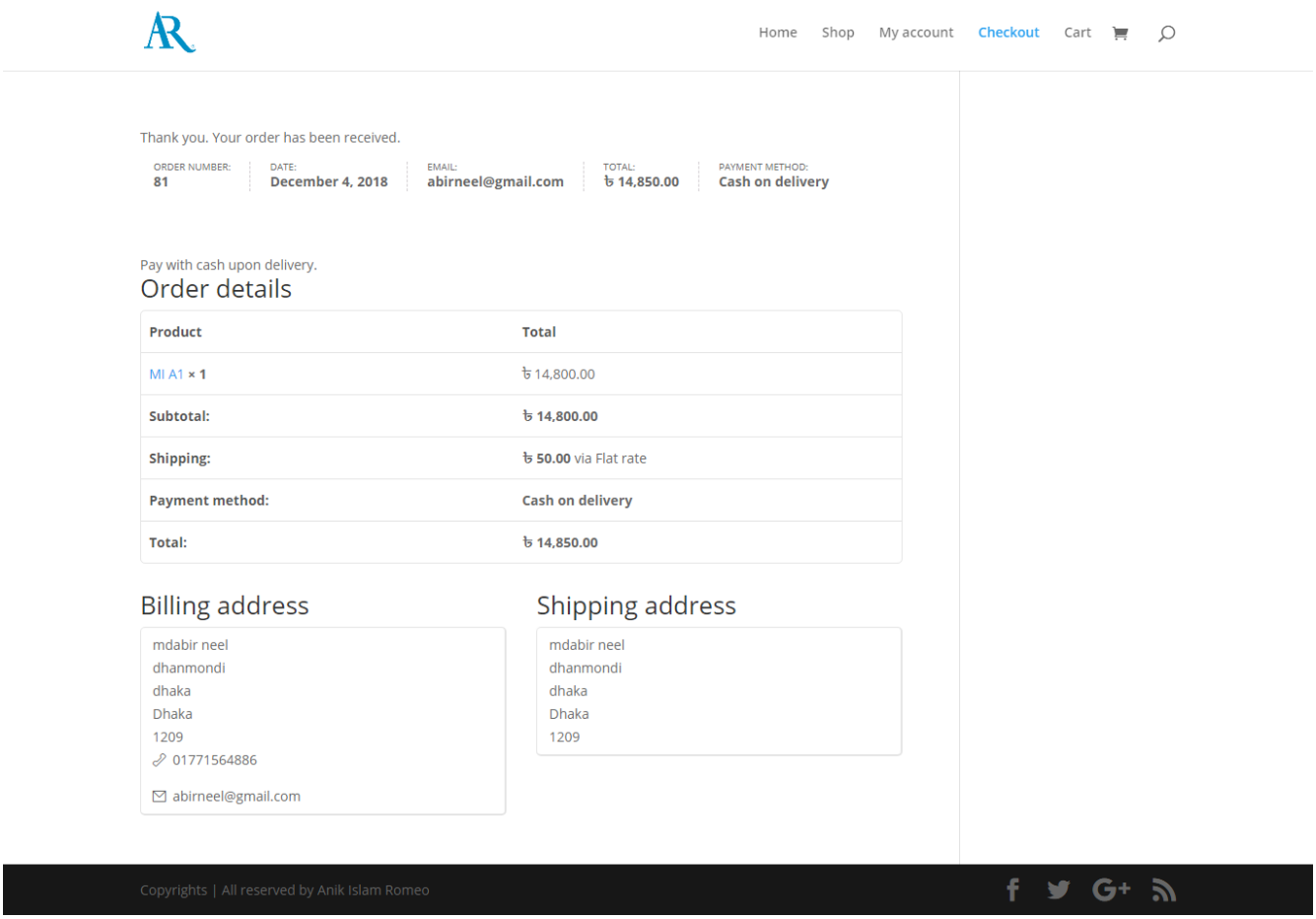

Figure 4.5: Order Success received message

4.2 Back-end Design

Backend consists of 3 parts: a server, associate degree application, and a info. When we go to a website link and see interface its frontend. And when we provide any information, once we've entered that information, the application stores it in a database that was created on a server. The logical part of an application is working in the back-end. It is the foremost necessary a part of associate degree application. The full system depends on it. Usually back-end refers server side for a web based

application. In back-end there are many factor consists like the scripting languages and the server side language, database management, security, authorization, data parsing, data validating, data

backups and soon shown in figures developed “ESHOP” using PHP, html, CSS JavaScript, jquery, which is a server side language and for the database part we use MySQL database for saving the data information and the work flow of the software. Affords internet developers the liberty to decide on their software and internet server. MySQL is a freely available open source Relational Database Management System (RDBMS) that uses Structured Query Language (SQL). SQL is the most popular language for adding, accessing and managing content in a database [7]. It is most noted for its fast process, proven reliability, ease and flexibility of use. That’s why we use MySQL database.

XAMPP may be a straightforward, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes. Everything needed to set up a web server – server application (Apache), database (MySQL), and scripting language (PHP) – is included in an extractable file. XAMPP is additionally cross-platform, which means it works equally well on Linux, Mac and Windows. Since most actual internet server deployments use an equivalent elements as XAMPP, it makes transitioning from an area check server to a live server very straightforward further.

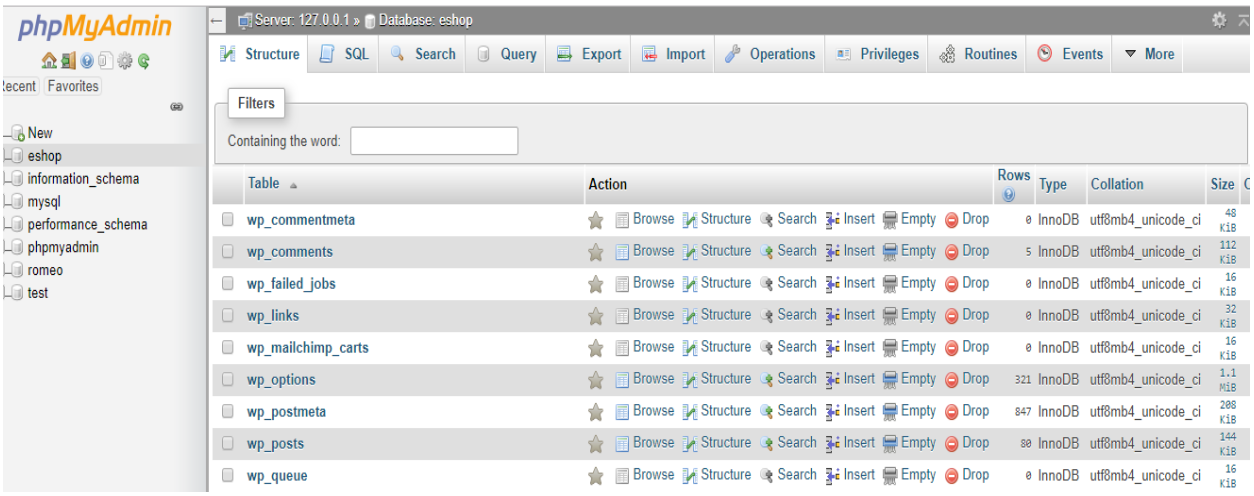

Figure 4.6: Database Sample

4.3 Interaction Design and UX

User experience design is the process of enhancing user satisfaction with a product by improving the usability, accessibility, and pleasure provided in the interaction with the product.The practice of designing interactive uniqueproducts, environments, systems, and services." While the digital side of this statement istrue, interaction design is also useful when creating physical (non-digital) products,exploring how a user might interact with it. Interaction design is a proper way that observes the interaction between a system and its user.

On the other hand, user experience focuses on the overall experience design between a user and an application. In our application, admin can add brand, category, and product informational details from the admin dashboard.

4.4 Implementation Requirements

To implement this project we need xampp for apache server and MySQL database for storing our website information. We need sublime text 3 for the coding part. In the sublime text we can code the html, CSS, JavaScript, jquery, PHP. Before we run the project we need to make sure the xampp is running and the apache and MySQL is running. We also need e browser to test the project. To access the xampp server internet isn’t required.

CHAPTER 5
IMPLEMENTATION AND TESTING

5.1 Implementation of Database

The implementation phase is where you install the DBMS on the required hardware, optimize the database to run best on that hardware and software platform, and create the database and load the data. Create the database and tables, load the data, the database implementation means where I install the DBMS on the required hardware, optimize the database to run best on that hardware and software platform, and create the database and load the data.

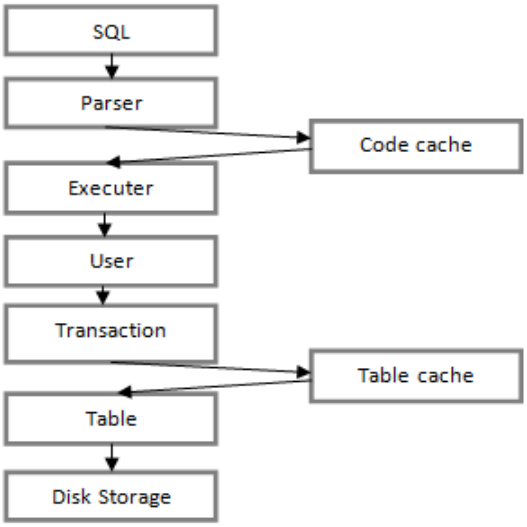

Figure 5.1: Database Processing System in Project

The 'user' context is handled in a number of different ways, it's depend on the which database system being used. The following diagram gives you an idea of working process what system MySQLand Oracle used.

In the upper image you can see that how to store the user's information in each time they register this system and when update information or create post, comment, likes. When user register then information saved in users table, when create post then information saved in global post table and other information store and process the same way in my project.

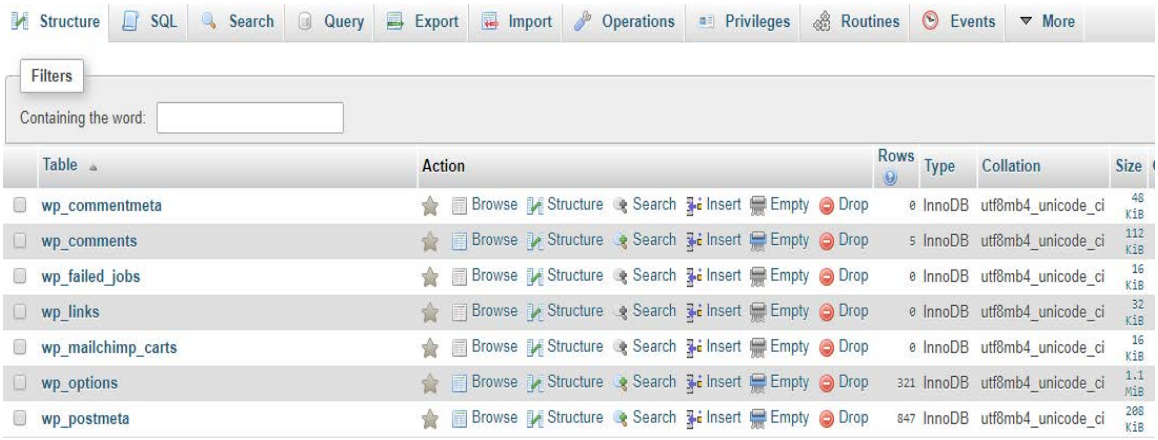

Figure 5.2: Database and all table used in project

5.2 Implementation of Front-end Design

While web design is the way a website looks, front end development is how that design actually get implemented on the web. For the front-end design we use html for the markup language and CSS to style the application. I also used java script, media query for the front end design. We have two sides of font end design. One side for user and another side for admin. Basically internet is a common fact in this application[9]. We make this responsive so that you get a great experience. It doesn't matter which device are you in, all the device will have the same responsive website. It's a dynamic website.

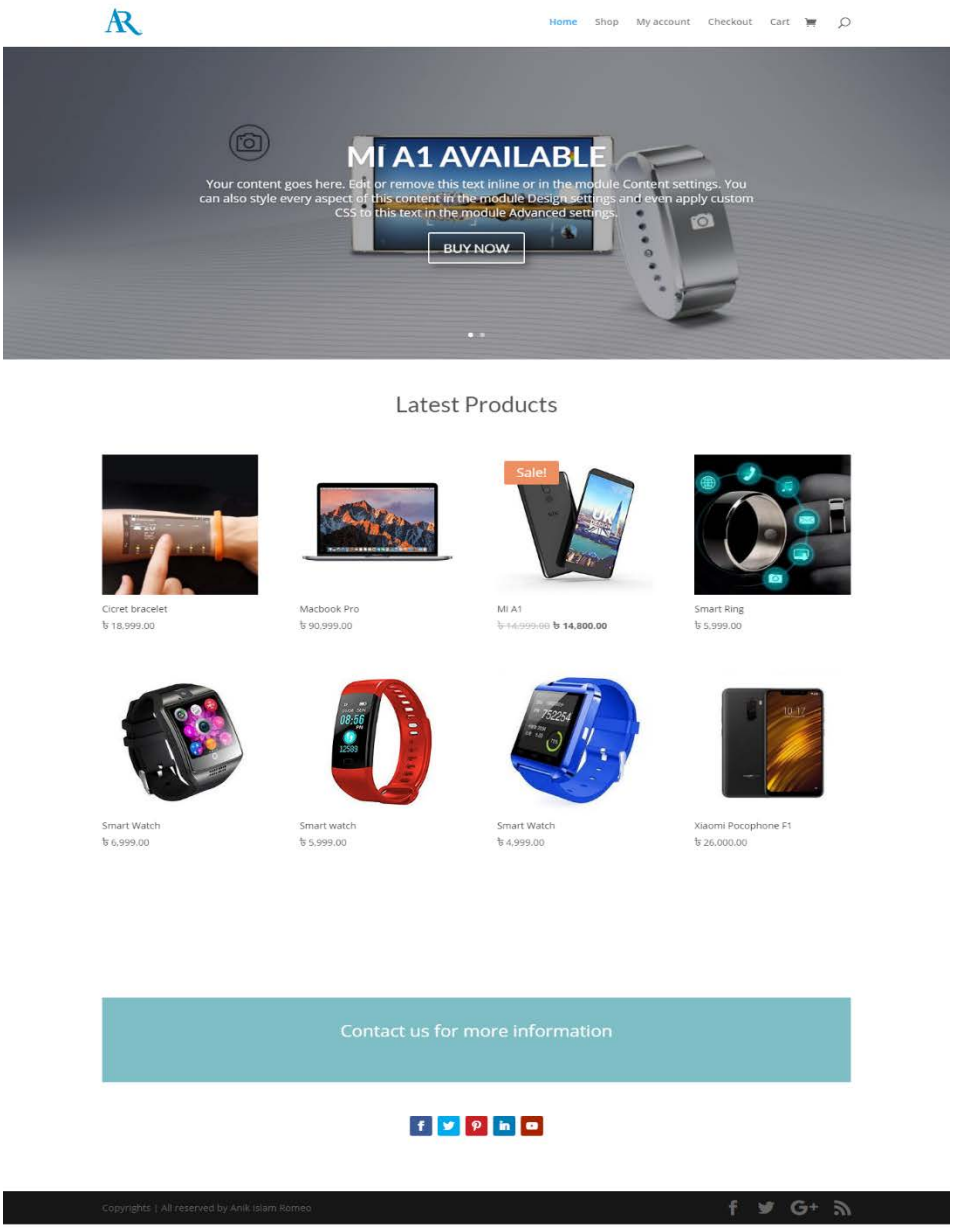

Figure 5.3: Front-end design of the homepage

5.3 Implementation of Interactions

Here to make my system interactive I have implement media query for better user experience and for make the website responsive. In the cases make things easy and looks better we use icon, text link and button. The system design of my application is user friendly. The customers need to create profile to make purchases

5.4 Testing Implementation

System Testing is a level of the software testing where a complete and integrated software is tested. The purpose of this test is to evaluate the systems compliance with the specified requirements. Definitionby ISTQB. System testing: the process of testing an integrated system to verify that it meets specified process successfully. Testing implementation is processed testing for implementation of a system, where a tester or system architect will see cases and specification, is it implementable or have limitations to develop this system.

Table 01: Test case for the system

Test case	Test input	Expected outcome	Obtained outcome	Pass/fail	Tested date
1.Login	Login using various browser	Login successfully	Successful login	pass	20-08-18
2.Add brand	Brand name	Brand name add successfully	Successfully added brand name	pass	21-08-18
3.Add category	Category name	Category name added successfully	Successfully added category name	pass	25-08-18
4.Update user information	User information	User information updated successfully	Successfully updated user information	pass	28-08-18
5.Add cart	Cart information save	Cart information save successfully	Successfully add cart information	pass	02-09-18
6.order product	Product order using the	Product ordered successfully	Successfully ordered product	pass	04-09-18

	system				
7.inbox message	Show order message	Show the details product order.	Successfully show the ordered product and who ordered	pass	06-09-18

5.5 Test Results and Reports

Test report is needed to reflect testing results in a formal way, which gives an opportunity to estimate testing result quickly. It is a document that record data obtained from an evaluation experiment in an organization manner, describe the environment or operating conditions. And shows the comparison of the test results with objectives.

- Registration system
- Login System
- Create post
- Post Comments
- User searching system
- View User profile
- Logout

CHAPTER 6

CONCLUSION AND FUTURE SCOPE

6.1 Discussion and Conclusion

The internet has create a major resource in new generation business, thus electronic shopping has gained significance not only from the entrepreneur's but also from the customer's point of view. For the entrepreneur, electronic shopping generates new business opportunities and for the customer, it makes easily shopping possible.

At last it can be concluded that the "E-commerce website development" was a real learning experience for me. The principles of software producing were well implemented in this system. The project has been made as per as the given specification. The system has made as user friendly as possible.

Working on the project was really a learning experience and I have come a long way in building my concept of system analysis and design. The overall purpose of the system is to customize the full process and thus prevent the intervening errors. I also tried to follow the best design site so that the interface of the system is simple.

6.2 Scope for Further Developments

As for other future developments the following can be done:

- The Administrator of the website can be given more functionalities, looklike at a specific customer's profile.
- More categories will be added.
- In the description section they will also be able to see other recommended products.
- There also be a review section for the customers for giving their important review of that product.
- An chat app also be added in the system so that the users can communicate with the support team members for this website.

REFERENCE

[1]"E-Commerce" Available at: https://en.wikipedia.org/wiki/E-commerce [last accessed on 02-12-2018 at 10:00 pm]

[2]"Business Challenges" Available at: https://ecommercetrainingacademy.com/ecommerce-business-challeges/.[last accessed on 02-12-2018 at 10:30 pm]

[3] “Website goals and objectives” Available at: https://www.intechnic.com/blog/best-examples-of-website-goals-and-objectives/.[last accessed on 02-12-2018 at 10:30 pm]

[4]“E-Commerce-data flow diagram” Available at: https://www.visual-paradigm.com/tutorials/data-flow-diagram-example-cs-system.jsp.[Last accessed on 02-12-2018 at 11:00pm.]

[5]“Functional and non-functional requirements” Available at: https://reqtest.com/requirements-blog/understanding-the-difference-between-functional-and-non-functional-requirements/,[last accessed on 02-12-2018 at 11:00pm]

[6]“HTML5” Available at: Learn about HTML5, available at https://en.wikipedia.org/wiki/HTML5#cite_note-finalars-2,[last accessed on 20-11-2018 at 14:00pm]

[7]Wiley, Y. M. J. & Sons. (1997) *Creating the Virtual Store: Taking Your Web Site from Browsing to Buying*.[Last accessed on 20-11-2018 at 10:00 pm]

[8]Available at: Wagner, R., Daniels, K., Griffin, G., Haddad, C. and Nasr, J. (1997) *JavaScript Unleashed*. SAMS Net.[Last accessed on 02-12-2018 at 11:00 pm]

[9]“CSS and its implementations” Available at: https://en.wikipedia.org/wiki/Cascading_Style_Sheets#cite_note-World_Wide_Web_Consortium-41, [last accessed on 120-11-2018 at 14:16pm]

[10]“Learning about HTML5 and web layouts” Available at: Learn about HTML5, available at https://en.wikipedia.org/wiki/HTML5#cite_note-finalars-2[last accessed on 20-11-2018 at 14:00pm]