

**DESIGNING AND DEVELOPING E-COMMERCE WEBSITE WITH
MAGENTO**

BY

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

Supervised By

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DAFFODIL INTERNATIONAL UNIVERSITY

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APPROVAL

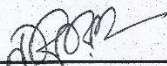
This Project titled “**Designing and Developing E-commerce Website with Magento**”, submitted by Jahid Hasan ID: 151-15-5346 to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering (BSc) and approved as to its style and contents. The presentation has been held on 10th December 2018.

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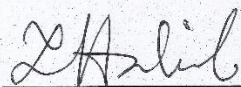
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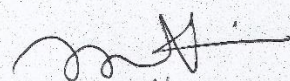
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DECLARATION

I hereby declare that, this Intern has been done by me under the supervision of **Dr. Fernaz Narin Nur, Assistant Professor**, Daffodil International University. I also declare that neither this Intern nor any part of this Intern has been submitted elsewhere for award of any degree or diploma.

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

ABSTRACT

I have done my internship on “Web design and development”. In my internship tenure, I had many responsibilities like installing and configuring XAMPP server, website design and development by using HTML, CSS, PHP, Bootstrap-Framework, jQuery, JavaScript, Magento and also test those websites on different browsers. In this internship report I basically tried to show that how I managed those things and how efficient I was there in the time of internship. Moreover, I tried to present whether my internship was a successful or not. Taking care of genuine issues was another key issue. This report takes me through all the details of every knowledge and experience gathered during this internship period. Finally, I have created an e-commerce website with Magento. The report is prepared on the base of practical experience in Helix IT Solution Ltd.

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CHAPTER 1

Introduction

1.1 Introduction

Web design is a study that teaches different skills and disciplines in the production and maintenance variety type of websites. There are many branches of web design include web graphics design; interface design; authoring; user experience design; and SEO. Often many individuals will work in teams covering different aspects of the design process, although a few designers will cover them all. The term web design is normally used to describe the design process of front-end design of a website including writing mark-up. Web design partially overlaps web engineering in the broader scope of the web development. On the other hand, web development teaches how to develop a website for the online. Web development can count from developing a simple single static page of plain text to complex web-based online application, e-business, and social network service. A wider list of tasks to which web development commonly refers, may include web engineering, web design, web content development, server-side scripting, and e-commerce development. Among web developers, web development usually refers to the main non-design aspects of building web sites: writing mark-up and coding. Recently Web development has come to mean the invention of content management systems (CMS). These CMS can be made from open source platform. In details the CMS works as middleware between the database and the user through the web browser. The main benefit of a CMS is that it enables anyone to make changes to their website without having any technical knowledge.

1.2 Motivation

Motivation is defined as a process that initiates, guides and maintains goal-oriented behaviors. Motivation is what provokes us to act, whether it's getting a glass of water to reduce thirst or reading a book to gain knowledge. As the studies of Daffodil International University (DIU) are highly concentrated on research works and scientific practices. I am confident that it will be a great support for me. Such an internship would provide me with the ideal opportunity to enhance my knowledge in the field of

Educational Institution. I am very interested about E-commerce in my study life so I select my internship of an IT farm that mostly work base on E-commerce; in future, I build up my carrier as an Internet entrepreneur.

1.3 Internship Objectives

The objective of the internship program is to help graduating a student comprehend how the theoretical knowledge obtained in the degree can be applied in practice by being associated with a real-life Education Institution as an intern. The internship experience is aimed to serve as bridge between to the theoretical learning of the students and practical applications of the same.

- Gain practical knowledge about website design and development.
- Learn about all type of e-commerce platform.
- Gain deep knowledge about online marketplaces. (including Amazon, eBay, Walmart, Sears etc.)
- Learn about the technical operations of online marketplaces.
- Learn about some CMS and e-commerce platform that can be used for making an online store.
- Learn about the technical operations of CMS and e-commerce platform.

1.4 Introduction to the Company

Helix IT Solution Ltd. is one of the Largest IT Companies in Bangladesh who released quality and moderation to its value led clients across the world. Helix helps clients all over the world to achieve E-commerce success. We've positioned ourselves as one of the top E-commerce solution providers by helping several online store owners move their online business forward without compromise. Helix deliver complete service with everything from service, expertise and support to designs, payment solutions, customizations and integration with business systems. Simply Helix put E-commerce at its best i.e. partnership with companies like Cerwin Vega, The London Video Marketing Company, eBusiness UK, etc. Helix has enhanced its portfolio in global arena.

1.5 Report Layout

- The Organization of my report assorted by
- Chapter 1: Discussion about my Motivation, Objective and Introduction to the Company.
- Chapter 2: Overview of Helix IT Solution Ltd.
- Chapter 3: Discusses about Internship Tasks, Activities and Use of web design, development and content management.
- Chapter 4: Discusses about competencies and a smart plan.
- Chapter 5: Conclusion, Future Career and References.

CHAPTER 2

Overview of Organization

2.1 Introduction

NAME: HELIX IT SOLUTION LTD.

Year of establishment : January 2010

Company website : <https://www.helixlogix.com/>

About:

Helix IT Solution Ltd. is one of the Largest IT Companies in Bangladesh who released quality and moderation to its value led clients across the world. Helix helps clients all over the world to achieve E-commerce success. We've positioned ourselves as one of the top E-commerce solution providers by helping several online store owners move their online business forward without compromise. Helix deliver complete service with everything from service, expertise and support to designs, payment solutions, customizations and integration with business systems. Simply Helix put E-commerce at its best i.e. partnership with companies like Cerwin Vega, The London Video Marketing Company, eBusiness UK, etc. Helix has enhanced its portfolio in global arena. [1]

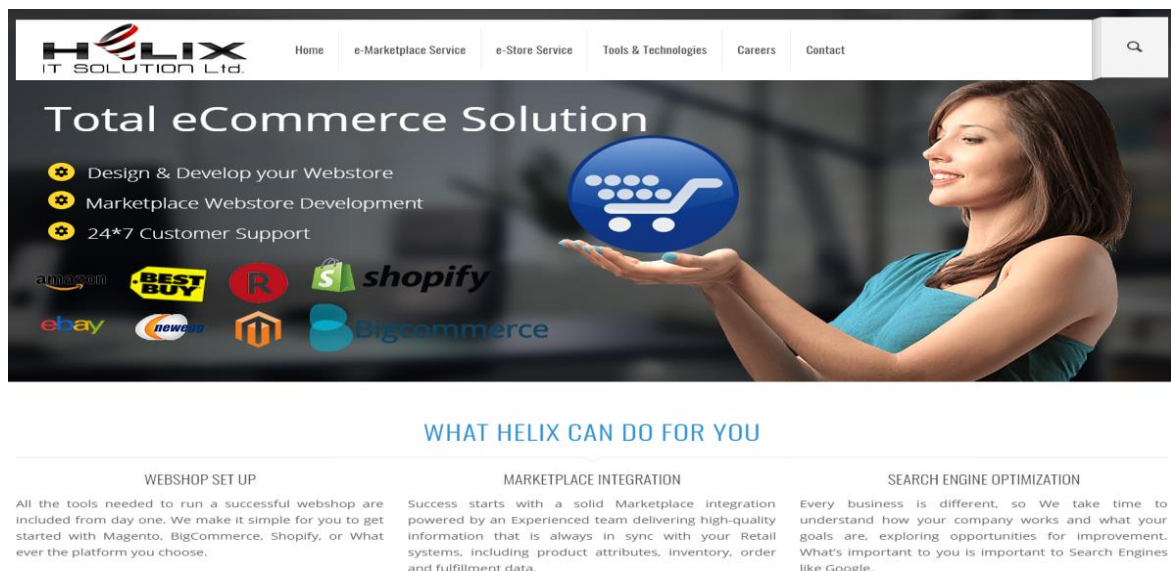


Figure 2.1: Helix IT Solution Ltd.

2.2 Product and Market Situation of Helix IT Solution Ltd.:

Helix IT Solution Ltd. Provides standard services for E-commerce. Helix IT Solution Ltd. Work with typical and international both type of companies. This company market situation is very well. Here is some example of those services:

Services:

- Online Store or E-shop Design
- Online Store or E-shop Develop
- Online Store or E-shop Management
- Online Marketplaces Integration

Case Study:

- Sonic Electronix Inc.
- Crutchfield Corporation

2.3 Target Group

Our target is to deliver the most optimal solutions with the best quality and services at reasonable prices. For us customers satisfaction is given top place. We are very friendly in our dealings to all the customers and it helps us retain existing clients and customer circle. We always try to improve The Best Quality of our products by exploring innovative ideas.

- We value and expect integrity in all that we always do
- We recognize that foundation of our growths and successes are making each and every client project a success
- We combat for operational and services excellence through an endless focus on:
 - ✓ **People** – Recruiting, developing and retaining top talent
 - ✓ **Process** – Ensuring the best quality while taking time and cost out of the drug development process.
 - ✓ **Clients** – significantly and continually enhancing client's satisfaction with our services

- We are determined to build our company culture based on superior performances, successes through teamwork, respect and recognition for the individual, diverse and challenging work and flexible and rewarding career opportunities for employees.
- Invent an idea that will combine physical store and online store and extend business for all type of business organization.

2.4 SWOT Analysis

SWOT analysis is a process of strategic planning which identifies the factors internal and external environment of the firm and divides them into 4 categories. [2]

- Strengths are company's resources and capabilities that can be used as a foundation for developing a competitive advantage.
- Weaknesses are the competitive qualification absence may be viewed as an incapability.
- Opportunities are the external environment may express certain new opportunities for profits and growths.
- Threats are changes in the external environmental also may present intimidation to the firm.

SWOT of Helix IT Solution Ltd.

Strength:

- Established a brand with the loyal customers.
- Easy to use software package.
- Dynamic distribution channels.
- Hearty financial performance.
- Dedicated employees who take pride for their work.

Weakness:

- Poor acquisition and investment

- Dependence on hardware manufacturers
- Criticism over security flaws
- Mature PC markets
- Slow to innovate
- Lack of Smart & experienced Employees.

Opportunities:

- Expanding sector with many opportunities to success.
- Native government wants to work with native business.
- Competitors slow to adapt to new technologies.

Threats:

- Intense competition in software products
- Changing consumer needs and habits
- Open source projects
- Will technology change beyond our ability to adapt ?
- Vulnerable to large competitor action.

2.5 Organizational Structure

Organizational structure means that the typical hierarchical arrangement of lines of authority, communications, rights and duties of an organization. Organizational structure decides how the roles, authority and responsibilities are assigned, controlled and coordinated and how information flows between the different levels of management. A structure depends on the organization's all objectives and strategy. In a centralized structure, the upper layer of management has most of the decision-making authority and has tight control over departments and divisions. In a decentralized structure the decision-making authority is distributed and the departments and divisions may have different degrees of independence. The company mainly works with international clients including American and British people.

Mr. Ferdous Mehedi is the managing director of our company and Lutfullah Khan is the director.

❖ **Software Engineer:**

The software engineer also known as coder. The work of a coder usually includes planning and programming system-level computer code, operating systems, info systems, embedded systems, content management so on. They perceive however each computer program or code and hardware perform. The work will involve taking to clients and colleagues to assess and outline what resolution or system is required, which suggests their area unit plenty of interaction in addition as full-on technical work. computer coder's area unit usually found in telecommunications firms. A computing, computer coding or connected higher degree is commonly required.

Key skills required: Analysis, intellection, cooperation and a spotlight to detail.

❖ **Systems Analyst:**

Systems analysts investigate and analyses business problems and then design information systems that provide a feasible solution, typically in response to requests from their business or a customer. They gather requirements and own the costs and the time needed to implement the project. The job needs a combine knowledge of business and technical, and a good understanding of people. It's a role for analyst programmers to move into and typically requires a few years' experiences from graduation.

Key skills include: Ability to extract and analyses information's, good communication skill, persuasion and sensitivity.

❖ **Technical Support:**

These area unit the professional or skilled troubleshooters of the IT world. several technical support specialists work for hardware makers and suppliers to unravel the issues of business customers or consumers, however several works for end-user firms supporting, watching and maintaining workplaces technology and responding to users'

requests for facilitate. Some lines of support need professionals with specific expertise and data, however technical support may also be an honest means into the trade for graduates.

Key skills required: Knowledge of wide-ranging technical data, problem solving, Communication/listening.

❖ **Technical Consultant:**

The term 'consultant' can be a tagline for many IT jobs, but typically technical consultants provide technical expertise too, and develop and implement IT systems for, external clients. They can be engaged at any or all stages of the project lifecycle; pitching for a contract; refining a specification with the client team; designing the system; managing part or all of the project; after sales and shopping support, or even coding the code. A technical degree is preferred, but not always obligate.

Key skills include: Good Communication Skill, Great presentation Skill, technical and business understanding, project management and teamwork.

❖ **Technical Sales:**

Technical sales could also be one among the smallest amount active technical roles, however it still needs associate degree understanding of however it's employed in business. you'll sell hardware, or glorify the business edges of whole systems or services. Day to day, the work might involve phone calls, meetings, conferences and drafting proposals. there'll be targets to satisfy and commission once you reach them. A technology degree is not essentially necessary; however, you may have to be compelled to have a radical technical understanding of the merchandise you sell.

Key skills required: Product information, persuasion, social skills, drive, quality and business acquaintance.

❖ **Project Manager:**

Project managers organize all of people, time and resources to make sure information technology projects meet stated requirements and are completed on time and on budget. They may manage a whole project from start to finish or manage part of a larger programmer.

Key skills required: Organization, problem solving, communication ability, clear thinking, and therefore the ability to remain calm pressure.

❖ **Web Developer:**

Web development may be a broad term and covers everything to try and do with building websites and every one the infrastructure that sits behind them. the task continues to be viewed because the modish aspect of IT years when it 1st emerged. lately web or internet development is pretty technical and involves some hardcore coding yet because a lot of developers or coders aspect of coming up with the user interfaces of latest websites. The role may be found in both of organizations massive and tiny.

Key skills required: Basic understanding of web or internet technologies (client aspect, server side and databases), analytical thinking and creative thinking.

❖ **Software Tester:**

Bugs can have a heavy impact on the productivity and fame of an IT firm. The Testers try to narrate all the ways an application or system might be used and how it could fail. They don't necessarily program but they do need a good understanding of codes. Testers prepare all the test scripts and macros, and analyses results, which are provided back to the project leader so that fixes can be made. Testers can also be involved at the early stages of projects in order to measure losses before work begins.

Key skills required: Attention to details, creativity, organization, analytical and investigatory thinking, and communication.

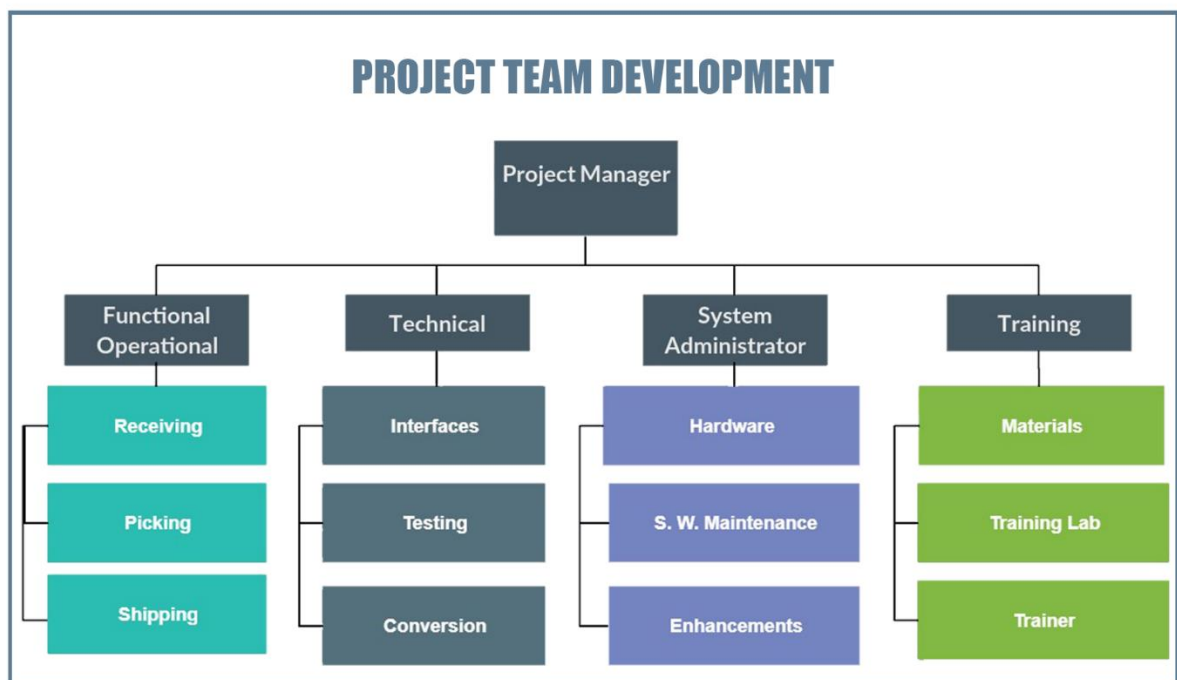
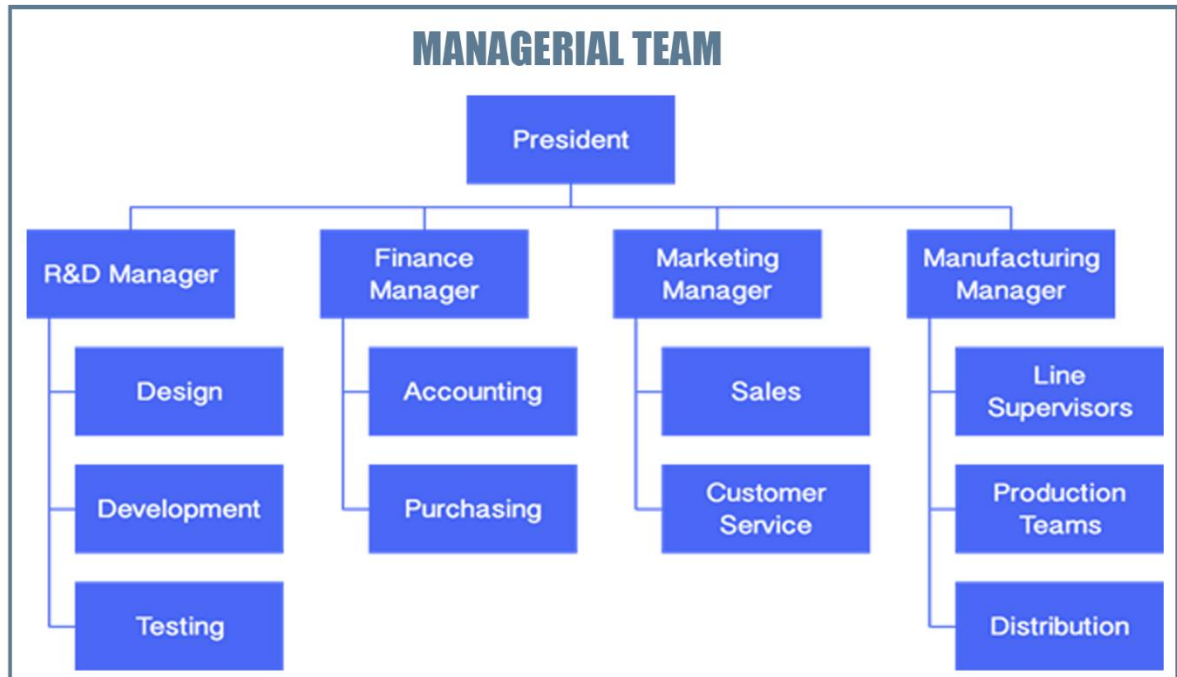


Figure 2.2: Organizational Structure

Figure 2.2 represents the organization structure of an IT Company base on Managerial Team and Project Team Development.

CHAPTER 3

Tasks, Projects and Activities

3.1 Introduction

In this chapter, I am discussing about my daily task and activities, events and activities, project task and activities and challenges of my internship.

3.1.1 Daily Task and Activities

Table 3.1: Daily Task and Activities

Date	Daily Task and Activities
02/07/2018 – 10/07/2018	Web design and development Overview
12/07/2018 – 19/07/2018	Working with HTML (Hyper Text Markup Language)
20/07/2018 – 25/07/2018	Working with CSS (Cascading Style Sheet)
26/07/2018 – 11/08/2018	Coding in PHP (Hyper Text Preprocessor)
13/08/2018 – 15/08/2018	To create Database through MySQL
16/08/2018 – 27/08/2018	Working with Magento
28/08/2018 – 11/09/2018	Website designed and development
12/09/2018	Testing website in different browser
13/09/2018 – 15/09/2018	PSD TO HTML
17/09/2018 – 20/09/2018	Adobe Photoshop CS
21/09/2018 – 27/09/2018	Template Design
28/09/2018	Installation of XAMPP server
29/09/2018 – 05/10/2018	To host a web site using Apache tools
06/10/2018 – 15/10/2018	How the server use
16/10/2018 – 20/10/2018	Transfer localhost to web hosting server
22/10/2018 – 30/10/2018	To install Plug-in
1/11/2018-3/11/2018	Limitations of Magento

In table 3.1, I have described the daily activity of my internship period according to dates.

3.2 Events and Activities

- Archive Event Materials
- Distribute Archives
- Collect Feedback
- Promote Next Event
- Daily Creativity thinking of Website

3.3 Projects Task and Activities

Work that have been completed plus the complete portions of work packages already performed. I was many tasks performed in Helix IT Solution Ltd. those are given bellow.

- Manage ongoing web projects.
- Report to the managing director.
- Liaise with the client services team.
- Website uploads.
- Creating server accounts.
- Assist with E-commerce Magento website design.
- Upgrading existing software as the user organization's change.
- Localizing software products for different international markets.
- Testing software to ensure the code is correct, fixing error where they occur, and rerunning and rechecking the programmed until it produces the correct results.
- Determine software and hardware problem and solve the problems, replace faulty components, when necessary.
- Configure operating system software, hardware software, networking software and others components.

- Performance Monitoring.

3.4 Challenges

Website composition and improvement isn't a simple errand. It takes a great deal of imagination, uniqueness and meetings to generate new ideas to think of decent website design. Only a designer can tell about the challenges they go through on constantly. Web designs which are liked and Website compositions which are preferred and increased in value by target market and customers are generally the consequence of consistent PSD change and backward basic considering.

Web sites sync with multiple apps along with its ability to be responsive is just a few factors which are pondered by the web designer. This makes web designing a challenging role. I also faced these problems and tried to solve these.

On the contrary, there are some other challenges which I faced during web designing. These challenges are about keeping and fulfilling a website responsive enough so that it can be viewed and accessed on all devices. At times sites set aside opportunity to stack, so keeping in mind the end goal to give a superior client encounter, one of the hardest difficulties adversary website composition and improvement is to influence site to stack quicker.

CHAPTER 4

Competencies and Smart Plan

4.1 Competencies Earned

Earn from online is all about testing and experimenting, no one gets it 100% right the first time they try. For example, when I first started my all affiliate websites, I thought the only way to monetize it was with banner advertising. What's nice concerning a number of these websites is that they need taken the usually monetization technique that is adding advertising banners to their website and so they accomplished there was alternative ways that to feature price which reciprocally they might make money. For example, Freelance Switch has a job board with a designer director and touts plus offers a premium membership offer more tutorials and resources.

In my case have got confidence on how to create website design and development files to HTML, CSS, JavaScript, bootstrap, PSD to HTML, Magento, Shopify, Photoshop CS and Database through MySQL, project with PHP in as professional which I think is very important as a website designer.

4.2 Smart Plan

- ❖ To start with we need to arrange and make the PSD outline.
- ❖ Most vital is handmade HTML5 code.
- ❖ It is vital to cut into Responsive HTML5.
- ❖ Use CSS, CSS3, PHP, MySQL, and JavaScript.
- ❖ Do legitimate handmade flawless and clam coding.
- ❖ Now create website design and development with responsive standpoint and plan with the assistance of some simple steps.
- ❖ Testing on numerous gadgets (smart phone, tablets, and widescreens) with distinctive screen resolutions.
- ❖ Release your site.

4.3 Reflections

My role is to create professional websites mainly E-commerce Sites or Online Stores that display content and Information of varieties products. In this internship period I learned about the tools which are design to use to design a web application such as HTML, CSS, Magento, Shopify, Joomla etc. This experience help me to be a strong applicant in job market. Intern help me to provide research and branch marking in web application. It also help advance tricks and trips that are practiced by the professional. I work with many projects now I know how to manage web application project and how to overcome any type of critical situation.

❖ Problems and Solutions

Here I give some work which I have done in Helix IT Solution Ltd during Internship. Some works are given bellow:

❖ Install XAMMP Server

The XAMMP (Windows, Apache, MySQL, FileZilla, Mercury and Tomcat) is all in one package, which installs the basic programs. I will need a local host running and to be able to build and run PHP scripts. I installed XAMMP Version 7.1.11(64 bit) in my computer with windows 10. [3]

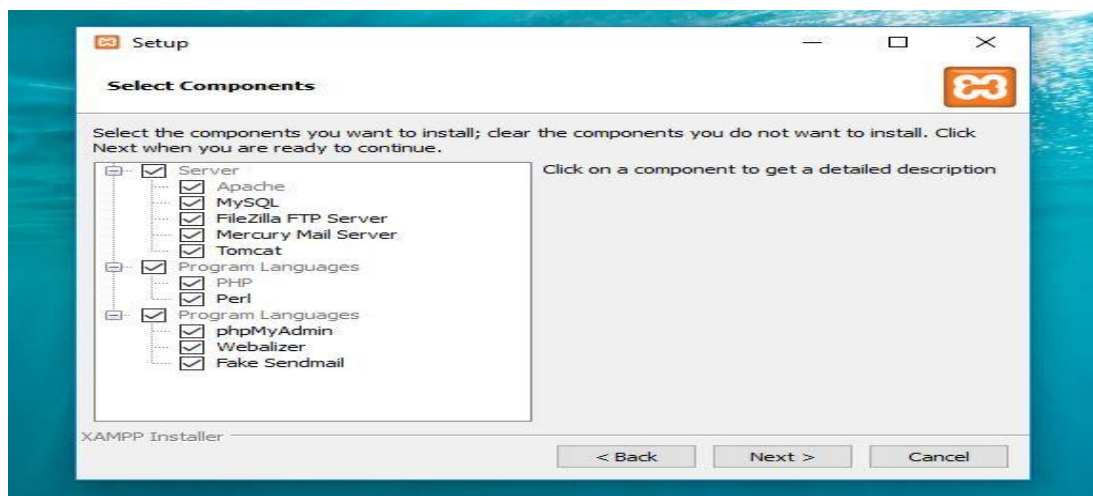


Figure 4.1: Install XAMMP Server

In figure 4.1, I describe about XAMPP Server installation.

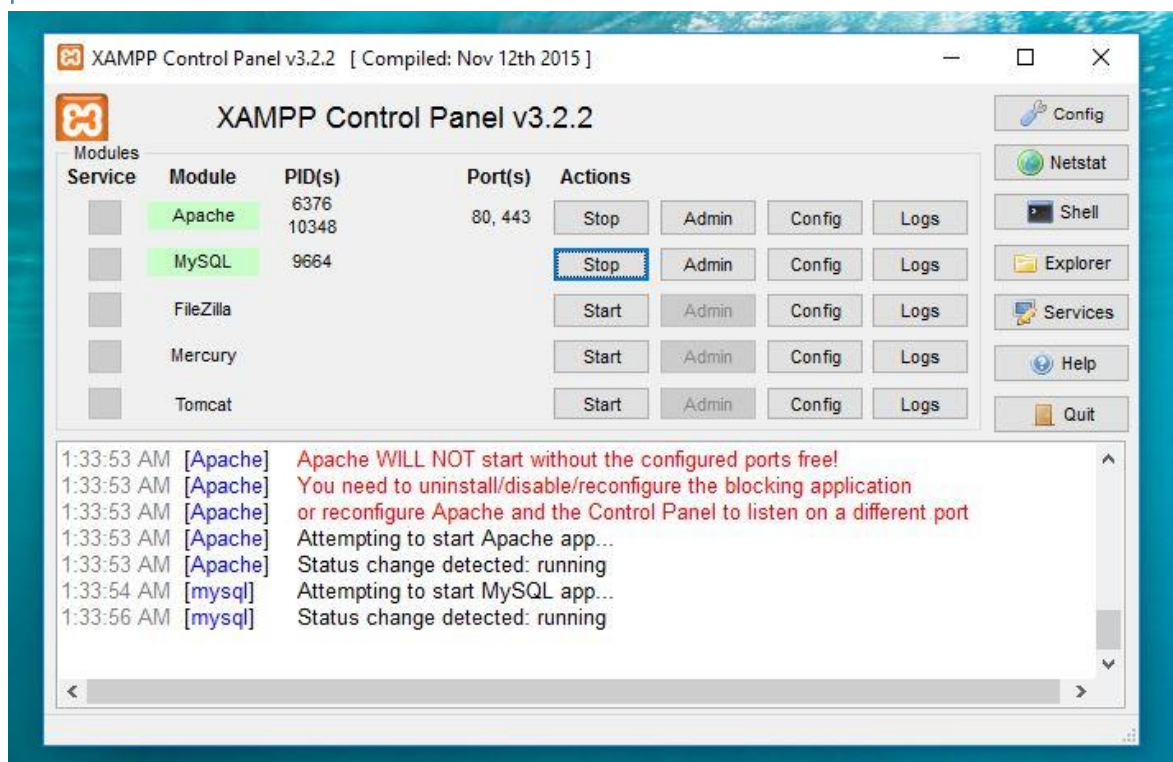
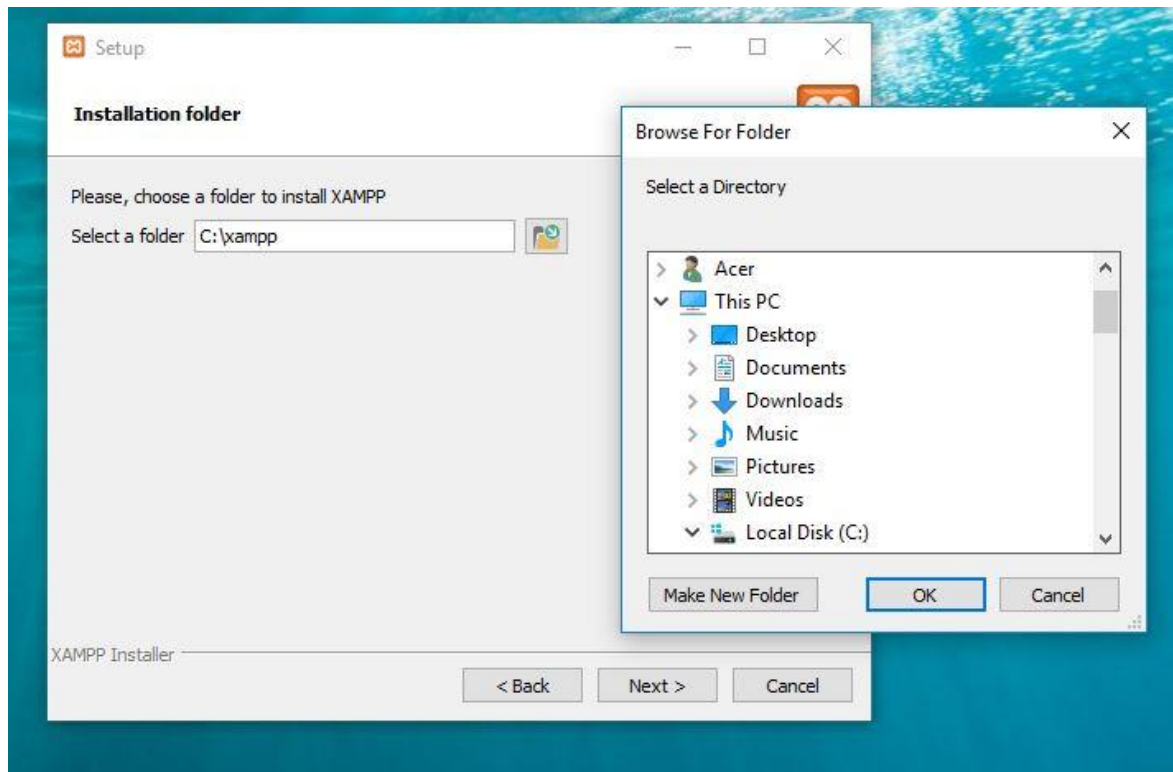


Figure 4.1.1: Configuring XAMPP Server

In figure 4.1.1, I describe about XAMPP Server configuring process.

4.4 Use Case Modeling and Description:

Use case diagrams are able to identify a set of actions that some system or systems should perform in collaboration with external user of the system. The most common parts of use case are actor, association, system boundary and packages. Use Cases are typically related to actors. In my Project there are two actors. They are Admin. and User.

❖ Use Case Diagram for Admin

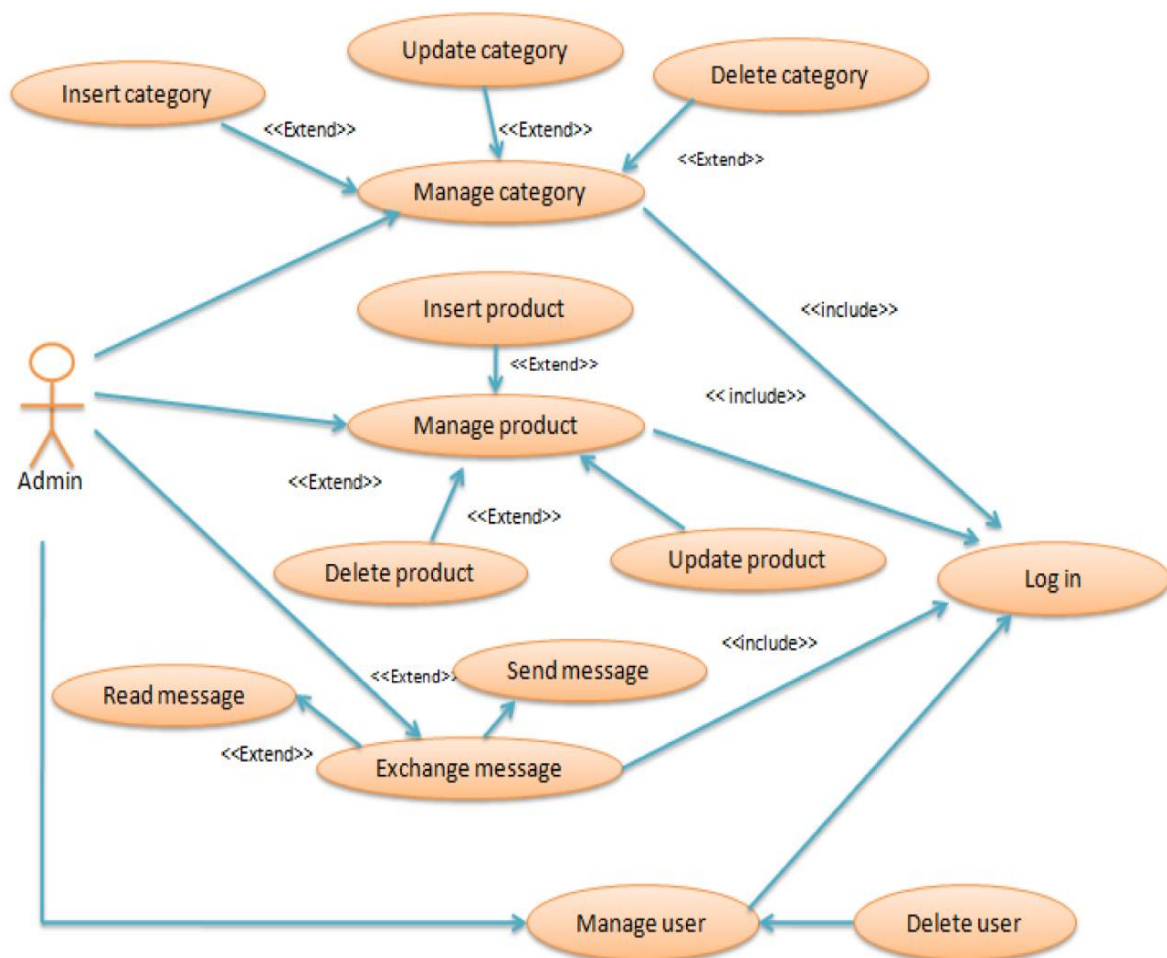


Figure 4.2: Admin Use Case Diagram

In figure 4.2, I describe about one actor which is Admin. Admin can do several works. Those works are adding new Product, deleting existing Product, editing existing

Product, adding Category, deleting Category, editing Category, Update Rules, Control User. But for fulfill those task Admin have to complete more subtask. Such as in Product Admin can do add Product, delete Product and edit Product. In Category Admin can do add category, Delete Category and edit Category.

❖ Table Description of Use Case Diagram for Admin

Table 4.1: Use Case Diagram for Admin

Title	Description
Name	Website Administrator
Brief Description	Website Administrator will access the web apps and complete their actions.
Actor	Website Administrator
Pre-Conditions	<ul style="list-style-type: none"> • Access Internet • Browser e-commerce shop maker's home Page • Create own shop
Exception Flows	<ul style="list-style-type: none"> • Internet Connection Failed • Shop name is not available
Post Condition	<ul style="list-style-type: none"> • Manager Products • Manage manufacturer • Manage category • View pie chart of products
Exception Flows	<ul style="list-style-type: none"> • Registration • Duplicate Registration • Login Failed • Password or Username not matched. • Connection loss during insert product information • Connection loss during manage category • Invalid date format during pie chart view
Flow of event	Website Administrator will access internet first then log in admin page and perform their action like manage product, confirm order etc.

In table 4.1, I describe about the description of use case diagram for admin.

❖ Use Case Diagram for User

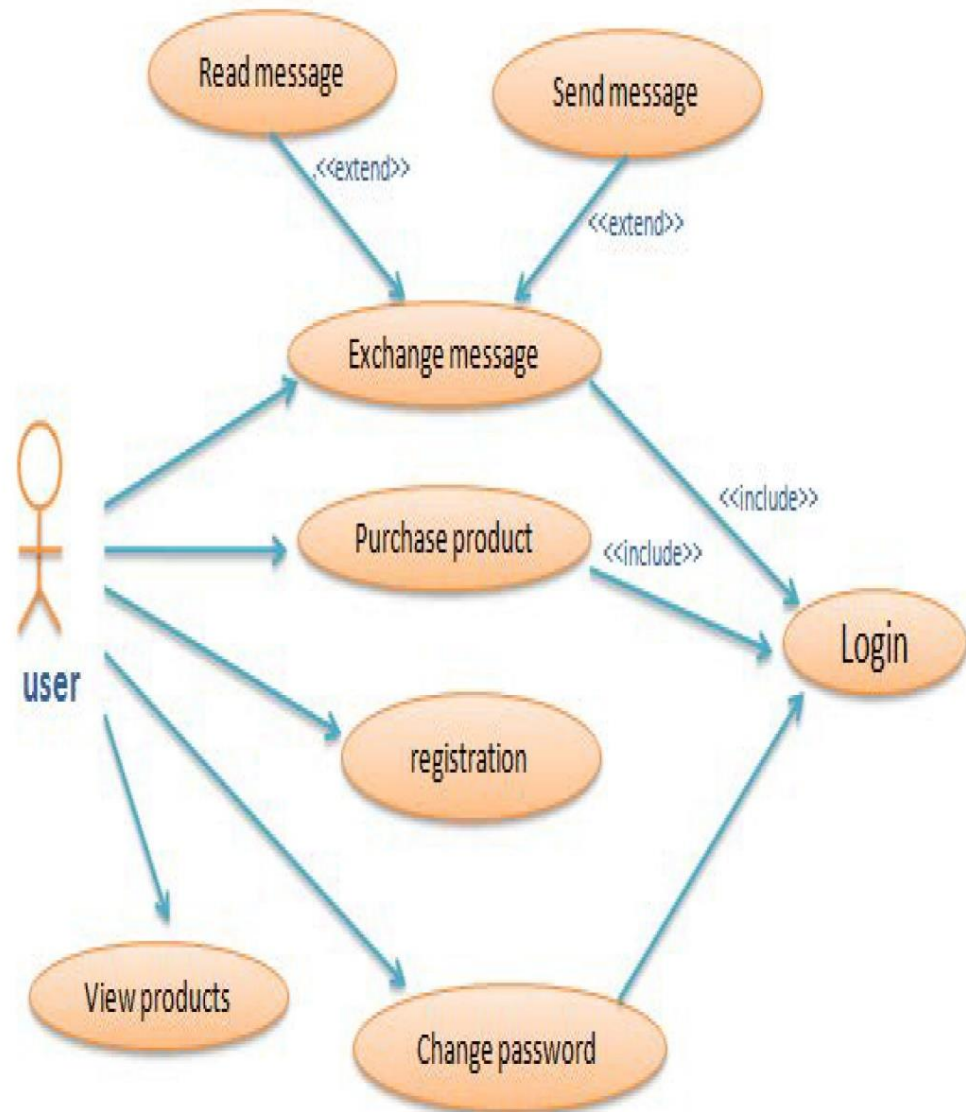


Figure 4.3: User Use Case Diagram

In figure 4.3, I describe about another actor which is User. His works are View Product, Purchase Product, Registration, Change Password, Recover/Forget Password, and Exchange Message. In Exchange message User, can do Send Message, Delete Message and Receive message, in Purchase product user have to login into his own account and then go to pay option for buying products. The interesting matter is that some task user

can complete without login such as View product, Add Product in to his cart but can't buy those products from cart.

❖ Table Description of Use Case Diagram for User

Table 4.2: Use Case Diagram for User

Title	Description
Name	Customer
Brief Description	Customer will access the web apps and complete their actions.
Actor	Customer
Pre-Conditions	<ul style="list-style-type: none"> • Access Internet • Browser e-commerce shop maker's home Page • Registration • Login
Exception Flows	<ul style="list-style-type: none"> • Internet Connection Failed • Duplicate Registration • Login Failed • Password or Username not matched
Post Condition	<ul style="list-style-type: none"> • Browse products • Add products to shopping cart • Update shopping cart • Order with shipping info • Select payment
Exception Flows	<ul style="list-style-type: none"> • Choose wrong product category • Cart limit cross • Wrong shipping information • Payment method not accepted
Flow of event	Customer will access internet first then go to home page and perform their action like browsing product, order products, select payment method etc.

In table 4.2, I describe about the description of use case diagram for user.

4.5 Logical Data Model

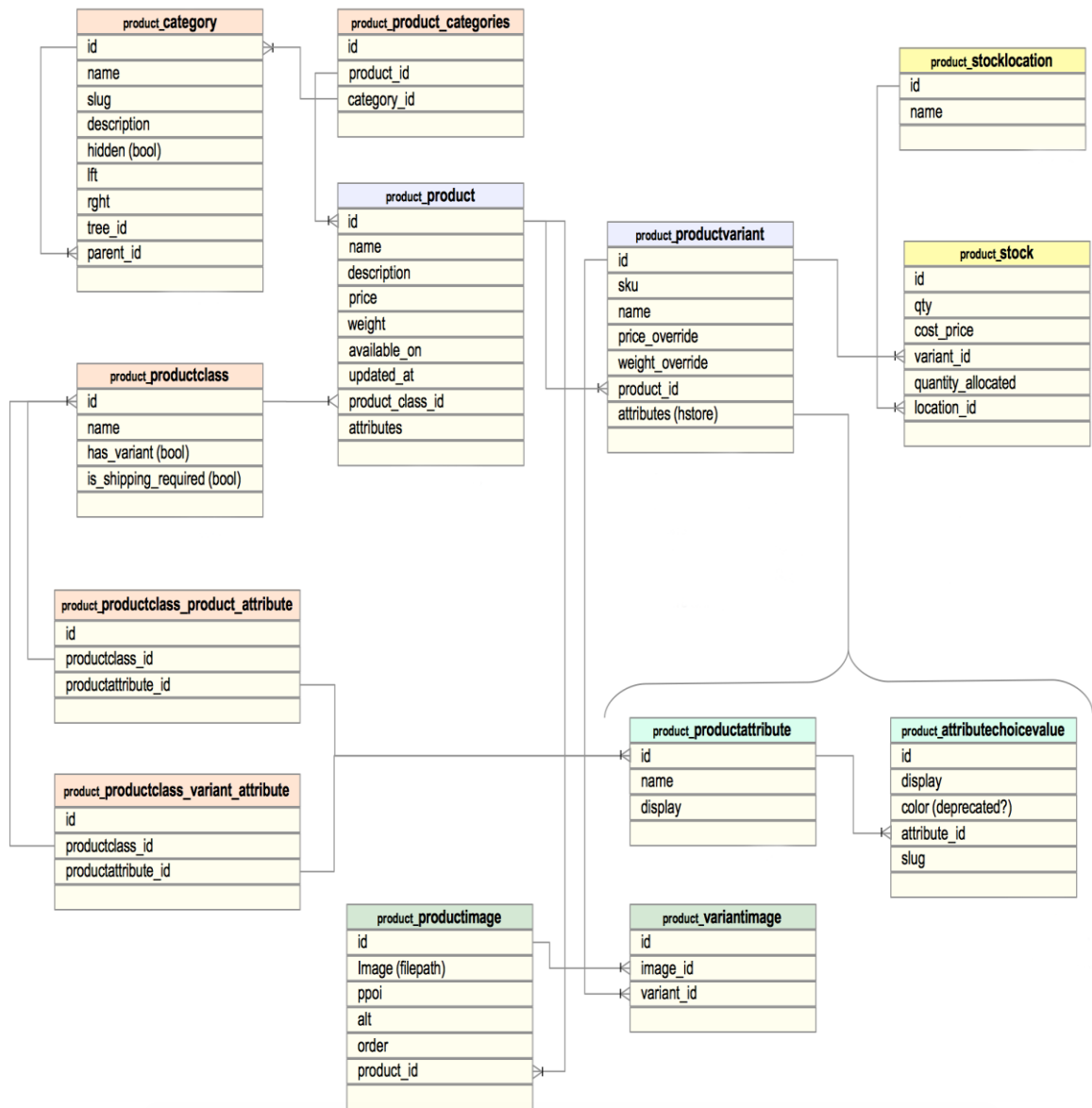


Figure 4.4: Logical Data Model

In figure 4.4, I describe about logical data model. Here I provide an GUI to relate the relation between database tables.

4.6 ER Diagram

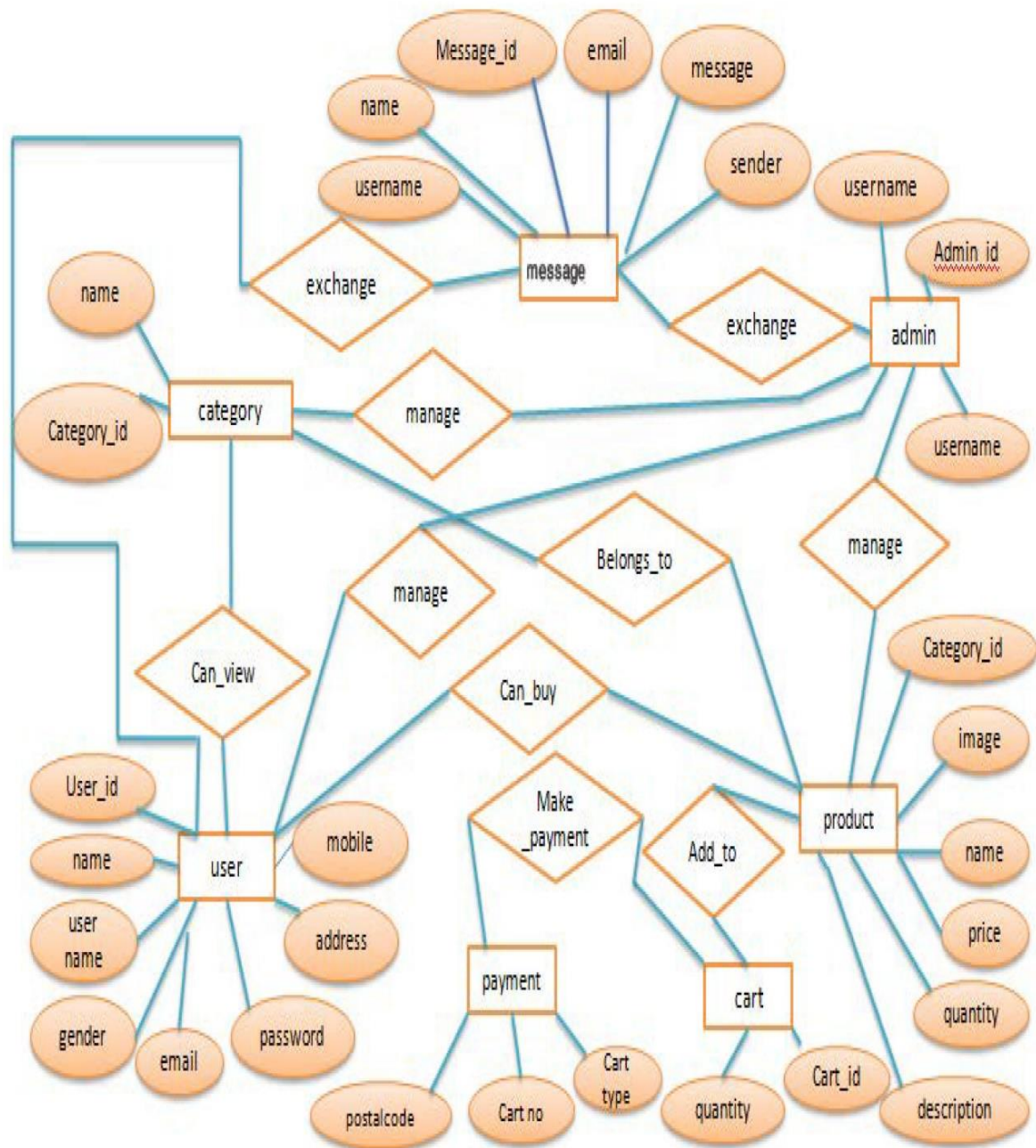


Figure 4.5: ER Diagram

In figure 4.5, I provide an ER Diagram to express the relation between all the entity and attribute of my project.

4.7 Design Requirements

Designing an e-commerce website can divide in two parts. Like frontend and backend. Frontend option is for customer or user and backend option is for admin. Backend option should not visible for general user. Only admin will be able to see it. Some major design requirements are given below:

❖ User Panel

- Interactive home page
- Product details
- Add cart
- User registration
- Shipping information form
- Checkout option
- View order details
- Payment option
- Online payment system
- Invoice option
- Cancel payment option
- Login and logout option
- Message admin

❖ Admin Panel

- Manage order
- Manage customer
- Admin login and logout option
- Payment confirmation
- Product publication and add new product option
- Edit and add new slider
- Add and edit category and manufacturer option
- Message customer

CHAPTER 5

Design Specification and Implementation

5.1 Front-end Design

Front-end is the page what the user will see and do their action. It is the most precious part for developing an e-commerce site.

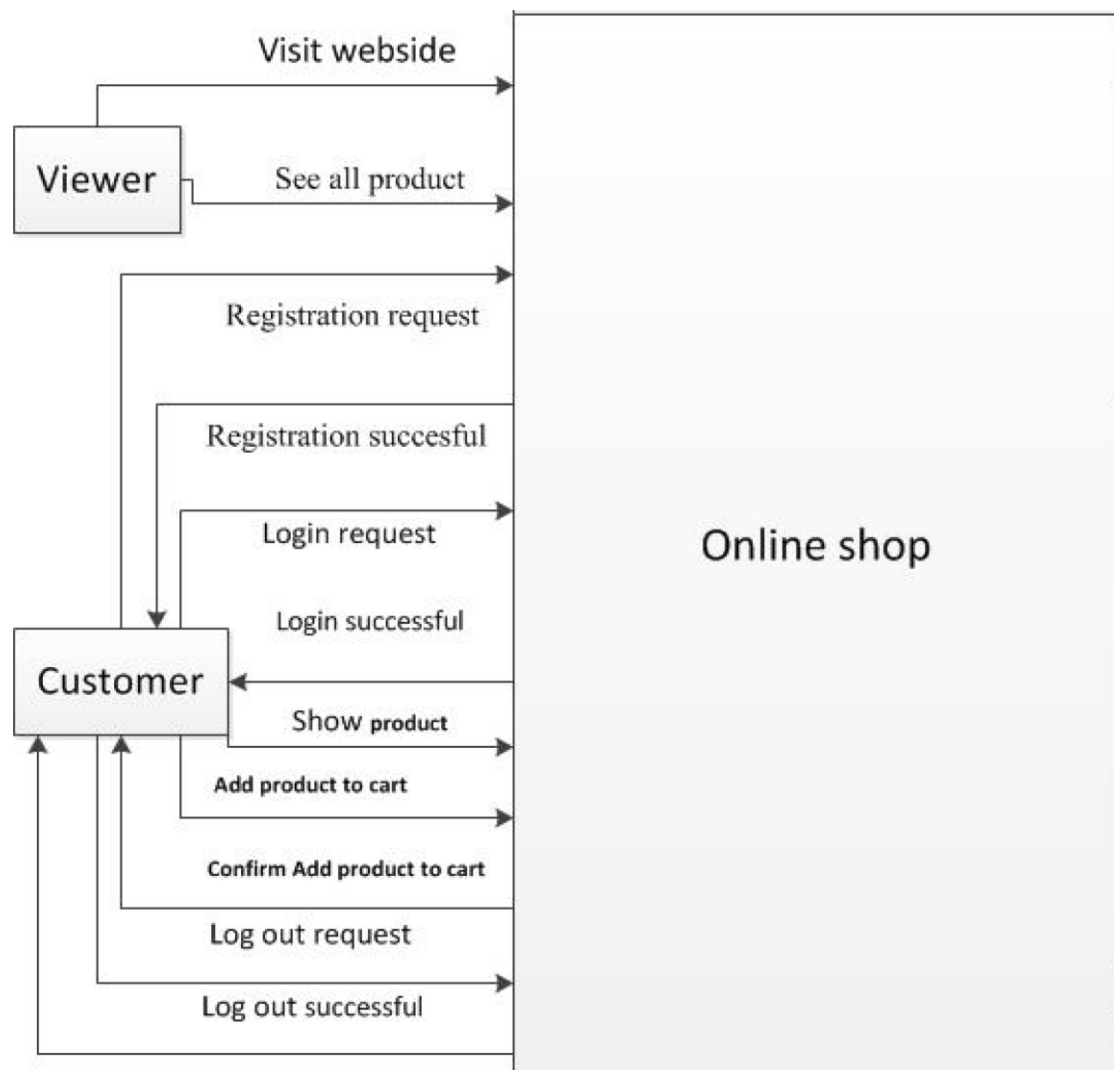


Figure 5.1: Front-end Design

5.2 Back-end Design

Back-end is the page for admin level who will control the shop through this page. It is the most vital part for admin. Because it will help the admin to control the shopping by the way he wants.

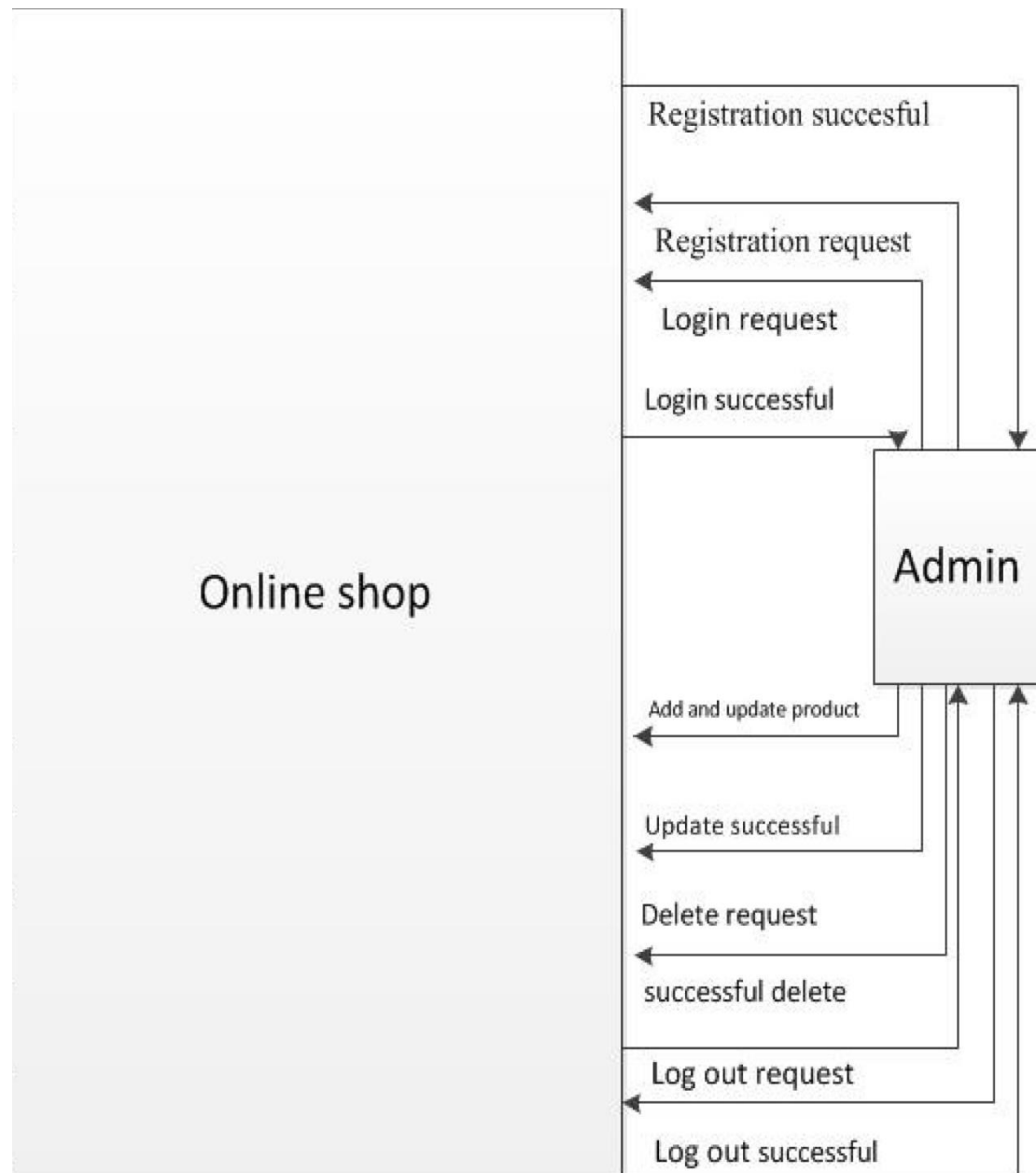


Figure 5.2: Back-end Design

5.3 Implementation Requirements

For implementing my project, I have used several tools. That are given bellow:

❖ Software

- XAMPP version 3.2.2
- Sublime Text

❖ Platform

- Magento

❖ Languages

- OOP PHP
- JavaScript

❖ Database

- MySQL version 5.6.26

❖ For Design

- HTML
- CSS
- Bootstrap

Magento:

Magento is written in PHP. It is an open-source e-commerce platform. The software system was originally developed by Varien, Inc, a US non-public company headquartered in Culver town, California, with help from volunteers. Varien revealed the primary general-availability unharness of the software system on March thirty one, 2008. Roy Rubin, former chief executive officer of Varien, later sold-out a considerable share of the corporate to eBay, that eventually utterly no heritable so sold-out the corporate to Permira. [4]

5.4 Implementation of Database

In figure showing the total database design implemented for this project. Databases are tbl_admin, tbl_category, tbl_customer, tbl_manufacture, tbl_order, tbl_order_details, tbl_payment, tbl_products, tbl_shipping, tbl_slider.

❖ Table Description of Database

Table 5.1: Database Table

Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> migrations	★ Browse Structure Search Insert Empty Drop	10	InnoDB	utf8mb4_unicode_ci	16 KiB	-
<input type="checkbox"/> tbl_admin	★ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_unicode_ci	16 KiB	-
<input type="checkbox"/> tbl_category	★ Browse Structure Search Insert Empty Drop	8	InnoDB	utf8mb4_unicode_ci	16 KiB	-
<input type="checkbox"/> tbl_customer	★ Browse Structure Search Insert Empty Drop	5	InnoDB	utf8mb4_unicode_ci	16 KiB	-
<input type="checkbox"/> tbl_manufacture	★ Browse Structure Search Insert Empty Drop	6	InnoDB	utf8mb4_unicode_ci	16 KiB	-
<input type="checkbox"/> tbl_order	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_unicode_ci	16 KiB	-
<input type="checkbox"/> tbl_order_details	★ Browse Structure Search Insert Empty Drop	10	InnoDB	utf8mb4_unicode_ci	16 KiB	-
<input type="checkbox"/> tbl_payment	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_unicode_ci	16 KiB	-
<input type="checkbox"/> tbl_products	★ Browse Structure Search Insert Empty Drop	13	InnoDB	utf8mb4_unicode_ci	16 KiB	-
<input type="checkbox"/> tbl_shipping	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_unicode_ci	16 KiB	-
<input type="checkbox"/> tbl_slider	★ Browse Structure Search Insert Empty Drop	6	InnoDB	utf8mb4_unicode_ci	16 KiB	-
11 tables	Sum	71	InnoDB	latin1_swedish_ci	176 KiB	0 B

Check all With selected:

In table 5.1, I describe how the root are represented in my database.

Table 5.2: Admin Table

+ Options									
← T →									
	admin_id	admin_email	admin_password	admin_name	admin_phone	created_at	updated_at		
<input type="checkbox"/>	3	thossainpias@gmail.com	e10adc3949ba59abbe56e057f20f883e	Pias		NULL	NULL		

Check all With selected: Edit Copy Delete Export

Show all Number of rows: 25 Filter rows:

In table 5.2, all the information's and credentials of all admin has been contained.

Table 5.3: Shipping Table

+ Options									
← T →									
	shipping_id	shipping_email	shipping_first_name	shipping_last_name	shipping_address	shipping_mobile_number	shipping_city	created_at	updated_at
<input type="checkbox"/>	16	shipping@gmail.com	Learn	Hunter				NULL	NULL
<input type="checkbox"/>	18	thossainpias@gmail.com	T. Hossain	Pias				NULL	NULL

Check all With selected: Edit Copy Delete Export

Show all Number of rows: 25 Filter rows: Sort by key: None

In table 5.3 purchased information has been stored, such as shipping address.

Table 5.4: Customer Table

+ Options		customer_id	customer_name	customer_email	password	mobile_number	created_at	updated_at
<input type="checkbox"/>	Edit Copy Delete	10	Pias1	thossainpias_1@gmail.com	827ccb0eea8a706c4c34a16891f84e7b	[REDACTED]	2018-04-02 21:08:03	NULL
<input type="checkbox"/>	Edit Copy Delete	11	Pias2	thossainpias_2@gmail.com	827ccb0eea8a706c4c34a16891f84e7b	[REDACTED]	2018-04-02 03:09:42	NULL
<input type="checkbox"/>	Edit Copy Delete	12	Pias3	thossainpias_3@gmail.com	827ccb0eea8a706c4c34a16891f84e7b	[REDACTED]	2018-04-02 03:23:41	NULL
<input type="checkbox"/>	Edit Copy Delete	13	Pias4	thossainpias_4@gmail.com	827ccb0eea8a706c4c34a16891f84e7b	[REDACTED]	2018-04-02 17:33:09	NULL
<input type="checkbox"/>	Edit Copy Delete	14	Pias	thossainpias@gmail.com	827ccb0eea8a706c4c34a16891f84e7b	[REDACTED]	2018-04-02 12:54:52	NULL

Check all With selected: Edit Copy Delete Export
 Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

In table 5.4, the information of the customers including their user account information's has been stored.

Table 5.5: Order Table

+ Options		order_id	customer_id	shipping_id	payment_id	order_total	order_status	created_at	updated_at
<input type="checkbox"/>	Edit Copy Delete	9	10	15	11	73,400.00	pending	2018-03-22 21:08:52	NULL
<input type="checkbox"/>	Edit Copy Delete	10	11	16	12	58,900.00	pending	2018-03-23 03:11:05	NULL
<input type="checkbox"/>	Edit Copy Delete	11	13	17	13	3,700.00	pending	2018-03-23 17:34:13	NULL
<input type="checkbox"/>	Edit Copy Delete	12	14	18	14	968.00	pending	2018-04-02 12:58:34	NULL

Check all With selected: Edit Copy Delete Export
 Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

In table 5.5, order information's including customer ID and payment amount has been stored.

Table 5.6: Payment Table

+ Options		payment_id	payment_method	payment_status	created_at	updated_at
<input type="checkbox"/>	Edit Copy Delete	11	handcash	pending	2018-03-22 21:08:52	NULL
<input type="checkbox"/>	Edit Copy Delete	12	handcash	pending	2018-03-23 03:11:05	NULL
<input type="checkbox"/>	Edit Copy Delete	13	handcash	pending	2018-03-23 17:34:13	NULL
<input type="checkbox"/>	Edit Copy Delete	14	handcash	pending	2018-04-02 12:58:33	NULL

Check all With selected: Edit Copy Delete Export
 Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

In table 5.6, all the payment information's including payment status and payment amount has been stored.

Table 5.7: Category Table

+ Options		category_id	category_name	category_description	publication_status	created_at	updated_at
<input type="checkbox"/>	Edit Copy Delete	8			1	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	9	Electronics	This is electronics	1	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	10			1	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	11	Electronics	This is electronics	1	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	14			1	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	15	Electronics	This is electronics	1	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	16			1	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	17	Electronics	This is electronics	1	NULL	NULL

Check all With selected: Edit Copy Delete Export

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

In table 5.7, has been stored all the created products categories of the website.

Table 5.8: Manufacturer Table

+ Options		manufacture_id	manufacture_name	manufacture_description	publication_status	created_at	updated_at
<input type="checkbox"/>	Edit Copy Delete	1	Others	this is others	1	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	3			1	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	4	Others	this is others	1	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	5			1	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	6	Others	this is others	1	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	7			1	NULL	NULL

Check all With selected: Edit Copy Delete Export

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

In table 5.8, manufacturer details information of the website has been stored.

Table 5.9: Order Details Table

+ Options		order_details_id	order_id	product_id	product_name	product_price	product_sales_quantity	created_at	updated_at
<input type="checkbox"/>	Edit Copy Delete	18	9	11	DEH-S4120BT	280	2	NULL	NULL
<input type="checkbox"/>	Edit Copy Delete	19	9	13	CDE-170	150	1	NULL	NULL

Check all With selected: Edit Copy Delete Export

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

In table 5.9, has been contained some order information's such as ordered product name, product price, sale qty etc.

Table 5.10: Slider Table

+ Options								
		<input type="checkbox"/>	slider_id	slider_image	publication_status	created_at	updated_at	
<input type="checkbox"/>				1	slider/vcssPCXaR9Odabx7kzfm.jpg	0	NULL	NULL
<input type="checkbox"/>				2	slider/5vbdukRnZ3WdsUPzyq4Y.jpg	1	NULL	NULL
<input type="checkbox"/>				3	slider/fdMfzQ7qQLTAslpxWY9l.png	1	NULL	NULL
<input type="checkbox"/>				4	slider/VS6qwyY9rfZhGpPiQ09a.jpg	1	NULL	NULL
<input type="checkbox"/>				5	slider/DBg7qPBuXj8abvB1TmyW.jpg	1	NULL	NULL
<input type="checkbox"/>				6	slider/lcDr2clOccxPGG4I7CWo.jpg	1	NULL	NULL

Check all With selected: Edit Copy Delete Export

Show all Number of rows: Filter rows: Sort by key:

In table 5.10, has been stored website slide images that I use to the websites front-end.

Table 5.11: Products Table

+ Options																
		<input type="checkbox"/>	product_id	product_name	category_id	manufacture_id	product_short_description	product_long_description	product_price	product_image	product_size	product_color	publication_status	created_at	upd	
<input type="checkbox"/>				3	Baby frok	10	6	this is thesdsdsd	sdsdsdsdsdsdsad	600.00	imageYUJCHtErSUCkHd5mPc.jpeg	M,L	Red,White,Black	1	NULL	NU
<input type="checkbox"/>				4	Shirt	8	2	sdsdsdsdsds	sdsdsdsdsds	800.00	image8rR9SUT8oT56Y1qgAW.jpg	M,L,XL	blue,white	1	NULL	NU
<input type="checkbox"/>				5	Womens Long Shirt	9	2	sdsdsdsdsds	sdsdsdsdsds	450.00	imageHDT4zu/n0vZqwB8GnT.jpg	xxl,xl	purple,pink	1	NULL	NU
<input type="checkbox"/>				6	Long Sourt	9	2	sdsdsdsds	sdsdsdsdsds	900.00	imageWtA7one7Ls6BHS400pn.jpg	xxl,xl	purple,blue,pink,maroon	1	NULL	NU
<input type="checkbox"/>				7	full long shirt	9	5	ssssssssssssss	ssssssssssssssss	1200.00	image5xv7EisV8zL4R6Rnj.jpg	L,XL,XXL	black,silver	1	NULL	NU
<input type="checkbox"/>				8	Shirt	8	2	saddddddddddd	saddddddddddd	700.00	imageV5W4cFMtLVE49T5H.jpg	M,XXL	maroon,blue,black	1	NULL	NU
<input type="checkbox"/>				9	Child dress	10	6	sdsaddddddd	saddddddddddd	1600.00	imageVl8M4uqCjBvIa7FF9P.jpg	xl	blue,black,red	1	NULL	NU
<input type="checkbox"/>				10	Bed	17	3	saddddddd	sdsasasasasas	28000.00	imageWgP16dMpmiThqSzrM.png	7*4	wood,maroon	1	NULL	NU
<input type="checkbox"/>				11	Laptop	11	1	sfsasasasas	saddddddddd	28000.00	imageWUJQAWUJlne138tY1cV.jpeg	16 inc display	silver,black	1	NULL	NU
<input type="checkbox"/>				13	Tablet	11	1	ssssssssss	ssssssssssss	15000.00	imageVl9QOM1HBNFnrIal.jpg	8 inc	black	1	NULL	NU
<input type="checkbox"/>				14	Plastic outdoor	12	6	ssssssssss	ssssssssssss	5000.00	imageUSQInJLuuKd2wllY6.jpg	unknown	orange	1	NULL	NU
<input type="checkbox"/>				15	child dress	10	2	ssssssssss	dbbbbbbbbb	1400.00	imageHrFgmIn79LSuDbTc3Z7.jpg	M,L	orange,maroon	1	NULL	NU
<input type="checkbox"/>				20	Table	17	3	sfsasasasas	sfsasasasas	12000.00	imageVl9FvFS0vUEw08oo.jpg	long	maroon,wood	1	NULL	NU

Check all With selected: Edit Copy Delete Export

In table 5.11, has been contained all the product details information's of the website.

5.5 Implementation of Front-end Design

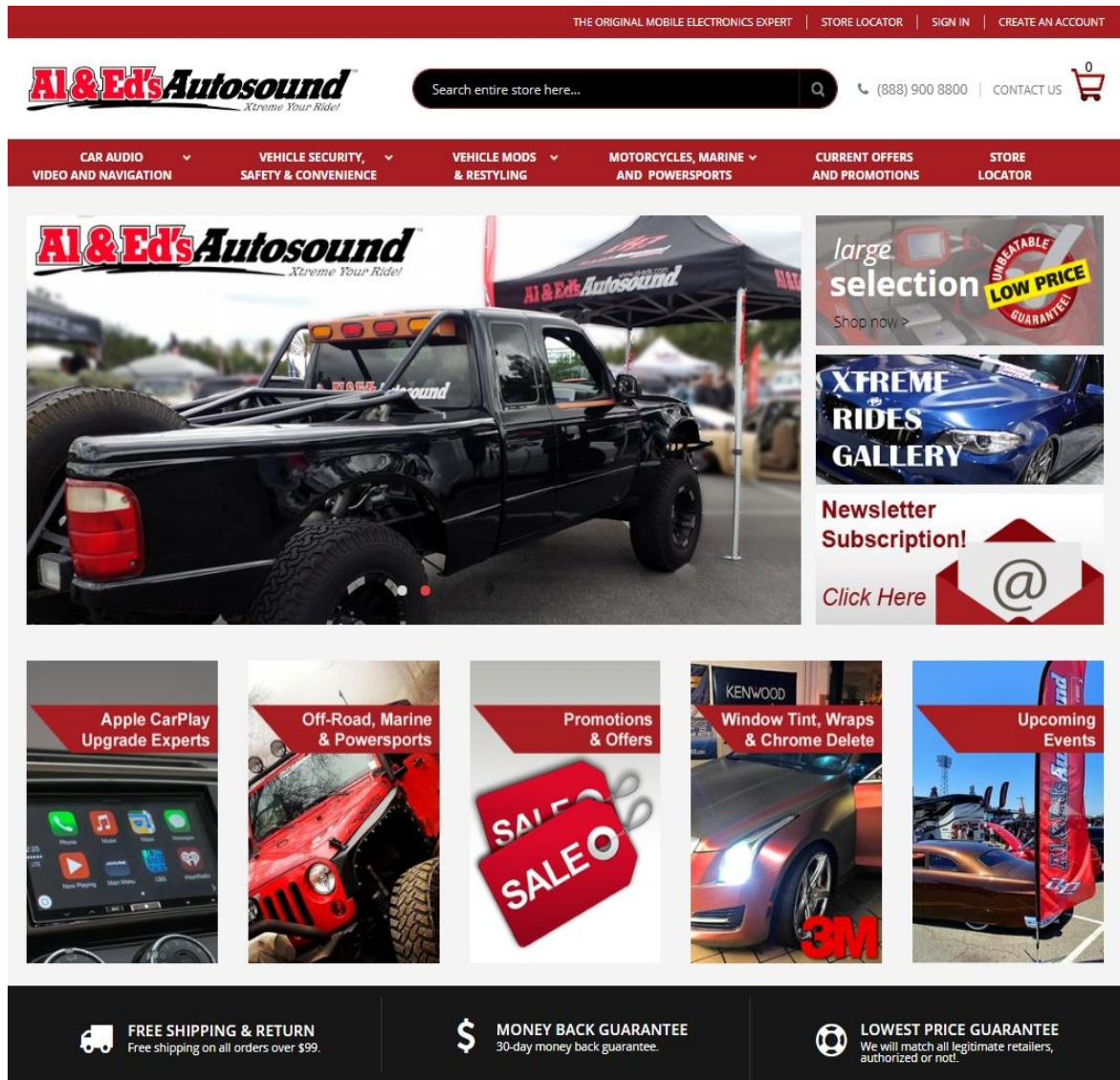


Figure 5.3: Implementation of Front-end Design

In figure 5.3, here I display my created website's front-end interface. This website is an online shop. Basically, it's a website of car electronic devices. It is a famous website for car electronics product in USA. [5]

5.6 Implementation of Back-end Design

❖ Back-end / Admin Panel on Magento Website

I design my website using Magento E-commerce Platform and a theme Porto. Magento is a software package like WordPress. But Magento only use to create online store or e-commerce site and WordPress mainly use to create blogging site. It is very SEO friendly. So, the websites that has been created using Magento, will receive too many traffics. This is one of the reasons that I use it to create my website.



Figure 5.4: Magento Admin Panel

In figure 5.4, I am displaying the interface of my website's Back-end or admin Panel. We can access in Magento Admin Panel through using credentials (username and password).

❖ Dashboard

The screenshot shows the Magento Admin Dashboard. At the top, there's a navigation bar with a left sidebar containing icons for Dashboard, Sales, Products, Store Locator, Customers, Marketing, Content, Reports, Smartwave, Stores, System, and Find Partners & Extensions. The main content area is titled 'Dashboard' and includes a 'Store View' dropdown set to 'All Store Views'. A yellow notification banner states 'It's time to change your password.' Below this, there are several key metrics: 'Lifetime Sales' at \$1,182.88, 'Average Order' at \$236.58, and 'Revenue' and 'Tax' both at \$0.00. A note indicates that a chart is disabled. There are three tabs: 'Bestsellers' (selected), 'Most Viewed Products', and 'New Customers'. The 'Bestsellers' tab shows a table of products. The 'Last Orders' table lists five guest orders, each with one item and a total of \$24.90 to \$28.66. The 'Last Search Terms' table shows one search term 'Lci' with 0 results and 3 uses.

Customer	Items	Total
Guest	1	\$24.90
Guest	1	\$28.66
Guest	1	\$28.66
Guest	1	\$28.66
Guest	1	\$28.66

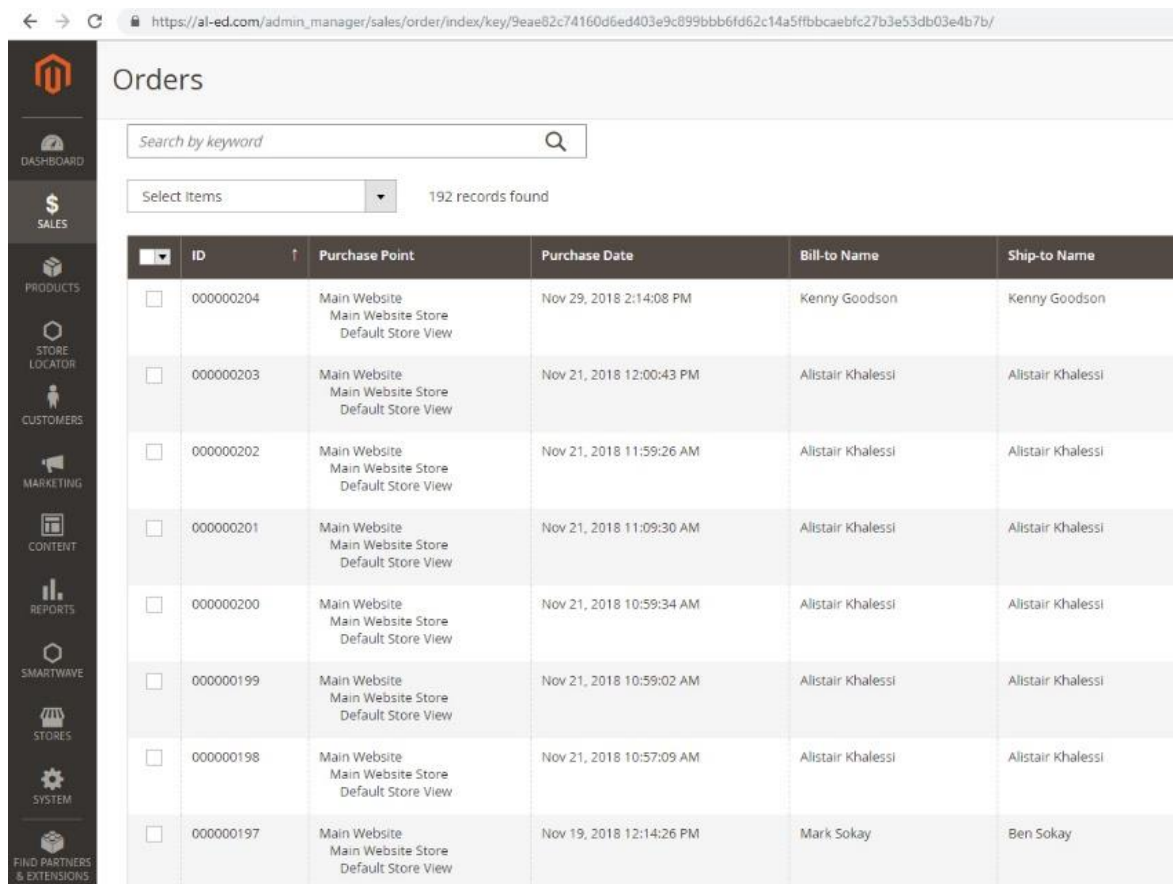
Search Term	Results	Uses
Lci	0	3

Product
Accele 6100CL
Cerwin-Vega XED10
JVC KDAV41BT
Cerwin-Vega H6E12DV
Cerwin-Vega XED71200.1M

Figure 5.5: Dashboard of Magento Admin Interface

Figure 5.5 represents the dashboard of my website that I created using Magento. It contains some basic information of website. We can see our daily sale amount, average sale amount and lifetime sale amount from our Magento dashboard.

❖ Order Page



Orders

Search by keyword

Select items 192 records found

<input type="checkbox"/>	ID	Purchase Point	Purchase Date	Bill-to Name	Ship-to Name
<input type="checkbox"/>	00000204	Main Website Main Website Store Default Store View	Nov 29, 2018 2:14:08 PM	Kenny Goodson	Kenny Goodson
<input type="checkbox"/>	00000203	Main Website Main Website Store Default Store View	Nov 21, 2018 12:00:43 PM	Alistair Khalessi	Alistair Khalessi
<input type="checkbox"/>	00000202	Main Website Main Website Store Default Store View	Nov 21, 2018 11:59:26 AM	Alistair Khalessi	Alistair Khalessi
<input type="checkbox"/>	00000201	Main Website Main Website Store Default Store View	Nov 21, 2018 11:09:30 AM	Alistair Khalessi	Alistair Khalessi
<input type="checkbox"/>	00000200	Main Website Main Website Store Default Store View	Nov 21, 2018 10:59:34 AM	Alistair Khalessi	Alistair Khalessi
<input type="checkbox"/>	00000199	Main Website Main Website Store Default Store View	Nov 21, 2018 10:59:02 AM	Alistair Khalessi	Alistair Khalessi
<input type="checkbox"/>	00000198	Main Website Main Website Store Default Store View	Nov 21, 2018 10:57:09 AM	Alistair Khalessi	Alistair Khalessi
<input type="checkbox"/>	00000197	Main Website Main Website Store Default Store View	Nov 19, 2018 12:14:26 PM	Mark Sokay	Ben Sokay

Figure 5.6: Order Page of Magento Admin Interface

Figure 5.6 represents the order page of my website that I created using Magento. The order page contains all the information's related to orders. here we can see order id, purchased date, customer billing address, shipping address, order price etc. We can manage order from order page (i.e. acknowledge orders, cancel order, create manual order etc.).

❖ Add New Product Listing

Brandmotion 5000-VSMA

Store View: All Store Views

It's time to change your password.

BASIC SETTINGS

Product Details

Images and Videos

Search Engine Optimization

Websites

ADVANCED SETTINGS

Default

Product Details

Name: Brandmotion 5000-VSMA

SKU: 5000-VSMA

Manufacturer: BrandMotion

Price: \$ 4.99

Sold Only In-Store: No

Tax Class: Taxable Goods

Images and Videos

Quantity: 5 In Stock

Brandmotion 5000-VSMA

Weight: Yes No

Categories: Car Audio Video and Navigation, Car Installation Supplies, Hardware

Description:

- windshield mirror
- hide the interior mirror
- harness running from the mirror to the headliner
- High quality at an affordable price

Is Featured: No

Car Video Monitor Type: Headrest Monitor

Speaker Size: 1-inch

Speaker Type: 2-way

Amplifier Type: Class D

Subwoofer Size: 5"

Bluetooth Feature:

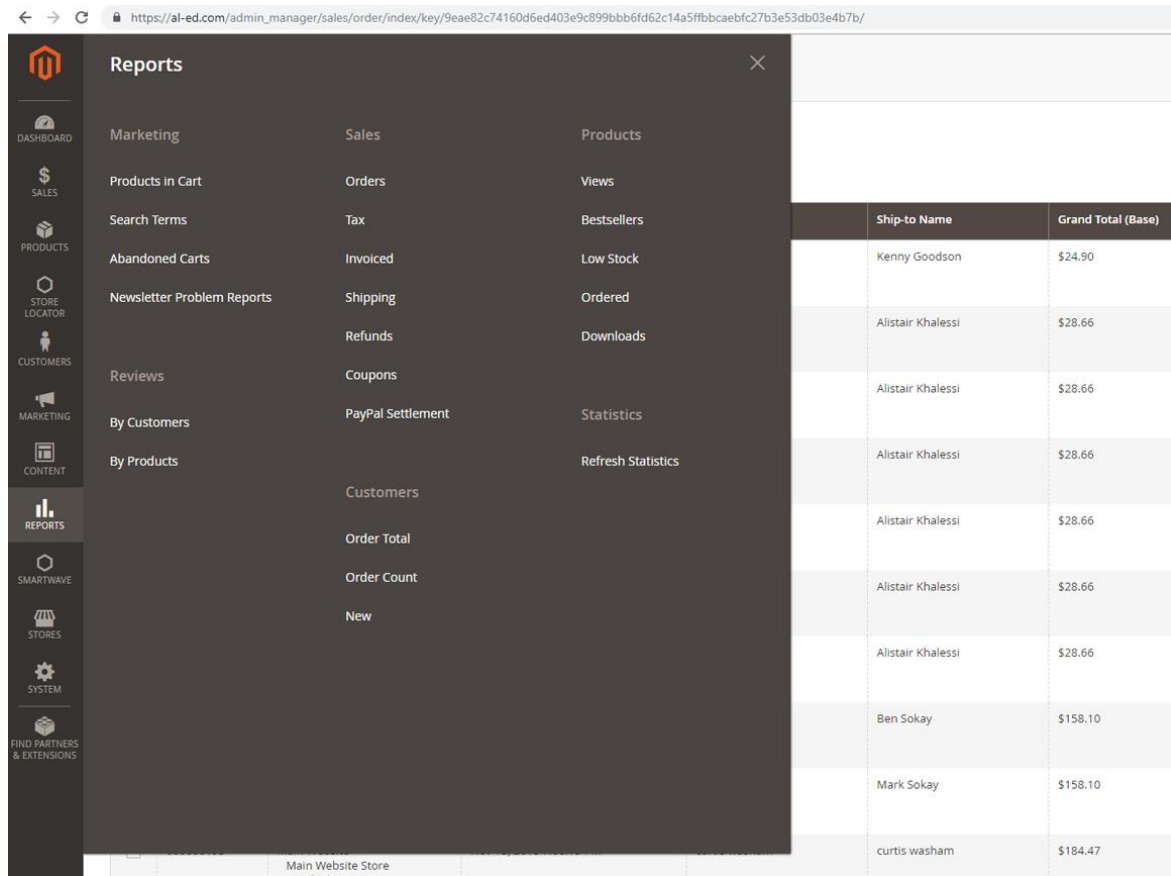
Brands:

Downloadable Information

Figure 5.7: Adding New Product Listing on Magento

Figure 5.7 represents the process of uploading / adding new product listing. We can upload a product in Magento Interface by entering some basic information (i.e. Product Name, SKU (Stock Keeping Unit) / Model No, Manufacturer Name, Posted Price, Some Good Quality Images and Description of Product).

❖ Reports



	Ship-to Name	Grand Total (Base)
	Kenny Goodson	\$24.90
	Alistair Khalessi	\$28.66
	Alistair Khalessi	\$28.66
	Alistair Khalessi	\$28.66
	Alistair Khalessi	\$28.66
	Alistair Khalessi	\$28.66
	Alistair Khalessi	\$28.66
	Ben Sokay	\$158.10
	Mark Sokay	\$158.10
	curtis washam	\$184.47

Figure 5.8: Report Category of Magento Admin Interface

In figure 5.8, I represent Report category. It is one of the most important categories in Magento interface. Basically, it contains some most important sale attributes (i.e. Marketing, Sales, Products, Review, Customers, Products, Statistics etc.).

CHAPTER 6

Conclusion and Future

6.1 Discussion and Conclusion

I have gathered a lot of experience and this is a great opportunity for me to complete this internship on “**Web Design and Development**” at Helix IT Solution Ltd. During this internship, I considered to web design, database create through MySQL, web development and also there I gained deep knowledge about Magento and Shopify E-commerce Platforms.

Overall, I can say that this internship that I’m discussing about is very useful for my web developing career, I have learned a lot and got chances to implement. It helped me to enrich my working in software company specially E-commerce based company and learning about enterprise also. Those experiences I gathered from the stated internship will surely help in near future in my career.

6.2 Scope for Future Career

Finding work can be a real challenge, especially if I don’t have any experience. A successful internship can help me to become an expert and will help to find better career opportunity. So as a successful internship my future scopes will be:

- Website Designer
- E-commerce Consultant
- Knowing Various Programming Languages.
- To Work in Online Platform.
- To be a Technical Supporter.
- To be Work in IT Company.
- To be Software Engineer.
- To be a Technical Supporter.
- To be System Analyst.
- To be Security Engineer.

References

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- [5] Al & Ed's Autosound. website information, available at <<<https://al-ed.com>>>, last accessed on 08-11-2018.

APPENDICES

Appendix A: Internship Reflection

Internship is basically one of the two choices for BSc requirements. The other option is project work. I choose internship instead of project work because I wanted to know about the job market and job culture of our country practically. At the same time I think this a great opportunity for anyone to learn professionalism also.

As an intern I chose Helix IT Solution Ltd. due to their market value and reputation. My interest also matched with their services. As an intern in Helix IT Solution Ltd. my role was to create professional websites mainly E-commerce Sites or Online Stores that displays content and Information of varieties product. In this internship period I learned about the tools which are design to use to design a web application such as HTML, CSS, Magento, Shopify, Joomla etc. This experience helps me to be a strong applicant in job market. Intern help me to provide research and branch marking in web application. It also helps advance tricks and trips that are practiced by the professional. I work with many projects now I am known how to manage web application project and how to overcome any type of critical situation. Finally getting the experience to work on professional team.

Appendix B: Company Detail

Helix IT Solution Ltd. is one of the Largest IT Companies in Bangladesh who released quality and moderation to its value led clients across the world. Helix helps clients all over the world to achieve E-commerce success. We've positioned ourselves as one of the top E-commerce solution providers by helping several online store owners move their online business forward without compromise. Helix deliver complete service with everything from service, expertise and support to designs, payment solutions, customizations and integration with business systems. Simply Helix put E-commerce at its best i.e. partnership with companies like Cerwin Vega, The London Video Marketing Company, eBusiness UK, etc. Helix has enhanced its portfolio in global arena.

Head Office

Helix IT Solution Ltd.

House# 793/1 Monipur,

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