MANAGEMENT OF ELECTRONIC COMMERCE AND WEBSITE APPLICATION IN ELECTRONIC PRODUCTS MARKETING IN IRAQ

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES OF
ÇANKAYA UNIVERSITY

BY
AHMED IBRAHEM

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE
IN
THE DEPARTMENT OF
MATHEMATICS AND COMPUTER SCIENCE
INFORMATION TECHNOLOGY

OCTOBER 2014
Title of Thesis: Management of Electronic Commerce and Website Application in Electronic Products Marketing in Iraq

Submitted By Ahmed IBRAHEM

Approval of the Graduate School of Natural And Applied Science, Çankaya University.

______________________________
Prof. Dr. Taner ALTUNOK
Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Science.

______________________________
Prof. Dr. Billur KAYMAKÇALAN
Head of Department

This is to certify that we have read this thesis and that in our opinion, it is fully adequate, in scope and quality, as a thesis of the degree Master of Science (M.Sc.) in Mathematics of Computer Science – Information Technology.

______________________________
Prof. Dr. Mahir NAKIP
Supervisor

Examination Date: 30/10/2014
Examining Committee Members:

Prof. Dr. Mahir NAKIP (Çankaya University)
Assist. Prof. Dr. Ö zgü r Tolga PUSATLI (Çankaya University)
Assoc. Prof. Dr. Fahd JARAD (THK University)
STATEMENT OF NON PLAGIARISM PAGE

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last Name: Ahmed IBRAHEM
Signature: 
Date: 30/10/2014
ABSTRACT

MANAGEMENT OF ELECTRONIC COMMERCE AND WEBSITE APPLICATION IN ELECTRONIC PRODUCTS MARKETING IN IRAQ

IBRAHEM, Ahmed Raid Ibrahem
M.Sc. Department of Mathematics and Computer Science
Information Technology Program
Supervisor: Prof. Dr. Mahir NAKIP
Co Supervisor: Dr. Alaa TAQA

OCTOBER 2014, 50 Pages

The consumer-to-consumer is one of electronic commerce (e-commerce) types. The primary aim of an e-commerce site is to buy and sell goods and services online. The purpose of this study is to design a web based interface for online shopping in Iraq. It is an open market between consumers to consumer shows us how to market electronic products. This system designed by using PHP language and MySQL server for database.

The finding of this research is the application enables consumers to sell their product online. Also, the website facilitates buying and selling on the Internet, saving time, search for a product, saving the cost of transportation, as well as the possibility of adding a product by the customer. Further, in this website can post buying and selling through social media and sharing information with (Facebook and Twitter).
Also, shopping cart is important for every online shopping, it facilitates to add and delete a product with shopping. Finally, customer should participate in the website as a member registering by username and password number for each customer to be able shopping.

**Keywords:** Electronic Marketing, Website, World Wide Web, E-commerce, Online Shopping, Consumers to Consumer.
ÖZ

ELEKTRONİK TİCARET VE İNTERNET SİTESİNİN YÖNETİMİ IRAK’TA
ELEKTRONİK ÜRÜNLERİN PAZARLANMASINI UYGULANMASI

IBRAHEM, Ahmed Raid Ibrahem
Yüksek lisans, Matematik – Bilgisayar Anabilim Dalı
Bilgi Teknolojileri Bölümü
Tez Yöneticisi : Prof. Dr. Mahir NAKIP
Eş - Tez Yöneticisi : Dr. Alaa TAQA

Ekim 2014, 50 Sayfa

Bu araştırmanın bulgusu tüketicilerin kendi ürünlerini internet üzerinden satabilmelerine olanak veren bir uygulamadır. Ayrıca, internet sitesi zaman
kazandırarak, bir ürünü aramayı, taşıma maliyetinden tasarruf yapılmasını yanı sıra internet üzerinden satın alma ve satma işlemlerini kolaylaştırır ve müşteri tarafından yeni bir ürünü eklenmesine olanak sağlar. Dahası, bu internet sitesinde sosyal medya aracılığıyla alım satış yapılabilir ve (Facebook ve Twitter) ile bilgi paylaşılabılır. Ayrıca, internet alış - veriş sepeti üzerinden satış yapan her site için önemlidir ve alış veriş sırasında bir ürünü eklemeyi ve çıkarmayı kolaylaştırır. Son olarak, her bir müşterinin alış veriş yapabilmesi için müşterinin kullanıcı adı ve şifresi ile bir üye olarak internet sitesinde kayıt yaparak katılmalıdır.

Anahtar kelimeler: Elektronik Pazarlama, İnternet Sitesi, Dünya Çapında Ağ, E-Ticaret, İnternet Üzerinden Alış - Veriş, Tüketiciden Tüketiciyeye.
ACKNOWLEDGMENTS

I would like to express my thanks and special appreciation to my advisor, Prof. Dr. Mahir NAKİP, you have been a tremendous mentor for me. I would like to thank you for allowing me to grow as a research scientist and for encouraging my research. Your advice on both research as well as on my career have been priceless.

I would like to express my special appreciation to my co advisor, Dr. Alaa TAQA. I had a lot of useful information from her. I would like to thank her cordially for her valuable comments.

Also I would like to express my absolute gratitude to my mother and father who had endured great sacrifices as a result of my pursuing this lifelong dream of academic accomplishment. Also I dedicate this gift to my brothers and all my family. I would not have been able to face many of the challenges in this journey without their unconditional love and support.

Finally, I would like to thank my close friends with whom we have shared good and bad times for many years.
# TABLE OF CONTENTS

STATEMENT OF NON PLAGIARISM ................................................................. iii
ABSTRACT ........................................................................................................ iv
ÖZ .................................................................................................................. vi
ACKNOWLEDGMENTS .................................................................................... vii
TABLE OF CONTENTS .................................................................................. ix
LIST OF FIGURES ............................................................................................ xii
LIST OF TABLES .............................................................................................. xiii
LIST OF ABBREVIATIONS ................................................................................ xiv

CHAPTERS:

1. INTRODUCTION ............................................................................................ 1
   1.1. Electronic Trade in General ................................................................. 2
   1.2. Need of System Application ............................................................... 3
       1.2.1. The problem of the study .............................................................. 3
       1.2.2. Solution of the study’s problem .................................................... 3
       1.2.3. Scope of the study ....................................................................... 4
   1.3. The Contribution to the Field ............................................................... 4
   1.4. Advantages of the New System Proposed ........................................... 5
   1.5. The Aim of the Thesis ......................................................................... 5
   1.6. Important of This Study ...................................................................... 6

2. BACKGROUND AND LITERATURE REVIEW ......................................... 7
   2.1. What is Electronic commerce? ............................................................. 8
   2.2. What is the Website? .......................................................................... 9
   2.3. Major Categories of Electronic Marketing ......................................... 9
   2.4. Zhou, 2004 ......................................................................................... 10
   2.5. Kodali, 2007 ...................................................................................... 11
   2.6. Mittapelli, 2008 .................................................................................. 11
2.7. Berg, 2008 ......................................................................................................................... 12
2.9. Saeed, 2010 ....................................................................................................................... 13
2.11. Brokaw, 2011 ................................................................................................................ 15
2.13. Bashir, 2013 .................................................................................................................. 17
2.15. Other Studies .............................................................................................................. 18
2.16. Discussion ..................................................................................................................... 20
3. METHODOLOGY .............................................................................................................. 21
3.1. Who Should Use the Internet? ....................................................................................... 21
3.2. Requirements Analysis of the System. ......................................................................... 22
3.3. MD5 Method for Security. ............................................................................................. 23
3.4. The System Administrator Function ........................................................................... 24
3.5. Advantages and Disadvantages of the Electronic Marketing. ...................................... 25
3.6. Description and Structure Design of the Database ....................................................... 28
4. IMPLEMENTATION OF THE SYSTEM DESIGN .................................................... 32
4.1. Technologies chosen to design and develop the system ................................................. 33
   4.1.1. PHP language ........................................................................................................... 33
   4.1.2. HTML language .................................................................................................. 34
   4.1.3. CSS language for web design. ............................................................................ 34
   4.1.4. Build the database by MySQL .............................................................................. 35
   4.1.5. Adobe dreamweaver. ............................................................................................. 36
4.2. Results of the System Designed .................................................................................. 37
   4.2.1. Admin interface. .................................................................................................... 37
      4.2.1.1. Inventory of products..................................................................................... 38
      4.2.1.2. Add new product by admin ........................................................................ 39
      4.2.1.3. Messages of customer suggestions and problems..................................... 40
4.2.1.4. Buy’s orders received.........................................................41
4.2.2. Customer Interface...............................................................42
  4.2.2.1. Home of the website........................................................42
  4.2.2.2. Products in the website......................................................43
  4.2.2.3. My cart for buy products....................................................44
  4.2.2.4. Add new product by customer.............................................44
  4.2.2.5. Contact us for customer suggestion....................................45
  4.2.2.6. About us for website information.......................................46
  4.2.2.7. Search for a products.........................................................46
  4.2.2.8. Category of products : left templet.....................................47
  4.2.2.9. Category of Products : right templet..................................48
    4.2.2.9.1. log in or register in the website to shopping..................48
    4.2.2.9.2. Follow us on facebook and twitter.................................49
    4.2.2.9.3. List of new products....................................................49
5. CONCLUSION.................................................................................51
REFERENCES ..................................................................................R1
APPENDICES ..................................................................................A1
A. CURRICULUM VITAE .................................................................A1
# LIST OF FIGURES

## FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Electronic trade in general</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>The interactive branding tools</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>A graphical representation of porter’s</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>The admin interface</td>
<td>24</td>
</tr>
<tr>
<td>5</td>
<td>ER diagram</td>
<td>30</td>
</tr>
<tr>
<td>6</td>
<td>Steps to build the website</td>
<td>31</td>
</tr>
<tr>
<td>7</td>
<td>Interface log in admin</td>
<td>36</td>
</tr>
<tr>
<td>8</td>
<td>Inventory of products</td>
<td>37</td>
</tr>
<tr>
<td>9</td>
<td>Add new product by admin</td>
<td>48</td>
</tr>
<tr>
<td>10</td>
<td>Messages of customer suggestions and problems</td>
<td>39</td>
</tr>
<tr>
<td>11</td>
<td>Buy’s orders received</td>
<td>40</td>
</tr>
<tr>
<td>12</td>
<td>Home page of the website</td>
<td>41</td>
</tr>
<tr>
<td>13</td>
<td>Products of the website</td>
<td>41</td>
</tr>
<tr>
<td>14</td>
<td>Shopping cart for buy products</td>
<td>42</td>
</tr>
<tr>
<td>15</td>
<td>Add new product by customer</td>
<td>43</td>
</tr>
<tr>
<td>16</td>
<td>Contact us</td>
<td>43</td>
</tr>
<tr>
<td>17</td>
<td>About us</td>
<td>44</td>
</tr>
<tr>
<td>18</td>
<td>Search for a products</td>
<td>45</td>
</tr>
<tr>
<td>19</td>
<td>Category of products : left templet</td>
<td>45</td>
</tr>
<tr>
<td>20</td>
<td>Log in or register in the website to shopping</td>
<td>46</td>
</tr>
<tr>
<td>21</td>
<td>Follow us on facebook and twitter</td>
<td>47</td>
</tr>
<tr>
<td>22</td>
<td>List of new products</td>
<td>58</td>
</tr>
</tbody>
</table>
LIST OF TABLES

TABLES

Table 1: Advantages of E-Commerce ................................................................. 28
Table 2: Disadvantages of E-Commerce .............................................................. 29
Table 3: Table of Admin Information ............................................................... 20
Table 4: Table of Customers Information .......................................................... 28
Table 5: Table of Messages Information ............................................................ 28
Table 6: Table of Orders Information ............................................................... 28
Table 7: Table of Order - Detail Information ...................................................... 29
Table 8: Table of Products Information ............................................................ 29
Table 9: Table of Shopping Information ............................................................ 29
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJAX</td>
<td>Asynchronous Javascript And XML</td>
</tr>
<tr>
<td>ASP</td>
<td>Active Server Pages</td>
</tr>
<tr>
<td>AIP</td>
<td>Admin Interface Page</td>
</tr>
<tr>
<td>B2B</td>
<td>Business To Business</td>
</tr>
<tr>
<td>B2C</td>
<td>Business To Consumer</td>
</tr>
<tr>
<td>C2B</td>
<td>Consumer To Business</td>
</tr>
<tr>
<td>C2C</td>
<td>Consumer To Consumer</td>
</tr>
<tr>
<td>CSS</td>
<td>Cascading Style Sheets</td>
</tr>
<tr>
<td>CIP</td>
<td>Customer Interface Page</td>
</tr>
<tr>
<td>DB</td>
<td>Database</td>
</tr>
<tr>
<td>DBMS</td>
<td>Database Management System</td>
</tr>
<tr>
<td>DSS</td>
<td>Decision Support System</td>
</tr>
<tr>
<td>EC</td>
<td>Electronic Commerce</td>
</tr>
<tr>
<td>EM</td>
<td>Electronic Marketing</td>
</tr>
<tr>
<td>EDI</td>
<td>Electronic Data Interchange</td>
</tr>
<tr>
<td>HTML</td>
<td>Hyper Text Markup Language</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>JSP</td>
<td>Java Server Pages</td>
</tr>
<tr>
<td>MD</td>
<td>Message Digest</td>
</tr>
<tr>
<td>OS</td>
<td>Operating System</td>
</tr>
<tr>
<td>OBS</td>
<td>Online Book Sale</td>
</tr>
<tr>
<td>PC</td>
<td>Personal Computer</td>
</tr>
<tr>
<td>PHP</td>
<td>Personal Home Page</td>
</tr>
<tr>
<td>ROM</td>
<td>Read Only Memory</td>
</tr>
<tr>
<td>RDBMS</td>
<td>Relational Database Management System</td>
</tr>
<tr>
<td>SMM</td>
<td>Social Media Marketing</td>
</tr>
<tr>
<td>SQL</td>
<td>Structured Query Language</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>SW</td>
<td>Software</td>
</tr>
<tr>
<td>URL</td>
<td>Uniform Resource Locator</td>
</tr>
<tr>
<td>WAP</td>
<td>Wireless Application Protocol</td>
</tr>
<tr>
<td>WML</td>
<td>Wireless Markup Language</td>
</tr>
<tr>
<td>WA</td>
<td>Web Analysis</td>
</tr>
<tr>
<td>WWW</td>
<td>Would Wide Web</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

The rapid expansion of Internet user has made it easy and improved the online marketing in the global market. As a result the number of customer and visitor shopping online are increasing more than the number of customer using online for others purpose [1]. The development in electronic business with the rise of the Internet has been nothing less than phenomenon. This has created new way access to markets in the form of customers and companies [2]. Increasing growth of technology minimizes problems dealing with time and place in business affairs and doing trade on Internet has found its position in many business over the world [3]. Electronic and algorithmic trading has become a significantly larger focus for financial, securities regulators, institutions, and different exchanges [4].

The revolution of communications and information technology (IT) has changed the way people doing current business. Nowadays, many of the businesses are related to electronically tools especially Internet. Application of e-marketing can change the style of business all over the world, because of the speedy prevalence of the Internet, the World Wide Web (WWW) and electronic communication has generated budding new electronic channels for shopping. Online shopping is a form of targeted marketing, assisting websites by increasing the number of customers and to introduce products or services through Internet [5].

Online marketing can fail because of several different reasons. One of the main reasons for such failure is that customers remain unaware of the advertised goods and their advantages. Another considerable issue that causes marketing failure is the lack of information about users and their tastes; that is, they are offered to purchase goods without analyzing them and their behavior in the network. In this regard, competition among different manufacturers and service companies makes the development of new type of electronic marketing a necessity. One of these new kinds of marketing is marketing in social networks.
An online social network is a community on the Internet where individuals usually keep in touch through a profile that introduces them [6].

1.1 Electronic Trade in General

The Internet can be used to conduct marketing research, reach new markets, distribute products faster, solve customer problems, serve consumers, and communicate more efficiently with business partners. The advantage of Internet marketing includes the developed flow of information, customer services and new products, improved market transparency, developed availability [7]. The system for online shopping helps purchase of products, services and products on the Internet by selecting the products listed on the website (e-market website). The proposed system supports in building a website to sell and purchase goods or products online using an Internet connection. Buying products online, users can select different goods dependent on categories, hence cover weaknesses of the current system, and delivery services, making it easier to buy and help sellers to reach a broader market.

![Diagram of electronic trade process]

**Figure 1:** Electronic trade in general
1.2 Needs of The Application

There are significant numbers of business websites and online shopping offer a large number of products specifically designed to meet the interests of shopping in a large number of clients or visitors, such as companies, HP and DELL. These markets on the Internet has more than thousands of goods listed under different types.

1.2.1 Problems of the study

- Some of the fundamental problems with current systems are non-interactive environment that is provided to the customers.
- The use of traditional user interfaces which make continuous post backs to the server; each post back makes a call to the server, gets the response and then refreshes the entire web form to display the result.
- This scenario adds an additional decline of commerce causing delay in offering results.
- Some systems such as e-steel.com not depend on search in order to view the products.

1.2.2 Solution of the study

- The motive of this electronic marketing website application is to allow the customer to play with search tools and create different integrative search criteria to perform exhaustive search.
- The visitors of this website can feel the difference between empowered user interfaces vs. traditional user interfaces.
- Provide an interactive interface through which the customer can interact with different areas of website application.
- The search engine would list a set of products based on the search term and customers can further filter the list based on various parameters.
- Provide drag-and-drop feature there by allowing customers to add products to or remove products from the shopping cart by dragging the products in to or out the shopping cart.
A good e-commerce website should present the following factors to the customers for best usability:

- Knowing when the items have been saved or not saved in the shopping cart.
- Returning to the different parts of the website after drag and drop an item to the shopping cart.
- Obvious buttons or shopping links.
- Consistent layout and clearly product information.

1.2.3 The scope

- Present system may extend allow visitors for the establishment accounts and save the products on the list of best desire.
- Users can participate to price alerts that will allow them to receive messages when prices of products reduced below a certain level.
- The existing system is limited just to the shopping cart process.
- Customers may have multiple shipping and invoices information saved.
- During checkout we can use drop and drag feature in the selection of billing and shipping information.

1.3 The Contribution to The Field

The proposed system helps in building a website to buy and sell products or goods online using an Internet connection. Buy products online, users can select different goods depend on the categories, delivery services, hence covering the disadvantages of the existing system, making the buying easier and helping the vendors to reach wider market.

The questions that arising from the aim are:

- How can reduce the time of search a product when you on website for online shopping?
- How can reduce the cost of product by online shopping?
How can reduce the risk of electronic marketing?

How can make the system efficient to use and hence make the shopping experience pleasant for the customers?

1.4 Advantages of The New System Proposed

- Select products easier and faster in one place through research and see the product description.
- Keeps time traveling to the seller and the seller's place.
- Trusted.
- The user can perform a drag-and-drop so easy to add the product to the shopping cart by dragging items in your shopping cart.
- Reports can be saved from references in the future.
- Information inventory reports to the vendor on a yearly, monthly, daily basis.
- Easy to show a complete description of the products and order the products by the press on the image of the product.
- The website allows the users to add products.

1.5 The Aim of Thesis

This knowledge would benefit e-marketers in their efforts to create and improve effective online shopping strategies. Also, make new consumers are necessary and essential, in order to in addition to an initial purchase; they bring the potential for lifetime value, which is the stream of gains that accrues through a consumer’s relationship with the buyers [8]. Digital shops are developed to be more “transparent” than traditional markets, search costs, with reduced information asymmetry, transaction costs, and menu costs, along with the ability to change prices dynamically depended on market conditions. Digital products, such as music, video, software, and books, can be delivered over a digital network [9]. Businesses with the most experience and success in using e-commerce are beginning to realize that the main factors of failure or success are not merely website existence and low cost, also include the electronic service quality (e-service quality) [10].
The aim of this system is to develop web-based interface for online shopping. The application will be efficient in use and therefore make your shopping experience enjoyable for customers. Also, customers can search for products, view a complete description of the products and order the products. Also, a search engine are provides convenient way and an efficient to search for products specific to their orders.

However, the customer can further filter the list of products depend on various parameters. Also, provides drop and drag advantage so that the customer can add the product to the shopping cart by dragging the item in to shopping cart. Finally, the website allows users to add products.

1.6 Importance of This Study

Online shopping has become common place among Internet visitors for a number of different activities connected to researching and making transactions online. Also, in day to day life, we will need to buy lots of products or goods from a market. It can be electronic products, food items, house hold items etc. Now days, it is really hard to get some time to go out and buy them by ourselves because lots of works or busy life style. In order to solve this, consumer to consumer e-marketing website will start. By using this website, we can buy products or goods on the Internet just by visiting the website and order products online.
CHAPTER 2
BACKGROUND AND LITERATURE REVIEW

Electronic commerce is a revolution in business practices. If organizations are going to take benefit of new Internet technologies, then they must take a strategic perspective. That is, care should be taken to make a close link between corporate strategy and electronic marketing strategy [11]. Electronic commerce and its systems have become everyday discussions and various literature and articles have been written in this regard. Access to the domain of electronic world have become priorities of many of the big and small public and private organizations and as such, managers has encountered new challenges in this field [12].

![Interactive Brand Experience Diagram](image)

**Figure 2**: The interactive branding tools [8]

In the early 1990s, online shopping was fueled by the potential of revolutionizing the manner in which organizations showed their entire business operations. In the past decade, with its rapid explosion of Web technologies, marketers have experienced excitement and panic; trial and error; and success and failure as they created online
businesses and expanded into electronic channels of distribution. Most now agree that electronic commerce remains unique from modern styles, yet, still draws on fundamental marketing principles [8].

The use of internet and its technologies to complete significant marketing activities is known as e-marketing or electronic marketing. The ways that many marketing activities are performed have improved as businesses have turned to e-commerce. However, the basic principles of marketing still apply. E-business must understand marketing basics and use them effectively so as to be profitable and successful [13]. Moreover, the everywhere nature of the Internet and its wide global access has made it an extremely effective mode of communication between commerce and consumers. The development of Internet technology has enormous potential as it decreases the costs of product and service delivery and extends geographical boundaries in bringing purchasers and vendors together [14].

### 2.1 What is Electronic Commerce?

Electronic commerce EC, is the usage of computer networks to develop organizational performance. Increasing profitability, gaining market share, improving consumer service, and delivering products faster are some of the organizational performance gains possible with electronic commerce. EC is more than ordering products from an online catalog. It involves all aspects of an organization's electronic interactions with its investors, the people who determine the future of the organization. This, electronic commerce contains activities such as establishing a Web page to support stockholder relations or communicating electronically with college students who are potential workers. Also, electronic commerce involves the use of information technology to enhance transactions and communications with all of an organization's investors. Such stakeholders include customers, sellers, government regulators, financial institutions, mangers, workers, and the public at large [11].
2.2 What is The Website?

Web 2.0 is the term used to describe a variety of website and systems that allow anyone to share and create online information or material they have created. A key section of the technology is that it lets people to create, share, collaborate & communicate. Web 2.0 differs from other kinds of website as it does not need any web design or publishing skills to participate, making it easy for people to share and create or communicate their work to the world. The nature of this technology makes it an popular mode to communicate information to any a choice group of publics or to a much wider audience.

There are number of different kinds of web 2.0 systems including social networking, wikis, blogs, folksonomies, podcasting and content hosting services. Some of the most popular websites are Web 2.0 sites such as YouTube, Wikipedia, Facebook, Flickr, MySpace [15].

2.3 Major Categories of Electronic Marketing

There are several categorizes of electronic marketing and some different ways to describe these groups. Academics determined a number of frameworks for classifying electronic marketing but every one need to clarify it form a unique perspective. The key different categorizes of electronic marketing are Business-to-Business (B2B), Business-to-Consumer (B2C), Consumer-to-Consumer (C2C), Consumer-to-business (C2B) and Mobile Commerce (M-Commerce) [16].

1- **B2B**, Business-to-Business is a type of marketing transaction that exists between businesses or a transaction that occurs between a firm and other company to transfer of services and goods. A possible explanation for this may be that Business-to-Business includes online wholesaling in which businesses sell materials, services and products to other businesses on the websites.

2- **B2C**, Business-to-Consumer is a type of marketing refers to transactions between a business and its end users and so it make electronic storefronts that proposal information, products, and services between business and customers in a retailing transaction or it is an online and electronic marketing model that
indicates a financial transaction or online sale between a business and consumer.

3- **C2B**, Consumer-to-Business is the transfer of services, products or information from people to business or it is a business typical where end users create goods and services that are used by business and organizations.

4- **C2C**, Consumer-to-Consumer is a type of online marketing facilitated medium, which involves transactions among consumers and it is a business model which two users deal business with every other directly.

5- **M-Commerce**, Mobile Commerce is the term was created in 1997 to goal “the purchasing and selling of goods, information and services” via wireless handheld devices such as cellular phones, personal digital assistants and laptops. These wireless devices interact with computer networks that include the capacity to conduct online merchandise buys. Mobile commerce lets consumers access to Internet in order to shopping online without needing to find a place to plug in. Mobile marketing transactions continue to improve and the phrase includes the purchase and sale of a wide range of goods and services, online banking, information delivery and bill payment.

In the review of the scientific references, whether books or articles that specialized in design and implement of website for online shopping design, founded many of the studies and research, including the establishment of an electronic marketing system for buy and sale products on the Internet, and following is a summary of each study in terms of its goals and the conclusions reached by.

**2.4 Zhou, 2004 [17]:**

Suggested design an Online Shopping System which is based on the 2.5G wireless communication technology, WAP (Wireless Application Protocol). Certainly, it can be compatible with cell phones which support WAP (2.5G application) not only allow it be implemented in office or home PCs, also. A general approach of the prototype creation, implementation and design.
The goals of the study:

- Study and extend the programming skills such as Java, HTML, WML, JSP and SQL syntax, etc.
- Employ proper theories to implement Online Shopping System, validate and test the realized system after application.

2.5 Kodali, 2007 [18]:

Suggested design business to the consumer project deal with the development of e-commerce website for Book Online Sale OBS. However, it provides for the consumer, with the index for the different books available for purchase in the shop. In order to enable buying, the shopping cart is provided to the customers. Also, the application applied using a multi-tiered approach, with a backend database, which is the middle layer of ASP.NET, Microsoft Internet Information Services, and Web browser as a user front.

Conclusions of the study:

This project helps in understanding the development of technologies and interactive web pages used to implement it. Moreover, the design of this project, which includes a data model and explains how to model the process of building a database containing different tables, and how the data is processed and accessed from the tables and awarded the project to build accurate knowledge about how ASP.NET is used to build the website on the internet, and how it connects to the database to connect the data. Also, it explain how to modify the data and Web pages to provide customers with a shopping cart application.

2.6 Mittapelli, 2008 [19]:

Suggested to design a web based application intended for online retailers, this application is intractive to use. However, customers can be classified into two types based on their knowledge of the goods that suit their needs. In addition, customers would be able to offer the full specifications of the product and the different images at different zoom levels. The tools and controls used in the system are recommended
AJAX controls and ASP.NET Toolkit controls which develops the navigation, usability and interactivity. The main focus lies in providing customers friendly search engine for effectively offering the desired results and its drop and drag behavior.

**Conclusions of The Study:**

The "online marketing" is planned to provide a web based system that would provide research showing and chose of product. In this application, they can observe that the customer interacts with the application during the graphical users interface. Also, customers can view product reviews and also write their reviews.

**2.7 Berg, 2008 [20]:**

This study faces two extremely different online shop systems – one open source and one high cost software. Basically both systems carry up the required shop functionalities. Usability, security as well as a general structured management of information in the front end and in the backend qualify both systems to be deployed in every-day online shopping. Moreover, customers have gotten used to shopping online. They expect the company to offer a full line of products online as well as offline. Meanwhile, many of them are already out of use whereas others have made their mark in every day online shopping. There are many commercial as well as free (open source) online shops Access closed.

**Conclusions of The Study:**

By the open sources and the resultant high adaptability of the commerce shop application can be said that it is a modern shop application fulfilling the common requirements on usability, clarity and security. Also, the participating community around commerce helps new comers as well as "old stager" with any type of concerns. The importance thing that author focus to while figuring out pros and cons of the systems will be the companies requirements.
2.8 Ali P., and Sankaran S., 2010 [21]:

In this study, the authors look and review the analyze of customer loyalty and satisfaction in order to develop online shopping for consumers in Norway. The theoretical framework discussed in brief about the effects of retention on consumer satisfaction and consumer loyalty. The study on consumer satisfaction and loyalty has been done from the perspective of a company performing online business.

Conclusions of The Study

The results of the study reveal that while a good percentage of Norwegians are satisfied with online shopping only less than half of them to stay loyal to the vendors on the Internet. However, in the long term, will be those loyal customers and can be retained only when online businesses to meet the constantly for them through the provision of detailed information for product on websites, timely delivery of goods, excellent customer service, quality and website designs effective importantly.

2.9 Saeed, 2010 [22]:

The studies are done on the basis of evaluation of feedback collection from customers and information search of the various goods online. However, the focus was more on the customers who do careful information search before running a buy and also many random consumer who buy a product without deep evaluation of the products. Also, they compared traditional customer behavior and the behavior of customers shopping online analytical results were a vast difference. In addition, the need for improvement in the application of the list is the base for this thesis. Studies that offered e-commerce systems is still not able to understand the new segment of consumers shopping online and there is a great need for improvement in the field for many customers. Results of this study are important for web stores that work in Scandinavia.

Objectives of The Study:

The key purposes of the study are to analyze the existing application of e-commerce for clothing, whether they are successful in addressing their customers segment. To
understand whether the consumers have many attitude into the online shopping as it was in traditional shopping or they is a new customers segment formed.

2.10 Yang T. A., Kim D. J., and Dhalwani V., 2007 [23]:

In this study, the authors explore the social media on the Internet as a new development of e-commerce. Also, they considering the first social media on the Internet as a new form of web services and social networks based compared with other existing Web based services using the 7C framework. In addition, the social media analyzed from the perspective of business strategy for the show, through the creation of a business model for social media sites on the Internet using Porter's five forces model. However, they discussed the primary income models that can be used by organizations and companies that provide social media services on the Internet.

➢ The Porter's Five Forces Model:

- Buyer power is high when buyer have many choices from home to buy, and low when their choices are few. As a provider of products and services, an organization wishes to reduce buyer power.
- Supplier power is high when buyers have few choices from whom to buy, and low when their choices are many. Supplier power is the converse of buyer power.
- The threat of substitute products or services depends on buyer propensity to substitute, relative price performance of substitute, buyer switching cost, and the perceived level of product differentiation.
- The threat of substitute products or services is high when there are many alternative to a product or service, and low when there are few alternatives from which to choose.
- The rivalry among existing competitors is high when competition is fierce in market and low when competition is more complacent. In the following figure 2.2 : A graphical representation of Porter's five forces model:
Figure 3: A graphical representation of Porter’s

Conclusions of The Study:

The analysis of revenue models indicate that the advertising, affiliate programs, and subscription-based services are still the primary source of revenue for social media websites. The greater number of people who use the online social media service, could be generated more revenue for the service provider. Also, online social media services are now giving their followers several referral points for referring friends to the service. Social media websites across the Internet in the future can integrate other services, such as selling products, into their business model, in order to generate more revenue.

2.11 Brokaw, 2011 [24]:

This study is to test the efficiency of the importance of shopping on social media and how to measure the return on investment. The Author has done an analysis activities to Twitter and some companies offer sales on social media and participating with them. In addition, they had to a survey on some of the college students to determine
if they are the largest group of young followers of social networking in the field of marketing and change in their purchasing decisions.

**Conclusions of The Study:**

The study finds that social media marketing effectiveness is highly influenced by its messages/contents quality, the firm’s involvement, and its relationship with the other shopping programs. Also, the study finds that generation young may be the main visitors of social media websites, but they are not the primary goal audience of the social media shopping.

2.12 Al-Nawayseh, 2012 [25]:

Suggested online grocery shopping focused on design business to customer (B to C) an e-commerce logistical decision support application for grocery retailers. However, online grocery marketing applications is one of the Internet business that has received a lot of care in the past several yeras. They has developed online grocery marketing on a stage in advanced countries, where benefited retailers and customers from it. Moreover, this service is still in infancy in advanced countries. The grocery store is one of the most difficult things for sale on the Internet mainly because of sensory issues and delivery. This model exposes determines the most suitable and grocery retailers logistical delivery application in the future.

**Conclusions of The Study:**

Grocery marketing on the Internet is one of the online business systems that received much care in the previous many years. Online grocery marketing has various potential achievement to consumers, mainly in terms of large selection, best prices, convenience and time savings.
2.13 Bashir, 2013 [26]:

Suggested system to identify and obtain insight into customer behavior towards online shopping of electronic products with respect to the economy of Pakistan. Also, identify the factors that affect online shopping behavior of customers to buy electronic products in Pakistan proposed. Further, explore the reason behind less attention from online customer about online shopping of electronics products in Pakistan. Moreover, you can create any segments by identifying the customer and how they can relate to these segments to identify the factors.

Conclusions of The Study:

This study was completed to determine the behavior of customers in Pakistan towards online shopping for electronic goods. However, online shopping is growing in Pakistan. Also, the acceleration of online shopping is not fast like compared to other developed countries such as the United States and the United Kingdom. In addition, the application of the theories of customer behavior on the Internet called goal-oriented online buyer and motives of the experimental online shopping and highlighted in the characteristics of the consumer, customer behavior online, predicting factor of online shopping and the mentality of the customers in online shopping.

2.14 Standing, 2013 [27]:

The writer suggested that the application is designed for trade exchange between business to business. Also, explained in this study on the importance of e-commerce for several years and EDI application. The buyer is responsible for the application, The purchaser who responsible for the application, established the terms of commerce and the electronically enabled supplier could connect to the system. These applications were expensive to shape, limiting their use, and only organizations with an integrated application that can be used. Web-based electronic markets have opened the possibility of linking many of the suppliers and buyers and enable electronic transactions. However, business to business (B2B) e-commerce
opportunities for the establishment of trade relations with many organizations all over the world.

**Conclusions of The Study:**

The study found that there are many influences on the cost of formal analysis, interest and participation electronic market is one aspect of the decision to participate. Moreover, organizations did not associate a competitive advantage, revenue growth or improve product quality in the assessment of the level of participation in the electronic market. This indifference, and the implementation of some analysis benefit / cost, indicating that the technology is established electronic market in organizational thinking as the setting of purchase which can reduce costs. However, concentrated a large part of the evaluation of the profits of trading emarketplace on the perceptions and interpretations of the results organising visions incorporate interpretations of the community discourse around phenomena, and perceptions of the phenomena are formed and re-formed during the community discourse.

**2.15 Other Studies**

There are also different studies on content marketing in social networks. For example, Sarsvanakumar and SuganthaLakshmi [28] investigated marketing in social networks. They discussed the advantages of Internet marketing in these networks and argued that social have more users compared to othed media. They also mentioned that the social networks of Facebook and Twitter have been introduced as the most popular ones. SMM (Social Media Marketing) is a method to promote a website, a brand, or a business through creating communication with customer in order to absorb their current benefits and predict their future needs through social networks. Harline et al. [29] investigated various strategies of marketing and discussed smart sale and viral marketing. It is stated that a customer purchases an item under the impact made by other customers. This strategy is called viral marketing and it is based on finding influential individuals in social networks, absorbing them, and conducting marketing through them.
Nielsen and Tahir [33] emphasized interface features that empower the customer, such as viewing products side by side for comparison. Web marketing’s advantage of low switching costs also means that a poor interface design can quickly drive users away. Further, observing how online shoppers react to specific design may be give accurate information for designing a best marketing interface [31], which might specific to market segments, even culture, and product lines [32]. Also, perfection in online interface design is elusive simply due to there is no master list of what works. Furthermore, the more basic matter faced when designing a Web page is the amount of complexity versus simplicity [33].

Jothi et al. [30] discussed communication and advertisement in social networks. It investigates the effectiveness of using brand in advertisement available in communications of social networks. Qiao [31] studied electronic commerce (e-commerce) in social networks and its positive and negative aspects. Qiao stated that social networks could change and revolutionize e-commerce and its limitations can be overcome to a high extent through social networks. What is commonly argued in all of these studies is that marketing in social networks is based on communication among the users of these networks. That is, the broader and stronger the communication among the users is, the higher the level of sale and service provision will be. Another significant issue in social networks is level of understanding the users. The higher the level of understanding, the higher the chance of selling goods will be, because knowing the users according to their behavior and needs causes better prediction about what services should be provided next.

In the other hand, groceries are touchable and perishable goods which are difficult to evaluate their quality on the Internet, specifically non packaged items like fruit [32]. However, e-grocery consumers’ logistics refer to the retailer’s series of activities to fulfil consumer orders. These activities start from the grocery store to home or any delivery location, such as organizing, dispatching and planning [33].

Further, Decision Support Systems (DSS) is the area of Information Systems (IS) discipline that is focused on supporting and developing managerial decision making. DSS relate to many case, design science, professional relevance, data warehousing, theoretical foundations, industry funding and business intelligence [34].

Furthermore, a key enabler of website measurement is Web Analytics and metrics. Web Analytics specifically refers to the use of data collected from a website to
determine which aspects of the website work towards the business objective. Web analytics must play an important role in overall company strategy and should converge to Web intelligence's specific part of business intelligence which collects and analyses information collected from website and applies them in a relevant business context [35].

2.16 Discussion:

For [22] and [26] it can be agreed with them about what came on their studies about influence electronic marketing and customers behavior to buy the electronics products in all aspects of the study in terms of the identification and analysis of the problems and propose solutions on the other hand, with updated technologies and tools used in the construction and implementation of this system. However with [21] and [24], it disagreed with this study, their studies about web analysis, and customer loyalty and satisfaction they accept of what came in their studies in relation of the analysis of the problem and propose their solutions. Also, they focus on implementation and adoption in an electronic commerce.

Moreover, with [17], [18], [20] and [25], possible to accept of what came in these studies in relation of the analysis of the problem and propose their solutions. They go to build online retailers for buy goods. Also it used PHP and ASP.net language for design their system.

In [23] and [27] it can completely agree with what came in this study, as well as agreed with the tools used to design electronic shopping for products marketing system, where adopted on the web tools that are more interactive in performing the tasks that set up for it. In this study will use another application for build it is PHP language. This language have some advantage if compare it with Asp.net.

The last study [19] considered the best of all previous studies in presenting the problem and find solutions to them, it is also the latest study on the establishment and management of student information system, and they are distinct from its predecessors the tools of modern technologies used in the creation of the online shopping.
CHAPTER 3

METHODOLOGY

In this study the author will design website application “www. GreenWorldElectronicMarketing.com”. This website is an open market between consumers to consumer shows us how to market electronic products. With this website we need database to store information and data that we will use in the web site.

In this system we will use three languages to build the web site. First language, PHP originally stood for Personal Home Page. Second language, Hyper Text Markup Language (HTML) is the language of computer coding used to convert ordinary text into active text for display and use on the Web and also to give a plain, unstructured text type of structure people beings rely on to read it.

Third language is Cascading Style Sheets (CSS). We will use CSS language for the style of the website and how will be visually presented. Also, MySQL server is for build the database.

3.1 Who Should Use The Internet?

Each organization requests to consider whether it would have an Internet presence and, if so, what must be the extent of its involvement. There are two key issues to be considered in answering these questions. First, how many current or potential consumers are probable to be Internet users? If a significant proportion of a company's consumers are Internet visitors, and the search costs for the products or service are reasonably (even moderately) high, then an organization should have a presence; otherwise, it is missing an opportunity to inform and interact with its customers. The Web is a friendly and extremely convenient source of information for many consumers. If a company does not have a
website, then there is the risk that potential users, who are Web savvy, will flow to competitors who have a Web presence.

Second, what is the information intensity of a firm's goods and services? An information intense product is one that needs considerable information to define it completely.

The two parameters, number of consumers on the website and goods information intensity, can be combined to provide a straightforward model for determining which companies would be using the online. Organizations falling in the top right quadrant are prime candidates due to many of their consumers having Internet access and their products having a high information content. Companies in the other quadrants, particularly the low quadrant, have less want to invest in a Web [11].

3.2 Requirements Analysis of The System

In this study we are determining some requirements according to the actual needs of the website, the information required for the buy and sale products online database information system are described as follows:

- Admin information
- Customer's information
- Messages information
- Orders information
- Orders detail information
- Products information
- Shopping information

Where, admin information includes, ID number (the ID number must be primary key), name (full name), password, last_login.

For customer's information includes, ID number (the ID number must be primary key), name (full name), phone, Email, password, address, country, city, state, activated, sign up, last_log, and IP.

Also, messages information includes, message ID number (the message ID number must be primary key), name, message name, message subject, message's message, and message date. While, orders information includes, orders ID number (the orders
ID number must be primary key), order's date (date sent order), customer ID (the customer ID number should be foreign key).

Furthermore, orders detail information includes, orders detail ID number (the orders detail ID number must be primary key), products ID (the products ID number should be foreign key), quantity, price. In addition, products information includes, products ID (the products ID number must be primary key), name, brand, category, size, description, quantity, price, status, date added. Finally, shopping information includes, shopping ID (the shopping ID number must be primary key), customer ID (the customer ID number should be foreign key), cart (for shopping), total (for total price), status.

3.3 MD5 Method for Security

Some applications use faster algorithms like MD5, SHA-1, or a custom function to meet their speed requirements, even although those functions might be uncertain. MD5 is famously vulnerable to collision and length extension attacks, but it is 2.53 times as fast as SHA-256 on Ivy Bridge and 2.98 times as fast as SHA-256 on Krait. In spite of MD5’s significant security flaws, it stays to be among the greatest widely used algorithms for file identification and data integrity. To select just a handful of samples, the Open Stack cloud storage method, the general version control system Perforce, and the recent purpose storage mode used internally in AOL all rely on MD5 for data integrity.

The venerable md5sum unix tool residues one of the most generally used tools for data integrity checking [36].

In this study we will use MD5 method in order to protect personal information. MD5 can be used to store one mode hash of a password, often with key stretching. Along with other hash functions, it is also used in the field of electronic discovery, so as to provide a unique identifier for each document that is exchanged through the legal discovery process.
3.4 The System Administrator Functions

In this website there is one administrator. Who is responsible for all functions of website, and follow the details of the store in terms of adding a product or delete the product and the possibility of amendment product specifications. As well, the customer can add product but it cannot be displayed in the main interface without the approval of the administrator. In addition, the administrator is following the orders that reach the website from customers and selects the desired product after that contact the applicant and delivering the product. Also messages and proposals that reach to the website from customers, administrator seen it and deal with it. Figure (4) shows the admin interface.

![Admin Interface](image.png)

**Figure 4:** The admin interface
3.5 Advantages and Disadvantages of The Electronic Marketing

The discovery of new telecommunication networks and new online devices has resulted in a new business. In fact, electronic marketing have become one of the best popular activities on the website. Electronic marketing formed some benefits for firms and customers. Morever, many disadvantages and some problems stem from this issue.

- **Advantages of The Electronic Marketing [35]**

Buying 24/7, we can also buy any time, night or day, 365 days a year. Even while we are in the home, our customers may be visit our website, search our products, services, and determine their orders.

Reduction Transaction Costs, when we buy from online supply, we spend little operational cost, we have better quality of service. Also we may cut the some unnecessary costs. For example, if our services or products downloadable, we will have transport costs completely cancel.

Conduct a Business Easily, in electronic marketing, we do not need to physical firm setups or there are not any crowds to deal with. We can purchase from our house relaxed; customers may choose goods from many procedures without moving around physically.

Comparison in prices, everybody may be compare fees among the various websites. Also, we may usually earn discounts on fees when compared with usual shop fees. In the following table 1: advantages of E-Commerce:
Table 1: Advantages of E-Commerce

<table>
<thead>
<tr>
<th>Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doing business around the globe 7 days a week, 24 hours a day</td>
</tr>
<tr>
<td>Gaining additional knowledge about potential customers</td>
</tr>
<tr>
<td>Improved customer involvement</td>
</tr>
<tr>
<td>Improved customer service</td>
</tr>
<tr>
<td>Improved relationships with suppliers</td>
</tr>
<tr>
<td>Improved relationships with the financial community</td>
</tr>
<tr>
<td>Increased ease and flexibility of shopping</td>
</tr>
<tr>
<td>Increased number of consumers</td>
</tr>
<tr>
<td>Personalized service</td>
</tr>
<tr>
<td>Product and service customization</td>
</tr>
</tbody>
</table>
Disadvantages of The Electronic Marketing [35]:

Security pursuits to be a key difficult in electronic marketing. Everyone good or bad may open a website, and there are some bad websites, which their purpose is customer’s money.

Guarantee, there is no guarantee for product quality. Our orders may be damaged in the post or things might look different online to what you actually receive for example, slightly different colors and feel of clothes or the freshness of vegetables and fruits.

Social relationships, electronic marketing may allow customers to buying and selling products and services without geographic limitations but in this system we have not any contacts and relationships with other people and loss our social contacts.

Impact, electronic marketing is a new way business that mixes all of the prior systems and transaction styles. Electronic marketing and electronic business have impact on some districts of business for instance, economics, marketing, computer science, finance and accounting, production and operation management, management information system, human source management, business law and ethics. In the following table 2: disadvantages of E-Commerce:

**Table 2: Disadvantages of E-Commerce**

<table>
<thead>
<tr>
<th>Possible capacity and bandwidth problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security issues</td>
</tr>
<tr>
<td>Accessibility (not everybody is connected to the web yet)</td>
</tr>
<tr>
<td>Acceptance (not everybody accepts this technology)</td>
</tr>
<tr>
<td>A lack of understanding of business strategy and goals</td>
</tr>
</tbody>
</table>
3.6 Description and structure design of the database

In this study, we will use MySQL server for the database, and create tables to store data. In this website, we need seven tables (admin, customers, messages, orders, orders_details, products, shopping). In the following tables, we show the logical construction of the data in the main tables, Admin information table is describe in the table 3, customers information table is describe in the table 4, information table is describe in the table 5, orders information table is describe in the table 6, orders - detail information table is describe in the table 7, products information table is describe in the table 8, and shopping information table is describe in the table 9:

Table 3: Table of Admin Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Collation</th>
<th>Attributes</th>
<th>Null</th>
<th>Default</th>
<th>Extra</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>int(1)</td>
<td></td>
<td></td>
<td>No</td>
<td></td>
<td>auto_increment</td>
<td></td>
</tr>
<tr>
<td>name</td>
<td>varchar(15)</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>password</td>
<td>varchar(32)</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>last_log</td>
<td>datetime</td>
<td></td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Table of Customers Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Collation</th>
<th>Attributes</th>
<th>Null</th>
<th>Default</th>
<th>Extra</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>int(9)</td>
<td></td>
<td></td>
<td>No</td>
<td></td>
<td>auto_increment</td>
<td></td>
</tr>
<tr>
<td>full_name</td>
<td>varchar(255)</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>country</td>
<td>varchar(100)</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>city</td>
<td>varchar(50)</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>state</td>
<td>varchar(50)</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>phone</td>
<td>int(15)</td>
<td></td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>email</td>
<td>varchar(100)</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>password</td>
<td>varchar(32)</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>address</td>
<td>text</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ip</td>
<td>varchar(15)</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>last_log</td>
<td>datetime</td>
<td></td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>signup</td>
<td>date</td>
<td></td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>activated</td>
<td>enum('0','1')</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Table of Messages Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Collation</th>
<th>Attributes</th>
<th>Null</th>
<th>Default</th>
<th>Extra</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>int(7)</td>
<td></td>
<td></td>
<td>No</td>
<td></td>
<td>auto_increment</td>
<td></td>
</tr>
<tr>
<td>msg_name</td>
<td>varchar(100)</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>msg_email</td>
<td>varchar(80)</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>msg_subject</td>
<td>varchar(50)</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>msg_message</td>
<td>mediumtext</td>
<td>utf8_general_ci</td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>msg_date</td>
<td>date</td>
<td></td>
<td></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
According to identify the requirements of database online shopping information, a database of the system consists of seven entities “admin entity, customers entity, messages entity, orders entity, orders – details entity, products entity, shopping entity”. Entities and their relationship must be designed to meet various types of online shopping information. These entities include varied specific information and interaction each other as information flow. In the following figure 5, shows the ERD of the entities and their relationships.
Figure 5: ER Diagram
CHAPTER 4
IMPLEMENTATION OF THE SYSTEM DESIGN

In this chapter we will design website application “www.GreenWorldElectronicMarketing.com”. This website is an open market between consumers to consumer shows us how to market electronic products. This website need database to store information and data that we will use in the website. We will explain how to build a Website, what are the tools used in the design of the application, and how the system works. Also, explain the programming languages used in the design, requirements of hardware and software that we need in the building, and how to work databases. In addition, we will show how to add a product to website, display the products and clarify the process of buying and selling on the website through the shopping cart. Furthermore, we will show how to contact admin by sending proposals and posts. In the following figure 6, shows steps to build the website.

Figure 6: Steps to Build the Website.
4.1 Technologies Chosen to Design and Develop the System

The objective of this application is to develop an electronic marketing for buy and sale online. To design a website for electronic marketing, it must use some trendy techniques of computer programs for this system. In the figure 4.1, we explained six steps of the methodology for my web site application. First step, the idea is begun. Electronic marketing is a good idea for make buy and sale simply. Second step, after we choose the idea we should select title for it. The name of my idea is "Green World Electronic Marketing ". Third step, it is the requirements of hardware. We need PC computer is to start the work. Fourth step is the requirement of software. In this study we need four programs (Windows 7, 8 or 8.1, Apache server, Adobe Dream Weaver CS6, Google chrome). Windows 7 or 8.1, it is operating system for computer. Apache server for PHP and MySQL are all open source projects that can be installed on a wide variety of programs. We will use MySQL Server for database, and build tables to store data. In this website we need seven tables (admin, customers, messages, orders, orders - detail, products, shopping). Also, in Adobe Dream Weaver CS6 program we will use it to write codes of PHP, HTML, and CSS languages. Sixth step is designing and building the web site in CS6 program. Seventh step, the customer visit the website and add product to sale it. Others customers visit the website and buy the products online. In the following definitions will illustrate these techniques and how to use them to build the website for electronic marketing.

4.1.1 PHP language

PHP originally stood for Personal Home Page. It was created in 1994 by Rasmus Lerdorf to track the users to his online résumé. As its usefulness and capabilities grew (and as it began to be utilized in more professional situations), PHP came to mean PHP: Hypertext Preprocessor. (The definition essentially means that PHP handles data before it becomes HTML—which stands for Hypertext Markup Language.). To say that PHP is HTML embedded means that it may be written within HTML code—HTML being the code with which all Web pages are built. Therefore, programming with PHP starts off as only slightly more complicated than hand-coding HTML. Also, PHP is a scripting language, as opposed to a programming language. This means that PHP is planned to do something only after
an event occurs—for example, when a visitor submits a form or goes to a URL (Uniform Resource Locator—the technical term for a Web address). Conversely, programming languages such as C and Java can be used to write stand-alone systems, which might or might not involve the Web. The most popular example of a scripting language is JavaScript, which commonly handles actions that occur within the web browser. Another way to refer to the different kinds of languages is to use the term interpreted for languages such as JavaScript and PHP, which can’t act on their own, and compiled for those like Java and C. [37].

4.1.2 HTML language

Hyper Text Markup Language (HTML) is the computer coding language used to change ordinary text into active text for show and use on the web and also to give plain, unstructured text the sort of structure human beings rely on to read it. Without many kind of structure imposed it, plain text would just run together with nothing to distinguish one string of words from another.

Also, HTML consists of encoded markers called tags that surround and differentiate bits of text, indicating the function and aim of the text those tags “mark up.” Tags are embedded directly in a plain-text document where they may be interpreted by computer software. They’re called tags due to, well, that’s what they are. Just as a price tag shows the cost of an item, so too does an HTML tag indicate the nature of a portion of content and provide vital information about it. The tags themselves are not showed and are distinct from the actual content they envelop.

However, HTML has been carefully designed to be a simple, easy and flexible language. It’s a free, open standard, not owned or controlled by any firm or individual. There is no license to buy or specialized software required to author your own HTML documents. Anyone and everyone are free to build and publish web pages, and it’s that very openness that makes the web the powerful, far-reaching medium it is. HTML exists so that we can all share information easily and freely [38].
4.1.3 CSS language for web design

Cascading Style Sheets (CSS). In a nutshell, CSS is a language that describes how web documents should be visually offered. It’s very powerful, flexible, easy, and is also pretty dang cool. Also, CSS is a rich, complex language in its own right. However, CSS is directly connected to HTML. Further, CSS so you can use it to visually style your web pages. XHTML provides the structure that supports the content of your web pages, while CSS provides the polish to make your content more memorable and attractive. Designing websites with CSS is not possible without many solid bedrock of markup underneath. Designing websites with CSS is considerably easier, fast and the results are more consistent when the document is rendered in compliance mode. Henceforward, including a complete and correct doc type is essential. And due to a doc type is already a required part of a valid web document and modern browsers will always render your pages in compliance mode if you create your documents correctly [38].

4.1.4 Build the database by MySQL server

MySQL is a real competitor to giants like Oracle and Microsoft’s SQL Server. Also, like PHP, MySQL shows excellent portability, reliability, and performance, with a moderate learning curve and little to no cost. However, MySQL is a database management system (DBMS) for relational databases (so, MySQL is an RDBMS). There are some kinds of databases, from the simple flat-file to relational and object-oriented. A relational database uses multiple tables to store information in its most discernable parts. While relational databases might involve more during in the design and programming steps, they show an development to data integrity and reliability that some than makes up for the more stress required. Furthermore, relational databases are some searchable and let for concurrent customers. By incorporating a database into a web system, many of the data generated by PHP can be retrieved from MySQL. This further moves the website’s content from a static (hard-coded) basis to a flexible one, flexibility being the key to a dynamic website. There are occasions in which you would pay for a MySQL license, specifically if you are creating money from the selling or establishment of the MySQL products.
SQL, short for Structured Query Language, is a collection of distinct words used exclusively for interacting with databases. Every main database uses SQL, and MySQL is no exemption. There are many versions of SQL and MySQL has its own variations on the SQL standards [39].

The main goal of MySQL is to create and drop databases and tables, create view, stored procedure, functions in a database, and set permissions on tables, procedures, and views.

4.1.5 Adobe dreamweaver cs6

Dreamweaver CS6 stands at the center of a complex series of overlapping worlds. In one realm, designers of static Web pages are looking to expand their knowledge base into data-driven sites. Over there, you’ll find application developers—some savvy in Active Server Pages, some in Cold-Fusion, and others in PHP—anxious to improve for the Internet. Also, the spectrum of experience in both camps runs the gamut from eager novice to experienced professional, all of whom advantage from the advanced style capabilities of Cascading Style Sheets (CSS). However, there’s yet another group of prospective Web craftsmen and artists who want to do it all and are looking for a place to start. Dreamweaver CS6 is the one program robust enough for them all, and the Dreamweaver CS6 Bible is your guidebook to all its capabilities and features.

In addition, dreamweaver has truly stepped up its game to keep pace with the shifts in the Web design climate while at the same time remaining accessible to the full spectrum of designers. That’s the attitude of a real professional, and Dreamweaver CS6 has it in spades [40].

4.2 Results of The System Designed

After reading the previous studies and look at the experiences and the details of the techniques used in e-marketing systems, the author have compiled the information to build a system of E-Marketing of the fourth type a buy and sell between consumers to consumer. However, this application website facilitates the process of buying and selling on the Internet, time-saving, search for a product, saving the cost of transportation, as well as the possibility of adding a product by the customer. Also, marketing protection where the confidentiality of personal information that was
protected by the MD5 algorithm. In addition, social media is the modern aspirations of the people, the development of social media networks became easy to deal with it by follow the website on Facebook or Twitter. So, in this website can post buying and selling through social media and sharing information with (Facebook and Twitter). Furthermore, customer can send suggestions and ideas to the administrator to improve and develop the website. Also, shopping cart is important for every online shopping, it facilitates to add and delete a product with shopping. Finally, customer should participate in the website as a member registering by username and password number for each customer to be able Shopping.

According to techniques and information previously about building this system, Reached the following results:

4.2.1 Admin interface

Admin interface page, this page is just for admin. It does not appear to the customer. The admin is responsible for all functions of website, follow the details of the store in terms of adding a product or delete the product, and the possibility of edit product specifications. As well, the customer can add product but it cannot be displayed in the main interface without the approval of the administrator. In addition, the admin is following the orders that reach the website from customers and selects the desired product after that contact the applicant and delivering the product. In the following figure 7, shows interface log in admin:

![Admin Log In](image)

**Figure 7:** Interface Log in Admin
4.2.1.1 Inventory of products

Inventory of products are contains all the products that added to the website by admin or by the customer. Also, in this inventory has the ability of the amendment on the product in terms of the product name, brand, category, size, price, quantity, product’s image, product’s status (visible or hidden on the home page), and the date of adding a product. In the following figure 8, shows Inventory of Products:

![Inventory of Products](image)

**Figure 8:** Inventory of Products

4.2.1.2 Add new product by admin

Admin can add new product to the website. Also, the admin who responsible for product’s status (visible or hidden on the home page). In the following figure 9, shows add new product by admin.
4.2.1.3 Messages of customer’s suggestions and problems

In this content, admin receives messages from customers that contain the suggestions, developments or problems pertaining to Website. And shows where the sender's name, Email Sender, proposed, and date of dispatching the message. In the following figure 10, shows messages of customer suggestions and problems:
4.2.1.4 Buy’s orders received

When the customer wants to purchase a product, he will selects and drop the product to the shopping cart. After that, customer send a order’s buy upon completion of marketing. Also, he should dictate the purchase information (name, email, address, mobile number). The demand will be up to admin’s Website. The admin will selects the desired product, contact the customer and set a date for deliver the product from the Office of violet flower in Taiba group for marketing / Mosul. In the following figure 11, shows buy’s orders received.
4.2.2 Customer interface

Customer interface page, it is the home page for this website. In this page, customers can buy and sale online after register in the website. Customer interface include the following contents:

4.2.2.1 Home page of the website

In this content shows just the new products added recently. Also, when customer need to buy product: press on the picture, see the properties of the product and add it to the shopping cart. In the following figure 12, shows home page of the website:
4.2.2.2 Products of the website

In this content shows all products added to the website sorted by date added. Also, when customer need to buy product: press on the picture, see the properties of the product and it add to the shopping cart. In the following figure 13, shows products of the website:
4.2.2.3 Shopping cart for buy products

Shopping cart is important for every online shopping, it facilitates to add or delete a product with shopping. Also, customer should participate in the website as a member registering by username and password number for each customer to be able Shopping. In the cart there are Id, name, price, quantity, and amount of product selected. In addition, customer can use options for continue shopping, remove product, clear cart, update cart, or place order buy product. When customer needs to buy any product the website will take a tax (0.05) from amount for once shopping. In the following figure 14, shows shopping cart for buy products:

![Shopping Cart for Buy Products](image)

**Figure 14:** Shopping Cart for Buy Products

4.2.2.4 Add new product by customer

Customer can add product but it cannot be displayed in the main interface without the approval of the administrator. Also, when adding a product to the website the customer should be given all the details of the product, from terms, the product
name, price, brand, category, quantity, description, product image. In the following figure 15, shows add new product by customer:

![Image of adding a new product](image1.png)

**Figure 15:** Add New Product By Customer

### 4.2.2.5 Contact us

Customers can contain suggestions, developments or problems pertaining to Website. Also, shows the sender's name, Email address, subject, and the message. In the following figure 16, shows contact us:

![Image of contact page](image2.png)

**Figure 16:** Contact Us
4.2.2.6 About us for website information

In this content there is all the information about the Website, Mobile Number, Email admin, Link Website on Facebook. In the following figure 17 shows about us:

![Image of about us page]

**Figure 17:** About Us

4.2.2.7 Search for a products

Customers can search for products, view a complete description of the products and order the products. In the following figure 18, shows Search for a Products:
4.2.2.8 Category of products : left temple

In the left temple, there are category of products (laptop, scanner, mobile, printer, camera, microphone, others). In the following figure 19, shows Category of Products: Left Temple:

![Figure 4.13: Search for a Products](image)

![Figure 19: Category of Products : Left Temple](image)
4.2.2.9 Category of products : right temple

In the right temple there are many content, will explain it in details:

4.2.2.9.1 log in or register in the website to shopping

Customer should participate in the website as a member registering by username and password number for each customer to be able Shopping. Upon registration, the customer must enter the correct information (full name, password, address, country, city, mobile number, and email address). This information will be protected and secured by MD5 an algorithm to prevent tampering, in the name, password or email address. After register, customer log in to the website by username and password and enjoy shopping. In the following figure 20, shows log In or Register in the Website to Shopping:

![Figure 20: Log In or Register in the Website to Shopping](image-url)
4.2.2.9.2 Follow us on facebook and twitter

Social media is the modern aspirations of the people, the development of social media networks became easy to deal with it by follow the website on Facebook or Twitter. So, in this Website can post buying and selling through social media and sharing information with (Facebook and Twitter). In the following figure 21, shows follow us on facebook and twitter:

**Figure 21**: Follow us on Facebook and Twitter
4.2.2.9.3 List of new products

This list considered one of new properties added recently to the modern websites. It is the moving list shows new products that were added recent to the website. In the following figure 22, shows list of new products:

![Image of new products](image-url)

**Figure 22:** List of New products
CHAPTER 5

CONCLUSION

In this thesis we have introduced website, electronic marketing, and types of electronic marketing. We designed website application “www.GreenWorldElectronicMarketing.com”. This website is an open market between consumers to consumer shows us how to market electronic products. With this website we need database to store information and data that we will use in the website. The ‘Electronic Marketing' is designed to provide a web based application that would provide searching, viewing and selection of a product. Shopping on the Internet is low cost of transport, and saving time. Provides also the search engine, it is a convenient way to search for products, where a customer can search for a product interactively and the search engine would refine the products available based on the user’s parameter input. The customer can then view the complete specification of each product. Also, drag product to the shopping cart and drop feature would make the application easy to use.

Customer can add product to the website, but it cannot be displayed in the main interface without the approval of the administrator. In addition, the admin is following the orders that reach the website from customers and selects the desired product after that contact the applicant and delivering the product. Furthermore, marketing protection where the confidentiality of personal information that was protected by the MD5 algorithm.

In addition, customer can send suggestions and ideas to the administrator to improve and develop the website. Also, social media is the modern aspirations of the people, the development of social media networks became easy to deal with it by follow the website on Facebook and Twitter. So, in this website can post buying and selling through social media and sharing information with (Facebook and Twitter). Finally,
customer should participate in the website as a member registering by username and password number for each customer to be able Shopping.

For further recommendations, the website needs purchase and reserve domain through web hosting companies. Also, development the payment system on the website and make it via Visa card to facilitate the purchase and sale process, which leads to easier order fulfillment. Additionally, the website needs deal with goods transporting companies for delivery products to the customer's home.

The work presented in this thesis has the following limitations:

1. The website does not have the space on the web.
2. The system has not been tested online.
3. The website does not adopt the electronic payment system.
4. The ER Diagram in page (30) does not suitable to make another relationship.
5. The website does not support the Arabic language.

The limitation (1) can be solved by purchasing a domain name. This may have some cost such as 700 USD for one year.

By the key online users can test the website. This future work can address limitation (2).

Limitation (3), depend on the admin’s account in the bank. When the admin open an account in the bank, then the website can deal with electronic payment system.

Limitation (4), the expansion in the tables of database can enable to grow in the ER diagram.

The website can support multi language after obtain the private compile code. This is limitation (5).
REFERENCES


APPENDICES A

CURRICULUM VITAE

PERSONAL INFORMATION
Surname, Name: IBRAHEM, Ahmed Raid Ibrahem
Date and Place of Birth: 09 September, 1989, Ninawa
Marital Status: Single
Phone: +9647709173249
Email: expensive915@gmail.com

EDUCATION

<table>
<thead>
<tr>
<th>Year of Graduation</th>
<th>Institution</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>Çankaya University, Mathematics and Computer Science – Information Technology Program.</td>
<td>M.Sc.</td>
</tr>
<tr>
<td>2011</td>
<td>University of Mosul College of Education</td>
<td>B.Sc.</td>
</tr>
<tr>
<td>2007</td>
<td>Alrisala High School</td>
<td>High School</td>
</tr>
</tbody>
</table>

WORK EXPERIENCE

<table>
<thead>
<tr>
<th>Year</th>
<th>Place</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-2013</td>
<td>The Future Noor School</td>
<td>Teacher</td>
</tr>
<tr>
<td>2012-2013</td>
<td>Global Mall</td>
<td>Cashier</td>
</tr>
<tr>
<td>2011-2012</td>
<td>Hall of Internet</td>
<td>Administration official</td>
</tr>
</tbody>
</table>

FOREIGN LANGUAGES
English.

HOBBIES
Football, Travelling, Swimming, Internet, Reading.