Development of E-commerce Dynamic Website: 
A Case Study of Obbercar Motor Company Limited

By
MONA SAAD MOHAMMED SILMAN
B.Sc. in Mathematical and Computer Science, 2001
Gezira University, Faculty of Mathematical and Computer Sciences

A Dissertation
Submitted in Partial Fulfillment of the Requirements for the
Degree of Master of
in
Computer Science and Information

Department of Computer Engineering
Faculty of Engineering and Technology
University of Gezira

Supervisor: Dr. Mohammed Abdalla Elmaleeh
CO- Supervisor: Dr. Khalid Osman Daffalla

Apr 2012
Development of E-commerce Dynamic Website: 
A Case Study of Obbercar Motor Company Limited

By
MONA SAAD MOHAMMED SILMAN

Examination Committee:

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Mohamed Abdalla Elmaleeh</td>
<td>Supervisor /Chair</td>
<td></td>
</tr>
<tr>
<td>Dr. Osman Ahmed Abdalla</td>
<td>External Examiner</td>
<td></td>
</tr>
<tr>
<td>Dr. Maha Ebaid Mohamed</td>
<td>Internal Examiner</td>
<td></td>
</tr>
</tbody>
</table>

Date of Examination: 02 / 04/2012
Acknowledgement

In completing this graduate project I have been fortunate to have help, support and encouragement from many people. I would like to acknowledge them for their cooperation.

First, I would like to thank Dr. Mohamed Abdallah Adam Elmaleeh, my research Supervisor, for guiding me through each and every step of the process with knowledge and support.

I would also like to thank Dr. Osman Ahmed Abdallah and Dr. Maha Ebaid, my project committee members, who showed immense patience and understanding throughout the project and provided suggestions.

Finally, I would like to dedicate this project to my mother, my husband, my grandmother, my uncle Jaffer and all my friends, for their love, encouragement and help throughout the project.
Development of E-Commerce Dynamic Website (OBERCAR MOTOR COMPANY LIMITED)
MONA SAAD MOHAMMED SILMAN
B.Sc. in Mathematical and Computer Science, 2001
Department of Computer Engineering
Faculty of Engineering and Technology
University of Gezira

Abstract

Electronic commerce is the implementation of all operations related to the sale and purchase of goods, services and information using the Internet, as well as other global business networks. It deals with the distribution, buying, selling, marketing and servicing of products via the Internet. The main objective of this study is to introduce the concept of the e-commerce in a suitable application area to enhance the performance and enable the customer, the shopping process to be quick and to achieve the benefits of the e-commerce which causes positive prosperity to the economy. In this study an e-commerce website is designed using AppServ v2.4.8 to create the database using MySQL. Macromedia Dreamweaver8 is also implemented to design the website bases. Adobe Photoshoop is also implemented for the advertisement and to enhance the website. The designed website provides the user with a catalog of various car models available in Obercar Motor Company Limited at Gedaref state, Sudan. It also allows the customer to make the online purchase of the company product.
تطوير موقع حيوي للتجارة الإلكترونية لشركة اوباركار للسيارات المحدودة
منى سعد محمد سليمان
م agreg 3ص 4العلوم
م 3 7ع 3ح
1230 2
منسق هندسة الحاسب
كلية الهندسة والتكنولوجيا
جامعة الجزيرة

مستخلص

التجارة الإلكترونية هي تنفيذ كافة العمليات المرتبطة ببيع وشراء السلع والخدمات والمعلومات باستخدام شبكة الإنترنت، وهي تقوم بتوزيع وتسويق المنتجات عبر الإنترنت. الهدف الرئيسي من هذه الدراسة هو تطوير وتطبيق مفهوم التجارة الإلكترونية في موقع مناسب، لتحسين الأداء وتمكين العملاء من عملية التسوق بسهولة. وفقاً لذلك، تهدف التجارة الإلكترونية إلى زيادة دخول الشركة في الأسواق. في هذه الدراسة تم استخدام مفهوم موقع إلكتروني على شبكة الإنترنت لتوفير حلول تجارية إلكترونية وذلك باستخدام برنامج AppServ v2.4.8 لإنشاء الجداول المطلوبة في قاعدة البيانات، ولتنفيذه في مضيف محلي Local Host، وتم استخدام برنامج Macromedia Dreamweaver v8 لتصميم الصفحات وربطها. وبرنامج Photoshop لتمكين إعداد الصور. وصمم هذا الموقع ليوفر للمستخدم مع فهرس لفهرس إعداد الصور. وتصميم صفحات متعددة في شركة اوباركار للسيارات المحدودة. كما أعطى نتائج متميزة ومتواضعة في شركة اوباركار للسيارات المحدودة في ولاية الفضائي. كما أيضاً يتيح هذا الموقع الفرصة للزبائن بأن يتم عملية الشراء من الشركة عبر الإنترنت.
# Table of Contents

Acknowledgments.............................................................................................................. i
Abstract.............................................................................................................................. ii
Abstract (Arabic) ................................................................................................................ iii
Table of Contents................................................................................................................ iv
List of Figures....................................................................................................................... viii
List of Tables....................................................................................................................... x
List of Abbreviation............................................................................................................ xi

**Chapter 1 Introduction**................................................................................................. 1
1.1 Introduction .................................................................................................................. 2
1.2 Problem Definition....................................................................................................... 3
1.3 Research Objectives.................................................................................................... 4
1.4 Methodology ............................................................................................................... 4
1.5 Dissertation Layout..................................................................................................... 4

**Chapter 2 Literature Review**....................................................................................... 6
2.1 Electronic Commerce.................................................................................................. 7
2.2 Models of E-commerce .............................................................................................. 8
  2.2.1 Business-to-Business (B2B) Model......................................................................... 9
  2.2.2 Business-to-Consumer (B2C) Model .................................................................... 10
  2.2.3 Consumer-to-Consumer (C2C) Model .................................................................. 12
  2.2.4 Consumer-to-Business (C2B) Model ................................................................... 13
2.3 Payment Methods

2.3.1 Cash Payments:

2.3.2 Cheque Payment:

2.3.3 Automatic Clearing House(ACH):

2.3.4 Wire Transfer:

2.3.5 Debit/credit Card Payments:

2.4 E-Commerce Transactions

2.4.1 Information Provision

2.4.2 Agreement of Transaction

2.4.3 Settlement of Transaction

2.4.4 After-Sales

2.5 Electronic Payment Model

2.5.1 Payer Electronic Payment

2.5.2 Payee Electronic Payment

2.5.3 Issuer Electronic Payment

2.5.4 Acquirer Electronic Payment

2.6 Transaction Authenticity

2.7 Online Versus Offline Authorization

2.8 E-commerce Solutions
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5 Implementation Technologies</td>
<td>38</td>
</tr>
<tr>
<td>3.5.1 Integrating the Website and Database</td>
<td>39</td>
</tr>
<tr>
<td>3.5.2 Web Page Programming Options</td>
<td>40</td>
</tr>
<tr>
<td>Chapter 4 Results and Discussions</td>
<td>41</td>
</tr>
<tr>
<td>4.1 Developing of E-commerce</td>
<td>42</td>
</tr>
<tr>
<td>4.2 Discussions</td>
<td>49</td>
</tr>
<tr>
<td>Chapter 5 Conclusion and Recommendations</td>
<td>50</td>
</tr>
<tr>
<td>5.1 Conclusion</td>
<td>51</td>
</tr>
<tr>
<td>5.2 Recommendation</td>
<td>52</td>
</tr>
<tr>
<td>References</td>
<td>53</td>
</tr>
<tr>
<td>Appendixes A</td>
<td>55</td>
</tr>
<tr>
<td>Appendixes B</td>
<td>58</td>
</tr>
<tr>
<td>Appendixes C</td>
<td>61</td>
</tr>
</tbody>
</table>
## List of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>B2B Business model</td>
<td>10</td>
</tr>
<tr>
<td>2.2</td>
<td>B2C Business model</td>
<td>11</td>
</tr>
<tr>
<td>2.3</td>
<td>C2C Business model</td>
<td>13</td>
</tr>
<tr>
<td>2.4</td>
<td>C2B Business model</td>
<td>14</td>
</tr>
<tr>
<td>2.5</td>
<td>E-commerce transactions</td>
<td>19</td>
</tr>
<tr>
<td>3.1</td>
<td>System Development Life Cycle</td>
<td>30</td>
</tr>
<tr>
<td>3.2</td>
<td>Entity-Relation Diagram</td>
<td>31</td>
</tr>
<tr>
<td>3.3</td>
<td>Functional Decomposition Diagram</td>
<td>35</td>
</tr>
<tr>
<td>3.4</td>
<td>Search operation data follow chart</td>
<td>37</td>
</tr>
<tr>
<td>3.3</td>
<td>Home Page</td>
<td>38</td>
</tr>
<tr>
<td>3.5</td>
<td>Relation between IIS and ASP.NET</td>
<td>39</td>
</tr>
<tr>
<td>3.6</td>
<td>Registration of the new user</td>
<td>40</td>
</tr>
<tr>
<td>3.7</td>
<td>Main Page</td>
<td>42</td>
</tr>
<tr>
<td>4.1</td>
<td>Products Page</td>
<td>43</td>
</tr>
<tr>
<td>4.2</td>
<td>Car Details</td>
<td>43</td>
</tr>
<tr>
<td>4.3</td>
<td>Registration Of New Customer</td>
<td>44</td>
</tr>
<tr>
<td>4.4</td>
<td>Purchase Requisition</td>
<td>45</td>
</tr>
<tr>
<td>4.6</td>
<td>Authentication of the user</td>
<td>45</td>
</tr>
<tr>
<td>4.5</td>
<td>Add New Car</td>
<td>46</td>
</tr>
<tr>
<td>4.7</td>
<td>Delete The Car</td>
<td>46</td>
</tr>
<tr>
<td>4.8</td>
<td>Modify Insert Car</td>
<td>47</td>
</tr>
</tbody>
</table>
Figures 4.10 Yearly Requisition Report .................................................. 47

Figures 4.11 Monthly Requisition Report .................................................. 48

Figures 4.12 Output Invoice Report .......................................................... 48
# List of Tables

Table 3.1 Administrator Database ............................................................. 32  
Table 3.2 Call Friend .................................................................................. 33  
Table 3.3 Database Register ...................................................................... 33  
Table 3.4 Sale-part ...................................................................................... 34  
Table 3.5 Store Database ........................................................................... 34
### List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Commerce</td>
<td>Electronic Commerce</td>
</tr>
<tr>
<td>CD</td>
<td>Compact Disc</td>
</tr>
<tr>
<td>B2B</td>
<td>Business – to – Business</td>
</tr>
<tr>
<td>B2C</td>
<td>Business – to – Consumer</td>
</tr>
<tr>
<td>C2C</td>
<td>Consumer – to – Consumer</td>
</tr>
<tr>
<td>C2B</td>
<td>Consumer – to – Business</td>
</tr>
<tr>
<td>ACH</td>
<td>Automatic Clearing House</td>
</tr>
<tr>
<td>SET</td>
<td>Secure Electronic Transaction</td>
</tr>
<tr>
<td>DSL</td>
<td>Digital Subscriber Line</td>
</tr>
<tr>
<td>ISDN</td>
<td>Integrated Systems Digital Network</td>
</tr>
<tr>
<td>T3</td>
<td>Technion Technology Transfer</td>
</tr>
<tr>
<td>ISP</td>
<td>Internet Service Provider</td>
</tr>
<tr>
<td>SSL</td>
<td>Secure Sockets Layer</td>
</tr>
<tr>
<td>FTP</td>
<td>File Transfer Protocol</td>
</tr>
<tr>
<td>SDLC</td>
<td>System Development Life Cycle</td>
</tr>
<tr>
<td>ERD</td>
<td>Relation Diagram</td>
</tr>
<tr>
<td>FDD</td>
<td>Functional Decomposition Diagram</td>
</tr>
<tr>
<td>DFD</td>
<td>Data Flow Diagram</td>
</tr>
<tr>
<td>UI</td>
<td>User Interface</td>
</tr>
<tr>
<td>URL</td>
<td>Uniform Resource Locator</td>
</tr>
<tr>
<td>IIS</td>
<td>Information Service</td>
</tr>
<tr>
<td>HTTP</td>
<td>Hypertext Transfer Protocol</td>
</tr>
<tr>
<td>PHP</td>
<td>Personal Home Page</td>
</tr>
<tr>
<td>HTML</td>
<td>Hyper Text Markup Language</td>
</tr>
</tbody>
</table>
Chapter 1

Introduction
1.1 Introduction

Electronic commerce is a term for any type of business, or commercial transaction that involves the transfer of information across the internet. It covers a range of different types of businesses, from consumer based retail sites, business exchanges trading goods and services between corporations. It is currently one of the most important aspects of the internet to emerge. E-commerce allows consumers to electronically exchange goods and services with no barriers of time or distance.

The concept of e-commerce is all about using the internet to do a better and faster business. It is about giving customers a controlled access to computer systems and letting people serve themselves and committing the company to a serious online effort and integrating its web site with the heart of the business enrolled, as well as other global business networks, including distribution and delivery of goods, follow-up procedures, payment of financial obligations and pay.

This project develops a general purpose e-commerce store where any product such as cars, computers, mobile phones, books, CDs, electronic items, and home appliances can be bought and browse from the comfort of home through the internet. However, for the implementation purposes the project develops an e-commerce website for OBERCAR Motor Company Limited. The developed website presents a virtual online car store on the internet where customers can browse the catalog and select products of interest. It also provides the customer information about various car modes and there sale prices.
1.2 Problem Definition

- There are many products which are categorized as the best over the world but they are not well known, Sudan has a very rich natural resources starting from agriculture and going down to oil and minerals. All these raw materials have a very good reputation worldwide because they are purely natural.

- There is no market place to group export and import Companies. Also the company registration and the Export and Import license issuing procedures are so complicated and time consuming.

- Traditional malls can only serve customers that could access them but far distance customers could not be served. In addition to this there are many things that couldn’t be sold in malls like raw materials (which is the case in Sudan as its required want to export the raw materials to the other countries as well as products and this kind of trade couldn’t be done via traditional malls).

- In Sudan, don’t have any commercial directory on the internet which is very important in these days because it could serve customers worldwide no matter what happened and at the same time the cost for such a thing is very cheap compared to other formats of advertisement.

- There are still concerns regarding the exchange of money securely and conveniently over the internet.
1.3 Objectives

The objective primarily includes.

- Design an e-commerce website in order to be utility in various commercial fields.
- Allow people from different places to share the same market place in the same time by achieving the benefits of the e-commerce.
- Create an external market for the products which helps in increasing the total value of investment in industry field by promoting the national products worldwide in the real time.

1.4 Methodology

This project is developed based on the analysis and design of a websites. Several roles have been applied to accomplish the work such as windows XP 2003, Microsoft office 2007, Microsoft Publisher2007 to select the first page of design and explains the site content. Uninstall AppServ v2.4.8 use the MySQL database to create the tables and store the data, which use local host to run the system, Macromedia Dreamweaver8 is used to design the site and link page, Personal Home Page (PHP) is used to show how to display the contents of the document that include text, images and other support media.

1.5 Dissertation layout

This research includes five chapters. Chapter1 presents the introduction about e-commerce. It’s also discusses the objective and the methodology of the research. Chapter2 is about the literature
review. Chapter 3 presents the design and implementation. However, chapter 4 includes the results and discussion. Finally chapter 5 is about the conclusion and future recommendations.
Chapter 2

Literature Review
2.1 Electronic commerce

E-commerce is simply any business transaction that takes place via digital processes over a network, however, it is really much more than just exchanging products or services for money over the internet, it is an enabling technology that allows businesses to increase the accuracy and efficiency of business transaction processing and also a way for organization to exchange information with customers and vendors to the benefit of everyone involved [1].

E-commerce is transforming the way products, services and even information are bought, sold and exchange. It is also changes the way organizations interact with customers and business partners. It involves making use of the internet to penetrate new markets, discover or create new sales channels, and get closer to customers and business partners through communication channels. Some pioneers achieve real success for both small and large organizations because size matters less now, all organizations stand an even chance because they have access to the same types of resources [1].

National governments and the private sector driven by global competitive pressures are seeking to create the necessary technological, legal and policy frameworks that will support electronic commerce. Over the last few years, various electronic commerce systems have been devised in an effort to create confidence in buyers and sellers using the Net as a platform for commercial transactions [2].

From a privacy perspective, sending credit card information over the internet entails a risk that the information may be intercepted
and used by someone other than the individual to whom the information was intended. Quite apart from unauthorized access to the information and loss of confidentiality, this could give rise to various forms of ‘identity theft’ where an individual not only lose control over their personal information, but also their identities [2].

To resolve this problem and create trust and confidence in internet-based transactions, a variety of technologies have been devised. In the first instance, they seek to overcome the security vulnerabilities of an open network. In so doing, they also, in varying degrees, provide confidentiality, integrity in the development stage, and there is a growing consensus that digital signatures and encryption will from the basic tools for electronic transactions. Encryption is needed to ensure security including authentication, confidentiality, data integrity and non-repudiation [2].

2.2 Models of E-commerce

Creating an e-commerce solution mainly involves creating and deploying an e-commerce site. The first step in the development of an e-commerce site is to identify the e-commerce model. Depending on the parties involved in the transaction, e-commerce can be classified into four models, these are: business – to – business (B2B) model, business – to – consumer (B2C) model, consumer – to – consumer (C2C) model, consumer – to – business (C2B) model [3].
2.2.1 Business-to-Business (B2B) Model

The B2B model involves electronic transactions for ordering, purchasing, as well as other administrative tasks between houses. It includes trading goods, such as business subscriptions, professional services, manufacturing, and wholesale dealings. Sometimes in the B2B model, business may exist between virtual companies, neither of which may have any physical existence [3].

In such cases, business is conducted only through the internet, looking at the same example of Amazon online shopping is an online bookstore that sells books from various publishers including Wrox, O’Reilly, Premier Press, and so on. In this case, the publishers have the option of either developing their own site or displaying their books on the Amazon site (www.amazon.com), or both. The publishers mainly choose to display their books on Amazon at it gives them a larger audience. Now, to do this, the publishers need to transact with Amazon, involving business houses on both the ends, is the B2B model [3].

- Consider a hypothetical example. ABC company sells automobile parts and XYZ company assembles these part and then sells the automobile to customers. XYZ company comes across the website of ABC and finds it suitable. XYZ therefore, requests for more information about ABC and finally, decides to purchase automobile parts automobile from ABC. To do this, XYZ places an order on the website of ABC. After ABC receives the order details, it validates the information. B2B model is described in Figure 2.1[3].
As soon as the order is confirmed, the payment procedures are settled. Finally, ABC sends an acknowledgement of payment to XYZ and delivers the goods as per the shipment details decided between the two organizations. The advantages of the B2B model are as follows [3].

- It can efficiently maintain the movement of the supply chain and the manufacturing and procuring processes.
- It can automate corporate processes to deliver the right products and services quickly and cost-effectively. The B2B model is predicted to become the largest value sector of the industry within a few years. This is said to be the fastest growing sector of e-commerce.

### 2.2.2 Business-to-Consumer (B2C) Model

The B2C model involves transactions between business organizations and consumers. It applies to any business organization that sells its products or services to consumers over the internet. These sites display product information in an online catalog and store it in a database. The B2C model also includes services online banking, travel services, and health information [3].
Consider a hypothetical example in which a transaction is conducted between a business organization and a consumer. A business house, LMN Department Store, displays and sells range of products on their web site, www.lmn.com. The details information of all their products is contained in the huge catalogs maintained by LMN Department Stores. Suppose, for example a consumer, X, wants to buy a gift for his wife. He therefore, logs on to the site of LMN Department Stores and selects a gift from the catalog. He also gets the detailed information about the gift such as, the price, availability, discounts, and so on from their catalog [3].

Finally, when he decides to buy the gift, he places an order for the gift on their web site. To place an order, he needs to specify his personal and credit card information on LMN site. This information is then validated by LMN Department Store and stored in their database. On verification of the information the order is processed. Therefore, as you can see, the B2C model involves transactions between a consume done or more business organizations [3]. The B2C to shown in Figure 2.2 [3].

Figure 2.2 B2C Business Models [3]
The example of the site also involves the B2C model in which the consumer searches for a book on their site and places an order, if required. This implies that a complete business solution might be an integration solution of more than one business model. For example, site includes the B2B model in which the publishers transact with Amazon and the B2C model in which an individual consumer transact with the business organization. The B2C model of e-commerce is more prone to the security threats because individual consumers provide their credit card and personal information n the site of a business organization [3].

In addition, the consumer might doubt that his information is secured and used effectively by the business organization. This is the main reason why the B2C model is not very widely accepted. Therefore, it becomes very essential for the business organizations to provide robust security mechanisms that can guarantee a consumer for securing his information [3].

2.2.3 Consumer-to-Consumer (C2C) Model

The C2C model involves transaction between consumers. Here, a consumer sells directly to another consumer. eBay and www.bazee.com are common examples of online auction Web sites that provide a consumer to advertise and sell their products online to another consumer. However, it is essential that both the seller and the buyer must register with the auction site. While the seller needs to pay a fixed fee to the online auction house to sell their products, the buyer can bid without paying any fee. The site brings the buyer and seller together to conduct deals.
Looking at the Figure 2.3 with respect to eBay, when a customer plans to sell his products to other customers on the web site of eBay, he first needs to interact with an eBay site, which in this case acts as a facilitator of the overall transaction. Then, the seller can host his product on www.ebay.com, which in turn charges him for this. The C2C model is shown in Figure 2.3 [3]

Any buyer can now browse the site of eBay to search for the product he interested in. If the buyer comes across such a product, he places an order for the same on the web site of eBay. eBay now purchase the product from the seller and then, sells it to the buyer. In this way, though the transaction is between two customers, an organization acts as an interface between the two organizations [3].

### 2.2.4 Consumer-to-Business (C2B) Model

The C2B model involves a transaction that is conducted between a consumer and a business organization. It is similar to the
B2C model, however, the difference is that in this case the consumer is the seller and the business organization is the buyer. In this kind of a transaction, the consumers decide the price of a particular product rather than the supplier. This category includes individuals who sell products and services to organizations. For example, www.monster.com is a web site on which a consumer can post his bio-data for the services he can offer.

Any business organization that is interested in deploying the services of the consumer can contact him and then employ him, if suitable. Looking at another example of the C2B model, William Ward needs to buy an airline ticket for his journey from New York to New Jersey. William needs to travel immediately. Therefore, he searches a Web site for a ticket. The Web site offers bidding facility to people who want to buy tickets immediately. On the Web site, William quotes the highest price and gets the ticket [3]. The C2B model is shown in Figure 2.4 [3].

![Figure 2.4 C2B Business Models](image)

Figure 2.4 C2B Business Models [3]
2.3 Payment Methods

Currently, many major payment methods, with variations are used to facilitate almost all commerce transactions. Save of these methods are shown below.

2.3.1 Cash payments

Cash is simple and effective means of payment for face to face commerce. Cash transactions have the advantage of settlement on the spot and do not carry any processing cost or paperwork (although for retailers there are costs associated with secure storage, transport and deposit of cash). Moreover, they can be conducted by anyone with sufficient cash, and both parties may remain anonymous. Cash transactions are relatively inexpensive to process and cost retailers less than other types of payments. The major security threats in dealing with cash are an theft, forgery and counterfeiting [4].

2.3.2 Cheque Payment

Paper cheques are an often convenient means of making payments, especially for large value transactions. However, cheques are costly for both users and banks, where the cost includes both cheque fabrication and cheques processing. Moreover, the task of clearing the cheque takes time [4].

2.3.3 Automatic Clearing House(ACH)

The growing number of cheque payments has made paper-based clearing increasingly difficult, this has led to the development of ACH payments. ACH is an automated means of payment which operates in similar way to paper clearing, except that the payment
instructions are in electronic form. Examples of such systems include direct debits, automatic payroll deposits, and utility bill payments [4].

2.3.4 Wire transfer

While ACH payments are used for low-to-mid value transactions, wire transfer payments are used for high value transactions. In these transactions the risk level is high (because of high transaction value), and thus different procedures involving more security are required. Typically, participants in these systems include corporations, banks, and governments[5].

2.3.5 Debit/credit card payments

Debit/credit cards appear to be the most expensive form of payment, with a transaction cost five times higher than the cost of a cash transaction. Transaction costs at least in any direct way, Compared to cash despite this, debit/credit cards have gained in popularity because of strong demand from customers, who typically do not pay the additional payments that only require the exchange of banknotes between buyer and seller, debit/credit card transactions are considerably more complex. Atypical payment card transaction requires the participation of several entities in addition to the cardholder and the seller. For example, before a credit card payment transaction can be conducted, the cardholder (issuer) bank may be contacted by the merchant bank (acquirer) to authorize the transaction. The authorization process uses pre-established criteria to make a decision, such as use of spending limit and/or a maximum allowed number of transactions in a specific period [6].
After the transaction has been conducted by the merchant and cardholder, the transaction is cleared and settled between the issuer and acquirer using the network established by the card brand. With current payment cards the sellers have no cash handling problem, although they do have to pay additional fees to their acquiring bank. Credit cards has the advantages of that they are universally accepted, so that you can pay using them any where the world, and the currency changing is done by the credit card issuer, not by the customer. Another advantage for the customer is that he needs only to enter the credit card number, shipping information and payment information in the their specified fields, so that he doesn’t need to use additional software or hardware components. Thus, without secure electronic payment systems, widespread e-commerce is very risk-prone. Moreover, it seems reasonable to assume that the level of customer adoption of e-commerce will be restricted if e-commerce gains a reputation for possessing major security flaws. For example, online privacy, which is a significant factor in customer trust, is increasingly being viewed as an imperative for e-commerce success [6].

In general, electronic payment systems are cheaper than their paper-based equivalent. The costs associated with electronic payments usually lie between a third and a half of the costs posed by cheques or other paper based transactions [6].

2.4 E-Commerce Transactions

This segment of the class will cover transactions in the broad sense of the term, generally referring to all interactions between the website owner and the website users [7].
2.4.1 Information provision

Providing pre-sales information on products and services. Typically, this may include online catalogues, price lists and product specifications. Information can be tailored to individual needs and previous purchasing history [7].

2.4.2 Agreement of transactions

 Agreeing the terms of the purchase, these may include price, discount, and method of payment and delivery requirements. This phase should result (either explicitly or implicitly) in a clearly understood contract between buyer and seller [8].

2.4.3 Settlement of transactions

Fulfilling the terms of the contract. These could include exchange of payment, receipt and arranging delivery logistics. For electronic goods (e.g. documents, music, software), delivery itself may also take place online [8].

2.4.4 After-sales

Providing post-sales support. This could include technical support such as electronic conferencing, new product information and product upgrades (e.g. for software). It can be used to maintain contact with customers and feed back into the information phase [8].

In practice, only some of these phases may take place electronically. For example, many organizations provide websites that hold product information and also provide online after-sales support. However, purchase, payment and delivery of goods may take place
through traditional channels [8]. Figure 2.5 represents an example of e-commerce transactions.

2.5 Electronic Payment Model

The widely used model involves four roles, namely a payer, a payee, an issuer, and an acquirer. The precise interactions between these roles will vary depending on the transaction type [7].

2.5.1 Payer Electronic Payment

This is the entity that makes a payment using an electronic payment instrument obtained from the issuer. The payer is sometimes called the buyer or the customer.

2.5.2 Payee Electronic Payment

This is the entity receiving the funds resulting from the payment. The payee sends the received payment instrument to the acquirer for clearance and settlement. The payee is sometimes called the seller or the merchant.
2.5.3 Issuer Electronic Payment

Issuer electronic payment is a financial institution that provides electronic payment instruments to the payer to use in a payment. These instruments need to provide assurance to the payee that they will be honored.

2.5.4 Acquirer Electronic Payment

Acquirer electronic payment is a financial institution associated with the payee that verifies the validity of the deposited payment instrument by clearing it with the issuer. After the settlement of funds between issuer and acquirer, the acquirer credits the payee’s account with the monetary value stated by the deposited instrument [7].

2.6 Transaction Authenticity

Authentication is an important issue for users of electronic commerce. Consumers must have faith in the authenticity of the merchant, and merchants must have faith in the authenticity of the consumer. Without authentication, any individual could pose as a merchant, and besmirch a merchant’s good name by failing to deliver goods and billing up credit card bills. Without authentication, any individual could pose as a consumer, ordering costly goods to an abandoned house or apartment, and defrauding the merchant. Without authentication, an individual could pose as a willing buyer, accept the goods, and then repudiate the transaction. Authentication is critical to achieving trust in electronic commerce [6].

Authentication is achieved through the use of digital signatures. Using a hashing algorithm, Secure Electronic Transaction (SET) can
sign a transaction using the sender’s private key. This produces a small message digest, which is a series of values that "sign" a message. By comparing the transaction message and the message digest, along with the sender’s public key, the authenticity of the transaction can be verified. Digital signatures are aimed at achieving the same level of trust as a written signature has in real life. This helps achieve non-repudiation, as the consumer cannot later establish that the message wasn't sent using his private key[6].

2.7 Online versus offline authorization

An important characteristic of any payment system is needed to obtain an online authorization for a transaction, or whether it is possible to proceed with a transaction without communicating with the issuer. Many electronic payment systems require the payee to contact the issuer (via the acquirer) at the time of the transaction in order to receive authorization for the payment. The method used to obtain an authorization depends on the particular payment system. Authorization might take the form of verifying that an electronic coin has not been previously spent in the case of an electronic money system, or a credit check in the case of a credit card system [10].

The use of an online authorization system implies a higher cost per transaction, and a greater processing load is placed on the issuer. Moreover, it assumes that the issuer can always be contacted. If the communications link to the issuer becomes unavailable, then potentially no transactions can be accepted. In the case of network congestion, an online transaction may also be subject to time delays.
Online authorizations are, however, probably essential when the value of the payment is high [10].

In an offline electronic payment system, only the payer and the payee have to be in contact at the moment of the transaction. This kind of payment must include a way of verifying the validity of the transaction. In most offline electronic payment systems, authorization is provided using a smart card. Such systems usually implement limits on how much the user can spend. In the case of electronic cash, verifying that an electronic coin has been previously spent can typically be established after the fact by cryptographic means, thereby increasing security. Also payees are required to contact their acquirer on a regular basis for clearing received payments. Offline schemes typically impose greater transaction complexity on the payer and payee than online schemes, since transaction security must be maintained without the online assistance of the acquirer or the issuer [10].

2.8 E-commerce Solutions

Having looked at some electronic businesses, which is now examine different solutions for implementing one, briefly touch on these now. The choices for an e-commerce site can be categorized as

- An in house solution.
- An instant storefront.
2.8.1 In House solution

With this option, a web business must buy, develop and implement an electronic commerce software package a service platform, redundant internet connections, secure payment processing network connections and round-the-businesses that have the staff and financial resources to support this effort [11].

The advantages of such a solution are obvious complete control of the hardware and software infrastructure, and an easier integration into existing back-end enterprise systems. The disadvantages are mainly the high cost for implementation and installation, this cost effectively puts such systems beyond the range of most small businesses [11].

2.8.2 Instant storefronts

The alternative to an in-house solution is to use a software package from a vendor that can provide the desired features at lower cost. Typically these packages require very little technical knowledge. The more advanced ones allow for customization, and also provide the necessary technology so the business can focus on selling goods and services. There are two types of instant storefront packages, online and offline [1].

2.8.2.1 Online storefront

With an online package, the entire electronic commerce package is on the service provider’s infrastructure. The business accesses it with a web browser, the advantage of an online storefront business is that it can be managed from anywhere that has an internet
connection. The business is freed from constant upgrades and other logistical issues associated with maintaining an internet infrastructure. The disadvantage is that control of the software package is with the ISP, and maintenance can be time-consuming, depending on the speed of the internet connection. Yahoo! Store and Open Market’s Shop site are examples of online storefront solution [1].

2.8.2.2 Offline Storefront

Offline package typically requires installing software on the business computing infrastructure. The owner builds and maintains the business inside the application. When changes are ready to be published, the owner connects to the internet and transmits the changes to the website. Advantages of an offline package include control (the business owns the software) and speed (changes to the store can be made quickly). The disadvantages include lack of software portability or installation/upgrade problem [1].

Small business owners do not usually have the time or energy to worry about technology. Technology should be an enabler, not a disabling force. Often, the quickest, best, and easiest way for a small business to establish a web presence on online, read-to-use package [1].

2.9 E-Commerce Components

This section provides a list of the hardware and software components used in establishing a web storefront. This list is not exhaustive, but should be used as a starting point for planning an electronic commerce-enabled site [12].
2.9.1 E-commerce Hardware

Some electronic payment systems require specific hardware to process transactions. An important issue is whether the device contains tamper-resistant hardware or not.

- Several other options are becoming available, including Digital Subscriber Line (DSL), Integrated Systems Digital Network (ISDN) and T3. A dial-up internet connection is usually not a viable or reliable option for any type of web server [12].
- If the electronic commerce software is maintained in-house, powerful workstations are needed to run the required servers and supporting software.
- Desktop computers are used as clients accessing the electronic commerce site.

2.9.2 E-commerce Software

Software-only electronic payment system is one in which no part of the device is required to tamper-resistant. In this system, additional security features must be provided to prevent users from obtaining any benefit from tampering with software, stored data or exchanged data.

- A solid and dependable web server software from Apache (www.apache.org), Netscape, or Microsoft will suffice. Web server software support of Secure Sockets Layer (SSL) is essential to secure the connection to and from the website, this is very important because sensitive information process like credit card
numbers and other personal information is sent during the buying. Servers from all three companies mentioned above support SSL.

- Standard internet servers such as FTP and Telnet servers to be used in uploading and downloading files and folders to and from the e-commerce website.

- Payment infrastructure to handle the online financial transactions for the e-commerce website. CyberCash has the required servers and clients to implement the payment infrastructure. Other vendors, such as DigiCache, Microsoft and Netscape also provide certain components to support the payment infrastructure.

- A database and database management system will be needed. Databases are critical for storing customer and product information and catalogs [12].
Chapter 3

System Design and Implementation
3.1 Introduction

This chapter describes the design of website for e-commerce and explains the significance of each page and linked on all pages with home page and the application to deal with the site. The protocol Socket Security Layers (SSL) to create a secure confidential communications between all entities involved. The model identifies the entities involved and their roles. The design includes.

- E-commerce Web Site
- E-commerce Database

3.2 Project Design

The System Development Life Cycle (SDLC) implement in the design of the e-commerce website and database will not write details description for the structure of the project due to the nature of the system, so just give only a brief information about the concept of system development life cycle, (SDLC) is disciplined approach to developing information system consist of five phases of SDLC are known collectively as system analysis [13].

3.2.1 Requirements phase

Requirement phase is given a project request, then initially survey for the project scope and feasibility.

- It is critical for e-commerce organizations to understand the customer requirements.
- Projects Company an image to consumers provides basic information to the customers. Therefore, it’s important to improve the website quality to understand able by the customer.
• The designed OBERCAR company website includes the car models and prices.
• The websites provides the customer all the necessary information require the cars available in the company.

3.2.2 Definition phase

It Consists of studying and analyses the proposed website where the problems, opportunities and constrains are clearly described.

• Definition phase describes the Obercar is a company activities that include, advertise, purchase of the cars from different manufactures.
• Obercar Company lacks the number of the customers, and sufficient information about the cars and their models.

3.2.3 Design phase

Design phase starts after defining the study problem. It includes the design of input and output of the system. It also describes the methods, procedures and the system design. On the other hand the design procedure describes the tools implemented to execute the design the design in PHP dreams dream weaver v 8 and use appserv v 8.4.2.
3.2.4 Implementation phase

Finally, the application phase concerned with the interface between the administrator and other user. This phase discusses the PHP code design implementation in this study. Figure 3.1 shows represent Software Life-Cycle Models.

Figure 3.1 Software Life-Cycle Models [13]
Before building the design relational database must be designed first. Conceptual design can be divided into two parts, the data model and the process model. The data model focuses on what data should be stored in the database while the process model deals with how the data is processed. To put this in the context of the relational database, the data model is used to design the relational tables. The process model is used to design the queries that will access and perform operations on those tables [14].

3.3 Data Model

A data model is a conceptual representation of the data structures that are required by a database. The first step in designing a database is to develop an Entity-Relation Diagram (ERD), which a relational database maybe deduced. Figure 3.2 shows the ERD, of proposed project [14].

![Figure 3.2 Entity-Relation Diagram for the table](image_url)
One to one means that entity A matches exactly one record in entity B and every record in B matches exactly one record in A. One to many means that every record in A matches zero or more records in B and every record in B matches exactly one record in A. In the relational database model, each of the entities will be transformed into a table. The tables are shown below along with the attributes.

### 3.3.1 Database Design

In this section, the basic structures of the tables consisting of the database for the project are shown along with necessary information. Five tables were included in study, the first column contains the field name and consists of the user and pass which will be used in the code. The second column is the description which defines the description of first contents of the field name. The third column is name as data type and it defines the type of the data needed, which include characters, integer, text…etc. The fourth column defines the number of characters and the length of the data type. The last column recognizes the type of the field to be used.

- **Administrator Table**: Used to secure the management and restrain it to the database administrators. Also it secure the user access; in this case the administrator only provides the user password. The Administrator Table is show in Table 3.1.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
<th>Data Type</th>
<th>Length</th>
<th>Constrain</th>
</tr>
</thead>
<tbody>
<tr>
<td>User</td>
<td>User Name</td>
<td>Character</td>
<td>10</td>
<td>Not null</td>
</tr>
<tr>
<td>Pass</td>
<td>User Password</td>
<td>Integer</td>
<td>10</td>
<td>Not null</td>
</tr>
</tbody>
</table>
• **Register Table:** This table represents the registry information that the application needs to be set in the company. Primarily, the objective of the table is to enable the customer to register in the designed e-commerce website. Register Table is shown in Table 3.2.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
<th>Type</th>
<th>Length</th>
<th>Constrains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Id</td>
<td>Customer Id</td>
<td>Integer</td>
<td>10</td>
<td>Not null</td>
</tr>
<tr>
<td>Name</td>
<td>Customer name</td>
<td>Text</td>
<td>30</td>
<td>Not null</td>
</tr>
<tr>
<td>Payment</td>
<td>Payment</td>
<td>Integer</td>
<td>10</td>
<td>Null</td>
</tr>
<tr>
<td>Address</td>
<td>Address</td>
<td>Text</td>
<td>20</td>
<td>Not null</td>
</tr>
<tr>
<td>Tel</td>
<td>Telephone no</td>
<td>Integer</td>
<td>10</td>
<td>Not null</td>
</tr>
<tr>
<td>e-mail</td>
<td>E-mail</td>
<td>Text</td>
<td>20</td>
<td>Not null</td>
</tr>
<tr>
<td>Comment</td>
<td>Comment</td>
<td>Text</td>
<td>20</td>
<td>Null</td>
</tr>
</tbody>
</table>

• **Call Friend Table:** The object of this table is to enable the customers to invite their friend send of the website title to visit the website. Call Friend Table is shown in Table 3.3.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
<th>Type</th>
<th>Length</th>
<th>Constrains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Id</td>
<td>Customer Id</td>
<td>Integer</td>
<td>10</td>
<td>Not null</td>
</tr>
<tr>
<td>Email</td>
<td>E-mail</td>
<td>Text</td>
<td>20</td>
<td>Not null</td>
</tr>
<tr>
<td>Email1</td>
<td>E-mail1</td>
<td>Text</td>
<td>20</td>
<td>Null</td>
</tr>
<tr>
<td>Email2</td>
<td>E-mail2</td>
<td>Text</td>
<td>20</td>
<td>Null</td>
</tr>
<tr>
<td>Email3</td>
<td>E-mail3</td>
<td>Text</td>
<td>20</td>
<td>Null</td>
</tr>
</tbody>
</table>
- Sale-Part Table: Aims of this table at allowing the customer to purchase items sales through the website

Table 3.4: sale-part

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
<th>Type</th>
<th>Length</th>
<th>Constrain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Id</td>
<td>Customer no</td>
<td>Varchar</td>
<td>20</td>
<td>Not null</td>
</tr>
<tr>
<td>D</td>
<td>Day</td>
<td>Integer</td>
<td>10</td>
<td>Not null</td>
</tr>
<tr>
<td>M</td>
<td>Month</td>
<td>Integer</td>
<td>10</td>
<td>Not null</td>
</tr>
<tr>
<td>Y</td>
<td>Year</td>
<td>Integer</td>
<td>10</td>
<td>Not null</td>
</tr>
<tr>
<td>Part-cod</td>
<td>Part-code</td>
<td>Integer</td>
<td>10</td>
<td>Not null</td>
</tr>
<tr>
<td>Price</td>
<td>Price</td>
<td>Integer</td>
<td>10</td>
<td>Not null</td>
</tr>
<tr>
<td>Quantity</td>
<td>Quantity</td>
<td>Integer</td>
<td>10</td>
<td>Not null</td>
</tr>
</tbody>
</table>

- Store Table: The purpose of this table is to fix part code for new items brought as new stock.

Table 3.5: store

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
<th>Type</th>
<th>Length</th>
<th>Constrain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part-cod</td>
<td>Part code</td>
<td>Integer</td>
<td>10</td>
<td>Null</td>
</tr>
<tr>
<td>Par-name</td>
<td>Part name</td>
<td>Text</td>
<td>20</td>
<td>Null</td>
</tr>
<tr>
<td>Model</td>
<td>Model</td>
<td>Text</td>
<td>20</td>
<td>Not Null</td>
</tr>
<tr>
<td>y-model</td>
<td>Year-Model</td>
<td>Integer</td>
<td>10</td>
<td>Not Null</td>
</tr>
<tr>
<td>Price</td>
<td>Price</td>
<td>Integer</td>
<td>10</td>
<td>Not Null</td>
</tr>
<tr>
<td>Quantity</td>
<td>Quantity</td>
<td>Integer</td>
<td>10</td>
<td>Null</td>
</tr>
</tbody>
</table>

3.3.2 Process Model

The Process Model is used to process the data and how it flows from one table to another to gather the required information. This model consists of the functional decomposition diagram and data flow diagram.
3.3.2.1 Functional Decomposition Diagram (FDD)

A decomposition diagram shows a top-down functional decomposition of a system and exposes the system's structure. The objective of the functional decomposition is to break down a system step by step, beginning with the main function of a system and continuing with the interim levels down to the level of elementary functions. The diagram is the starting point for more detailed process diagrams, such as data flow diagrams (DFD). Figure 3.3 shows the (FDD) for this project.

![Functional Decomposition Diagram](image)

Figure 3.3 Functional Decomposition Diagram
3.3.2.2 Data Flow Diagram (DFD)

The DFD shows the flow of data from external entities into the system, and from one process to another within the system. There are four symbols for drawing a DFD [14]

- Rectangles representing external entities, which are sources or destinations of data.
- Ellipses representing processes, which take data as input, validate and process it and output it.
- Arrows representing the data flows, which can either, be electronic data or physical items.
- Open-ended rectangles or a disk symbol representing data stores, including electronic stores such as databases or XML files and physical stores such as filing cabinets or stacks of paper.

The DFD for the current system, each process within the system is shown as a detailed DFD, provide a conceptual view of the process and its surrounding input, output and data stores. The detailed DFD provides a more detailed and comprehensive view of the interaction among the sub-processes within the system.

Once, at client site need the details about the significant car, if find the car in the store you can read the information of the car, if you not found the system go the end search. The next flow chart shows the search operation and work as illustrated in Figure 3.4
Figure 3.4 Search Operation Data Follow Chart
3.4 User Interface Design

Before implementing the actual design of the project, a graphical user interface (UI) designs was constructed to visualize the users interaction with the system as they browse for cars, create a shopping and purchase. The user interface design will closely follow the proposed FDD and initial designs of the web pages. The home page is shown in Figure 3.5

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td></td>
</tr>
<tr>
<td>Home Page</td>
<td>Image1</td>
</tr>
<tr>
<td>Menu</td>
<td></td>
</tr>
<tr>
<td>Sub Menu1</td>
<td>Image2</td>
</tr>
<tr>
<td>Sub Menu2</td>
<td></td>
</tr>
<tr>
<td>Sub Menu3</td>
<td>Text1(Introduction of the company)</td>
</tr>
<tr>
<td></td>
<td>Image3</td>
</tr>
</tbody>
</table>

Figure 3.5 Home Page

3.5 Implementation Technologies

The objective of this project is to develop an online car store. When the user types in the Uniform Resource Locator (URL) of the car store in the address field of the browser, a web server is contacted to get the requested information. In the Internet framework, the Internet Information Service(IIS) acts as the web server. The sole task
of a web server is to accept incoming PHP requests and to return the requested resource in an PHP response. The first thing IIS when a request comes in is to decide how to handle the request. Its decision is based upon the requested file extension. For example, if the requested file has the .asp extension, IIS will route the request to be handled by asp.dll. If it has the extends of .aspx, .ascx, etc, it will route the request to be handled by ASP.NET Engine. Figure 3.6 relation between IIS and ASP.NET.

![Figure 3.6 Relation between IIS and ASP.NET](image)

The ASP.NET Engine then gets the requested file, and if necessary contacts the database through ADO.NET for the required file and then the information is sent back to the Client’s browser. Figure 3.6 shows how a client browser interacts with the Web server and how the Web server handles the request from client.

### 3.5.1 Integrating the Website and Database

Customers ordering from an e-commerce website need to be able to get information about a vendor’s products and services, select items they wish to purchase, and submit payment information.
Vendors need to be able to track customer inquiries and preferences and process their orders. So a well organized database is essential for the development and maintenance of an e-commerce site. In a static web page, content is determined at the time when the page is created.

### 3.5.2 Web Page Programming Options

Performs all processing necessary to create the page, and then sends it to the client for display in the client’s browser. Client-side processing is done on the client workstation by having the client browser execute a program that interacts directly with the database. The program designed the registration of the new user. It contains the title: register, field1: name, field2: password, field3: address, field4: tel, field5: Email. In addition it contains command1: (Save) and command2: (Cancel) shown in Figure 3.7.

![Figure 3.7 Registration of the new user](image_url)
Chapter 4

Results and Discussions
4.1 Developing of E-commerce

This project deals with the development of an e-commerce website for online cars sale Obercar Motor Company Limited, at Gedaref state, Sudan. It provides the customers with a catalog of different cars available for purchase in the store. It facilitates and helps in using internet facility to perchance the company cars from anywhere in Sudan. The customer can check the car model, type and price can perform all purchase steps online. Figure 4.1 shows the home page provides illustrative information about the website for all customers and views. And Figure 4.2 shows the product page, it represents the company production item where the customer can get sufficient information about the price, the variety and the quality. (see appendix A).

![Home Page](image)

Figure 4.1 Home Page
Figure 4.2 Products Page

Figure 4.3 shows the car details page, click on the picture of the product will give this page bearing different elevations.

Figure 4.3 Car Details
Figure 4.4 shows registration of new customer page, this page is the customer registration which includes the name, password, address, telephone number and email. (see appendix B).

Figure 4.5 shows Purchase Requisition page, where the customer applies to buy a product and feed in the required product specification and quantity.
Figure 4.5 Purchase Requisition

Only the administrator is allowed to add or modify, delete or update the database. Figure 4.6 shows the administrator login process to the system. And Figure 4.7 shows add new car, display item with a change to of add a new item in the store. (see appendix C).

Figure 4.6 Authentication of the user
Figures 4.7 Add New Car

Figure 4.8 shows delete the car page, the administrator process of the information delete, if the data is incorrect. And Figure 4.9 shows modify insert car page, the process of modifying the data if the data is changed or incorrect.

Figure 4.8 Delete the Car
Figure 4.9 Modify Insert Car

Figure 4.10 shows year requisition report page, represent the clients who bought item through the years. i.e. it is annual report. Figure 4.11 shows monthly requisition report page, display report about monthly.

Figure 4.10 Yearly Requisition Report
Figure 4.11 Monthly Requisition Report

Figure 4.12 shows Output invoice report, the invoice received by the customer.

<table>
<thead>
<tr>
<th>Final Invoice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OberCar Motor Company Limited</strong></td>
</tr>
<tr>
<td>customer name</td>
</tr>
<tr>
<td>date</td>
</tr>
<tr>
<td>Item</td>
</tr>
<tr>
<td>price</td>
</tr>
<tr>
<td>total</td>
</tr>
<tr>
<td>signature</td>
</tr>
<tr>
<td>stamp:</td>
</tr>
</tbody>
</table>

Figure 4.12 Output Invoice Report
4.2 Discussions

- Figure 4.2 shows the product page, it represents the company production item where the customer can get sufficient information about the price, the variety and the quality.

- Figure 4.4 shows registration of new customer page, this page is the customer registration which includes the name, password, address, telephone number and email.

- Figure 4.5 shows Purchase Requisition page, where the customer applies to buy a product and feed in the required product specification and quantity.

- Only the administrator is allowed to add or modify, delete or update the database. Figure 4.6 shows the administrator login process to the system. The name and password help in administering the program. If they are wrong it cannot be opened, and if they are right all the database will be opened and all the operation can be used (add, edit, update and delete). If the administrator feels that another person is using the data, the password can be changed.

- The customers to enable invite their friend send of the website title to visit the website, obercar.com.
Chapter 5

Conclusion & Recommendations
5.1 Conclusion

The internet has become a major resource in modern business, thus electronic shopping has gained significance not only from the entrepreneur’s but also from the customer’s point of view. For the entrepreneur, electronic shopping generates new business opportunities and for the customer, it makes comparative shopping possible. As per a survey, most consumers of online stores are impulsive and usually make a decision to stay on a site within the first few seconds. Hence we have designed the project to provide the user with easy navigation, retrieval of data and necessary feedback as much as possible.

In this research, an e-commerce web site to buy cars online has been developed.

A good shopping design has been accompanied with user-friendly shopping application logic. It should be convenient for the customer to view the contents of their payment method and to be able to remove or add items to their shopping. The shopping application described in this project provides a number of features that are designed to make the customer more comfortable.

This research helps in understanding the creation of an interactive web page and the technologies used to implement it. The design of the project which includes data model and process model illustrates how the database is built with different tables, how the data is accessed and processed from the tables. The building of the website has given me a precise knowledge about how Appser is used to
develop a website, how it connects to the database to access the data and how the data and web pages are modified to provide the user with a shopping cart application.

E-commerce driven by global competitive are seeking to create the necessary technological, frameworks that will support electronic commerce.

The e-commerce is a very important in people life. The design is very simple the Microsoft publisher very good to design and Dreamweaver is interesting, but the web site need to update and to administrator good.

5.2 Recommendation

- To enhance the proposed website it is recommend to use Photoshop for designing the advertisements of the company.
- It is also recommend to use a suitable security methods to safe the transactions between the company and customers.
References


Appendix A

<?php require_once('../Connections/conn.php'); ?>

<?php

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

if ((isset($_POST['part_code'])) && ($_POST['part_code'] != "") ) {
    $deleteSQL = sprintf("DELETE FROM store WHERE part_code=%s",  

68
GetSQLValueString($_POST['part_code'], "int");

mysql_select_db($database_conn, $conn);

</head>
<p>Delete Car</p>
<form id="form1" name="form1" method="post" action="">
  <td width="72">part code</td>
  <td width="145"><input name="part_code" type="text" id="part_code" /></td>
  <input type="submit" name="Submit" value="Delete" />
  <input name="submit" type="submit" value="Cancel" />
</form>
</body>
GetSQLValueString($_POST['model'], "text"),
GetSQLValueString($_POST['year_model'], "int"),
GetSQLValueString($_POST['bay_price'], "int"),
GetSQLValueString($_POST['price'], "int"),
GetSQLValueString($_POST['quant'], "int"),
GetSQLValueString($_POST['part_code'], "int"));

mysql_select_db($database_conn, $conn);
$Result1 = mysql_query($updateSQL, $conn) or die(mysql_error());
}
</form>
<p>&nbsp;</p>
<td colspan="2" align="right" nowrap><div align="center">
<input name="submit" type="submit" value="Update"/>
<input name="submit2" type="submit" value="Cancel"/>
</div></td>
</tr>
</table>
<input type="hidden" name="MM_update" value="form2">
<input type="hidden" name="part_code" value="<?php echo $row_Recordset1['part_code']; ?>">
</form>
<p>&nbsp;</p>
</div>
</body>
</html>

<?php
mysql_free_result($Recordset1);
?>
Appendix B

```php
<?php require_once('../Connections/ecommerce.php'); ?>

<?php

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

$editFormAction = $_SERVER['PHP_SELF'];

```

71
if (isset($_SERVER['QUERY_STRING'])) {
    $editFormAction .= "?" . htmlentities($_SERVER['QUERY_STRING']);
}

if ((isset($_POST['MM_insert'])) && ($_POST['MM_insert'] == "form1")) {
    $insertSQL = sprintf("INSERT INTO reg (Id, Name, Address, Tel, Email) VALUES (%s, %s, %s, %s, %s)",
        GetSQLValueString($_POST['Id'], "text"),
        GetSQLValueString($_POST['Name'], "text"),
        GetSQLValueString($_POST['Address'], "text"),
        GetSQLValueString($_POST['Tel'], "int"),
        GetSQLValueString($_POST['Email'], "text"));

    mysql_select_db($database_ecommerce, $ecommerce);
    $Result1 = mysql_query($insertSQL, $ecommerce) or die(mysql_error());
    $insertGoTo = "able_reg.php";

    if (isset($_SERVER['QUERY_STRING'])) {
        $insertGoTo .= (strpos($insertGoTo, '?')) ? "&" : "?";
        $insertGoTo .= $_SERVER['QUERY_STRING'];
    }

    header(sprintf("Location: %s", $insertGoTo));
}

mysql_select_db($database_ecommerce, $ecommerce);
$sql_Recordset1 = "SELECT * FROM marquee_news";
$Recordset1 = mysql_query($sql_Recordset1, $ecommerce) or die(mysql_error());
$row_Recordset1 = mysql_fetch_assoc($Recordset1);
$totalRows_Recordset1 = mysql_num_rows($Recordset1);
?>

<?php

mysql_select_db($database_ecommerce, $ecommerce);
$query_Recordset1 = "SELECT * FROM marquee_news";
$row_Recordset1 = mysql_fetch_assoc($Recordset1);
$totalRows_Recordset1 = mysql_num_rows($Recordset1);

<head>
<meta http-equiv="Content-Type" content="text/html; charset=windows-1256" />
<title>Registration</title>
<script type="text/javascript" language="javascript" src="jquery.js"></script>
<script type="text/javascript">
// Developed by Roshan Bhattarai
// Visit http://roshanbh.com.np for this script and more.
// This notice MUST stay intact for legal use
$(document).ready(function()
    <td><input name="Name" type="text" value="" size="32"></td>
    <td nowrap align="right">Password:</td>
    <td><input name="Id" type="text" value="" size="32"></td>
    <td><input name="Address" type="text" value="" size="32"></td>
    <td><input name="Tel" type="text" value="" size="32"></td>
    <td><input name="Email" type="text" value="" size="32"></td>
    <input name="submit" type="submit" value="Save" />
    <input type="submit" name="Submit" value="cancel" />
</div></td>
</tr>
</table>
<input type="hidden" name="MM_insert" value="form1">
</form> </p></td>
<td>&nbsp;</td>
</tr>
Appendix C

```php
<?php require_once('../Connections/ecommerce.php'); ?>

<?php

mysql_select_db($database_ecommerce, $ecommerce);
$query_Recordset1 = "SELECT * FROM marquee_news";
$Recordset1 = mysql_query($query_Recordset1, $ecommerce) or die(mysql_error());
$row_Recordset1 = mysql_fetch_assoc($Recordset1);
$totalRows_Recordset1 = mysql_num_rows($Recordset1);

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=windows-1256" />
<title>Home Page</title>
<script type="text/javascript" language="javascript" src="jquery.js"></script>
<script type="text/javascript">
//  Developed by Roshan Bhattarai
//  Visit http://roshanbh.com.np for this script and more.
//  This notice MUST stay intact for legal use
$(document).ready(function()
{
<link rel='stylesheet' id='style-css' href='diapo.css' type='text/css' media='all'>
<body>

<marquee onmouseover=this.stop() onmouseout=this.start() title="News" >

<?php do { ?>
    <?php } while ($row_Recordset1 = mysql_fetch_assoc($Recordset1)); ?>
</marquee>

<p class="menu_head">Home Page</p>
```

74
OberCar company is a live demo of a car company integrated with a control panel provided and designed by car company solutions. 

This is a simple image to Modern cars in Obercar Motor Company Limited.

Obercar Motor Company Limited.

This is a simple image to Modern cars in Obercar Motor Company Limited

Obercar Motor Company Limited:

Obercar

Motor Company Limited

Obercar Motor Company Limited...

This is a simple image to Modern cars in Obercar Motor Company Limited

This is a simple image to Modern cars in Obercar Motor Company Limited
<div class="price_column highlighted fadeIn" style="top:0; left:190px;">Obercar</div>

Obercar Motor Company Limited

This is a simple image to Modern cars in Obercar Motor Company Limited

<?php
mysql_free_result($Recordset1);
?>