

## Project Profile

---

❖ Project Title	: ONLINE SHOP MANAGEMENT SYSTEM
❖ Platform	: Microsoft Windows 10.
❖ Back-end (Used)	: PHP v5.5.38, MySQL v10.1.16-MariaDB, PHP OOP
❖ Front-end (Used)	: HTML5, CSS3, Java Script, JQuery, AJAX, Bootstrap v3.3.7
❖ Web Server	: Apache Server v2.4.23.
❖ Team Members	: Three.
❖ Development Tools	<ul style="list-style-type: none"><li>▪ Sublime Text v3.3126.</li><li>▪ xampp Server v3.3.2.</li><li>▪ Adobe Photoshop CS6</li><li>▪ MS Word 2013</li><li>▪ MS Powerpoint</li><li>▪ Diagram Designer</li></ul>
❖ Project Duration	: 14 Classes (42 Hours).
❖ Guided By	: <b>Md. Saiful Islam Shuvo</b>
❖ Submitted by	<ul style="list-style-type: none"><li>• <b>Syed Ariful Islam Emon</b></li><li>• <b>Nirjhar Mazumder</b></li><li>• <b>Md. Masud Shikder</b></li></ul>

# **Chapter 1**

## **Introduction**

---

## **1.1 Introduction:**

People use the internet to sell and buy online, advertisement, promote and to share information. Internet also acts as a medium of getting latest news around the world. As a result, the world is now in our hand.

In present days, there are millions of websites which can be browsed worldwide and they offer different kinds of services to their users. The rapid development of information technologies makes the internet as the first medium to find information related to daily life. To accomplish this demand, the Government and the private organization are rushing to implement their own website to spread their services and products to people.

Now, sometimes it becomes too much difficult to create a complete website. Because for this, web designers have to follow user requirements. To fulfill user requirements, designers need to know the total background of user through which websites are designed. And website security is one more thing that should be keep in mind while creating a perfect and attractive website.

## **1.2 Project Overview:**

Online Shopping Management System (OSMS) is targeted a facilitating the administrators, stuffs, customers through a complete automated and comprehensive system. Basically the target of this system is to given facilities to the customers so that they can shopping from home by ordering and paid by online.

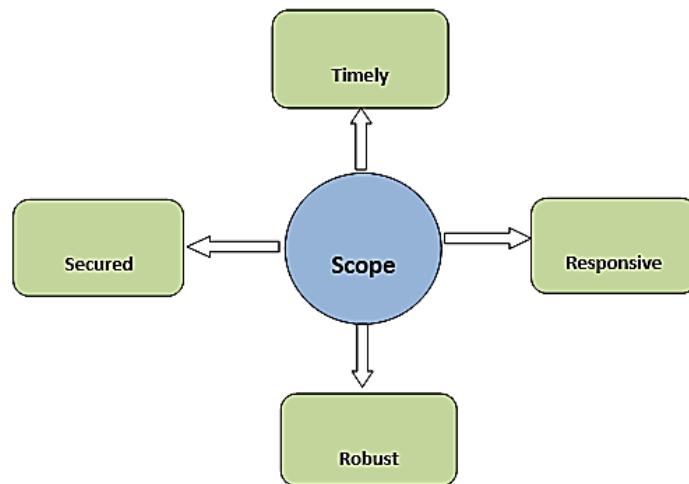
As it is web based application, this can be controlled and accessed from anywhere by its respective users and administrators which will make the task of managing online shopping easier. Another advantage of this system is that it does not require any installation and modification of system files to access.

**OSMS** will be engaged in all the general people in Bangladesh as well as can be implemented in any country in the world. It will store, show, update, prune, analyze, integrate information of the customers and all merchant related to this site. Apparently, this system is associated with the all latest features of a standard system, essentially this our system has three modules\_\_\_\_\_

- I. Administrator Module
- II. Users module
- III. Public module

- I. **Administrator panel:** This module is highly secured compared to the other panels and accessed only by the authorized administrators. All manipulation, dealings will be dominated from this panel. The access of this panel requires two level of security check.
- II. **User's module (Limited access):** User denotes to the authorized users. That is, who are registered here, they will be able to check and monitor the updates on our site about new products and features.
- III. **Public module (Limited access):** This module is accessible for all. People can learn about our products, our rules and so on from the system. This panel is necessarily resembles to a traditional website.

### **1.3 Scope of the project:**



Online Shopping Management System (**OSMS**) is capable of accepting, validating and incorporating data. This system has the potentiality to work in rush hour and can process multiple requests. It enables administrator to manipulate data in rational time. We have used MSYSQL in the back end which is a relational database. It is fully optimized and can handle ambiguous as well as reduced redundancy of data. It is not vulnerable to SQL injection, Brute force attack and other security hazards.

### **1.4 Objective of the project:**

**OSMS** focuses precisely on the following objectives:

1. To enable administrator to access the system from anywhere.
2. To manipulate data precisely.

3. To abate data redundancy and pruning ambiguous data.
4. To process data in possibly least amount of time.
5. To secure the information and obstruct the access of unauthorized persons.
6. To enable customers to get an overview frequently about the products.
7. To avail the information immediately in demand.
8. To analyze the data for providing analytical decisions.

## **1.5 Facilities:**

Our system will provide facilities:

- I. System administrator
- II. Customers

### **1.5.1 Facilities to be provided to the system administrator:**

- I. System administrator will have user friendly asynchronous GUI (Graphical User Interface) system.
- II. System administrator can easily see the basic information and condition of the customers on the first page which will be refreshed automatically at a predefined time interval.
- III. All calculations including expenditure of customers and jail will be done automatically.
- IV. Data will be shown graphically for easy understanding.
- V. No difficulty of installation. Can be accessed from anywhere of the world.

### **1.5.2 Facilities to be provided to the customers:**

- I. Customers can choose and order products easily from this site only by registering.
- II. Clothes will delivered to their house and they can give it back they won't like it.
- III. Customers need not go to shopping center to buy his/her cloths it will reduce customer's time and money.
- IV. Customers can ask the authority for any particular product.
- V. Merchant will have some advantage if any customer buy product through the merchant.
- VI. Customers can cancel orders within a limited time if any problem occurs.

## **1.6 Security fact:**

- I. Customers will be assured to give maximum security.
- II. Keep maximum confidentiality and sensitive information hidden from public.
- III. Auto logout and shutdown of the system if any possibility of security hazard.
- IV. Validate all data during insertion to prevent junk or invalid data.

## **1.7 Analytical functionalities:**

- I. To analyze the data by fetching data from database, and decides what type of people is most likely to be shopping frequently.
- II. To analyze that the customer of which area is more likely to be shopping from online.
- III. To analyze the conduct of the customers and automatically categories the customers into two categories
  - a) General customer
  - b) merchant
- IV. Our system will provide comparative comparison between customers of different ages, cast and creed, professions etc. Which will answer the following questions :
  - a) How many customers are frequently willing to shopping?
  - b) What types of products are frequently bought by a person?

# **Chapter 2**

**Project Findings**

**&**

**Methodology**

---

## **2.1 Project Findings (existing systems):**

We have conducted a case study on various Online Shopping sites and try to find out their management procedures, drawbacks, public opinion which has facilitated to find out the fault of current existing systems and helped us to avoid those drawbacks and inconsistencies in our project. We have also conduct a survey on Sellers and buyers opinion about online shopping. The summery of the finding is depicted below in tabular fashion.

## **2.2 Main Objectives:**

The system is capable of maintaining details of various customers, vendors, products and storing all the day to day transactions such as generations of shipment address, bills, handling customers and product receipts updating of stores. The central concept of the application is to allow the customer to shop virtually using the internet and allow customers to buy the items and articles of the desire from the store. The information pertaining to the products are stores at the server side. The server process the customer and the items are shipped to the address submitted by them.

The main objective behind preparing this project is that to give a customer completes facility to:

- Profile management facility for customers in secure manner
- All the products are accessed through e-mail like Computer & Computer accessories.
- Shopping cart is also created for customers for total amount checking
- Recent offers updates to customers via mail
- About most of them purchased are shown.

## **2.3 Methodology of Online Shopping:**

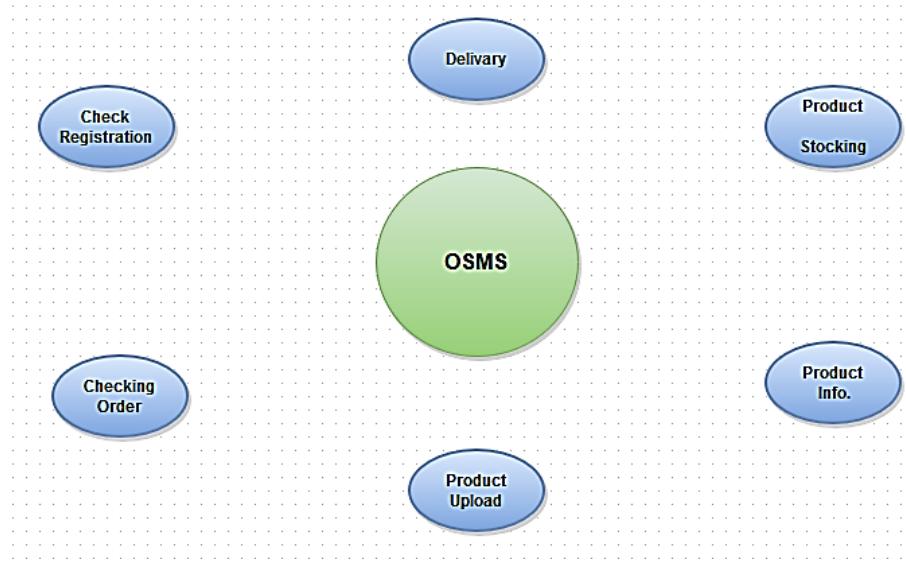
Online shopping (sometimes known as e-tail from "electronic retail" or e-shopping) is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser. Alternative names are: e-web-store, e-shop, e-store, Internet shop, web-shop, web-store, online store, online storefront and virtual store. Mobile commerce (or m-commerce) describes purchasing from an online retailer's mobile optimized online site or app. An online shop evokes the physical analogy of buying products or services at a bricks-and-mortar retailer or shopping center; the process is called business-to-consumer (B2C) online shopping.

Various inconsistencies and mismanagement of several OSMS are detected after the case study and our findings. By analyzing the finding and the demand of people of several categories we have tried to remove

those inconsistencies and security hazard in our system. Based on our findings and report we will implement the following functionalities to ablate the drawbacks of existing system.

### **2.3.1 Developing the crucial functionalities:**

This will include the development and fertilize the administration part of our project which will include sellers info, buyers info, products, price, how to buy and so on.



### **2.3.2 Facilitating the buyers for allowing them access in the system:**

In our next phase we will develop the panel for buyers so that this will enable them to choose items anytime from anywhere with a detail information of the product. This functionality will be a major one because most of the people want to know every details of a product before buying.

### **2.3.3 Developing the report generation and analytical functionalities:**

Sometimes it is boring to search for information of products in the system as the chronological information are not stored in one place. So, to get rid of this monotonous task, we will develop a functionality for our system that will generate the search option from where a buyer can search for a specific product to choose for him/her. Moreover, we will facilitate the admin / the owner of this site by automatic generation of cost and income and the most selling and hitting product of the site to give him/her a details information about his business.

## **2.4 Various Method of Online Shopping:**

- 1. Determining Target Customer:** Online customers must have access to the Internet and a valid method of payment in order to complete a transaction. Generally, higher levels of education and personal income correspond to more favorable perceptions of shopping online. Increased exposure to technology also increases the probability of developing favorable attitudes towards new shopping channels.
- 2. Product selection:** Consumers find a product of interest by visiting the website of the retailer directly or by searching among alternative vendors using a shopping search engine. Once a particular product has been found on the website of the seller, most online retailers use shopping cart software to allow the consumer to accumulate multiple items and to adjust quantities, like filling a physical shopping cart or basket in a conventional store.

A "checkout" process follows (continuing the physical-store analogy) in which payment and delivery information is collected, if necessary. Some stores allow consumers to sign up for a permanent online account so that some or all of this information only needs to be entered once. The consumer often receives an e-mail confirmation once the transaction is complete. Less sophisticated stores may rely on consumers to phone or e-mail their orders (although full credit card numbers, expiry date, and Card Security Code or bank account and routing number should not be accepted by e-mail, for reasons of security).

- 3. Customer needs & expectation:** A successful web store is not just a good looking website with dynamic technical features, listed in many search engines. In addition to disseminating information, it is also about building a relationship with customers and making money. Businesses often attempt to adopt online shopping techniques without understanding them and/or without a sound business model; often, businesses produce web stores that support the organizations' culture and brand name without satisfying consumer expectations. User-centered design is critical.

Understanding the customer's wants and needs is essential. Living up to the company's promises gives customers a reason to come back and meeting their expectations gives them a reason to stay. It is important that the website communicates how much the company values its customers. Customer needs and expectations are not the same for all customers. Age, gender, experience and culture are all important factors.

**4. Payment System:** Online shoppers commonly use a credit card or a PayPal account in order to make payments. However, some systems enable users to create accounts and pay by alternative means, such as:

- Billing to mobile phones and landlines
- Cash on delivery (C.O.D.)
- Cheque

**5. Product Delivery:** Once a payment has been accepted, the goods or services can be delivered in the following ways. For physical items:

**Shipping:** The product is shipped to a customer-designated address. Retail package delivery is typically done by the public postal system or a retail courier such as FedEx, UPS, DHL, or TNT.

**Drop shipping:** The order is passed to the manufacturer or third-party distributor, who then ships the item directly to the consumer, bypassing the retailer's physical location to save time, money, and space.

**In-store pick-up:** The customer selects a local store using a locator software and picks up the delivered product at the selected location. This is the method often used in the bricks and clicks business model.

# **Chapter 3**

## **System Requirements**

---

### **3.1 Tools and Platforms Used**

#### **3.1.1 Hardware Requirements**

<b>Processor</b>	PC with a Pentium IV-class processor, 1 GHz processor Recommended: 2 GHz processor
<b>RAM</b>	256 MB or onwards Recommended.
<b>Hard Disk</b>	5 GB of available space required on system drive of available or more.
<b>Operating System</b>	Windows XP Service Pack 2, Windows Server 2003 Service Pack 1, or later versions
<b>Access</b>	MySQL v5.1.36.
<b>Browser</b>	Mozilla Firefox 20.0 /Internet Explorer 8.0/ Google Chrome 27.0 Onwards with Player Plug-in 9.0 or onwards, Opera Mini.

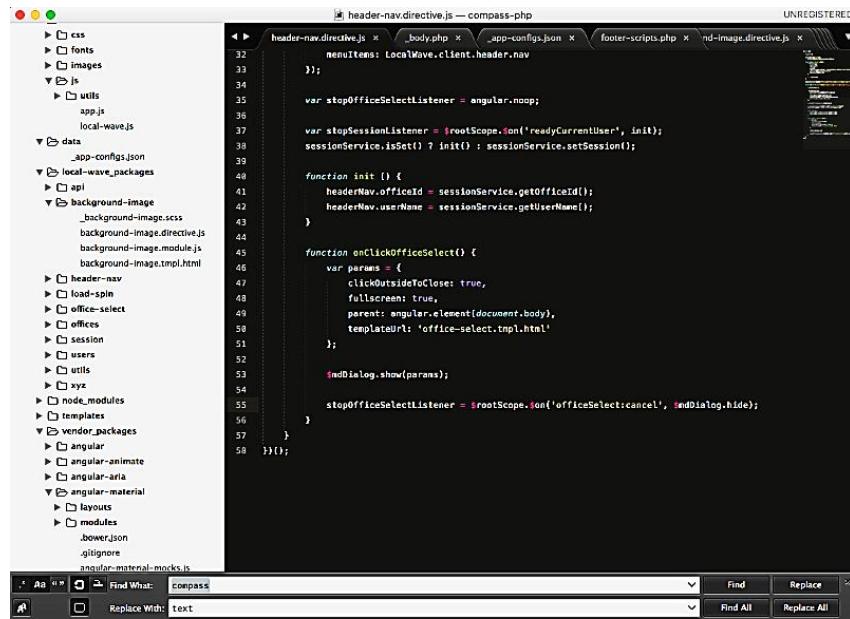
<b>Server Side Tools</b>	
<b>Processor</b>	PC with a Pentium IV-class processor, 1 GHz processor Recommended: 2 GHz processor
<b>RAM</b>	1 GB or onwards Recommended.
<b>Hard Disk</b>	80 GB of available space required on system drive of available or more.
<b>Operating System</b>	Windows XP Service Pack 2, Windows Server 2003 Service Pack 1, or later versions
<b>Software</b>	MySQL v5.1.36.
<b>Browser</b>	Mozilla Firefox 20.0 /Internet Explorer 8.0/ Google Chrome 27.0 Onwards with Player Plug-in 9.0 or onwards.

<b>Development Side Tools</b>	
<b>Processor</b>	PC with Intel Core i-5 (5 <sup>th</sup> Generation)
<b>RAM</b>	4 GB DDR3.
<b>Hard Disk</b>	1 TB.
<b>Operating System</b>	Windows 10 Enterprise
<b>Software</b>	Sublime Text 3.3326, XAMPP Server 3.3.2, Adobe Photoshop CC, MS Word 2013, MS PowerPoint 2013
<b>Browser</b>	Google Chrome 55.0.2883.87, Internet Explorer 11, Mozilla Firefox, Edge, Sparta, Opera Mini

#### **1.4.1 Software Requirements**

##### **1.4.1.1 Sublime Text**

Sublime Text is a proprietary cross-platform source code editor with a Python application programming interface (API). It natively supports many programming languages and markup languages, and its functionality can be extended by users with plugins, typically community-built and maintained under free-software licenses.



## Features

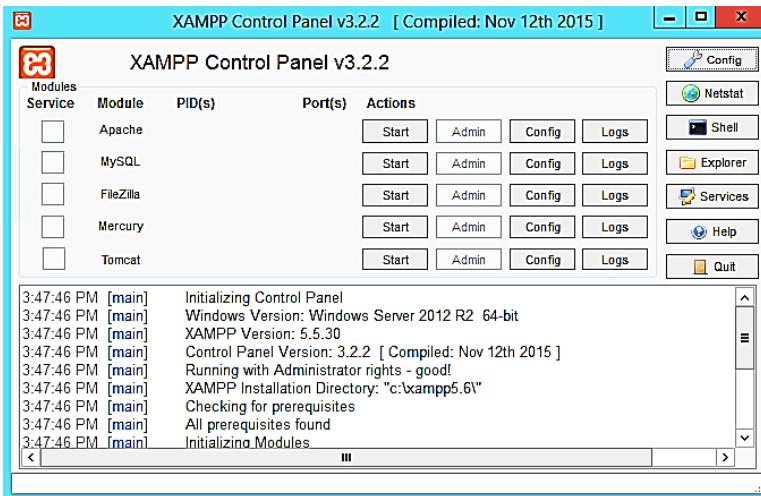
The following is a list of features of Sublime Text:

- "Goto Anything," quick navigation to files, symbols, or lines
- "Command palette" uses adaptive matching for quick keyboard invocation of arbitrary commands
- Simultaneous editing: simultaneously make the same interactive changes to multiple selected areas
- Python-based plugin API
- Project-specific preferences
- Extensive customizability via JSON settings files, including project-specific and platform-specific settings
- Cross platform (Windows, OS X, Linux)
- Compatible with many language grammars from TextMate.

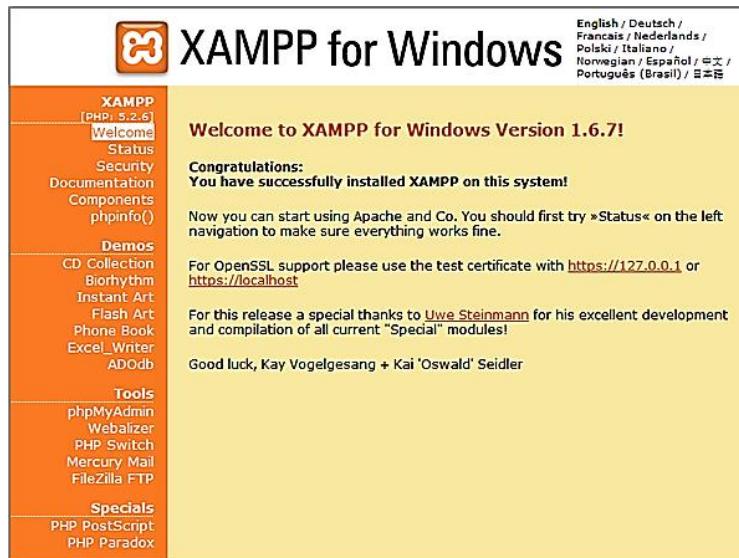
### 3.1.2.2XAMPP

XAMPP is a free and open source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. XAMPP stands for Cross-Platform (X), Apache (A), MariaDB (M), PHP (P) and Perl (P). It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes. Everything needed to set up a web server – server application (Apache), database (MariaDB), and scripting language (PHP) – is included in an

extractable file. XAMPP is also cross-platform, which means it works equally well on Linux, Mac and Windows. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server extremely easy as well.



In general, XAMPP is used for web development on your local machine, as opposed to directly on your web space. It allows you to tinker and test out changes on your personal computer before making those changes publicly online. The XAMPP package is simply an easy way to install all the vital web server parts all at once, though it's just as possible to install them all individually and by hand instead. Some people prefer to do that for a better understanding of the individual setup for each piece of software. If you prefer to focus on web development, though, XAMPP should be perfectly acceptable.



It's a fancy way of saying "bunch of software that helps you accomplish something." In this case the **stack** is AMPP, and the **solution** in question would be "web development". The **package** is the combination of all that related software. Easy-peasy!

### 3.2 Development Environment:

To implement of our project we have used various design tools available to us. List of this tools are given bellow...

#### For Frontend Design

- 1 HTML5
- 2 CSS3
- 3 JavaScript (Framework)
- 4 Bootstrap



#### For Backend Design

- 1 PHP
- 2 MySQL
- 3 OOP PHP
- 4 jQuery



### **3.2.1 HTML (HyperText Markup Language):**

HTML, which stands for HyperText Markup Language (HTML), is the most basic building block of a webpage and used for creating and visually representing a webpage. It determines the content of a webpage, but not its functionality.

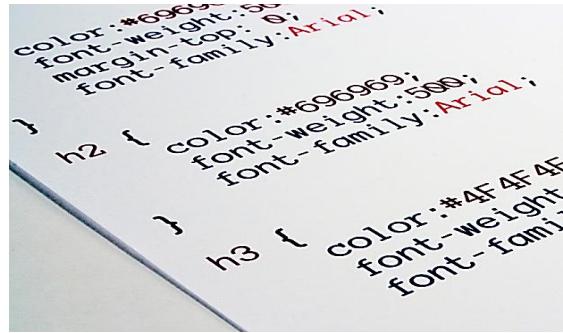


HTML adds "markup" to Standard English text. "Hyper Text" refers to links that connect Web pages to one another, making the World Wide Web what it is today. By creating and uploading Web pages to the Internet, you become an active participant in the World Wide Web once your site is online. HTML supports visual images and other media as well. With the help of HTML everyone can make static as well as dynamic web sites. HTML is the language that describes the structure and the semantic content of a web document. Content within a web page is tagged with HTML elements such as <img>, <title>, <p>, <div>, <picture>, and so forth. These elements form the building blocks of a website.

### **3.2.2 CSS (Cascading Style Sheets):**

Cascading Style Sheets (CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language. Although most often used to change the style of web pages and user

interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML, SVG and XUL. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.

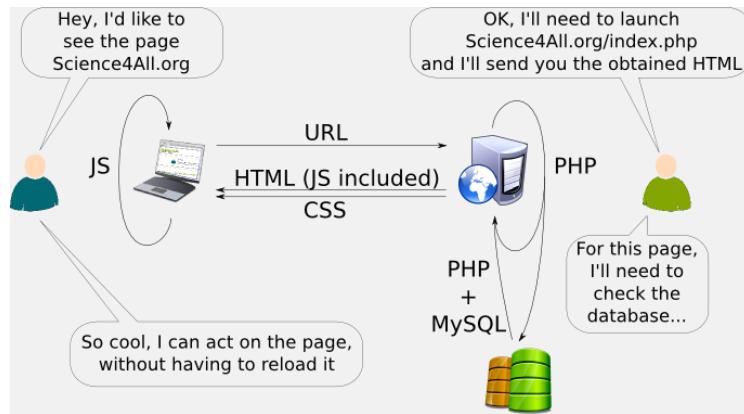


CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics and enable multiple HTML pages to share formatting by specifying the relevant CSS in a separate. CSS file, and reduce complexity and repetition in the structural content, such as semantically insignificant tables that were widely used to format pages before consistent CSS rendering was available in all major browsers. CSS makes it possible to separate presentation instructions from the HTML content in a separate file or style section of the HTML file.

### **3.2.3 JavaScript (Framework):**

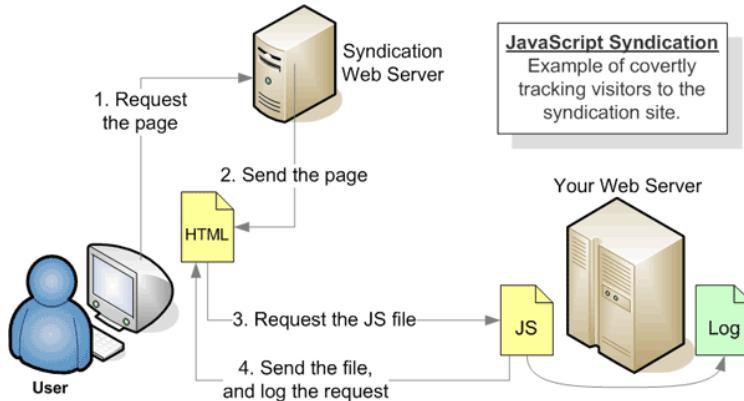


JavaScript is a high level, dynamic; untyped, and interpreted programming language. It has been standardized in the ECMAScript language specification. Alongside HTML and CSS, it is one of the three essential technologies of World Wide Web content production; the majority of websites employ it and it is supported by all modern web browsers without plug-ins. JavaScript is prototype-based with first-class functions, making it a multi-paradigm language, supporting object-oriented, imperative, and functional programming styles. It has an API for working with text, arrays, dates and regular expressions, but does not include any I/O, such as networking, storage or graphics facilities, relying for these upon the host environment in which it is embedded.



Despite some naming, syntactic, and standard library similarities, JavaScript and Java are otherwise unrelated and have very different semantics. The syntax of JavaScript is actually derived from C, while the semantics and design are influenced by the self and Scheme programming languages.

JavaScript is also used in environments that are not web-based, such as PDF documents, site-specific browsers, and desktop widgets. Newer and faster JavaScript virtual machines (VMs) and platforms built upon them have also increased the popularity of JavaScript for server-side web applications. On



the client side, JavaScript has been traditionally implemented as an interpreted language, but more recent browsers perform just-in-time compilation. It is also used in game development, the creation of desktop and mobile applications, and server-side network programming with runtime environments such as Node.js.

### 3.2.4 Bootstrap:

Bootstrap is a free and open-source collection of tools for creating websites and web applications. It contains HTML- and CSS-based design templates for typography, forms, buttons, navigation and other interface

components, as well as optional JavaScript extensions. It aims to ease the development of dynamic websites and web applications.



Bootstrap is a front end framework, that is, an interface for the user, unlike the server-side code which resides on the "back end" or server. Bootstrap is compatible with the latest versions of the Google Chrome, Firefox, Internet Explorer, Opera, and Safari browsers, although some of these browsers are not supported on all platforms.

Since version 2.0 it also supports responsive web design. This means the layout of web pages adjusts dynamically, taking into account the characteristics of the device used (desktop, tablet, mobile phone).

Starting with version 3.0, Bootstrap adopted a mobile first design philosophy, emphasizing responsive design by default.

**Grid** 12 columns with a responsive twist

```
<div class="row">
  <div class="span1.12">...</div>
  <div class="span4 offset1.12">...</div>
</div>
```

**Icons** by Glyphicons

```
<i class="icon-search icon-white"></i>
```

**Tables** For you guessed it, tabular data

```
<table class="table
  table-striped
  table-bordered
  table-condensed">
  <thead>
    <tr>
      <th>...</th>
      <th>...</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>...</td>
      <td>...</td>
    </tr>
  </tbody>
</table>
```

**Buttons** push it, push it real good

```
<a class="btn
  btn-primary Primary"
  btn-info Info"
  btn-success Success"
  btn-warning Warning"
  btn-danger Danger"
  btn-inverse Inverse"
  btn-large|small|mini
  disabled">
  >Push it!</a>
```

**Dropdowns** use in buttons, tabs, nav

```
<a class="btn dropdown-toggle"
  data-toggle="dropdown"
  href="#">
```

Bootstrap is open source and available on GitHub. Developers are encouraged to participate in the project and make their own contributions to the platform.

### **3.2.5 PHP (Hypertext Processor):**

PHP is a server-side scripting language designed for web development but also used as a general-purpose programming language. While PHP originally stood for Personal Home Page, it now stands for PHP: Hypertext Preprocessor, which is a recursive acronym.



PHP code can be simply mixed with HTML code, or it can be used in combination with various templating engines and web frameworks. PHP code is usually processed by a PHP interpreter, which is usually implemented as a web server's native module or a Common Gateway Interface (CGI) executable. After the PHP code is interpreted and executed, the web server sends the resulting output to its client, usually in the form of a part of the generated web page; for example, PHP code can generate a web page's HTML code, an image, or some other data. PHP has also evolved to include a command-line interface (CLI) capability and can be used in standalone graphical applications.

```
        'role_id' => $role_details['id'],
        'resource_id' => $resource_details['id'],
    );
if ( $this->rule_exists( $resource_details['id'], $role_details['id'] ) ) {
    if ( $access == false ) {
        // Remove the rule as there is currently no need for it
        $details['access'] = !$access;
        $this->_sql->delete( 'acl_rules', $details );
    } else {
        // Update the rule with the new access value
        $this->_sql->update( 'acl_rules', array( 'access' => $access ), array( 'role_id' => $role_details['id'], 'resource_id' => $resource_details['id'] ) );
    }
}
foreach( $this->rules as $key => $rule ) {
    if ( $details['role_id'] == $rule['role_id'] && $details['resource_id'] == $rule['resource_id'] ) {
        if ( $access == false ) {
            unset( $this->rules[ $key ] );
        } else {
            $this->rules[ $key ]['access'] = $access;
        }
    }
}
```

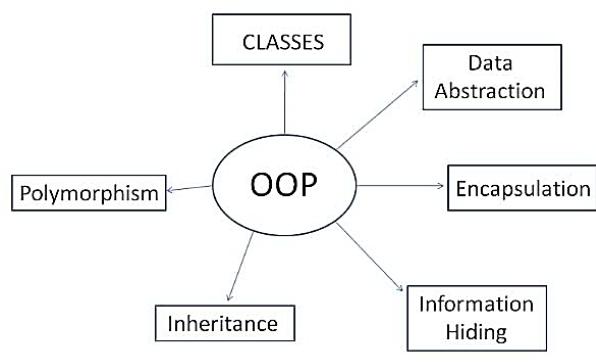
The standard PHP interpreter, powered by the Zend Engine, is free software released under the PHP License. PHP has been widely ported and can be deployed on most web servers on almost every operating system and platform, free of charge.

Despite its popularity, no written specification or standard existed for the PHP language until 2014, leaving the canonical PHP interpreter as a de facto standard. Since 2014, there is ongoing work on creating a formal PHP specification.

### 3.2.5.1 OOP PHP (Object Oriented Programming PHP):

#### What is Object Oriented Programming?

Object-oriented programming (OOP) is a programming paradigm based on the concept of "objects", which are data structures that contain data, in the form of fields, often known as attributes; and code, in the form of procedures, often known as methods. A distinguishing feature of objects is that an object's procedures can access and often modify the data fields of the object with which they are associated (objects have a notion of "this" or "self"). In OO programming, computer programs are designed by making them out of objects that interact with one another. There is significant diversity in object-oriented programming, but most popular languages are class-based, meaning that objects are instances of classes, which typically also determines their type.



Many of the most widely used programming languages are multi-paradigm programming languages that support object-oriented programming to a greater or lesser degree, typically in combination with imperative, procedural programming. Significant object-oriented languages include Python, C++, Objective-C, Smalltalk, Delphi, Java, Swift, C#, Perl, Ruby and PHP.

```
1 <?php
2
3 class Product {
4     /*
5         , $product_id, $category, $product_info, $product_status,
6         $product_credit_required, $product_end_time, $product_credit_inserted; */
7
8     private $product_name = array();
9     private $num_rows = 0;
10
11    public function set_latest_products() {
12        include 'connect.php';
13        $sth = $dbh->query("SELECT * FROM product");
14        $sth->setFetchMode(PDO::FETCH_ASSOC);
15        while ($row = $sth->fetch()) {
16            $this->num_rows++;
17            $this->product_name[] = $row['product_name'];
18        }
19    }
20}
```

### 3.2.5.2 Why is needed to start writing object oriented code in PHP?

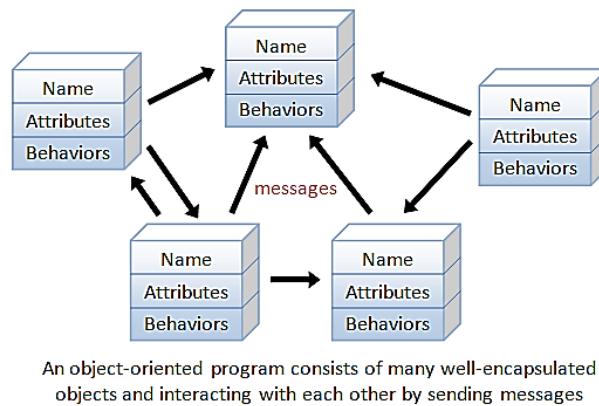
OOP was made to make programming languages more similar to real life. We live in a world of objects. You are an object (Person), you live in an object House, that Houseobject (as well as any other House object) has an House::\$address and House::\$number, your house probably contains other objects such as LivingRoom and Kitchen. The Kitchen can hold Oven and Stove and Refrigerator, which are all extensions of the Kitchen Appliance object. OOP programming takes that approach, and incorporates it into the programming world.

Well, there are several things:

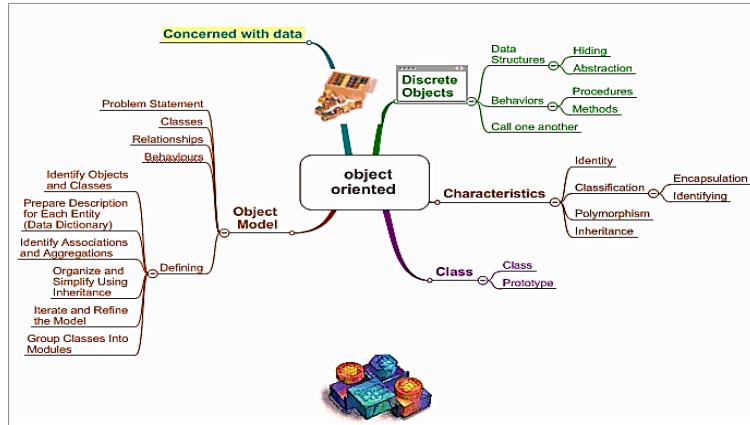
It makes the code more maintainable. Instead of dividing the program into tasks (functions), to divide it into objects, if anyone think of a database connection as an object (meaning, there can be multiple database connections, they share methods and properties, but each is performed on a different instance), it makes it easier to understand and maintain.

It makes the code more readable. To define an object with the class declaration, and then call it with the new ClassName() keyword.

It allows for extensibility and flexibility. Just like KitchenAppliance can be extended into Oven orStove, so can your objects and classes.



OOP programming comes with many advantages. It requires a slightly different way of thinking, but eventually, it's worth it.



### 3.2.6 SQL (Structured Query Language):



SQL Structured Query Language is a special-purpose programming language designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS). Originally based upon relational algebra and tuple relational calculus, SQL consists of a data definition language, data manipulation language, and a data control language. The scope of SQL includes data insert, query, update and delete, schema creation and modification, and data access control. Although SQL is often described as, and to a great extent is, a declarative language (4GL), it also includes procedural elements. SQL was one of the first commercial languages for Edgar F. Codd's relational model, as described in his influential 1970 paper, "A Relational Model of Data for Large Shared Data Banks. Despite not entirely adhering to the relational model as described by Codd, it became the most widely used database language. The standard has been revised to include a larger set of features. Despite the existence of such standards, though, most SQL code is not completely portable among different database systems without adjustments. The SQL language is subdivided into several language elements, including:

Clauses, which are constituent components of statements and queries. (In some cases, these are optional.)

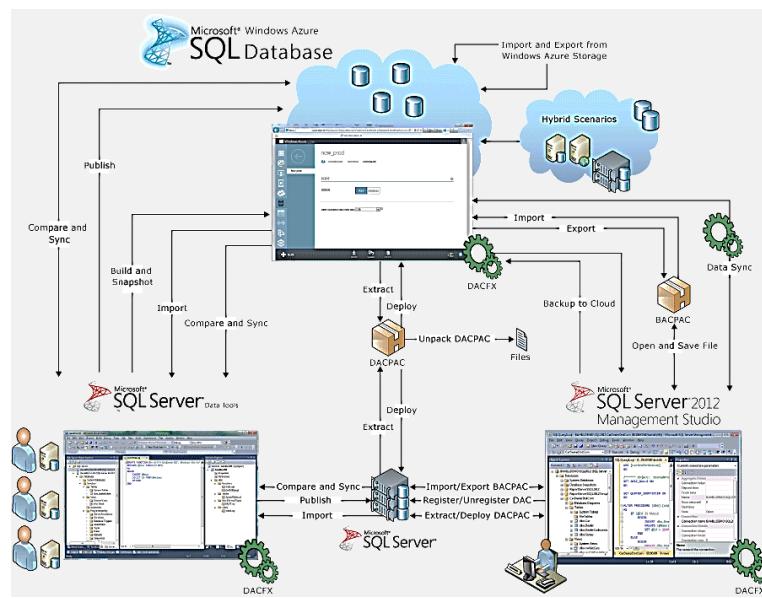
Expressions, which can produce either scalar values, or tables consisting of columns and rows of data

Predicates, which specify conditions that can be evaluated to SQL three-valued logic (3VL) (true/false/unknown) or Boolean truth values and are used to limit the effects of statements and queries, or to change program flow.

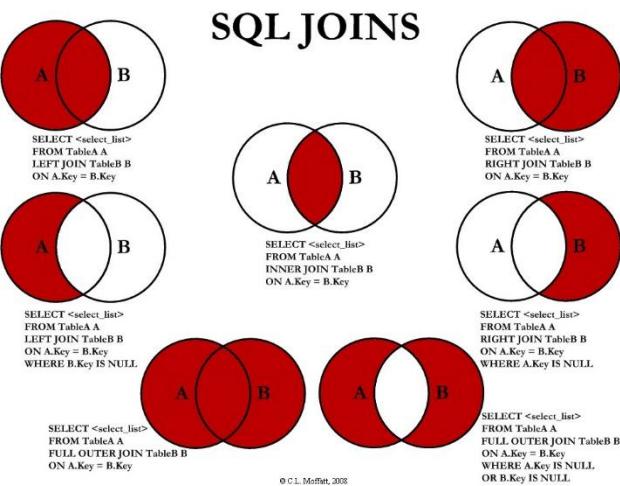
Queries, which retrieve the data based on specific criteria. This is an important element of SQL.

Statements, which may have a persistent effect on schemata and data, or may control transactions, program flow, connections, sessions, or diagnostics.

SQL statements also include the semicolon (";") statement terminator. Though not required on every platform, it is defined as a standard part of the SQL grammar.



Insignificant whitespace is generally ignored in SQL statements and queries, making it easier to format SQL code for readability.



### 3.2.7 MySQL



MySQL is an open-source relational database management system (RDBMS). Its name is a combination of "My", the name of co-founder Michael Widenius' daughter, and "SQL", the abbreviation for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation. For proprietary use, several paid editions are available, and offer additional functionality.

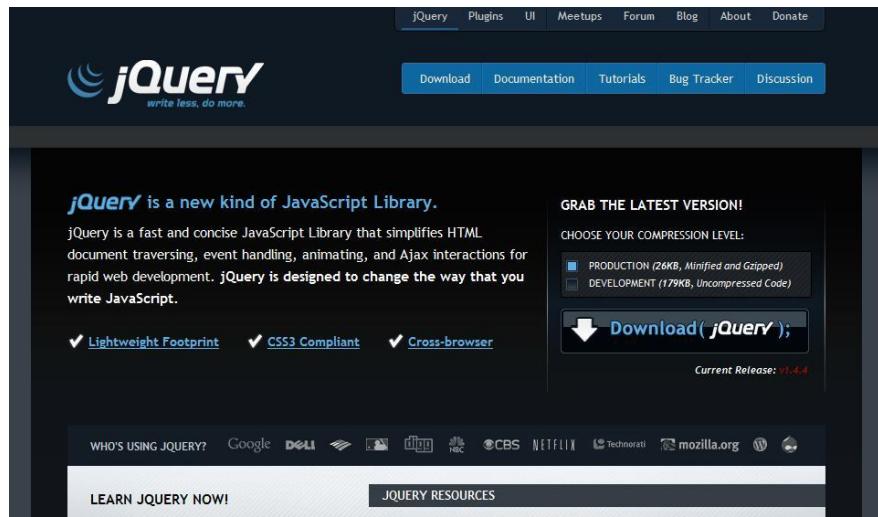
Field	Type	Collation	Attributes	Null	Default	Extra	Action
<input type="checkbox"/> id	int(11)	utf8_general_ci	No	None		auto_increment	
<input type="checkbox"/> name	varchar(100)	utf8_general_ci	No	None			
<input type="checkbox"/> value1	varchar(300)	utf8_general_ci	No	None			
<input type="checkbox"/> value2	varchar(300)	utf8_general_ci	No	None			
<input type="checkbox"/> value3	varchar(300)	utf8_general_ci	No	None			
<input type="checkbox"/> value4	varchar(300)	utf8_general_ci	No	None			
<input type="checkbox"/> value5	varchar(300)	utf8_general_ci	No	None			
<input type="checkbox"/> width	int(10)		UNSIGNED	Yes	NULL		
<input type="checkbox"/> height	int(10)		UNSIGNED	Yes	NULL		

This was how my database tables were created

MySQL is a central component of the LAMP open-source web application software stack (and other "AMP" stacks). LAMP is an acronym for "Linux, Apache, MySQL, Perl/PHP/Python". Applications that use the MySQL database include: TYPO3, MODx, Joomla, WordPress, phpBB, MyBB, and Drupal. MySQL is also used in many high-profile, large-scale websites, including Google (though not for searches), Facebook, Twitter, Flickr, and YouTube.

### 3.2.8 jQuery ( ):

jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript.



jQuery is a cross-platform JavaScript library designed to simplify the client-side scripting of HTML. jQuery is the most popular JavaScript library in use today, with installation on 65% of the top 10 million highest-trafficked sites on the Web. jQuery is free, open-source software licensed under the MIT License.

**THE ULTIMATE  
jQuery List**  
a really big 1-page list of plugins & examples for jQuery

255 list items

Social sharing icons: Digg, StumbleUpon, DZone, Twitter, Digg, Facebook, Google+, Firefox

**THE ULTIMATE CATEGORIES:**

Ajax Plugins and Tutorials	Alert Windows and Prompts	Animation and Effects	Browser Tweaks and Fixes
CSS	Charts and Presentations	Color Pickers	Corners and Borders
DOM and Other Plugins	Drag and Drop	File Uploading	Flash and Other Media
Form Select Boxes	Form Validation	Forms and Input Fields	Games and Game Development
Grids	Inline Edit and Editors	Mapping	Photos/Images/Galleries
Plugin Development	RSS and XML/XSLT	Rating Plugins	Search Plugins
Sliders and Accordions	Social Bookmarking	Tables and Table Sorting	Tabs/Menus/Navigation
Tagging and Tag Clouds	Text and Links	Time and Date Pickers	Tooltip Plugins and Tutorials

jQuery's syntax is designed to make it easier to navigate a document, select DOM elements, create animations, handle events, and develop Ajax applications. jQuery also provides capabilities for developers to create plugins on top of the JavaScript library. This enables developers to create abstractions for low-level interaction and animation, advanced effects and high-level, theme-able widgets. The modular approach to the jQuery library allows the creation of powerful dynamic web pages and web applications.

*ira Pinho (leandrovieira.com)  
ke 2.5 Brazil - http://creativecommons.org/licenses/by-sa/2.5/t  
eira.com/projects/jquery/lightbox/ for more informations about*

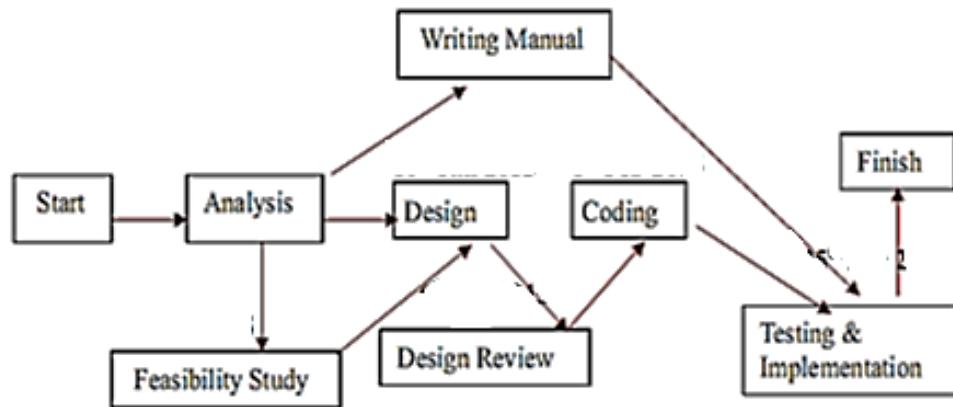
```
n(settings){settings=jQuery.extend({overlayBgColor:'#000',overl
ding:'js/lightbox-ico-loading.gif',imageBtnPrev:'images/lightb
htbox-btn-next.gif',imageBtnClose:'js/lightbox-btn-close.gif',:
rSize:10,containerResizeSpeed:
yToClose:'c',keyToPrev:'p',keyToNext:'n',imageArray:[],activeI
this;function _initialize(){_start(this,jQueryMatchedObj);retu
atchedObj}{$('embed, object, select').css({'visibility':'hidden
ttings.activeImage=0;if(jQueryMatchedObj.length==1){settings.in
f'),objClicked.getAttribute('title'))};else{for(var
{settings.imageArray.push(new Array(jQueryMatchedObj[i].getAtti
bute('title')));}
.activeImage][0]!=objClicked.getAttribute('href')){settings.aci
).append('<div id="jquery-overlay"></div><div id="jquery-light
<div id="lightbox-container-image">Phases</b>                 | <b>No. Of Classes</b> | <b>Deliverables of the phase</b> |
|-------------------------------|-----------------------|----------------------------------|
| <b>Feasibility Study</b>      | 1                     | Feasibility report               |
| <b>Requirement Analysis</b>   | 1                     | System requirement               |
| <b>System analysis</b>        | 2                     | DFD, E-R diagram, Flow Chart     |
| <b>Design</b>                 | 3                     | Pattern document                 |
| <b>Implementation(Coding)</b> | 5                     | System Implementation            |
| <b>Testing</b>                | 1                     | Unit Test report                 |
| <b>Final Evolution</b>        | 1                     | Submission of report             |
| Total                         |                       | 14                               |

## **4.2 Roles and Responsibilities:**

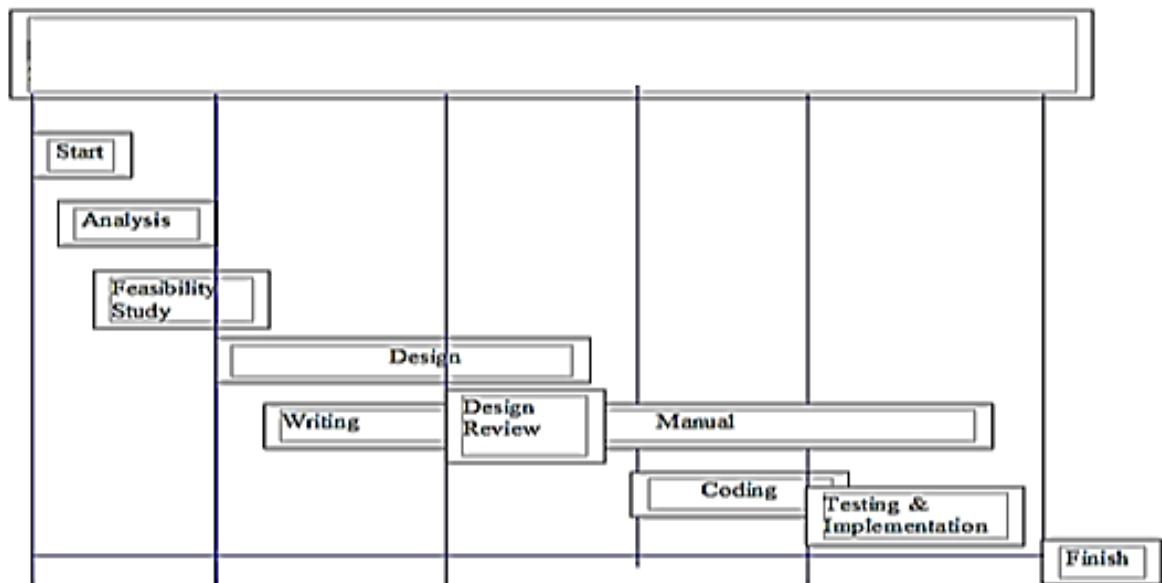
Here we will define the duty of individual team member so that the task can be finished in the defined time.

| <b>Role</b>                | <b>Responsibilities</b>                                                                                                                                | <b>Team Member</b>                                          |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| <b>Project Coordinator</b> | Determine project scope.<br>Facilitating with required resources.<br>Project planning, tracking and monitoring.<br>Co-ordination between project team. | Syed Ariful Islam Emon<br>Masud Shikder<br>Nirjhar Mazumder |
| <b>Senior Adviser</b>      | Ensures that mandatory requirements are met.<br>Tracks performance.<br>Proactively develops a collaborative relationship.                              | Samsuddin Ahmed                                             |
| <b>Project Developer</b>   | Designing, Implementing & documentation.<br>Execution of project as per defined schedule.                                                              | Syed Ariful Islam Emon<br>Nirjhar Mazumder                  |
| <b>Project Reporter</b>    | Testing QA/QC.<br>Validating development as per the design and Documentation.                                                                          | Syed Ariful Islam Emon<br>Masud Shikder                     |

#### 4.3 Pert Chart:



#### 4.4 Gantt Chart:



# **Chapter 5**

## **System Analysis and Design**

---

## **5.1 System analysis:**

**Systems analysis** is the study of sets of interacting entities. According to the Merriam-Webster dictionary, systems analysis is "the process of studying a procedure in order to identify its goals and purposes and create systems and procedures that will achieve them in an efficient way". Analysis and synthesis, as scientific methods, always go hand in hand; they complement one another. Every synthesis is built upon the results of a preceding analysis, and every analysis requires a subsequent synthesis in order to verify and correct its results.

## **5.2 Software Process Models:**

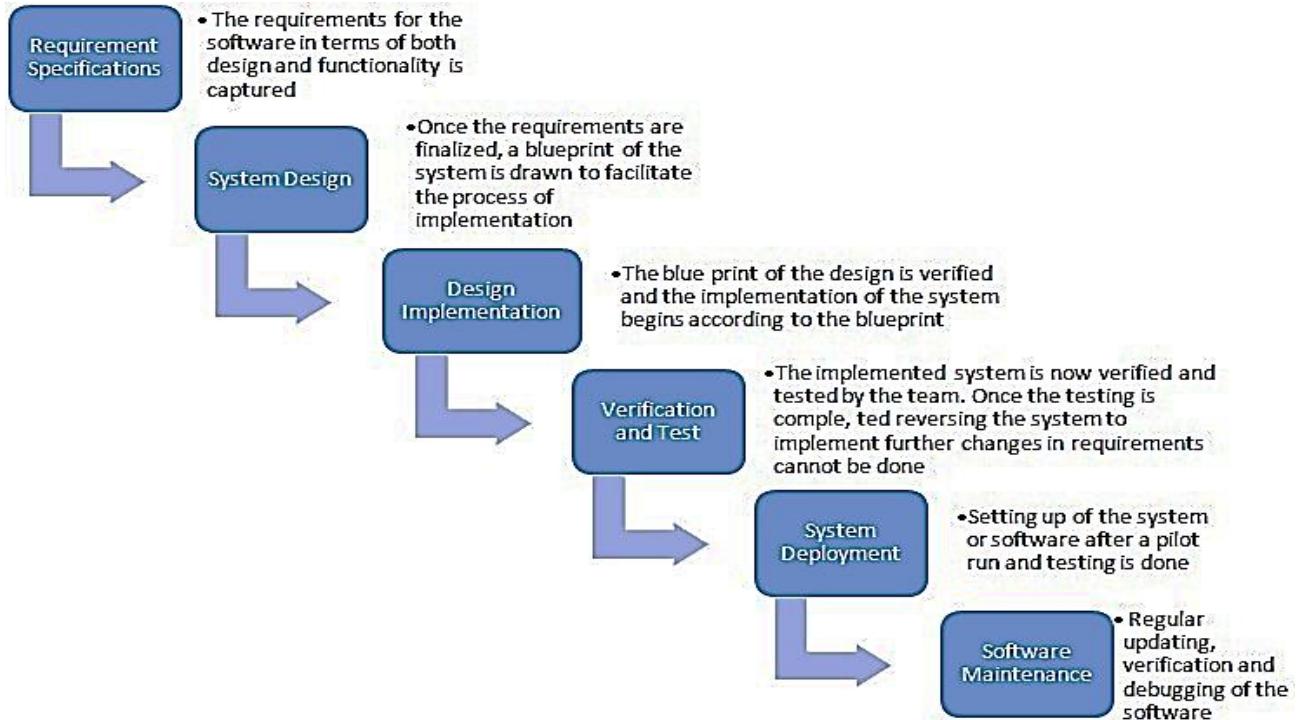
A software process model is a simplified representation of a software process. Each process model represents a process from a particular perspective, and thus provides only partial information about that process. For example, a process activity model shows the activities and their sequence but may not show the roles of the people involved in these activities. In this section, I introduce a number of very general process models (sometimes called ‘process paradigms’) and present these from an architectural perspective. That is, we see the framework of the process but not the details of specific activities. These generic models are not definitive descriptions of software processes. Rather, they are abstractions of the process that can be used to explain different approaches to software development. You can think of them as process frameworks that may be extended and adapted to create more specific software engineering processes.

### **5.2.1 The Waterfall Model:**

This takes the fundamental process activities of specification, development, validation, and evolution and represents them as separate process phases such as requirements specification, software design, implementation, testing, and so on.

**The principal stages of the waterfall model directly reflect the fundamental development activities:**

- 1. Requirements analysis and definition:** The system’s services, constraints, and goals are established by consultation with system users. They are then defined in detail and serve as a system specification.
  
- 2. System and software design:** The systems design process allocates the requirements to either hardware or software systems by establishing an overall system architecture. Software design involves identifying and describing the fundamental software system abstractions and their relationships.



3. **Implementation and unit testing:** During this stage, the software design is realized as a set of programs or program units. Unit testing involves verifying that each unit meets its specification.
4. **Integration and system testing:** The individual program units or programs are integrated and tested as a complete system to ensure that the software requirements have been met. After testing, the software system is delivered to the customer.
5. **Operation and maintenance:** Normally (although not necessarily), this is the longest life cycle phase. The system is installed and put into practical use. Maintenance involves correcting errors which were not discovered in earlier stages of the life cycle, improving the implementation of system units and enhancing the system's services as new requirements are discovered.

### Advantage of Waterfall Model:

- This model is simple and easy to understand and use.
- It is easy to manage due to the rigidity of the model – each phase has specific deliverables and a review process.
- In this model phases are processed and completed one at a time. Phases do not overlap.
- Waterfall model works well for smaller projects where requirements are very well understood.
- Waterfall model is simple to implement and also the amount of resources required for it are minimal.

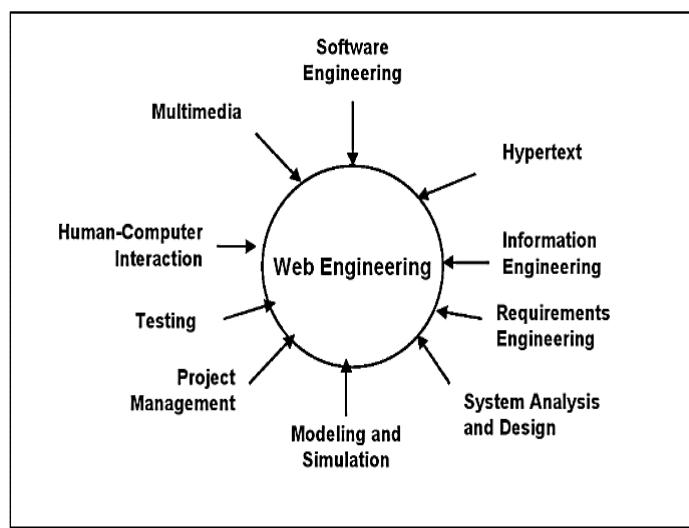
- In this model, output is generated after each stage (as seen before), therefore it has high visibility. The client and project manager gets a feel that there is considerable progress. Here it is important to note that in any project psychological factors also play an important role.
- Project management, both at internal level and client's level, is easy again because of visible outputs after each phase. Deadlines can be set for the completion of each phase and evaluation can be done from time to time, to check if project is going as per milestones.
- This methodology is significantly better than the haphazard approach to develop software. It provides a template into which methods of analysis, design, coding, testing and maintenance can be placed.
- This methodology is preferred in projects where quality is more important as compared to schedule or cost.

### **Disadvantage of Waterfall Model:**

- Once an application is in the testing stage, it is very difficult to go back and change something that was not well-thought out in the concept stage.
- No working software is produced until late during the life cycle.
- High amounts of risk and uncertainty.
- Not a good model for complex and object-oriented projects.
- Poor model for long and ongoing projects.
- Not suitable for the projects where requirements are at a moderate to high risk of changing.
- Real projects rarely follow the sequential flow and iterations in this model are handled indirectly. These changes can cause confusion as the project proceeds.
- It is often difficult to get customer requirements explicitly. Thus specifications can't be freeze. If that case arises baseline approach is followed, wherein output of one phase is carried forward to next phase. For example, even if SRS is not well defined and requirements can't be freeze, still design starts. Now if any changes are made in SRS then formal procedure is followed to put those changes in baseline document.
- In this model we freeze software and hardware. But as technology changes at a rapid pace, such freezing is not advisable especially in long-term projects.
- This method is especially bad in case client is not IT-literate as getting specifications from such a person is tough.
- Even a small change in any previous stage can cause big problem for subsequent phases as all phases are dependent on each-other.
- Going back a phase or two can be a costly affair.

### 5.3 Web Engineering:

The World Wide Web has become a major delivery platform for a variety of complex and sophisticated enterprise applications in several domains. In addition to their inherent multifaceted functionality, these Web applications exhibit complex behavior and place some unique demands on their usability, performance, security and ability to grow and evolve. However, a vast majority of these applications continue to be developed in an ad-hoc way, contributing to problems of usability, maintainability, quality and reliability. While Web development can benefit from established practices from other related disciplines, it has certain distinguishing characteristics that demand special considerations. In recent years, there have been developments towards addressing these considerations. As an emerging discipline, Web engineering actively promotes systematic, disciplined and quantifiable approaches towards successful development of high-quality, ubiquitously usable Web-based systems and applications. In particular, Web engineering focuses on the methodologies.

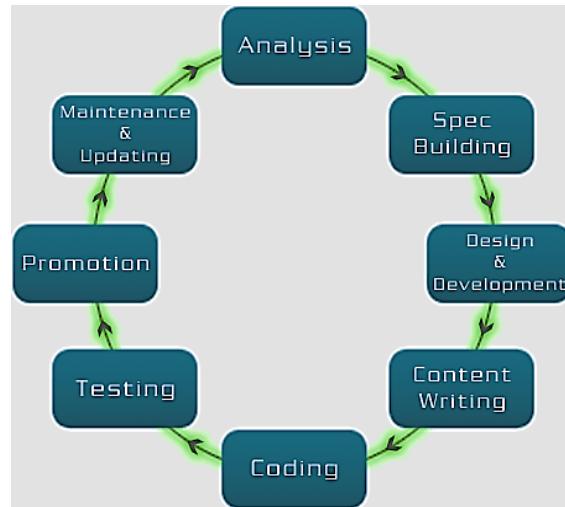


Techniques and tools that are the foundation of Web application development and which support their design, development, evolution, and evaluation. Web application development has certain characteristics that make it different from traditional software, information system, or computer application development.

Web engineering is multidisciplinary and encompasses contributions from diverse areas: systems analysis and design, software engineering, hypermedia/hypertext engineering, requirements engineering, human-computer interaction, user interface, information engineering, information indexing and retrieval, testing, modeling and simulation, project management, and graphic design and presentation. Web engineering is neither a clone, nor a subset of software engineering, although both involve programming and software development. While Web

Engineering uses software engineering principles, it encompasses new approaches, methodologies, tools, techniques, and guidelines to meet the unique requirements of Web-based applications.

#### 5.4 Steps in Website Development Process:



##### Phase1: Information Gathering:

The first step in designing a successful web site is to gather information. Many things need to be taken into consideration when we design the look and feel of your site, so we first ask a lot of questions to help us understand your business and your needs in a web site.

##### Phase Two: Planning

Using the information gathered from phase one, we put together a plan for your web site. Here we develop a site map – a list of all main topic areas of the site, as well as sub-topics (if applicable). This gives us a guide as to what content will be on the site, and is essential to developing a consistent, easy to understand navigational system. This is also the point where we decide what technologies should be implemented – interactive forms, CMS (content management system) such as WordPress, etc.

##### Phase Three: Design

Drawing from the information gathered up to this point, we determine the look and feel of the site. Target audience is one of the key factors taken into consideration here. A site aimed at teenagers, for example, will

look much different than one meant for a financial institution. We also incorporate elements such as the company logo or colors to help strengthen the identity of your company on the web site.

Once we've designed a prototype, you are given access to the Client Studio, which is a secure area of our web site. The Client Studio allows you to view your project throughout the design and development stages. Most importantly, it gives you the opportunity to express your likes and dislikes on the site design.

In this phase, communication is crucial to ensure that the final web site will match your needs and taste. We work together in this way, exchanging ideas, until we arrive at the final design for the site. Then development can begin.

#### **Phase Four: Development**

This is where the web site itself is created. We take all of the individual graphic elements from the prototype and use them to create the functional web site. We also take your content and distribute it throughout the site, in the appropriate areas. This entire time, you will continue to be able to view your site in the Client Studio, and suggest any additional changes or corrections you would like to have done.

#### **Phase Five: Web programming**

- Define functionality using use cases and a check list of options
- Programming with client review on a regular basis
- Database: Design, develop and populate
- Create segments of site, templates for the Content Management System or html or PHP pages

#### **Phase Six: Content writing**

This phase is necessary mainly for the web sites. There are professional content developers who can write industry specific and relevant content for the site. Content writers need to add their text in such a way as to utilize the design templates. The grammatical and spelling check should be over in this phase. The type of content could be anything from simple text to videos.

Input: Designed template

Output: Site with formatted content.

## **Phase Seven: Testing and Delivery**

At this point, we attend to the final details and test your web site. We test things such as the complete functionality of forms or other scripts, we test for last minute compatibility issues (viewing differences between different web browsers), ensuring that the site is optimized to be viewed properly in the most recent browser versions. Once we receive your final approval, it is time to deliver the site. We upload the files to your server – in most cases, this also involves installing and configuring WordPress, along with a core set of essential plugins to help enhance the site. Here we quickly test again to make sure that all files have been uploaded correctly, and that the site continues to be fully functional. This marks the official launch of your site, as it is now viewable to the public.

## **Phase Eight: Maintenance**

The development of your web site is not necessarily over, though. One way to bring repeat visitors to your site is to offer new content or products on a regular basis. If this interests you, we will be more than happy to continue working together with you to update the information on your web site. We offer maintenance packages at reduced rates, based on how often you anticipate making changes or additions to your site.

### **5.5 Database Design Basics:**

A properly designed database provides you with access to up-to-date, accurate information. Because a correct design is essential to achieving your goals in working with a database, investing the time required to learn the principles of good design makes sense. In the end, you are much more likely to end up with a database that meets your needs and can easily accommodate change.

This article provides guidelines for planning a desktop database. You will learn how to decide what information you need, how to divide that information into the appropriate tables and columns, and how those tables relate to each other. You should read this article before you create your first desktop database.

Microsoft Access 2010 provides a new design experience that lets you create database applications for the Web. Many design considerations are different when you design for the Web. This article does not discuss Web database application design.

**A good database design is, therefore, one that:**

- Divides your information into subject-based tables to reduce redundant data.
- Provides Access with the information it requires to join the information in the tables together as needed.
- Helps support and ensure the accuracy and integrity of your information.
- Accommodates your data processing and reporting needs.

**The design process consists of the following steps:**

- **Determine the purpose of your database:** This helps prepare you for the remaining steps.
- **Find and organize the information required:** Gather all of the types of information you might want to record in the database, such as product name and order number.
- **Divide the information into tables:** Divide your information items into major entities or subjects, such as Products or Orders. Each subject then becomes a table.
- **Turn information items into columns:** Decide what information you want to store in each table. Each item becomes a field, and is displayed as a column in the table. For example, an Employees table might include fields such as Last Name and Hire Date.
- **Specify primary keys:** Choose each table's primary key. The primary key is a column that is used to uniquely identify each row. An example might be Product ID or Order ID.
- **Set up the table relationships:** Look at each table and decide how the data in one table is related to the data in other tables. Add fields to tables or create new tables to clarify the relationships, as necessary.
- **Refine your design:** Analyze your design for errors. Create the tables and add a few records of sample data. See if you can get the results you want from your tables. Make adjustments to the design, as needed.
- **Apply the normalization rules:** Apply the data normalization rules to see if your tables are structured correctly. Make adjustments to the tables, as needed.

### **5.5.1 Determining the purpose of your database:**

It is a good idea to write down the purpose of the database on paper — its purpose, how you expect to use it, and who will use it. For a small database for a home based business, for example, you might write something simple like "The customer database keeps a list of customer information for the purpose of producing mailings and reports." If the database is more complex or is used by many people, as often occurs in a corporate setting, the purpose could easily be a paragraph or more and should include when and how each person will use the

database. The idea is to have a well-developed mission statement that can be referred to throughout the design process. Having such a statement helps you focus on your goals when you make decisions.

## **5.6 Finding and organizing the required information:**

To find and organize the information required, start with your existing information. For example, you might record purchase orders in a ledger or keep customer information on paper forms in a file cabinet. Gather those documents and list each type of information shown (for example, each box that you fill in on a form). If you don't have any existing forms, imagine instead that you have to design a form to record the customer information. What information would you put on the form? What fill-in boxes would you create? Identify and list each of these items. For example, suppose you currently keep the customer list on index cards. Examining these cards might show that each card holds a customer name, address, city, state, postal code and telephone number. Each of these items represents a potential column in a table. As you prepare this list, don't worry about getting it perfect at first. Instead, list each item that comes to mind. If someone else will be using the database, ask for their ideas, too. You can fine-tune the list later.

Next, consider the types of reports or mailings you might want to produce from the database. For instance, you might want a product sales report to show sales by region, or an inventory summary report that shows product inventory levels. You might also want to generate form letters to send to customers that announces a sale event or offers a premium. Design the report in your mind, and imagine what it would look like. What information would you place on the report? List each item. Do the same for the form letter and for any other report you anticipate creating.

## **5.7 E-R Diagram:**

An entity-relationship (ER) diagram is a specialized graphic that illustrates the relationships between entities in a database. ER diagrams often use symbols to represent three different types of information. Boxes are commonly used to represent entities. Diamonds are normally used to represent relationships and ovals are used to represent attributes.

An entity–relationship model is the result of using a systematic process to describe and define a subject area of business data. It does not define business process; only visualize business data. The data is represented as components (entities) that are linked with each other by relationships that express the dependencies and requirements between them, such as: one building may be divided into zero or more apartments, but one

apartment can only be located in one building. Entities may have various properties (attributes) that characterize them. Diagrams created to represent these entities, attributes, and relationships graphically are called entity–relationship diagrams. An ER model is typically implemented as a database. In the case of a relational database, which stores data in tables, every row of each table represents one instance of an entity. Some data fields in these tables point to indexes in other tables; such pointers are the physical implementation of the relationships. The three schema approach to software engineering uses three levels of ER models that may be developed.

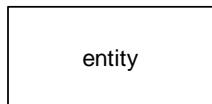
### 5.7.1 General Overview

An entity relationship diagram consists of several components. Components those are frequently used to represent an e-r diagram are\_\_

- I. Entity
- II. Weak entity
- III. Attribute
- IV. Multi valued attribute
- V. Derived attribute
- VI. Relationship

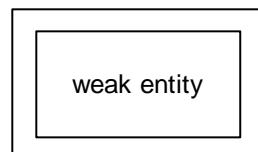
#### Entity:

An entity can be a person, place, event, or object that is relevant to a given system. For example, a school system may include students, teachers, major courses, subjects, fees, and other items. Entities are represented in ER diagrams by a rectangle and named using singular nouns. It is represented by **rectangle**.



#### Weak entity:

A weak entity is an entity that depends on the existence of another entity. In more technical terms it can defined as an entity that cannot be identified by its own attributes. It uses a foreign key combined with its attributed to form the primary key. An entity like order item is a good example for this. The order item will be meaningless without an order so it depends on the existence of order. It is represented by **double rectangle**.



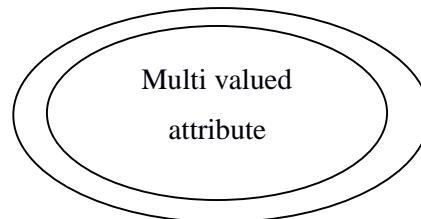
### **Attribute:**

An attribute is a property, trait, or characteristic of an entity, relationship, or another attribute. It is represented by an **ellipse**.



### **Multi valued attribute:**

If an attribute can have more than one value it is called a multi valued attribute. It is important to note that this is different to an attribute having its own attributes. For example a teacher entity can have multiple subject values. It is represented by a **double ellipse**.



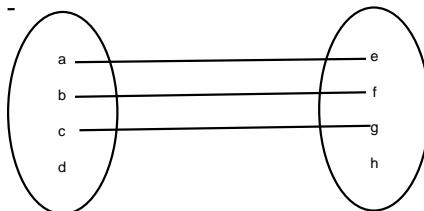
### **5.7.2 Mapping Cardinality:**

Cardinality refers to the number of entity objects on each side of the relationship. In e-r diagram there are four types of mapping cardinalities. For example: a customer can order products one after another.

- One-to-One
- One-to-Many or Many-to-One (dependent on the direction)
- Many-to-One
- Many-to-Many

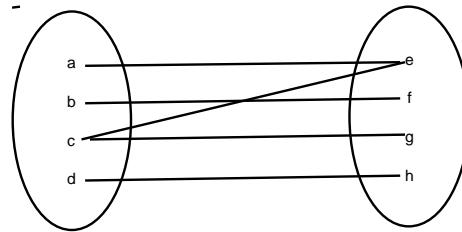
#### **One to One:**

A one-to-one relationship is the simplest relationship between two beans. One entity bean relates only to one other entity bean. For example: a customer can be kept only in one word/cell at a time.



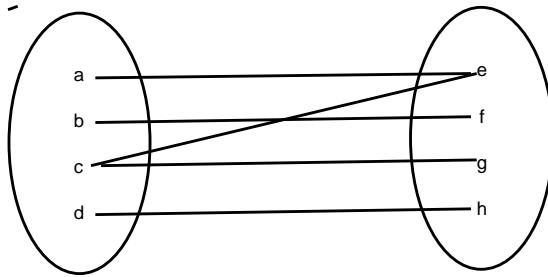
### **One-to-many:**

In a one-to-many relationship, one object can reference several instances of another.



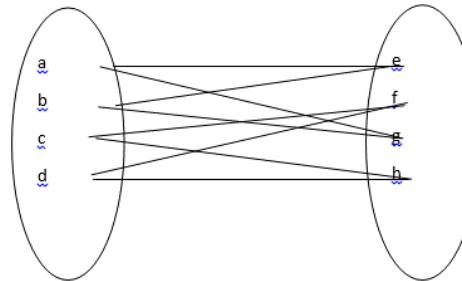
### **Many-to-one:**

In a many-to-one relationship, many objects can reference one instance of another.



### **Many-to-many:**

A many-to-many relationship is complex. In a many-to-many relationship, many objects can reference many objects. This cardinality is the most difficult to manage.



### **5.7.3 Conceptual Data Model:**

This is the highest level ER model in that it contains the least granular detail but establishes the overall scope of what is to be included within the model set. The conceptual ER model normally defines master reference data entities that are commonly used by the organization. Developing an enterprise-wide conceptual ER model is useful to support documenting the data architecture for an organization. A conceptual ER model may be used as the foundation for one or more logical data models (see below). The purpose of the conceptual ER model is then to establish structural metadata commonality for the master data entities between the set of logical ER models. The conceptual data model may be used to form commonality relationships between ER models as a basis for data model integration.

### **5.7.4 Logical Data Model:**

A logical ER model does not require a conceptual ER model, especially if the scope of the logical ER model includes only the development of a distinct information system. The logical ER model contains more detail than the conceptual ER model. In addition to master data entities, operational and transactional data entities are now defined. The details of each data entity are developed and the relationships between these data entities are established. The logical ER model is however developed independent of technology into which it can be implemented.

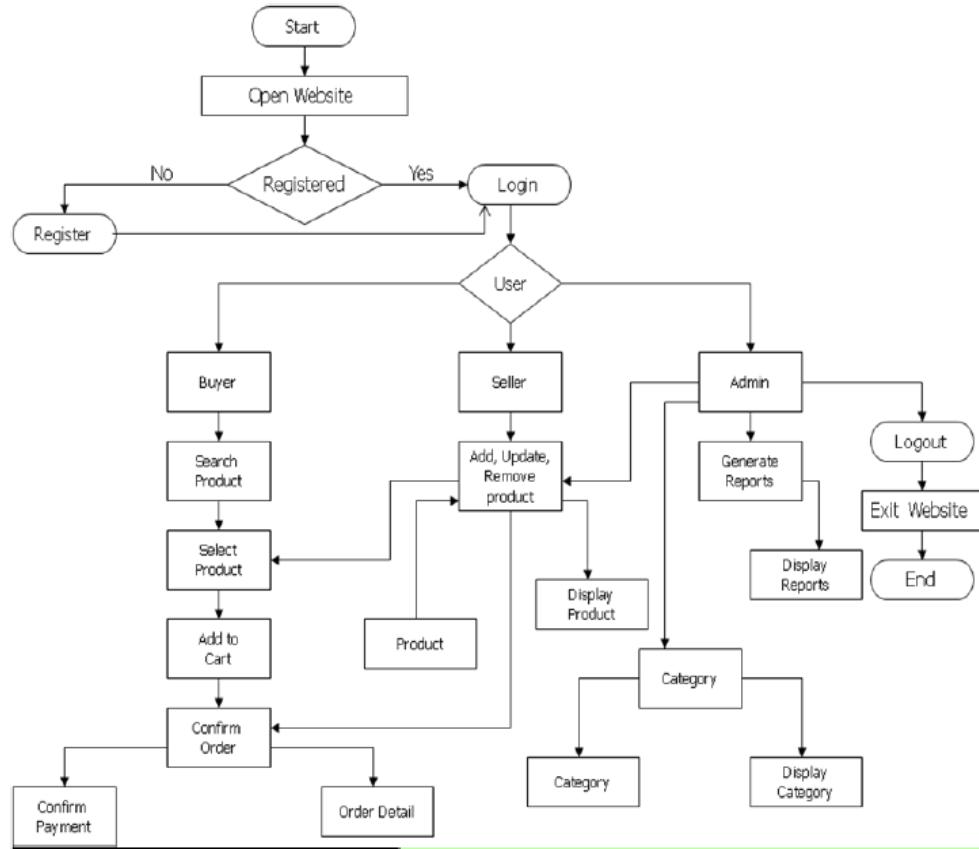
### **5.7.5 Physical Data Model:**

One or more physical ER models may be developed from each logical ER model. The physical ER model is normally developed to be instantiated as a database. Therefore, each physical ER model must contain enough detail to produce a database and each physical ER model is technology dependent since each database management system is somewhat different.

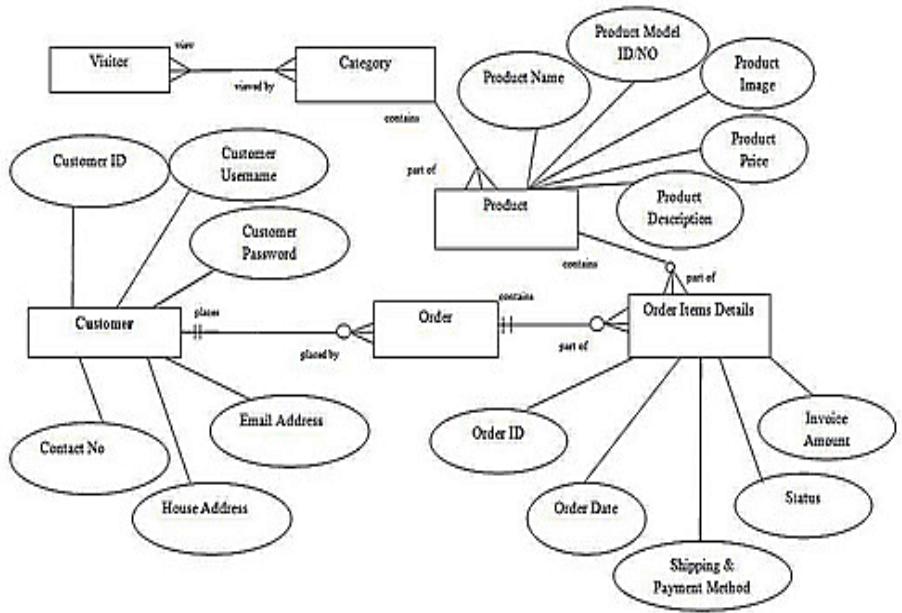
The physical model is normally instantiated in the structural metadata of a database management system as relational database objects such as database tables, database indexes such as unique key indexes, and database constraints such as a foreign key constraint or a commonality constraint. The ER model is also normally used to design modifications to the relational database objects and to maintain the structural metadata of the database.

The first stage of information system design uses these models during the requirements analysis to describe information needs or the type of information that is to be stored in a database. The data modeling technique can be used to describe any ontology (i.e. an overview and classifications of used terms and their relationships) for a certain area of interest.

In the case of the design of an information system that is based on a database, the conceptual data model is, at a later stage (usually called logical design), mapped to a logical data model, such as the relational model; this in turn is mapped to a physical model during physical design. Note that sometimes, both of these phases are referred to as "physical design". It is also used in database management system.



**Fig: System Chart**



**Fig: Order Processing E-R Diagram**

#### 4.8 DFD (Data Flow Diagram):

This context-level DFD is next "exploded", to produce a Level 1 DFD that shows some of the detail of the system being modeled. The Level 1 DFD shows how the system is divided into sub-systems (processes), each of which deals with one or more of the data flows to or from an external agent, and which together provide all of the functionality of the system as a whole. It also identifies internal data stores that must be present in order for the system to do its job, and shows the flow of data between the various parts of the system.

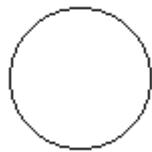
Data flow diagrams are one of the three essential perspectives of the structured-systems analysis and design method SSADM. The sponsor of a project and the end users will need to be briefed and consulted throughout all stages of a system's evolution. With a data flow diagram, users are able to visualize how the system will operate, what the system will accomplish, and how the system will be implemented. The old system's dataflow diagrams can be drawn up and compared with the new system's data flow diagrams to draw comparisons to implement a more efficient system. Data flow diagrams can be used to provide the end user with a physical idea of where the data they input ultimately has an effect upon the structure of the whole system from order to dispatch to report. How any system is developed can be determined through a data flow diagram model. In the course of developing a set of leveled data flow diagrams the analyst/designers is forced to address how the system may be decomposed into component sub-systems, and to identify the transaction data in the data model.

Data flow diagrams can be used in both Analysis and Design phase of the SDLC.

### 5.8.1 Representation of Components:

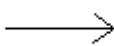
DFDs only involve four symbols. They are:

- Process
- Data Object
- Data Store
- External entity



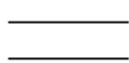
#### Process

Transform of incoming data flow(s) to outgoing flow(s).



#### Data Flow

Movement of data in the system.



#### Data Store

Data repositories for data that are not moving. It may be as simple as a buffer or a queue or as sophisticated as a relational database.

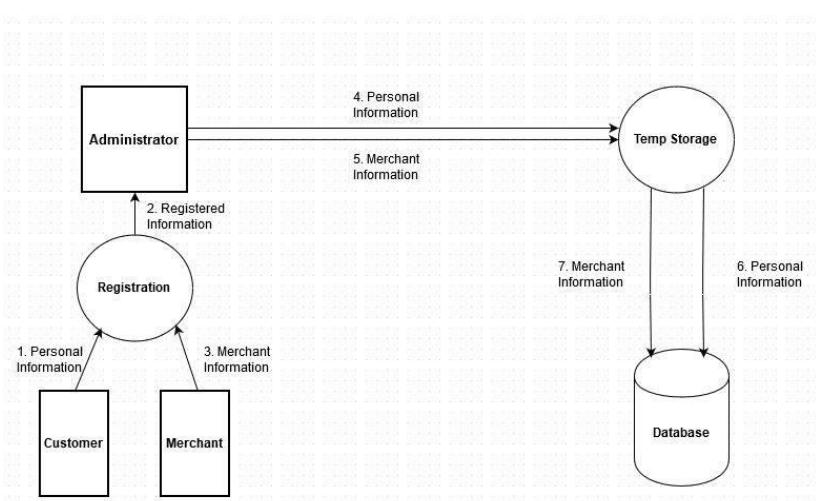


#### External Entity

Sources of destinations outside the specified system boundary.

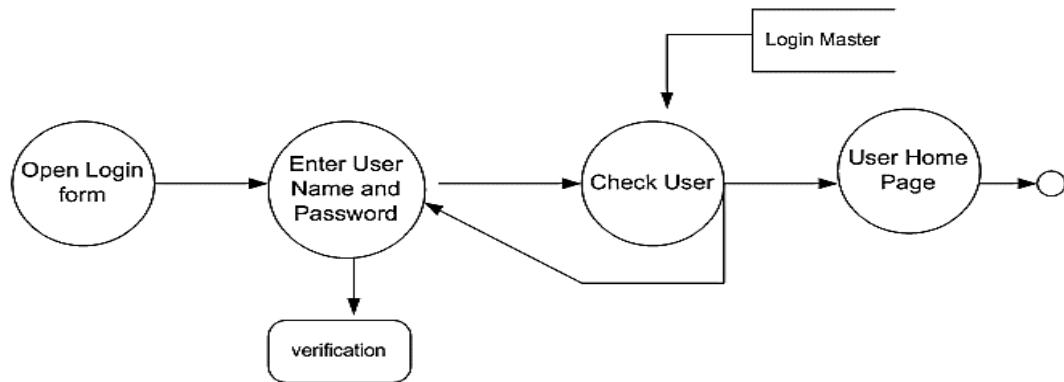
### 5.8.2 DFD for Customers registration:

Here the information will be collected by the data entry operator from the customers including the customer's personal detail. As there are multiple forms to be filled these information will not be stored in the database one by one. First of all data will be saved into a temporary storage. After being ensured that all data regarding customer's registration has been input to the system then the system will save the data into the database. This will ensure that no process will be incomplete or partial during power failure.

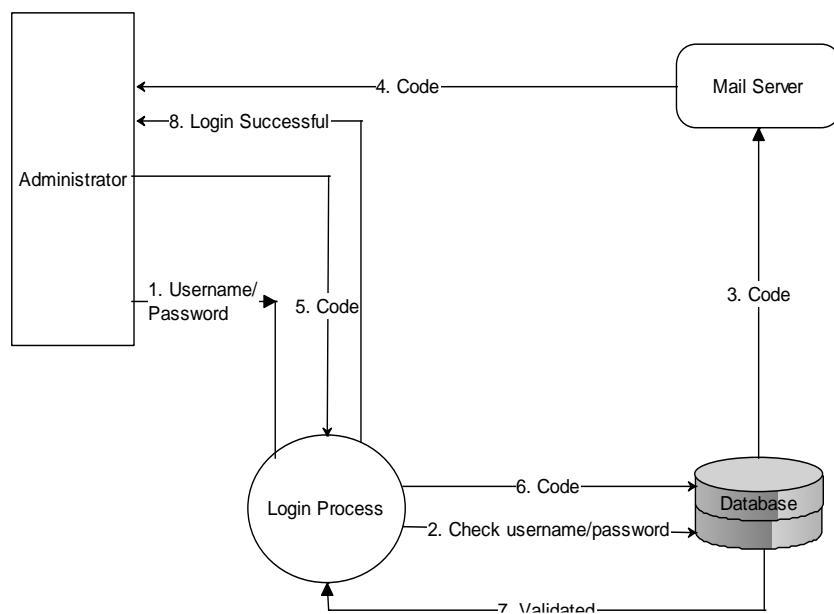


### 5.8.3 DFD for Login:

This DFD shows how the login data will be send to the database how it will processed. For security, we have kept two level login processes. First of all the administrator will input his/her username and password. Then the username and password will be send to the database to check whether it is available or not. If available then an **Email** with validation code will be send to the customer's previously defined **mail id**. Then administrator will be leaded to second level where he will input his validation code collected from mail. If the code is valid then the customer can login to the system.



**Fig: User login Process**



#### 5.8.4 DFD for Ordering Detail:

Here the information regarding product order will be send to the administrator. Then the administrator will save the data into the database. But before storing the data into the database, system will check the validity of the data if any inconsistency found it will show error message to the administrator.

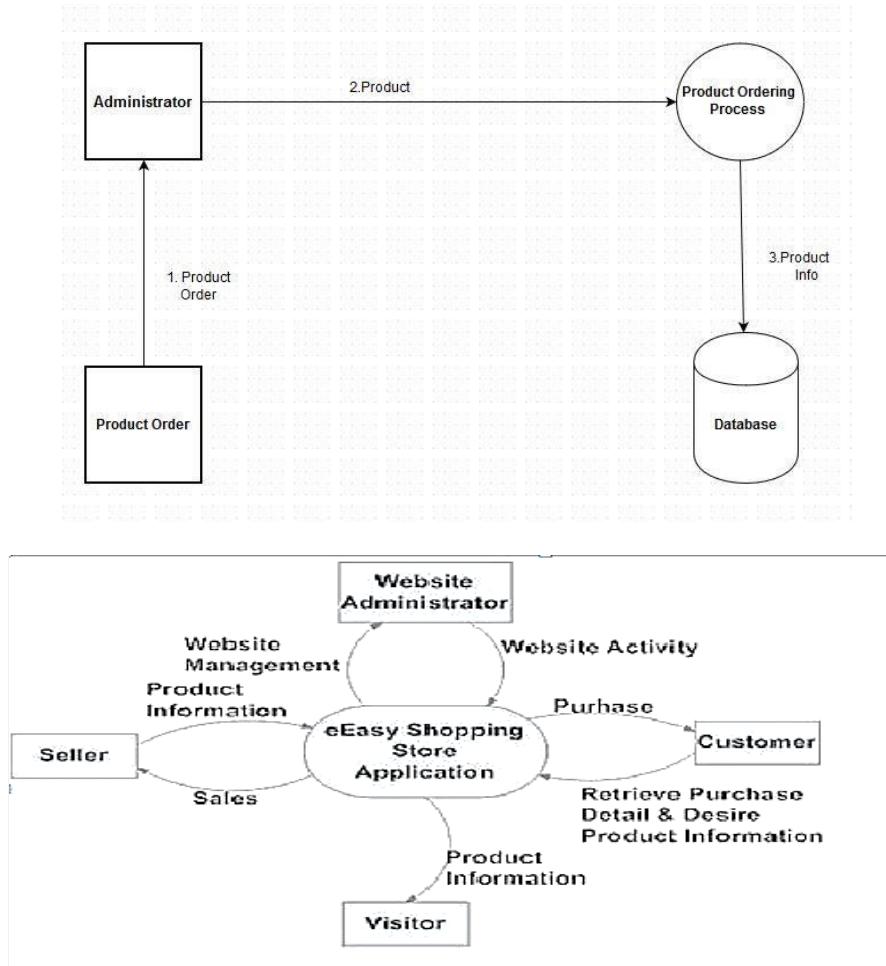


Fig: DFD for Order & Purchas Process

#### 5.9 Schema:

Pronounce *skee-ma*, the structure of a database system, described in a formal language supported by the database management system (DBMS). In a relational database, the schema defines the tables, the fields in each table, and the relationships between fields and tables.

Schemas are generally stored in a data dictionary. Although a schema is defined in text database language, the term is often used to refer to a graphical depiction of the database structure.

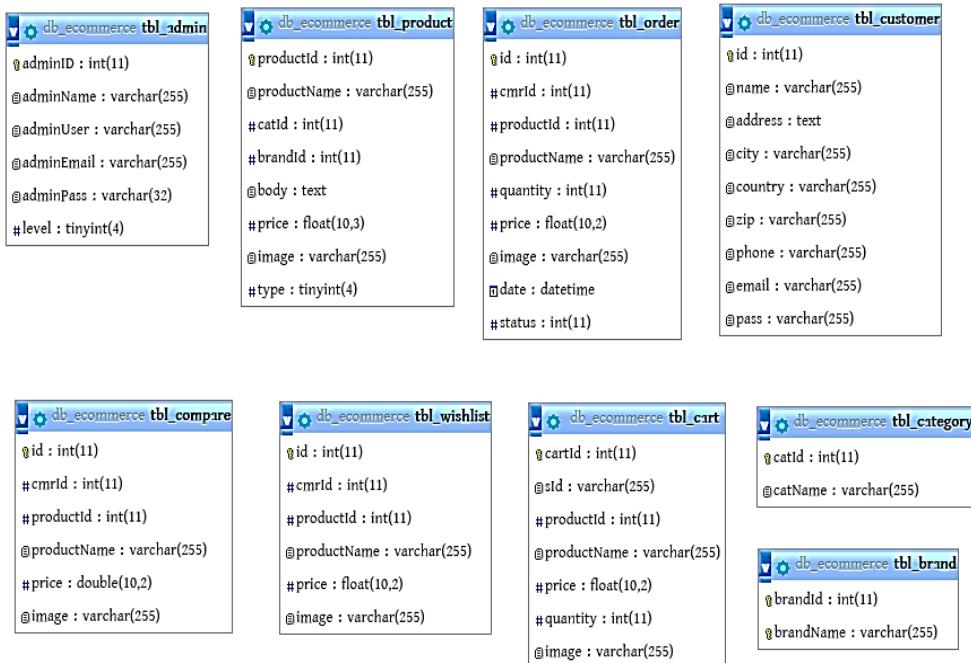
## 5.10 Primary Key:

A primary key, also called a primary keyword, is a key in a relational database that is unique for each record.

## 5.11 Foreign Key:

A foreign key is a column or group of columns in a relational database table that provides a link between data in two tables. It acts as a cross-reference between tables because it references the primary key of another table, thereby establishing a link between them.

## 5.12 Schema diagram for administrator and Customers:



## 5.13 Data Dictionary:

A data dictionary is a collection of descriptions of the data objects or items in a data model for the benefit of programmers and others who need to refer to them. A first step in analyzing a system of object with which users interact is to identify each object and its relationship to other objects. This process is called data modeling and results in a picture of object relationships. After each data object or item is given a descriptive name, its relationship is described (or it becomes part of some structure that implicitly describes relationship), the type

of data (such as text or image or binary value) is described, possible predefined values are listed, and a brief textual description is provided. This collection can be organized for reference into a book called a data dictionary.

## Why is data dictionary necessary?

- a) In order to manage the details in large-scale systems.
- b) Most systems are ongoing and dynamic and management of all the descriptive details is difficult, therefore an accurate and consistent recording technique is essential.
- c) To communicate a common meaning for all of the elements in the system.
- d) Simply making sure that for all elements, the meaning will remain consistent.
- e) To document features of the system.
- f) It is essential to document the circumstances under which data items occur. For example, what is the frequency of this process? Who has access to this data store? Documenting these features will produce a more complete and better understanding of the system for the analyst.
- g) To locate errors and omissions in the system.
- h) The data dictionary may reveal information that is incomplete and/or inaccurate. It may show stores that are never accessed and/or processes that should be sub-divided, etc.

### 5.14 Description of data objects in database table

**Table 1: Table Structure of Admin**

| Field                      | Type         | Null | Key     | Description         |
|----------------------------|--------------|------|---------|---------------------|
| adminID ( <i>Primary</i> ) | int(11)      | No   | Primary | Authority ID        |
| adminName                  | varchar(255) | No   |         | Authority name      |
| adminUser                  | varchar(255) | No   |         | Authority User name |
| adminEmail                 | varchar(255) | No   |         | Authority Email Id  |
| adminPass                  | varchar(32)  | No   |         | Authority Password  |
| level                      | tinyint(4)   | No   |         | Level of User       |

| adminID | adminName                 | adminUser | adminEmail      | adminPass                        | level |
|---------|---------------------------|-----------|-----------------|----------------------------------|-------|
| 1       | Syed Ariful<br>Islam Emon | admin     | admin@admin.com | 202cb962ac59075b964b07152d234b70 | 0     |

**Table 2: Table Structure of Customer**

| Column                | Type         | Null | Key     | Description        |
|-----------------------|--------------|------|---------|--------------------|
| id ( <i>Primary</i> ) | int(11)      | No   | Primary | Customer Id        |
| name                  | varchar(255) | No   |         | Customer name      |
| address               | text         | No   |         | Customer address   |
| city                  | varchar(255) | No   |         | Customer city      |
| country               | varchar(255) | No   |         | Customer country   |
| zip                   | varchar(255) | No   |         | Customer zip code  |
| phone                 | varchar(255) | No   |         | Customer phone no. |
| email                 | varchar(255) | No   |         | Customer e-mail Id |
| pass                  | varchar(255) | No   |         | Customer password  |

|   | <b>id</b>              | <b>name</b> | <b>address</b> | <b>city</b> | <b>country</b> | <b>zip</b>     | <b>phone</b> | <b>email</b>      | <b>pass</b>                      |
|---|------------------------|-------------|----------------|-------------|----------------|----------------|--------------|-------------------|----------------------------------|
| 1 | Md. Masud Sikder       | Pirojpur    | Barisal        | Bangladesh  | 1200           | 01234567890    |              | masud@gmail.com   | 202cb962ac59075b964b07152d234b70 |
| 2 | Nirjhar Mazumder       | Keranigonj  | Dhaka          | Bangladesh  | 1002           | 01424242424242 |              | nirjhar@gmail.com | 123                              |
| 3 | Syed Ariful Islam Emon | Dhanmondi   | Dhaka          | Bangladesh  | 1205           | 0525545554     |              | emon@gmail.com    | 123                              |

**Table 3: Table Structure of Brand**

| Column                     | Type         | Null | Key | Description |
|----------------------------|--------------|------|-----|-------------|
| brandId ( <i>Primary</i> ) | int(11)      | No   |     | Brand Id    |
| brandName                  | varchar(255) | No   |     | Brand name  |

| brandId | brandName |
|---------|-----------|
| 1       | iPhones   |
| 2       | SAMSUNG   |
| 3       | ACER      |
| 4       | CANON     |

**Table 4: Table Structure of Category**

| Column                   | Type         | Null | Key     | Description   |
|--------------------------|--------------|------|---------|---------------|
| catId ( <i>Primary</i> ) | int(11)      | No   | Primary | Category Id   |
| catName                  | varchar(255) | No   |         | Category name |

| catId | catName              |
|-------|----------------------|
| 1     | Mobile Phones        |
| 2     | Desktop              |
| 3     | Laptop               |
| 4     | Accessories          |
| 5     | Software             |
| 6     | Sports & Fitness     |
| 7     | Footwear             |
| 8     | Jewellery            |
| 9     | Clothing             |
| 10    | Home Decor & Kitchen |
| 11    | Beauty & Healthcare  |
| 12    | Toys, Kids & Babies  |

**Table 5: Table Structure of Product**

| Column                       | Type         | Null | Key     | Description         |
|------------------------------|--------------|------|---------|---------------------|
| productId ( <i>Primary</i> ) | int(11)      | No   | Primary | Product Id          |
| productName                  | varchar(255) | No   |         | Product name        |
| catId                        | int(11)      | No   | Foreign | Category Id         |
| brandId                      | int(11)      | No   | Foreign | Brand Id            |
| body                         | text         | No   |         | Product Description |
| price                        | float(10,3)  | No   |         | Product Price       |
| image                        | varchar(255) | No   |         | Product image       |
| type                         | tinyint(4)   | No   |         | Product Type        |

| productId | productName               | catId | brandId | body                                                  | price      | image                  | type |
|-----------|---------------------------|-------|---------|-------------------------------------------------------|------------|------------------------|------|
| 4         | Lorem Ipsum is simply     | 1     | 1       | <p>Lorem Ipsum is simply&nbsp;Lorem Ipsum is simpl... | 80000.000  | uploads/b828bf4f9d.png | 0    |
| 5         | Lorem Ipsum is simplya    | 2     | 2       | <p>Lorem Ipsum is simply&nbsp;Lorem Ipsum is simpl... | 58880.000  | uploads/3c8faf5e12.jpg | 0    |
| 6         | Lorem Ipsum is simplyaa   | 3     | 3       | <p>Lorem Ipsum is simply&nbsp;Lorem Ipsum is simpl... | 100000.000 | uploads/6935d6a4b1.png | 0    |
| 7         | Lorem Ipsum is simplyaaas | 8     | 4       | <p>Lorem Ipsum is simply&nbsp;Lorem Ipsum is simpl... | 250000.000 | uploads/5ca4061338.jpg | 0    |

**Table 6: Table Structure of Cart**

| Column           | Type         | Null | Key     | Description      |
|------------------|--------------|------|---------|------------------|
| cartId (Primary) | int(11)      | No   | Primary | Cart Id          |
| sId              | varchar(255) | No   |         | Session Id       |
| productId        | int(11)      | No   | Foreign | Product Id       |
| productName      | varchar(255) | No   |         | Product name     |
| price            | float(10,2)  | No   |         | Product Price    |
| quantity         | int(11)      | No   |         | Product Quantity |
| image            | varchar(255) | No   |         | Product Image    |

**Table 7: Table Structure of Order**

| Column       | Type         | Null | Default           | Key     | Description      |
|--------------|--------------|------|-------------------|---------|------------------|
| id (Primary) | int(11)      | No   |                   | Primary | Order Id         |
| cmrId        | int(11)      | No   |                   | Foreign | Customer Id      |
| productId    | int(11)      | No   |                   | Foreign | Product Id       |
| productName  | varchar(255) | No   |                   |         | Product name     |
| quantity     | int(11)      | No   |                   |         | Product Quantity |
| price        | float(10,2)  | No   |                   |         | Product Price    |
| image        | varchar(255) | No   |                   |         | Product Image    |
| date         | datetime     | No   | CURRENT_TIMESTAMP |         | Order date       |
| status       | int(11)      | No   | 0                 |         | Order Status     |

| id | cmrId | productId | productName               | quantity | price      | image                  | date                | status |
|----|-------|-----------|---------------------------|----------|------------|------------------------|---------------------|--------|
| 37 | 1     | 5         | Lorem Ipsum is simplya    | 2        | 117760.00  | uploads/3c8faf5e12.jpg | 2017-01-07 12:58:13 | 2      |
| 38 | 1     | 6         | Lorem Ipsum is simplyaa   | 2        | 200000.00  | uploads/6935d6a4b1.png | 2017-01-07 12:58:46 | 2      |
| 39 | 1     | 5         | Lorem Ipsum is simplya    | 1        | 58880.00   | uploads/3c8faf5e12.jpg | 2017-01-07 13:19:44 | 0      |
| 40 | 1     | 6         | Lorem Ipsum is simplyaa   | 4        | 400000.00  | uploads/6935d6a4b1.png | 2017-01-07 13:20:32 | 2      |
| 41 | 1     | 5         | Lorem Ipsum is simplya    | 1        | 58880.00   | uploads/3c8faf5e12.jpg | 2017-01-07 13:43:43 | 0      |
| 42 | 1     | 4         | Lorem Ipsum is simply     | 1        | 80000.00   | uploads/b828bf4f9d.png | 2017-01-08 12:19:21 | 0      |
| 43 | 1     | 7         | Lorem Ipsum is simplyaaas | 5        | 1250000.00 | uploads/5ca4061338.jpg | 2017-01-08 12:19:43 | 0      |

**Table 8: Table Structure of Wish list**

| Column       | Type         | Null | Key     | Links to      |
|--------------|--------------|------|---------|---------------|
| id (Primary) | int(11)      | No   | Primary | Wishlist Id   |
| cmrId        | int(11)      | No   | Foreign | Customer Id   |
| productId    | int(11)      | No   | Foreign | Product Id    |
| productName  | varchar(255) | No   |         | Product name  |
| price        | float(10,2)  | No   |         | Product Price |
| image        | varchar(255) | No   |         | Product Image |

| id | cmrId | productId | productName               | price    | image                  |
|----|-------|-----------|---------------------------|----------|------------------------|
| 1  | 1     | 4         | Lorem Ipsum is<br>simply  | 80000.00 | uploads/b828bf4f9d.png |
| 2  | 1     | 5         | Lorem Ipsum is<br>simplya | 58880.00 | uploads/3c8faf5e12.jpg |

**Table 9: Table Structure of Compare**

| Column       | Type         | Null | Key     | Links to      |
|--------------|--------------|------|---------|---------------|
| id (Primary) | int(11)      | No   | Primary | Compare Id    |
| cmrId        | int(11)      | No   | Foreign | Customer Id   |
| productId    | int(11)      | No   | Foreign | Product Id    |
| productName  | varchar(255) | No   |         | Product name  |
| price        | double(10,2) | No   |         | Product Price |
| image        | varchar(255) | No   |         | Product Image |

| id | cmrId | productId | productName               | price     | image                  |
|----|-------|-----------|---------------------------|-----------|------------------------|
| 1  | 1     | 4         | Lorem Ipsum is simply     | 80000.00  | uploads/b828bf4f9d.png |
| 2  | 1     | 7         | Lorem Ipsum is simplyaaas | 250000.00 | uploads/5ca4061338.jpg |

# **Chapter 6**

## **Graphical User Interface**

**&**

## **User Guide**

---

This chapter will show the Graphical User Interface (GUI) of the system through screenshots and user guides that how will they operate the system.

## **6.1 Main Features of This System:**

- Highly Automated
- Ordering and payments completed in real time
- Customer emails including order confirmation, generated in real time
- Shipping details immediately emailed to those responsible for order fulfillment
- Easy to administer
- Database driven
- Mass entry and updating of product and category information
- Mass export of customer information and order information from the online store database into spreadsheets, the accounting system.
- Easy to use for visitors and customers
- Easy to follow navigation system
- Strong search function, including display of product information and images
- Complete product list including product prices and links to each product page
- Automatic calculation of shipping charges - customer can determine freight cost before commencing checkout process
- Payment and invoicing completed in real time. The customer views the full invoice details, including all shipping and handling charges and receives credit authorization (or refusal), online at the time of purchase
- Customers receive immediate email confirmation of credit authorization and complete order details
- Returning customers login and thus avoid keying in their billing and shipping information each time
- Product attributes eg sizes or colors
- Attractive and interesting
- Automatic random featured products
- Thumbnail images used in category pages and full size images in the product pages
- Maximization of sales with marketing and sales promotion features like:
- Automatic up sale products - offer made during checkout process, applicable to just that purchase
- Search engine friendly links and site structure
- Highly extensible - unlimited number of products.

## **6.2 Privacy & Security of This System:**

E-Shopping system's Security is a part of the Information Security framework and is specifically applied to the components that affect e-commerce that include Computer Security, Data security and other wider realms of the Information Security framework. E- Shopping security has its own particular nuances and is one of the highest visible security components that affect the end user through their daily payment interaction with business. Our system security is the protection of e-commerce assets from unauthorized access, use, alteration, or destruction. Dimensions of e-commerce security-Integrity, Non-repudiation, Authenticity, Confidentiality, Privacy, Availability, technological and business change and requires a coordinated match of algorithm and technical solutions.

## **6.3 About the System:**

Our system is design by using the style in the following:

Home page is the first page of system or website which is directly connected to our domain. The web page has contains four category menu system as per our analysis of online customers. They are Header menu, Left side bar, Right side bar & Footer menu.

## **6.4 Menu Types:**

This entire menu bar is open for all guests.

**Header Menu:** Header menu have been containing the following options.

- Home
- Sign In
- Contact

**Rightside Bar:** Right side bar have been containing the following options

- Featured Product
- Product's Price
- Product's Details
- Product Brands

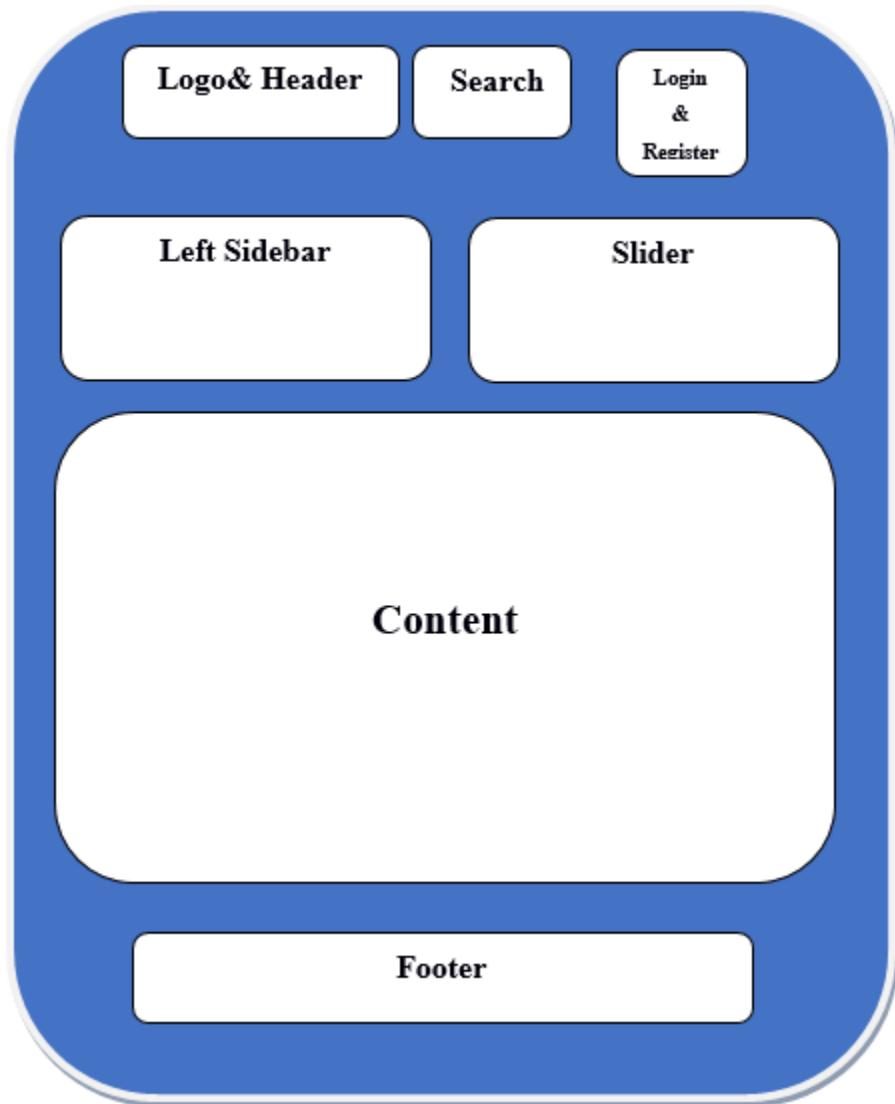
**Footer Menu:** Footer menu bar have been containing the following options

- About
- Service
- Information
- Admin bar

We used metro dashboard template in our admin panel. In after log in admin menu we can see following options:

- Dashboard
- Show order information
- Show shipping information
- Brand Option
- Category Option
- Product Option

## **6.5 Organization of the Template:**



## 6.6 Screenshots and outputs of the system:

### Our Home Page :

The screenshot displays the homepage of an e-commerce website. At the top, there is a header bar with the text "E-COMMERCE" on the left, a search bar with placeholder text "Search keyword...", a shopping cart icon labeled "Cart (Empty)", and a "User Login" button on the right. Below the header, a navigation menu includes "HOME", "TOP BRANDS", and "CONTACT".

The main content area features a grid of product categories. In the top-left, there are two rows of products: "IPHONE" (with a small image of a smartphone) and "SAMSUNG" (with a small image of a tablet). In the second row, there are "ACER" (with a small image of a laptop) and "CANON" (with a small image of a printer). To the right of these categories is a promotional banner for "SALES" with a discount of up to 60%, showing a large computer monitor and a keyboard.

Below the product categories is a section titled "FEATURE PRODUCTS" containing four items: a blender, a laptop, another blender, and a refrigerator. Each item has a small image, a placeholder text description, and a price in red (e.g., "tk. 80000.00"). A "Details" button is provided for each item.

Further down is a section titled "NEW PRODUCTS" featuring four more items: a refrigerator, a blender, a laptop, and a blender. Similar to the feature products, each item has a small image, a placeholder text description, and a price in red (e.g., "tk. 250000.00"). A "Details" button is also present for each item.

At the bottom of the page is a dark footer bar divided into four sections: "INFORMATION", "WHY BUY FROM US", "MY ACCOUNT", and "CONTACT". Each section contains links to various site pages like "About Us", "Customer Service", "Privacy Policy", etc. The "CONTACT" section includes phone numbers and social media icons for Facebook, Twitter, Google+, and YouTube.

At the very bottom center of the page, there is a small copyright notice: "Syed Aniful Islam. All rights Reserved."

## Top Brand page:

**E-COMMERCE**

Search keyword...  Cart (Empty)

[HOME](#) [TOP BRANDS](#) [CONTACT](#)

### ACER

Lorem Ipsum is simply  
Lorem ipsum dolor sit amet, consectetur  
adipiscing elit.

\$505.22

[Details](#)

Lorem Ipsum is simply  
Lorem ipsum dolor sit amet, consectetur  
adipiscing elit.

\$620.87

[Details](#)

Lorem Ipsum is simply  
Lorem ipsum dolor sit amet, consectetur  
adipiscing elit.

\$220.97

[Details](#)

Lorem Ipsum is simply  
Lorem ipsum dolor sit amet, consectetur  
adipiscing elit.

\$415.54

[Details](#)

### SAMSUNG

Lorem Ipsum is simply  
\$403.66

[Details](#)

Lorem Ipsum is simply  
\$621.75

[Details](#)

Lorem Ipsum is simply  
\$428.02

[Details](#)

Lorem Ipsum is simply  
\$457.88

[Details](#)

### CANON

Lorem Ipsum is simply  
\$403.66

[Details](#)

Lorem Ipsum is simply  
\$621.75

[Details](#)

Lorem Ipsum is simply  
\$428.02

[Details](#)

Lorem Ipsum is simply  
\$457.88

[Details](#)

**INFORMATION**

[About Us](#)  
[Customer Service](#)  
[Advanced Search](#)  
[Orders and Returns](#)  
[Contact Us](#)

**WHY BUY FROM US**

[About Us](#)  
[Customer Service](#)  
[Privacy Policy](#)  
[Site Map](#)  
[Search Terms](#)

**MY ACCOUNT**

[Admin Login](#)  
[View Cart](#)  
[My Wishlist](#)  
[Track My Order](#)  
[Help](#)

**CONTACT**

+88-01713458599  
+88-01813458552

**FOLLOW US**

Syed Anifur Islam Emon & All rights Reserved.

Page 62 of 90

## User Login and Registration page:

## Details Page:

## Cart Page:

The screenshot shows the 'Your Cart' section. A single item is listed: 'Lorem Ipsum is simply a' with a price of 'Tk. 58880.00'. The quantity is set to 1, with an 'Update' button. Below the table, it shows Sub Total: TK. 58880, VAT: 15%, and Grand Total: TK. 67712. At the bottom, there are 'Continue Shopping' and 'Checkout!' buttons.

| SL | Product Name            | Image | Price        | Quantity | Total Price | Action |
|----|-------------------------|-------|--------------|----------|-------------|--------|
| 1  | Lorem Ipsum is simply a |       | Tk. 58880.00 | 1        | TK. 58880   | X      |

Sub Total : TK. 58880  
VAT : 15%  
Grand Total : TK. 67712

[Continue Shopping](#) [Checkout!](#)

**INFORMATION**

- About Us
- Customer Service
- Advanced Search
- Orders and Returns
- Contact Us

**WHY BUY FROM US**

- About Us
- Customer Service
- Privacy Policy
- Site Map
- Search Terms

**MY ACCOUNT**

- Admin Login
- View Cart
- My Wishlist
- Track My Order
- Help

**CONTACT**

- +88-01713458599
- +88-01813458552

**FOLLOW US**

Syed Aniful Islam Emon & All rights Reserved

## Payment Page:

The screenshot shows the 'Choose a payment option' section. It features a large red button labeled 'Offline Payment' and a dark grey button labeled 'Previous'.

Choose a payment option

[Offline Payment](#)

[Previous](#)

**INFORMATION**

- About Us
- Customer Service
- Advanced Search
- Orders and Returns
- Contact Us

**WHY BUY FROM US**

- About Us
- Customer Service
- Privacy Policy
- Site Map
- Search Terms

**MY ACCOUNT**

- Admin Login
- View Cart
- My Wishlist
- Track My Order
- Help

**CONTACT**

- +88-01713458599
- +88-01813458552

**FOLLOW US**

Syed Aniful Islam Emon & All rights Reserved

## Offline payment page:

The screenshot shows an e-commerce website's payment page. At the top, there is a navigation bar with links for HOME, TOP BRANDS, CART, PAYMENT, ORDER, PROFILE, COMPARE, WISHLIST, and CONTACT. A search bar and a shopping cart icon showing "Cart tk.58880 Qty:1" are also present. On the left, there is a table showing a single item: "1 Lorem Ipsum is Tk. 58880.00". Below this table, there are sub-totals: Sub Total (TK. 58880), VAT (15% (Tk. 8832)), Grand Total (TK. 67712), and Quantity (1). To the right, there is a section titled "Your Profile Details" containing fields for Name (Md. Masud Sikder), Address (Pirojpur), City (Barisal), Country (Bangladesh), Zip Code (1200), Phone (01234567890), and Email (masud@gmail.com). A red "Order" button is centered at the bottom of the page.

## Success after order page:

The screenshot shows a success page after an order has been placed. The layout is similar to the previous page, with a navigation bar at the top. The main content area displays a message "Thanks for purchase." and a note: "Receive your order successful. We will contact with you as soon as possible delivery details. Here is your order details.... Visit here...". Below this, it says "Total Payable amount:(Including VAT): Tk. 67712" and features a large green button with the text "Payment Successful!!!". At the bottom, there is a footer with links for INFORMATION, WHY BUY FROM US, MY ACCOUNT, and CONTACT, along with social media icons for FOLLOW US.

## Order page:

**E-COMMERCE**

Search keyword...  Cart (Empty)

| HOME               | TOP BRANDS                | ORDER | PROFILE  | COMPARE        | WISHLIST                   | CONTACT |        |
|--------------------|---------------------------|-------|----------|----------------|----------------------------|---------|--------|
| Your Order Details |                           |       |          |                |                            |         |        |
| No                 | Product                   | Image | Quantity | Price          | Date                       | Status  | Action |
| 1                  | Lorem Ipsum is simplya    |       | 1        | Tk. 58880.00   | January 10, 2017, 11:58 pm | Pending | N/A    |
| 2                  | Lorem Ipsum is simplyaaas |       | 5        | Tk. 1250000.00 | January 8, 2017, 12:19 pm  | Pending | N/A    |
| 3                  | Lorem Ipsum is simply     |       | 1        | Tk. 80000.00   | January 8, 2017, 12:19 pm  | Pending | N/A    |
| 4                  | Lorem Ipsum is simplya    |       | 1        | Tk. 58880.00   | January 7, 2017, 1:43 pm   | Pending | N/A    |
| 5                  | Lorem Ipsum is simplyaa   |       | 4        | Tk. 400000.00  | January 7, 2017, 1:20 pm   | OK      | OK     |
| 6                  | Lorem Ipsum is simplya    |       | 1        | Tk. 58880.00   | January 7, 2017, 1:19 pm   | Pending | N/A    |
| 7                  | Lorem Ipsum is simplyaa   |       | 2        | Tk. 200000.00  | January 7, 2017, 12:58 pm  | OK      | OK     |
| 8                  | Lorem Ipsum is simplya    |       | 2        | Tk. 117760.00  | January 7, 2017, 12:58 pm  | OK      | OK     |

| INFORMATION                                                                         | WHY BUY FROM US                                                            | MY ACCOUNT                                                        | CONTACT                            |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------|
| About Us<br>Customer Service<br>Advanced Search<br>Orders and Returns<br>Contact Us | About Us<br>Customer Service<br>Privacy Policy<br>Site Map<br>Search Terms | Admin Login<br>View Cart<br>My Wishlist<br>Track My Order<br>Help | +88-01713458599<br>+88-01813458552 |
| <b>FOLLOW US</b>                                                                    |                                                                            |                                                                   |                                    |
|                                                                                     |                                                                            |                                                                   |                                    |

Syed Aniful Islam Emon & All rights Reserved

## Compare page:

**E-COMMERCE**

Search keyword...  Cart (Empty)

| HOME    | TOP BRANDS                | ORDER | PROFILE       | COMPARE              | WISHLIST | CONTACT |
|---------|---------------------------|-------|---------------|----------------------|----------|---------|
| Compare |                           |       |               |                      |          |         |
| SL      | Product Name              | Image | Price         | Action               |          |         |
| 1       | Lorem Ipsum is simplyaaas |       | Tk. 250000.00 | <a href="#">View</a> |          |         |
| 2       | Lorem Ipsum is simply     |       | Tk. 80000.00  | <a href="#">View</a> |          |         |

| INFORMATION                                                                         | WHY BUY FROM US                                                            | MY ACCOUNT                                                        | CONTACT                            |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------|
| About Us<br>Customer Service<br>Advanced Search<br>Orders and Returns<br>Contact Us | About Us<br>Customer Service<br>Privacy Policy<br>Site Map<br>Search Terms | Admin Login<br>View Cart<br>My Wishlist<br>Track My Order<br>Help | +88-01713458599<br>+88-01813458552 |
| <b>FOLLOW US</b>                                                                    |                                                                            |                                                                   |                                    |
|                                                                                     |                                                                            |                                                                   |                                    |

Syed Aniful Islam Emon & All rights Reserved

## Wish list page:

The screenshot shows the Wish list page of an e-commerce website. At the top, there is a header with the logo "E-COMMERCE", a search bar, a shopping cart icon showing "Cart (Empty)", and a "logout" button. Below the header is a navigation menu with links: HOME, TOP BRANDS, ORDER, PROFILE, COMPARE, WISHLIST (which is highlighted in purple), and CONTACT. The main content area is titled "Wishlist" and contains a table with two items. The table has columns for SL, Product Name, Image, Price, and Action. The first item is "Lorem Ipsum is simply..." with a price of Tk. 58880.00 and actions "Buy Now || Remove". The second item is "Lorem Ipsum is simply..." with a price of Tk. 80000.00 and actions "Buy Now || Remove". Below the table is a large orange "Continue Shopping" button with a shopping cart icon. At the bottom of the page is a footer with sections for INFORMATION, WHY BUY FROM US, MY ACCOUNT, and CONTACT. The footer also includes social media links and a copyright notice: "Syed Ariful Islam Emran & All rights Reserved".

## Customer profile page:

The screenshot shows the Customer profile page of an e-commerce website. The layout is identical to the Wish list page, featuring a header with "E-COMMERCE", a search bar, a shopping cart icon showing "Cart (Empty)", and a "logout" button. The navigation menu includes HOME, TOP BRANDS, ORDER, PROFILE (which is highlighted in purple), COMPARE, WISHLIST, and CONTACT. The main content area displays "Your Profile Details" with the following information:  
Name : Md. Masud Sikder  
Address : Pirojpur  
City : Barisal  
Country : Bangladesh  
Zip Code : 1200  
Phone : 01234567890  
Email : masud@gmail.com  
Below this is an "Update Details" button. The footer is identical to the one on the Wish list page, containing sections for INFORMATION, WHY BUY FROM US, MY ACCOUNT, and CONTACT, along with social media links and the copyright notice: "Syed Ariful Islam Emran & All rights Reserved".

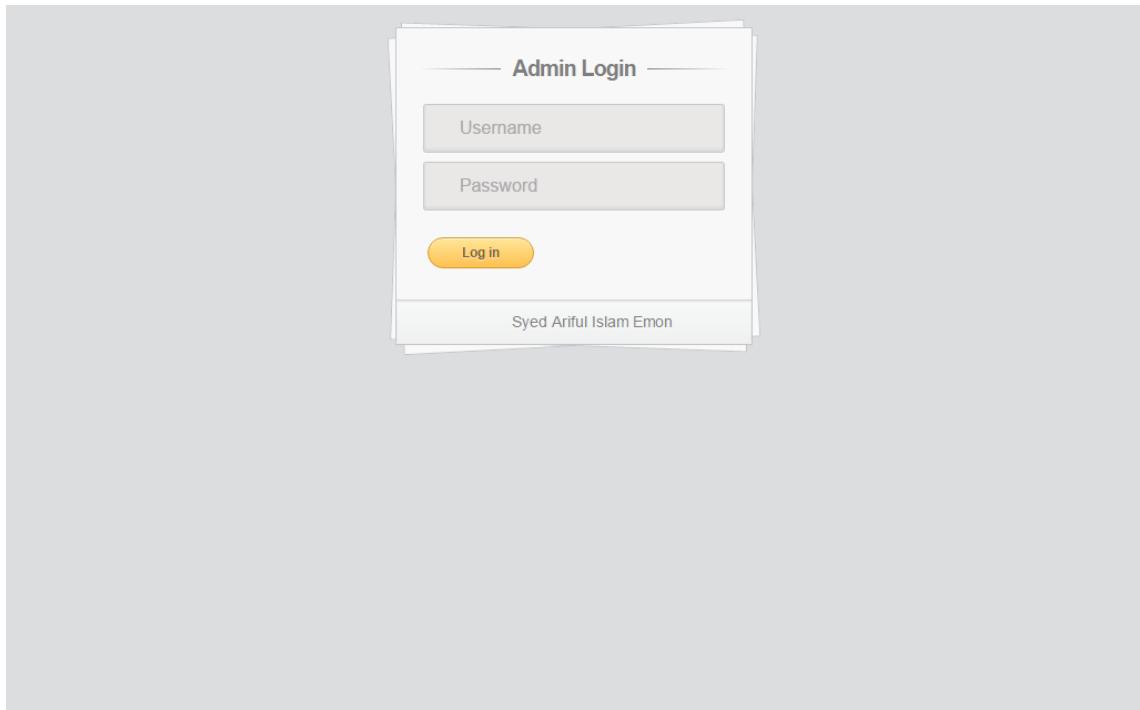
## Edit customer profile page:

The screenshot shows the customer profile edit page. At the top, there is a header with the logo "E-COMMERCE", a search bar, a shopping cart icon labeled "Cart (Empty)", and a "logout" button. Below the header is a navigation menu with links: HOME, TOP BRANDS, ORDER, PROFILE, COMPARE, WISHLIST, and CONTACT. The main content area contains a form for updating profile information. The form fields are: Name (Md. Masud Sikder), Address (Pirojpur), City (Barisal), Country (Bangladesh), Zip Code (1200), Phone (01234567890), and Email (masud@gmail.com). There is also an "Update" button at the bottom of the form. At the bottom of the page, there are four columns: INFORMATION (About Us, Customer Service, Advanced Search, Orders and Returns, Contact Us), WHY BUY FROM US (About Us, Customer Service, Privacy Policy, Site Map, Search Terms), MY ACCOUNT (Admin Login, View Cart, My Wishlist, Track My Order, Help), and CONTACT (+88-01713458599, +88-01813458552). On the right side, there is a "FOLLOW US" section with social media icons for Facebook, Twitter, Google+, and YouTube. The footer contains the copyright notice "Syed Aniful Islam Enam & All rights Reserved".

## Contact page:

The screenshot shows the contact page. At the top, there is a header with the logo "E-COMMERCE", a search bar, a shopping cart icon labeled "Cart (Empty)", and a "logout" button. Below the header is a navigation menu with links: HOME, TOP BRANDS, ORDER, PROFILE, COMPARE, WISHLIST, and CONTACT. The main content area features a "Live Support" section with the text "24 hours | 7 days a week | 365 days a year Live Technical Support" and a small illustration of a person wearing a headset. To the right of this is a "Company Information" section with the address "500 Lorem Ipsum Dolor Sit, 22-56-2-8 St Amet, Lorem, USA", phone number "(00) 222 666 444", fax "(000) 000 00 00", email "info@mycompany.com", and social media links for Facebook and Twitter. Below this is a "Contact Us" form with fields for NAME, E-MAIL, MOBILE.NO, SUBJECT, and a large text area for message content. A "SUBMIT" button is located at the bottom right of the form. At the bottom of the page, there are four columns: INFORMATION (About Us, Customer Service, Advanced Search, Orders and Returns, Contact Us), WHY BUY FROM US (About Us, Customer Service, Privacy Policy, Site Map, Search Terms), MY ACCOUNT (Admin Login, View Cart, My Wishlist, Track My Order, Help), and CONTACT (+88-01713458599, +88-01813458552). On the right side, there is a "FOLLOW US" section with social media icons for Facebook, Twitter, Google+, and YouTube. The footer contains the copyright notice "Syed Aniful Islam Enam & All rights Reserved".

## Admin login page:



## Admin dashboard page:

A screenshot of an admin dashboard. The top navigation bar is dark blue with the text "E-Commerce Admin Dashboard". On the right side of the bar, there is a user profile icon and the text "Hello Syed Ariful Islam Emon | Logout". Below the bar, there are three menu items: "Dashboard", "Order", and "Visit Website". The "Dashboard" item is currently selected, indicated by a blue background. The main content area has a light blue header with the text "Dashbord". Below the header, the text "Welcome admin panel" is displayed. On the left side of the content area, there is a vertical sidebar with four menu items: "Site Option", "Category Option", "Brand Option", and "Product Option", each with a small icon next to it. At the bottom of the page, there is a dark blue footer bar with the text "© Copyright Syed Ariful Islam Emon. All Rights Reserved.".

## Category list page:

The screenshot shows the 'Category List' page of the E-Commerce Admin Dashboard. The left sidebar contains navigation links: Site Option, Category Option (which is selected), Brand Option, and Product Option. The main content area has a header 'Category List' with a search bar and a dropdown for 'Show 100 entries'. A table lists 12 categories with columns for 'Serial No.', 'Category Name', and 'Action'. The categories listed are: Mobile Phones, Desktop, Laptop, Accessories, Software, Sports & Fitness, Footwear, Jewellery, Clothing, Home Decor & Kitchen, Beauty & Healthcare, and Toys, Kids & Babies. Each row in the table includes 'Edit' and 'Delete' links. At the bottom, it says 'Showing 1 to 12 of 12 entries'.

## Category add page:

The screenshot shows the 'Add New Category' page of the E-Commerce Admin Dashboard. The left sidebar contains the same navigation links as the previous page. The main content area has a header 'Add New Category' and a form with a text input field labeled 'Enter Category Name...' and a 'Save' button.

## Category update page:

The screenshot shows the E-Commerce Admin Dashboard. The top navigation bar includes links for Dashboard, Order, Visit Website, and user profile (Hello Syed Ariful Islam Emon | Logout). On the left, a sidebar menu lists Site Option, Category Option, Brand Option, and Product Option. The main content area is titled 'Update Category' and contains a single input field with the value 'Mobile Phones' and a 'Update' button below it. At the bottom, a copyright notice reads '© Copyright Syed Ariful Islam Emon. All Rights Reserved.'

## Brand list page:

The screenshot shows the E-Commerce Admin Dashboard. The top navigation bar includes links for Dashboard, Order, Visit Website, and user profile (Hello Syed Ariful Islam Emon | Logout). On the left, a sidebar menu lists Site Option, Category Option, Brand Option, and Product Option. The main content area is titled 'Brand List' and displays a table with four entries. The table columns are Serial No., Brand Name, and Action. The entries are: 1. iPhone, Action: Edit || Delete; 2. SAMSUNG, Action: Edit || Delete; 3. ACER, Action: Edit || Delete; 4. CANON, Action: Edit || Delete. A search bar is also present at the top of the table. At the bottom, a message indicates 'Showing 1 to 4 of 4 entries'. The footer contains the copyright notice '© Copyright Syed Ariful Islam Emon. All Rights Reserved.'

## Brand edit page:

The screenshot shows the E-Commerce Admin Dashboard. At the top, there is a header with the logo 'E-COMMERCE', the title 'E-Commerce Admin Dashboard', and a user profile with the name 'Hello Syed Ariful Islam Emon | Logout'. Below the header, there is a navigation bar with links for 'Dashboard', 'Order', and 'Visit Website'. On the left side, there is a sidebar with options: 'Site Option', 'Category Option', 'Brand Option', and 'Product Option'. The main content area is titled 'Update Brand' and contains a form with a single input field containing the text 'iPhones' and a 'Update' button below it. At the bottom of the page, there is a copyright notice: '© Copyright Syed Ariful Islam Emon. All Rights Reserved.'

## Brand add page:

The screenshot shows the E-Commerce Admin Dashboard. At the top, there is a header with the logo 'E-COMMERCE', the title 'E-Commerce Admin Dashboard', and a user profile with the name 'Hello Syed Ariful Islam Emon | Logout'. Below the header, there is a navigation bar with links for 'Dashboard', 'Order', and 'Visit Website'. On the left side, there is a sidebar with options: 'Site Option', 'Category Option', 'Brand Option', and 'Product Option'. The main content area is titled 'Add New Brand' and contains a form with a single input field labeled 'Enter Brand Name...' and a 'Save' button below it. At the bottom of the page, there is a copyright notice: '© Copyright Syed Ariful Islam Emon. All Rights Reserved.'

## Product list page:

E-COMMERCE Admin Dashboard

[Dashboard](#) [Order](#) [Visit Website](#)

[Hello Syed Ariful Islam Emon](#) | [Logout](#)

| Serial No. | Product Name             | Category      | Brand   | Description                               | Price         | Image | Type     | Action                                         |
|------------|--------------------------|---------------|---------|-------------------------------------------|---------------|-------|----------|------------------------------------------------|
| 1          | Lorem Ipsum is simply    | Mobile Phones | iPhones | Lorem Ipsum is simply Lorem Ipsum is..... | tk.80000.000  |       | Featured | <a href="#">Edit</a>    <a href="#">Delete</a> |
| 2          | Lorem Ipsum is simplya   | Desktop       | SAMSUNG | Lorem Ipsum is simply Lorem Ipsum is..... | tk.58880.000  |       | Featured | <a href="#">Edit</a>    <a href="#">Delete</a> |
| 3          | Lorem Ipsum is simplyaa  | Laptop        | ACER    | Lorem Ipsum is simply Lorem Ipsum is..... | tk.100000.000 |       | Featured | <a href="#">Edit</a>    <a href="#">Delete</a> |
| 4          | Lorem Ipsum is simplyaas | Jewellery     | CANON   | Lorem Ipsum is simply Lorem Ipsum is..... | tk.250000.000 |       | Featured | <a href="#">Edit</a>    <a href="#">Delete</a> |

Showing 1 to 4 of 4 entries

© Copyright Syed Ariful Islam Emon. All Rights Reserved.

## Product add page:

E-COMMERCE Admin Dashboard

[Dashboard](#) [Order](#) [Visit Website](#)

[Hello Syed Ariful Islam Emon](#) | [Logout](#)

[Site Option](#) [Category Option](#) [Brand Option](#) [Product Option](#)

**Add New Product**

|                                     |                                                           |
|-------------------------------------|-----------------------------------------------------------|
| Name                                | <input type="text" value="Enter Product Name..."/>        |
| Category                            | <input type="button" value="Select Category"/>            |
| Brand                               | <input type="button" value="Select Brand"/>               |
| Description                         |                                                           |
| Price                               | <input type="text" value="Enter Price..."/>               |
| Upload Image                        | <input type="button" value="Choose File"/> No file chosen |
| Product Type                        | <input type="button" value="Select Type"/>                |
| <input type="button" value="Save"/> |                                                           |

© Copyright Syed Ariful Islam Emon. All Rights Reserved.

## Product edit page:

## Order page:



# E-Commerce

Admin Dashboard

Dashboard Order Visit Website

## Order Details

Show 10 entries Search:

| ID | Order time                 | Product                   | Quantity | Price         | Customer ID | Address                      | Action                  |
|----|----------------------------|---------------------------|----------|---------------|-------------|------------------------------|-------------------------|
| 37 | January 7, 2017, 12:58 pm  | Lorem Ipsum is simplya    | 2        | Tk.117760.00  | 1           | <a href="#">View Details</a> | <a href="#">Remove</a>  |
| 38 | January 7, 2017, 12:58 pm  | Lorem Ipsum is simplyaa   | 2        | Tk.200000.00  | 1           | <a href="#">View Details</a> | <a href="#">Remove</a>  |
| 39 | January 7, 2017, 1:19 pm   | Lorem Ipsum is simplya    | 1        | Tk.58880.00   | 1           | <a href="#">View Details</a> | <a href="#">Shifted</a> |
| 40 | January 7, 2017, 1:20 pm   | Lorem Ipsum is simplyaa   | 4        | Tk.400000.00  | 1           | <a href="#">View Details</a> | <a href="#">Remove</a>  |
| 41 | January 7, 2017, 1:43 pm   | Lorem Ipsum is simplya    | 1        | Tk.58880.00   | 1           | <a href="#">View Details</a> | <a href="#">Shifted</a> |
| 42 | January 8, 2017, 12:19 pm  | Lorem Ipsum is simply     | 1        | Tk.60000.00   | 1           | <a href="#">View Details</a> | <a href="#">Shifted</a> |
| 43 | January 8, 2017, 12:19 pm  | Lorem Ipsum is simplyaaas | 5        | Tk.1250000.00 | 1           | <a href="#">View Details</a> | <a href="#">Shifted</a> |
| 44 | January 10, 2017, 11:58 pm | Lorem Ipsum is simplya    | 1        | Tk.58880.00   | 1           | <a href="#">View Details</a> | <a href="#">Shifted</a> |

Showing 1 to 8 of 8 entries

Copyright Syed Ariful Islam Emon. All Rights Reserved.

# **Chapter 7**

**System algorithms**

**&**

**Coding**

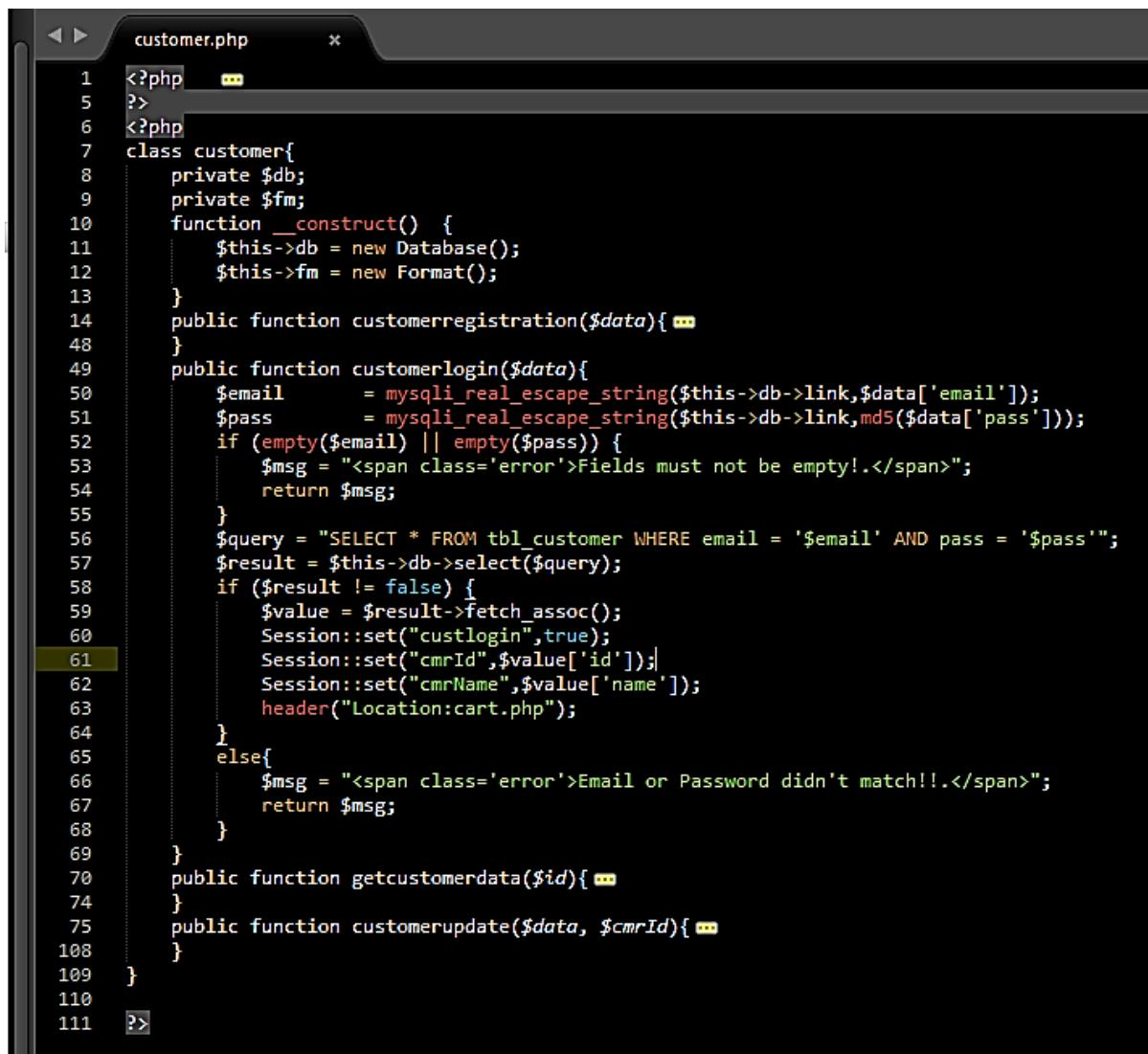
---

This chapter will illustrate the algorithm and coding of the algorithm of our system.

## 7.1 Customer Login Module:

Pseudo Code:

1. Enter User email & password
2. IF user is found THEN Send Mail with Validation Code  
ELSE Print “Invalid Values”.
3. Enter the validation code in the second level of login.  
IF validated THEN redirect to “Home Page”.  
ELSE Print “Login Failed”.



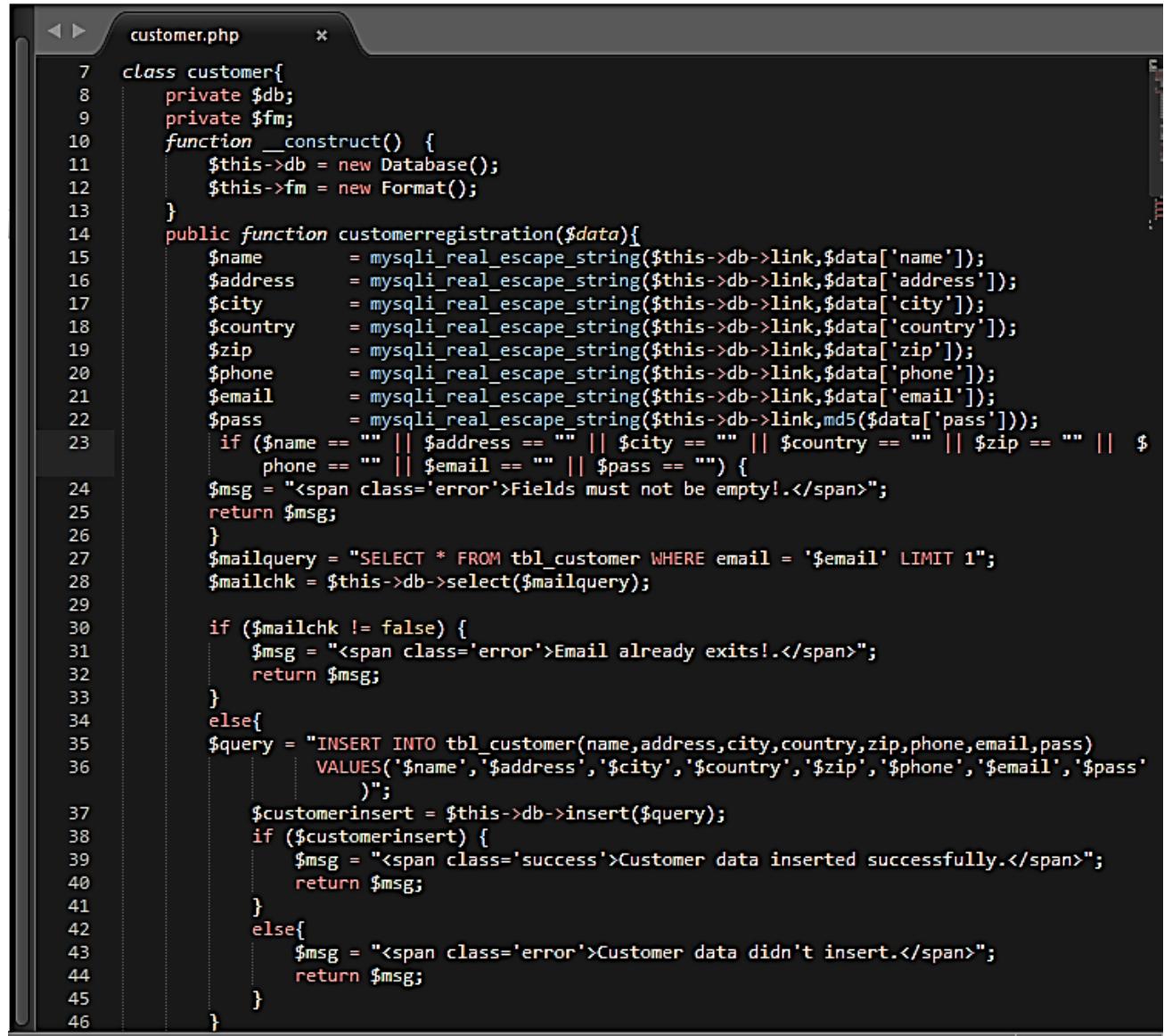
The screenshot shows a code editor window with the file name "customer.php" at the top. The code is written in PHP and defines a class named "customer". The class has private members \$db and \$fm, and a constructor that initializes them. It contains three public functions: customerregistration, customerlogin, and getcustomerdata. The customerlogin function handles user authentication by selecting from a database table where email matches the input and password is hashed. If successful, it sets session variables for customer ID and name, and redirects to "cart.php". If unsuccessful, it returns an error message. The code uses mysqli\_real\_escape\_string for security and md5 for password hashing.

```
1 <?php
5 ?>
6 <?php
7 class customer{
8     private $db;
9     private $fm;
10    function __construct() {
11        $this->db = new Database();
12        $this->fm = new Format();
13    }
14    public function customerregistration($data){ ??}
18
19    public function customerlogin($data){
20        $email      = mysqli_real_escape_string($this->db->link,$data['email']);
21        $pass       = mysqli_real_escape_string($this->db->link,md5($data['pass']));
22        if (empty($email) || empty($pass)) {
23            $msg = "<span class='error'>Fields must not be empty!.</span>";
24            return $msg;
25        }
26        $query = "SELECT * FROM tbl_customer WHERE email = '$email' AND pass = '$pass'";
27        $result = $this->db->select($query);
28        if ($result != false) {
29            $value = $result->fetch_assoc();
30            Session::set("custlogin",true);
31            Session::set("cmrId",$value['id']);
32            Session::set("cmrName",$value['name']);
33            header("Location:cart.php");
34        }
35        else{
36            $msg = "<span class='error'>Email or Password didn't match!!.</span>";
37            return $msg;
38        }
39    }
40    public function getcustomerdata($id){ ??}
44
45    public function customerupdate($data, $cmrId){ ??}
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111 ?>
```

## 7.2 Registering Customer:

Pseudo Code:

Enter Customer's Personal Information  
IF Validated THEN save into temp storage JUMP to Product Detail  
ELSE Print "Error Messages".



The screenshot shows a code editor window with the file name 'customer.php' at the top. The code is a PHP class named 'customer' with methods for registration and validation.

```
customer.php
1  <?php
2  class customer{
3      private $db;
4      private $fm;
5      function __construct() {
6          $this->db = new Database();
7          $this->fm = new Format();
8      }
9      public function customerregistration($data){
10         $name      = mysqli_real_escape_string($this->db->link,$data['name']);
11         $address   = mysqli_real_escape_string($this->db->link,$data['address']);
12         $city      = mysqli_real_escape_string($this->db->link,$data['city']);
13         $country   = mysqli_real_escape_string($this->db->link,$data['country']);
14         $zip       = mysqli_real_escape_string($this->db->link,$data['zip']);
15         $phone     = mysqli_real_escape_string($this->db->link,$data['phone']);
16         $email     = mysqli_real_escape_string($this->db->link,$data['email']);
17         $pass      = mysqli_real_escape_string($this->db->link,md5($data['pass']));
18         if ($name == "" || $address == "" || $city == "" || $country == "" || $zip == "" || $phone == "" || $email == "" || $pass == "") {
19             $msg = "<span class='error'>Fields must not be empty!.</span>";
20             return $msg;
21         }
22         $mailquery = "SELECT * FROM tbl_customer WHERE email = '$email' LIMIT 1";
23         $mailchk = $this->db->select($mailquery);
24
25         if ($mailchk != false) {
26             $msg = "<span class='error'>Email already exists!.</span>";
27             return $msg;
28         }
29         else{
30             $query = "INSERT INTO tbl_customer(name,address,city,country,zip,phone,email,pass)
31                         VALUES('$name','$address','$city','$country','$zip','$phone','$email','$pass')";
32             $customerinsert = $this->db->insert($query);
33             if ($customerinsert) {
34                 $msg = "<span class='success'>Customer data inserted successfully.</span>";
35                 return $msg;
36             }
37             else{
38                 $msg = "<span class='error'>Customer data didn't insert.</span>";
39                 return $msg;
40             }
41         }
42     }
43 }
44
45 }
```

### 7.3 Customer order product:

```
public function orderproduct($cmrId){
    $sId = session_id();

    $query = "SELECT * FROM tbl_cart WHERE sId = '$sId'";
    $getpro = $this->db->select($query);
    if ($getpro) {
        while ($result = $getpro->fetch_assoc()) {
            $productId = $result['productId'];
            $productName = $result['productName'];
            $quantity = $result['quantity'];
            $price = $result['price'] * $quantity;
            $image = $result['image'];

            $query = "INSERT INTO tbl_order(cmrId,productId,productName,quantity,price,image)
                VALUES('$cmrId','$productId','$productName','$quantity','$price','$image')";
            $productinsert = $this->db->insert($query);

        }
    }
}
```

### 7.4 Admin panel order showing:

```
<?php
    $getorder = $ct->getallorderproduct();
    if ($getorder) {
        while ($result= $getorder->fetch_assoc()) {

    ?>
        <tr class="odd gradeX">
            <td><?php echo $result['id'] ;?></td>
            <td><?php echo $fm->formatDate($result['date']) ;?></td>
            <td><?php echo $result['productName'] ;?></td>
            <td><?php echo $result['quantity'] ;?></td>
            <td>Tk.<?php echo $result['price'];?></td>
            <td><?php echo $result['cmrId'] ;?></td>
            <td><a href="customer.php?customerId=<?php echo $result['cmrId'] ;
    ?>">View Details</a></td>
            <?php
                if ($result['status'] == '0') { ?>
                    <td><a href="?shiftid=<?php echo $result['cmrId'] ;?>
                        &price=<?php echo $result['price'] ;?>&time=<?php echo $result['date'] ;?>">Shifted</a></td>
                <?php
                } elseif
                    ($result['status'] == '1'){
                ?>
                    <td>Pending</td>
                <?php } else{?>
                    <td><a href="?delprodid=<?php echo $result['cmrId'] ;?>&price=<?php
                        echo $result['price'] ;?>&time=<?php echo $result['date'] ;?>">
                    Remove</a></td>
                <?php } ?>
            </tr>

        <?php
    }
}
?>
```

# **Chapter 8**

## **Improvement of System**

---

## **8.1 Maintenance:**

Maintenance the last phase in the software engineering process. As programs are developed. A distributing trend has emerged the amount of effort and a resource expended on software maintenance is growing. In total project development maintenance takes 65% of effort .In software maintenance there are four. They are

- Adaptive Maintenance
- Corrective Maintenance
- Perfective Maintenance
- Preventive Maintenance

**Adaptive Maintenance** applied when changes in the external environment precipitate modifications to software. It deals with adapting the software to new environments.

**Perfective Maintenance** incorporates enhancements that are requested by user community. It deals with updating the software according to changes in user requirements.

**Corrective Maintenance** acts to correct errors that are uncovered after the software is in use. It deals with fixing bugs in the code.

**Preventive Maintenance** improves future maintainability and reliability and provides a basis for future enhancement. It deals with updating documentation and making the software more maintainable .Tasks performed during the software engineering process define maintainability and have an important impact in the success of any maintenance approach .Reverse Engineering and Reengineering are the tools and techniques used to maintain the project.

There are four major problems that can slow down the maintenance process

- Unstructured code.
- Maintenance programmers having insufficient knowledge of the System.
- Documentation being absent.
- Out of Date, or at best insufficient.

## **8.2 System maintenance**

System maintenance is actually the implementation of the post-implementation review plan. So, at this stage we implement the following maintenance area:

**i) Administrative Maintenance:** The following activities are maintained under this maintenance:

- User objective maintenance: This is an extremely critical area since it may be possible that over the period of time either the system does not meet the initial objectives of the user or the user objectives get changed as a result of the changes in the overall objectives of the organization.
  - Operating costs and benefits maintenance: Under this maintenance, current budgets are designed to manipulate the costs and savings of the system.
- ii) **Personnel Requirement Maintenance:** Under this maintenance, all activities involving system personnel and staff members associated with the system are maintained. That is,
- Maintained the performance of personnel objectives with current performance levels.
  - Maintained training performance through testing and conducting interviews.
- iii) **Hardware Maintenance:** The hardware of the new system is also maintained including servers, terminals, and communication networks. The main target is a comparison of current performance specifications with design specifications.
- For implementing the overall post-implementation plan, actually we employ little efforts, because most of essential tasks that are maintained in this stage are already performed with more efficiently. For example:
- During system development the user's requirements were defined more accurately.
  - System documentation was prepared in a better way.
  - Processing logic was also designed using more effective way.
  - Existing tools and techniques are better utilized.
  - System engineering processes are managed effectively.

### **8.3 System Security Measures**

The protection of computer based resources that includes hardware, software, data, procedures and people against unauthorized use or natural.

Disaster is known as System Security.

System Security can be divided into four related issues:

- Security
- Integrity
- Privacy
- Confidentiality

**SYSTEM SECURITY** refers to the technical innovations and procedures applied to the hardware and operation systems to protect against deliberate or accidental damage from a defined threat.

**DATA SECURITY** is the protection of data from loss, disclosure, modification and destruction.

**SYSTEM INTEGRITY** refers to the proper functioning of hardware and programs, appropriate physical security and safety against external threats such as eavesdropping and wiretapping.

**PRIVACY** defines the rights of the user or organizations to determine what information they are willing to share with or accept from others and how the organization can be protected against unwelcome, unfair or excessive dissemination of information about it.

**CONFIDENTIALITY** is a special status given to sensitive information in a database to minimize the possible invasion of privacy. It is an attribute of information that characterizes its need for protection.

For adopting some security measures for the proposed system, first we have to identify all the system security goals:

- Preventing malicious damage to files and system
- Preventing accidental damage to files and system
- Protecting the integrity and confidentiality of data
- Preventing unauthorized access to the system
- Providing appropriate disaster-recovery system so the server can be restored

So once we have defined our security goals, we can safely decide which security measures make sense for this new system. Some of the measures are:

- The server is physically secure from theft and damage.
- In addition to keep the server in a physically secure area, we may want to keep it on a separate network with restricted access to enhance the server's security.
- Use of power-conditioning device to clean the electrical power coming into the server and to keep the server running long enough so an orderly shutdown can be performed.
- Use of the entire audit trail and logging features available in the operating system. Because the audit trail records the details of every user action on the system, whether it was successful or not.
- Control access to sensitive files and directories.
- Inform all customers about security policies and their duties and responsibilities as users.
- Prepare a plan that can execute when the new system is under attack.
- Provide virus protection for all employees, and scan all files on servers and workstations daily.

# **Chapter 9**

## **System's Limitations**

**&**

## **Future Enhancement**

---

## **9.1 Benefits:**

The project is identified by the merits of the system offered to the user. The merits of this project are as follows: -

- It's a web-enabled project.
- The user is mainly more concerned about the validity of the data, whatever he is entering. There are checks on every stages of any new creation, data entry or updating so that the user cannot enter the invalid data, which can create problems at later date.
- Through these features it will increase the efficiency, accuracy and transparency.

## **9.2 Limitation of the system:**

Though we have tried our level best to make our system flawless and user friendly by using the modern technologies, some minor functional and design inconsistencies exist in our system due to time constraint, design of prototype and cost constraints. The limitations of OSMS are:

- I. The PDF report which will be generated based on the customer information may not be well organized if the quantity of the data is extremely high.
- II. Customer can't pay in online. Pay pal (Credit/Debit card) system is not available.
- III. Quantity alert message to admin.
- IV. Corporate client information management providing MIS (Manage Information System) like schedule, report key, indicator.
- V. Discount for maximum sell.
- VI. Best seller list, automatic updated.
- VII. Create groups of customers that have access to special products or categories that are not publicly available.
- VIII. 10% discount on next purchase.
- IX. Monthly Prize system for best buyer.
- X. Track free search engine and online advertising traffic to orders.
- XI. Message will be sent automatically to customer email for upcoming product
- XII. A message will be sent to admin about higher sells Products.

### **9.3 Future Enhancement of Our Project:**

Our system OSMS is developed based on current findings, demand of customers satisfaction and facilities. In our system we have used the modern web technologies to make our system fast, convenient and efficient for all of the personnel mentioned. Due to time and cost constraint it was not possible to fulfill all requirements and functionalities those were planned. But in future these planned functionalities and more improvement will be possible to pursue. The functionalities to be implemented are:

- I. Facility of shopping chart that will help the customer to buying many things at a time.
- II. Want to build an online transaction system so that customer can pay from home and it will also help the management to get away from the problem of physical document of payment.
- III. Automatic notification of customer's conduct to the administrator through fully dynamic AJAX page.
- IV. A complete management system for the administration.
- V. For purchasing convenience in a future we will add PayPal system & open an account in a well-known bank.
- VI. Our system privacy will be hard & more secure when we open a bank account & add PayPal system so that customer do not feel unsecure.
- VII. When our any product will become less than 5 then an alert message will automatically send to admin.
- VIII. Monthly prize system include for the best buyer who will Purchas our maximum product.
- IX. A message will send to customer for upcoming product who will log in our system & Purchas our product.

# **Chapter 10**

**Discussion**

**&**

**Conclusion**

---

## **10.1 Discussion & Conclusion:**

The purpose of this website to serve sellers and buyers to sell and buy clothes in online without any hassle, we hope it will satisfy the demand of buyers and sellers and make better improvement in several OSMS for enhancing its demand and preciseness.

We believe that, it will remove the monotony of the owner by relieving him from disturbing accounting tasks. It will help the owner to know his business condition by giving a look at the detail of his account info. Where he will find his cost and income, he can also find his benefit.

This website is not totally dynamic but it is extendable. If the website needs to extend then we must have to work little on the database. So, we have the demand to develop a website that considers all the issues. Keeping all these things in mind we have tried our best to build a website which is secure, dynamic, extendable and reusable. There still have the opportunity to add other features that are not mentioned here.

Some minor functional problem may occur during operation, but it will not have any minimum effect on kernel part of the system.

# **Chapter 11**

## **References**

---

## 11.1 Websites:

1. <http://www.wikipedia.org/>
2. <http://www.webopedia.com/>
3. <http://www.mysql.com/>
4. <http://www.w3schools.com/>
5. <http://www.php.net/>
6. <http://www.ask.com/>
7. <http://stackoverflow.com/>
8. <http://www.codecademy.com/tracks/php>
9. <http://www.goodreads.com/list/tag/technology>
10. <https://www.scribd.com/doc/88753639/9/E-R-Diagram>
11. <http://www.freestudentprojects.com/phpscript/online-shopping-system/>
12. <https://www.privacyrights.org/online-shopping-tips-e-commerce-and-you>
13. <https://www.scribd.com/doc/51580564/2/OBJECTIVE-OF-ONLINE-SHOPPING>
14. <https://www.freelancer.com/job-search/online-shopping-management-system-project-report/1/>
15. <http://www.cio.com/article/2384809/e-commerce/15-ways-to-protect-your-commerce-site-from-hacking-and-fraud.html>
16. <https://www.google.com.bd/webhp?sourceid=chromestant&ion=1&espv=UTFq=Privacy+%26+Security+of+online+e+shopping+project>
17. [http://www.top10ecommercebuilders.com/?kw=e%20commerce%20websites&c=720892300&interest=&physical=2050&feedid=&a=502&ts=&gclid=Cj0KEQjwvJqvBRCL77m2uKczsIBEiQAkx8VjHDtEef\\_RpeTvTI3\\_0aeGOUOISJIE16sVO6oTE26BT4aAqY98P8](http://www.top10ecommercebuilders.com/?kw=e%20commerce%20websites&c=720892300&interest=&physical=2050&feedid=&a=502&ts=&gclid=Cj0KEQjwvJqvBRCL77m2uKczsIBEiQAkx8VjHDtEef_RpeTvTI3_0aeGOUOISJIE16sVO6oTE26BT4aAqY98P8)
18. <http://www.priyoshop.com/>
19. <http://www.clickbd.com/>
20. <http://ajkerdeal.com/>
21. <http://www.biponee.com/>
22. <http://www.eso.org/shop/>
23. <http://www.yepme.com/>
24. <http://www.yepme.com/>
25. <http://www.kaymu.com.bd/>

## **11.2 Books:**

1. High Performance MySQL: Optimization, Backups, Replication, and More, by Baron Schwartz, Peter Zaitsev, Vadim Tkachenko, Jeremy Zawodny, Arjen Lentz, Derek J. Balling
2. MySQL Cookbook, by Paul DuBois
3. MySQL Administrator's Bible, by Sheeri K. Cabral and Keith Murphy
4. MySQL in a Nutshell, by Russell Dyer
5. Pro MySQL (Expert's Voice in Open Source), by Michael Kruckenberg, Jay Pipes.
6. Expert MySQL, by Dr. Charles A. Bell
7. PHP Bible, 2nd Edition
8. Programming PHP
9. PHP and MySQL Web Development (4th Edition)
10. PHP 6 and MySQL 5 for Dynamic Web Sites: Visual QuickPro Guide
11. Beginning PHP and MySQL: From Novice to Professional, Third Edition
11. Practical Web 2.0 Applications with PHP
12. Professional PHP5 (Programmer to Programmer)
13. PHP 5 / MySQL Programming for the Absolute Beginner
14. PHP and MySQL for Dynamic Web Sites: Visual QuickPro Guide (4th Edition) by Larry Ullman
15. Object-Oriented Programming with PHP5
16. PHP Advanced and Object-Oriented Programming
17. Object-Oriented PHP: Concepts, Techniques, and Code
18. Effortless E-Commerce with PHP and MySQL 1st Edition by Larry Ullman (Author)
19. PHP 5 e-commerce Development by Michael Peacock