A Mini Project Report

on

CLICK TO CART

by

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CERTIFICATE

This is to certify that the mini project entitled **"CLICK TO CART "**, done by **Naushin Azi (16WH1A1249)**, **Shaik Sumera Sultana (16WH1A1255) of IV Year I Sem** of **Department of Information Technology,** is a record of work carried out by them under my supervision.

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1.ABSTRACT

In recent times, it has become necessary for any business to have an online presence in order to remain relevant and competitive. As a result of this necessity many businesses, including small enterprises, now operate an e-commerce web store so as to increase sales and attract new customers. Also, business owners do not have to worry about finding a place to erect their stores and customers can have unhindered access to a wide range of products at anytime and anywhere in the world .In today's fast-changing business environment, it's extremely important to be able to respond to client needs in the most effective and timely manner. If your customers wish to see your business online and have instant access to your products or services. Online Shopping is a lifestyle e-commerce web application, which retails various fashion and lifestyle products. This project allows viewing various products available enables registered users to purchase desired products. Click To Cart is an interactive e-commerce solution providing users with an opportunity to buy and sell products

2. INTRODUCTION

E-commerce is fast gaining ground as an accepted and used business paradigm. More and more business houses are implementing web sites providing functionality for performing commercial transactions over the web. It is reasonable to say that the process of shopping on the web is becoming commonplace.

The objective of this project is to develop a general-purpose e-commerce store where product like clothes can be bought from the comfort of home through the Internet. However, for implementation purposes, this paper will deal with an online shopping for clothes.

An online store is a virtual store on the Internet where customers can browse the catalogue and select products of interest. The selected items may be collected in a shopping cart. At checkout time, the items in the shopping cart will be presented as an order. At that time, more information will be needed to complete the transaction. Usually, the customer will be asked to fill or select a billing address, a shipping address, a shipping option, and payment information such as credit card number. An e-mail notification is sent to the customer as soon as the order is placed.

3. ANALYSIS

Requirements analysis is one of the major tasks in software engineering, which is vital to the success of a software development project. It involves the determination of the requirements or functions of a software project. The main task to perform before analyzing requirements is requirements elicitation.

Requirements elicitation is the gathering of the requirements or needs of a software system from the client and other stakeholders involved in the software project. Some of the activities involved in requirements elicitation are interviews, meetings, and surveys.

Three requirements elicitation techniques are Initiating the Process, Facilitated Application Specification Techniques (FAST), and Quality Function Deployment (QFD).

The requirements for this application were gathered based on QFD. This is because QFD prioritizes both explicit and implicit requirements for the software. Also, it focuses on client satisfaction all through the development process.

4. ARCHITECTURE

Fig 4.1 Architecture of ecommerce Website

5. IMPLEMENTATION

Implementation in software development is the process of realizing an application's requirements and design. It mainly involves mapping the design into coding in order to achieve the specifications stated for the application. This section will describe the key implementation processes and some code snippets of this e-commerce web application.

This application was implemented as a JPA application, thus, the database tables used by the application were automatically generated by JPA. the application was structured according to the MVC pattern. This pattern aims to separate the user interface logic from the business logic. Also, this pattern helps to create well defined and organized web applications with efficient code reuse and multiple views.

HTML

HTML, a initial of Hypertext Mark up Language, is the predominant mark up language for web pages. It provides a means to describe the structure of text-based information in a document by denoting certain text as headings, paragraphs, lists, and so on and to supplement that text with interactive forms, embedded images, and other objects. HTML is written in the form of labels (known as tags), surrounded by angle brackets. HTML can also describe, to some degree, the appearance and semantics of a document, and can include embedded scripting language code which can affect the behaviour of web browsers and other HTML processors.

The idea behind Hypertext is that instead of reading text in rigid linear structure, we can easily jump from one point to another point. We can navigate through the information based on our interest and preference. Hyperlinks are underlined or emphasized works that load to other documents or some portions of the same document.

HTML can be used to display any type of document on the host computer, which can be geographically at a different location. It is a versatile language and can be used on any platform or desktop.

JAVA SCRIPT

JavaScript is a script-based programming language that was developed by Netscape Communication Corporation. JavaScript was originally called Live Script and renamed as JavaScript to indicate its relationship with Java. JavaScript supports the development of both client and server components of Web-based applications. On the client side, it can be used to write programs that are executed by a Web browser within the context of a Web page. On the server side, it can be used to write Web server programs that can process information submitted by a Web browser and then update the browser's display accordingly.

Even though JavaScript supports both client and server Web programming, we prefer JavaScript at Client side programming since most of the browsers supports it. JavaScript is almost as easy to learn as HTML, and JavaScript statements can be included in HTML documents by enclosing the statements between a pair of scripting tags. Here are a few things we can do with JavaScript:

Validate the contents of a form and make calculations. Add scrolling or changing messages to the Browser's status line. Animate images or rotate images that change when we move the mouse over them. Detect the browser in use and display different content for different browsers. JavaScript and Java are separate languages. They are both useful for different things; in fact, they can be used together to combine their advantages. JavaScript can be used for Server-side and Client-side scripting. It is more flexible than VBScript. JavaScript is the default scripting languages at Client-side since all the browsers.

SQL

Structured Query Language (SQL) is the language used to manipulate relational databases.

SQL is tied very closely with the relational model.

In the relational model, data is stored in structures called relations or tables.

SQL statements are issued for the purpose of:

Data definition: Defining tables and structures in the database (DDL used to create, alter and drop schema objects such as tables and indexes).

Data manipulation: Used to manipulate the data within those schema objects (DML Inserting, Updating, Deleting the data, and Querying the Database).

A schema is a collection of database objects that can include: tables, views, indexes and sequences.

List of SQL statements that can be issued against an Oracle database schema are

- ALTER - Change an existing table, view or index definition (DDL)
- AUDIT - Track the changes made to a table (DDL)
- COMMENT - Add a comment to a table or column in a table (DDL)
- COMMIT - Make all recent changes permanent (DML - transactional)
- CREATE - Create new database objects such as tables or views (DDL)
- DELETE - Delete rows from a database table (DML)
- DROP - Drop a database object such as a table, view or index (DDL)
- GRANT - Allow another user to access database objects such as tables (DDL)
- INSERT - Insert new data into a database table (DML)
- NO AUDIT - Turn off the auditing function (DDL)
- REVOKE - Disallow a user access to database objects such as views (DDL)
- ROLLBACK - Undo any recent changes to the database (DML - Transactional)
- SELECT - Retrieve data from a database table (DML)
- TRUNCATE - Delete all rows from a database table (DML)
- UPDATE - Change the values of some data items in a database table (DML)

XAMPP SERVER

It 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.Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server possible.

XAMPP's ease of deployment means a WAMP or LAMP stack can be installed quickly and simply on an operating system by a developer. With the advantage of common add-in applications such as WordPress and Joomla! can also be installed with similar ease using Bitnami

PHP

PHP is an HTML-embedded, server-side scripting language designed for web development. It is also used as a general-purpose programming language. It was created by Rasmus Lerdorf in 1994 and appeared in the market in 1995. Much of its syntax is borrowed from C, C++, and Java.

PHP codes are simply mixed with HTML codes and can be used in combination with various web frameworks. Its scripts are executed on the server. PHP code is processed by a PHP interpreter. The main goal of PHP is to allow web developer to create dynamically generated pages quickly.

A PHP file consists of texts, HTML tags and scripts with a file extension of .php, .php3, or .phtml. You can create a login page, design a form, create forums, dynamic and static websites and many more with PHP.

SOURCE CODE:

```
<?php
/**
 *   */
class Database
{
private $con;
public function connect () {
$this->con = new Mysqli("localhost", "root", "", "CLICK TO CART");
return $this->con;
}
}
?>
```

ADMIN MODULE CODE:

```
<?php
/**
 *
 */
class Admin
{
private $con; function __construct()
{
include_once("Database.php"); $db = new Database();
$this->con = $db->connect();
}
public function getAdminList(){
```

```
$query = $this->con->query("SELECT `id`, `name`, `email`, `is_active` FROM
`admin` WHERE 1");
$ar = [];
if ($query->num_rows > 0) {
while ($row = $query->fetch_assoc()) {
$ar[] = $row;
}
return ['status'=> 202, 'message'=> $ar];
}
return ['status'=> 303, 'message'=> 'No Admin'];
}
}
if (isset($_POST['GET_ADMIN'])) {
$a = new Admin(); echo json_encode($a->getAdminList());
exit();
}
?>
```

USER MODULE CODE:

```
<?php
session_start();
/**
 *   */
class Customers
{
private $con; function __construct()
{
include_once("Database.php"); $db = new Database();
```

```
$this->con = $db->connect();
}
public function getCustomers(){
$query = $this->con->query("SELECT `user_id`, `first_name`, `last_name`,
`email`, `mobile`, `address1`, `address2` FROM `user_info`");
$ar = [];
if (@$query->num_rows > 0) {
while ($row = $query->fetch_assoc()) {
$ar[] = $row;
}
return ['status'=> 202, 'message'=> $ar];
}
return ['status'=> 303, 'message'=> 'no customer data'];
}
public function getCustomersOrder(){
$query = $this->con->query("SELECT o.order_id, o.product_id, o.qty, o.trx_id,
o.p_status, p.product_title, p.product_image FROM orders o JOIN products p ON
o.product_id = p.product_id");
$ar = [];
if (@$query->num_rows > 0) {
while ($row = $query->fetch_assoc()) {
$ar[] = $row;
}
 return ['status'=> 202, 'message'=> $ar];
}
return ['status'=> 303, 'message'=> 'no orders yet'];
}


}
```

```
/*$c = new Customers();
 echo "<pre>";
 print_r($c->getCustomers());
exit();*/
if (isset($_POST["GET_CUSTOMERS"])) {
if (isset($_SESSION['admin_id'])) {
  $c = new Customers();
      echo json_encode($c->getCustomers());
 exit();
 }
}
if (isset($_POST["GET_CUSTOMER_ORDERS"])) {
if (isset($_SESSION['admin_id'])) {
  $c = new Customers();
  echo json_encode($c->getCustomersOrder());
  exit();
}
}
?>
```

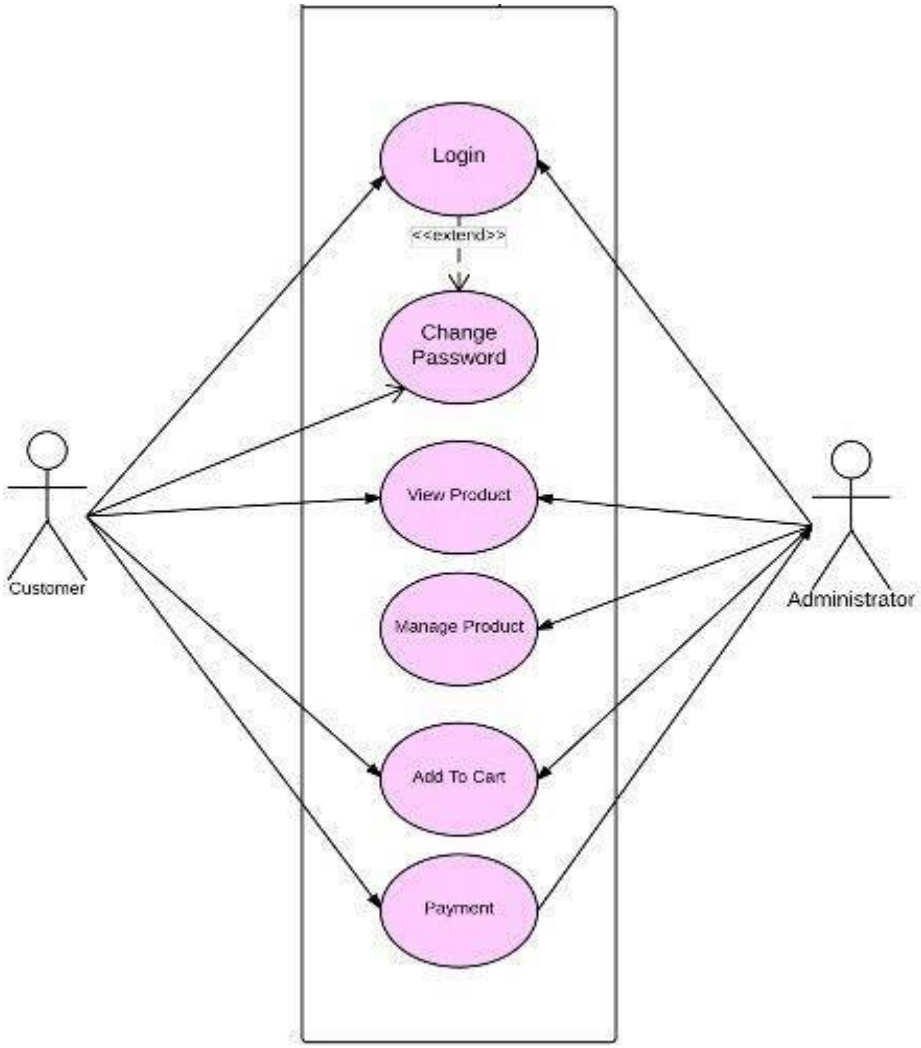
HOME PAGE MODULE:

```
   .overlay{
   display: none; position: fixed;
        width: 100%; height: 100%; background: #fff; z-index: 10;
        opacity: 0.7;
        }
      loader{
  width: 150px; height: 150px; border-radius: 50%; border:10px solid #333;
```

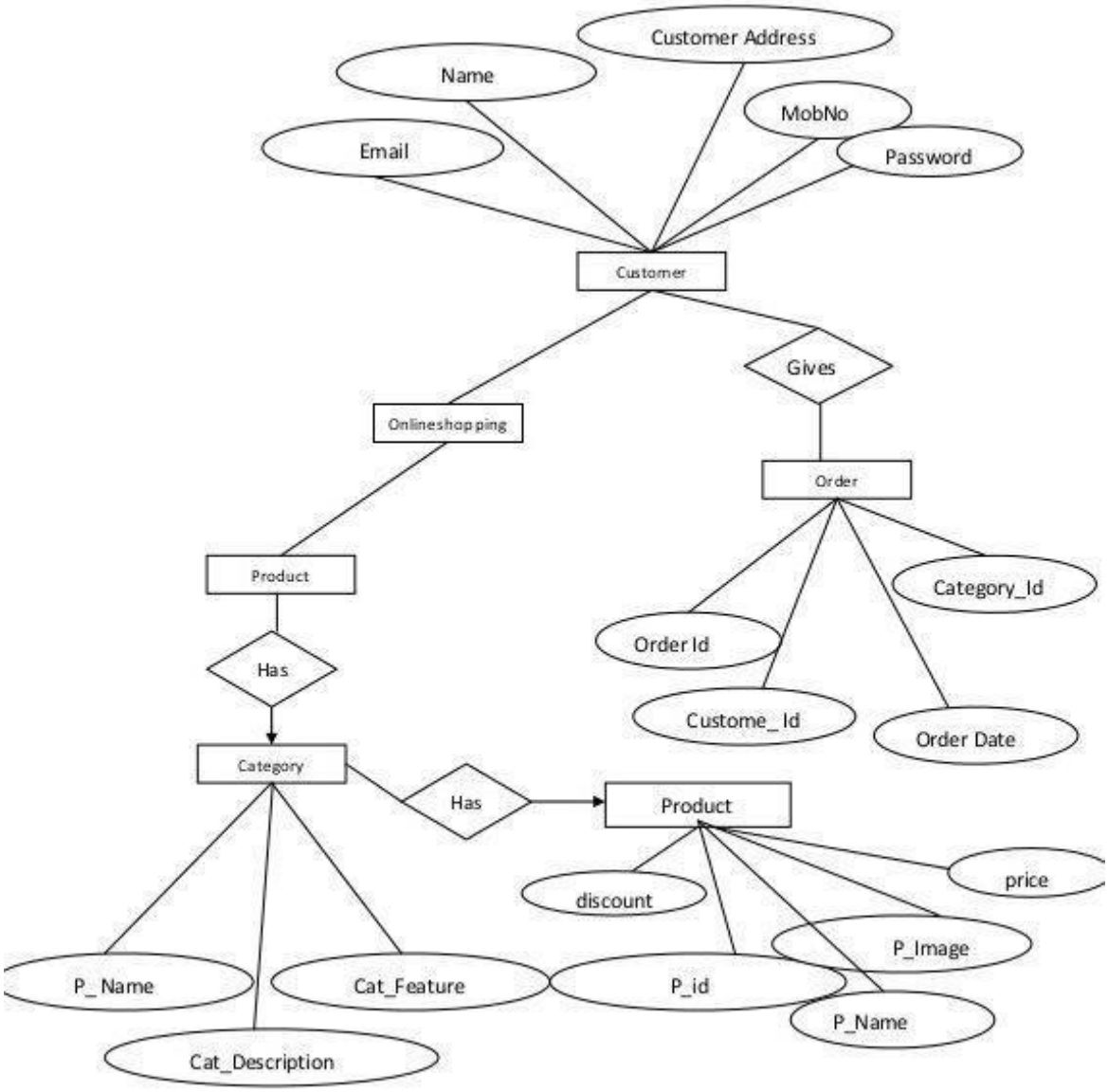
```
position: relative; margin: 0 auto; top:30%;
 animation:loader 2s linear infinite;
}
@keyframes loader{
50% {
opacity: 0.5;
}
100% { transform:rotate(360deg);
}
}
.loader:after{
        content: "";
         width: 35px;
          height: 35px;
          background: #333;
          position: absolute;
         border-radius: 50%;
         top: -20px;
         left: 55px;
        }
.loader:before{
        content: "";
        width: 0;
          height: 0;
          border-left: 15px solid transparent;
           border-right: 15px solid transparent;
             border-bottom: 15px solid #333;
           position: absolute;
         transform: rotate(-90deg); }
```

6.DATA FLOW DIAGRAMS

6.1 USE CASE DAIGRAM:



6.2 E-R DIAGRAM:



7. MODULES

The proposed system should provide the facilities for the following modules

1. Administration Module
2. Customer Module
3. Product Module
4. Cart Module

Only the authorized persons can login to their respective modules using their username and Password.

1. Administration Module:

In administrator module, once an administrator logs on to the system, he/she can register the departments and maintain Master Data, Remove old and outdated data. The system should accept the following as input from Administration of organization for successful login. It should contain Valid username and Password. After successful login, the administrator is provided with the following options, which require some data entry

- To add new Product
- To update product information
- To update the status of the product
- To maintain the list of products.

2. Customer Module:

In customer module, once a customer logs on to the system. The customer can view the status to the products posted by Admin. They can also edit their personnel details.

2.1 Customer Registration:

This module takes the following details as Input

Citizen Name

Date of Birth

Address

Contact No

Login Name

Password

After submitting all the details, a unique ID is generated to uniquely identify that particular customer.

2.2 Customer Login:

This module takes the following details as Input

Login Name

Password

It validates all the above fields and if the input given is valid then the customer is allowed to enter to its main page.

3. PRODUCTS MODULE:

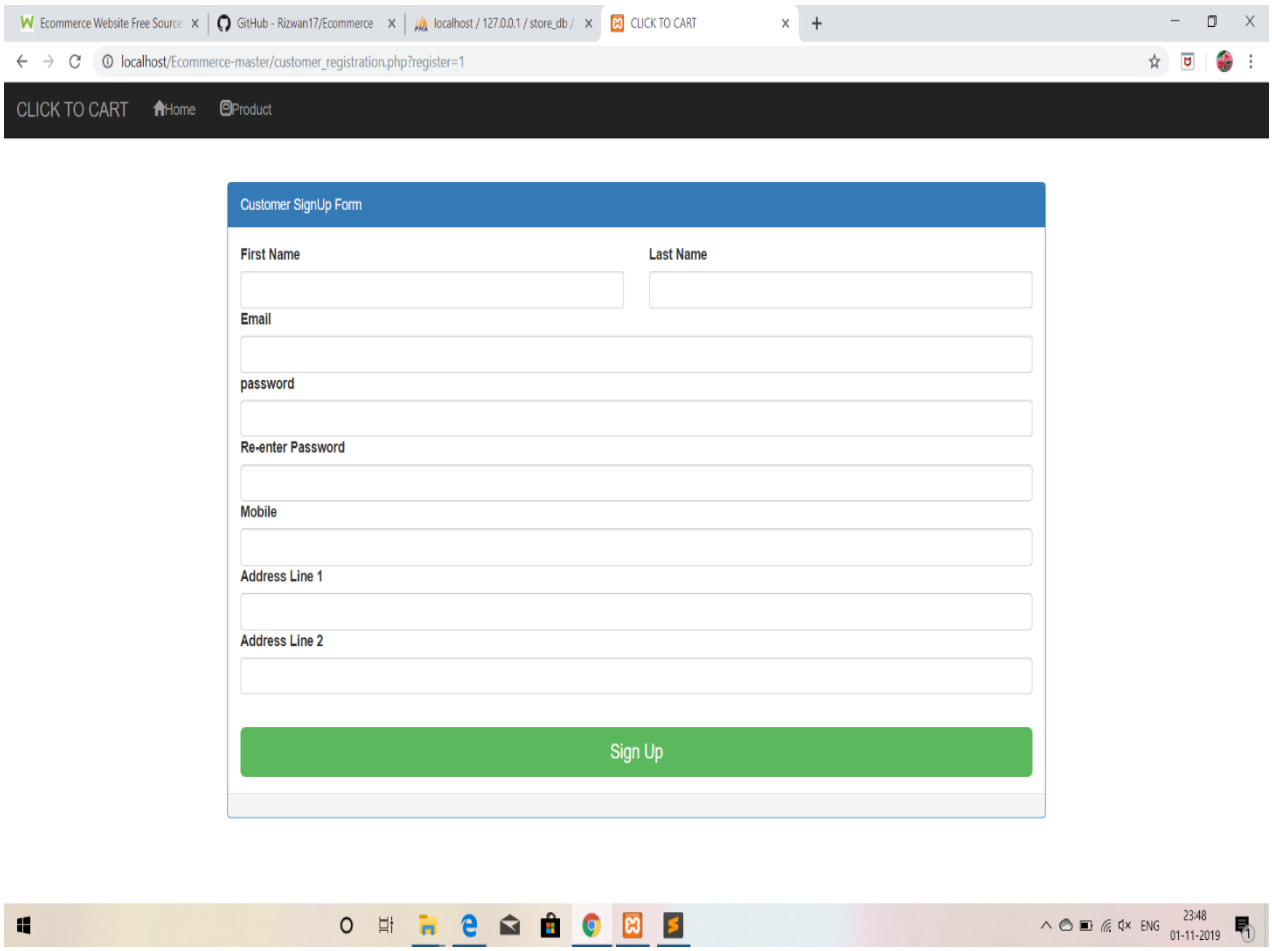
All the products which are added by the admin are visible on the home page of the website. The user can view all the products which are categorized as brands. The category list contains all product category. If we press on a category it will show the subcategory list. Subcategory list will show the product under subcategory. Brand list contains all brands of product. It also shows the related brand products.

4. CART MODULE:

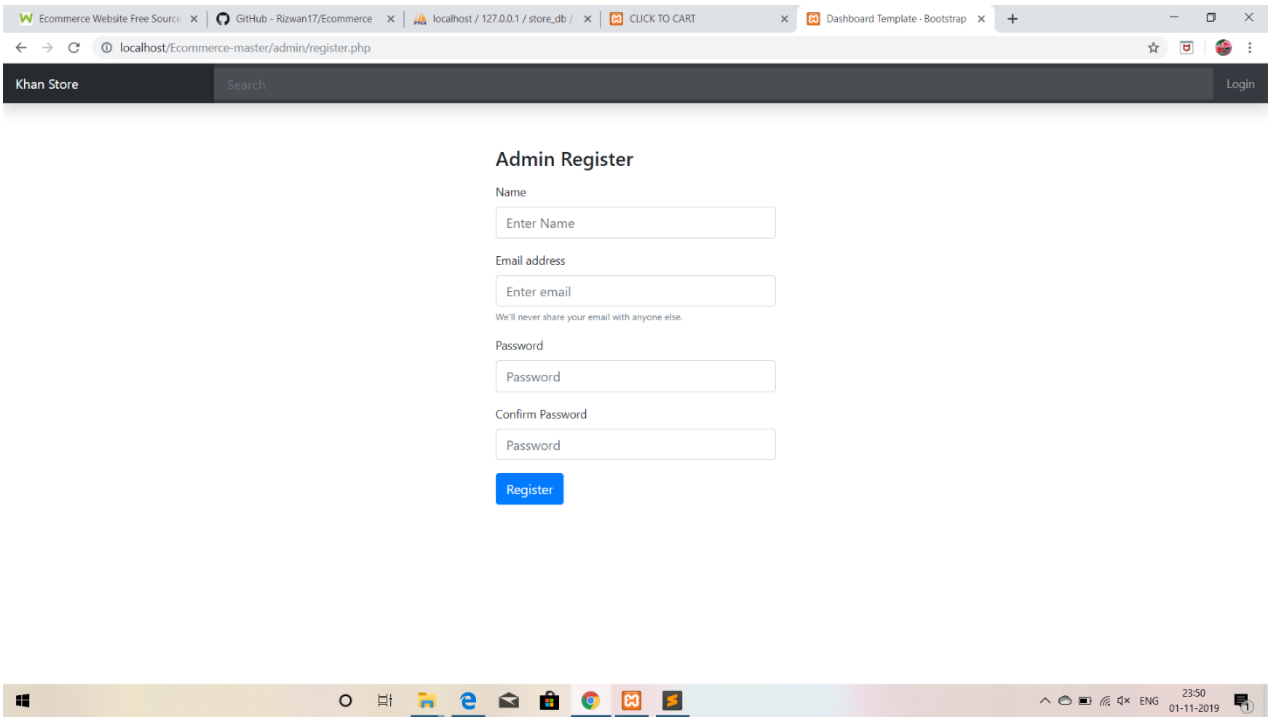
Cart module refers to the module where the user can add the required products into the cart before proceeding to buy them. The user can edit the items or products in the cart.

8. SCREENSHOTS

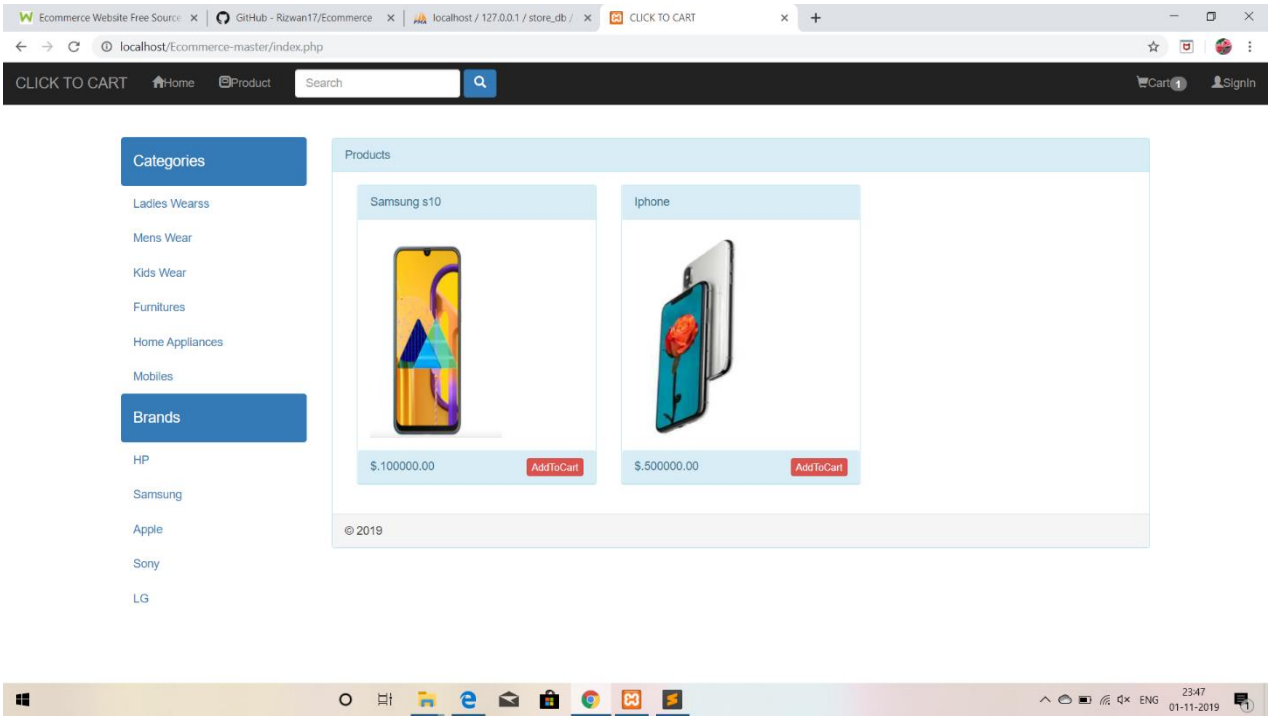
CUSTOMER REGISTRATION FORM:



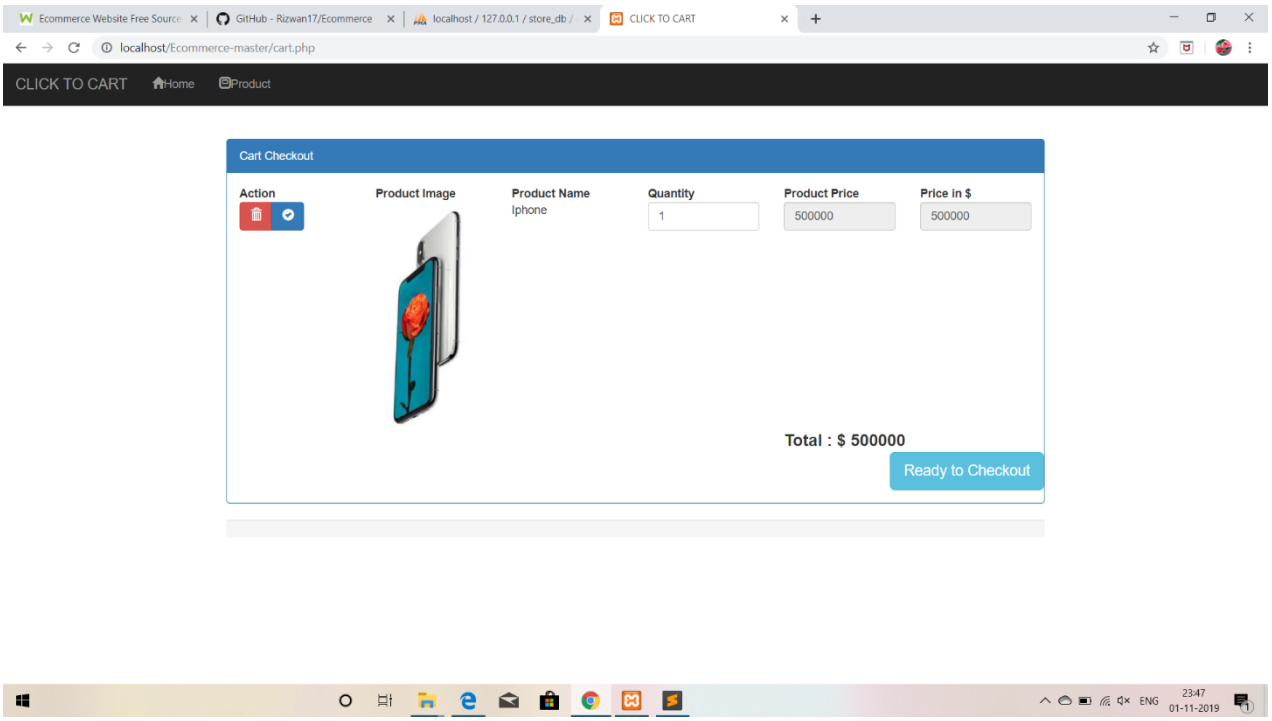
ADMIN REGISTRATION FORM:



PRODUCTS MODULE:



CART MODULE


Ecommerce Website Free Source
GitHub - Rizwan17/Ecommerce
localhost / 127.0.0.1 / store_db /
CLICK TO CART
localhost/Ecommerce-master/cart.php
CLICK TO CART
Home
Product
Cart Checkout
Action
Product Image
Product Name
Iphone
Quantity
1
Product Price
500000
Price in $
500000
Total : $ 500000
Ready to Checkout
ENG
23:47
01-11-2019

9. DESCRIPTION

Any member can register and view available products.

Only registered member can purchase multiple products regardless of quantity.

There are three roles available:

I. Visitor

II. User

III. Admin.

Visitor can view available products. User can view and purchase products.

An Admin has some extra privilege including all privilege of visitor and user.

1.Admin can add products, edit product information and add/remove product.

2. Admin can add user, edit user information and can remove user.

3. Admin can ship order to user based on order placed by sending confirmation mail.

Anyone can view Online Shopping portal and available products, but every user must login by his/her Username and password in order to purchase or order products. Unregistered members can register by navigating to registration page. Only Admin will have access to modify roles, by default developer can only be an 'Admin'. Once user register site, his default role will be 'User'.

A. DATA DESCRIPTION

This database consists of

1. Users: User and Admin information is added to database with Unique ID based on their roles.
2. Shopping: Complete products information is stored in this table.
3. Orders: Customer ordered products, status and delivery information is stored in this table.

B. DATA TABLES:

1. User: ID, User Name, Password, Email, Role
2. Shopping: ID, Product, Product ID, Cost, Category, Image, Description 3. Orders: ID, Client, Product, Quantity, Price, Date, Order Shipped

Figure 9.1 Database Diagrams

10. OPERATIONAL REQUIREMENTS

SECURITY:

Pages of the website must be access in the way they were intended to be accessed. Included files shall not be accessed outside of their parent file. Administrator can only perform administrative task on pages they are privileged to access. Customers will not be allowed to access the administrator pages.

EFFICIENCY AND MAINTAINABILITY:

1. Page loads should be returned and formatted in a timely fashion depending on the request being made.

2. Administrators will have the ability to edit the aspects of the order forms, product descriptions, prices and website directly.

11. SOFTWARE REQUIREMENT SPECIFICATION

11.1 Requirements Specification:

Requirement Specification provides a high secure storage to the web server efficiently. Software requirements deal with software and hardware resources that need to be installed on a serve which provides optimal functioning for the application. These software and hardware requirements need to be installed before the packages are installed. These are the most common set of requirements defined by any operation system. These software and hardware requirements provide a compatible support to the operation system in developing an application.

11.2 HARDWARE REQUIREMENTS:

The hardware requirement specifies each interface of the software elements and the hardware elements of the system. These hardware requirements include configuration characteristics.

System : Intel Core i5

Hard Disk : 64 GB.

RAM : 4 GB.

11.3 SOFTWARE REQUIREMENTS:

The software requirements specify the use of all required software products like data management system. The required software product specifies the numbers and version. Each interface specifies the purpose of the interfacing software as related to this software product.

Operating system	:	Windows XP/7/10
Coding Language	:	HTML, Java Script, PHP
Development Kit	:	XAMPP
Database	:	MySQL
Server	:	Apache

12. DATABASE DESIGN

MySQL database management system is the most popular database system for Java web applications because of its speed, reliability, and flexibility. All the data generated by this application are managed on MySQL database system. All the tables (except admin and admin_roles) were generated by JPA based on the relationships that exist among the JPA entities defined for the application, and these relationships are clearly evidenced in the ER diagram. The admin and admin_roles tables were defined for authentication purpose. The following numbered list gives a brief explanation of these tables.

1. Category – Contains category data for the products.
2. Product – Contains product data.
3. Customer – Contains customer data.
4. Customer_order – Contains customer order information.
5. Order_line_item – Contains order line items information.
6. Customer_order_order_line_item – This is a bridge table automatically generated as a result of the one-to-many relationship that exists between customer_order and order_line_item tables.
7. Payment – This contains order payment data.
8. Sequence – Contains data used to automatically generate primary key values.
9. Email_subscriber – Contains email subscribers information.
10. Admin – Contains the administrator credentials for login (authentication) purpose.
11. Admin_roles – Contains roles data of admin.

13. ADVANTAGES

- Faster buying/selling procedure, as well as easy to find products.
- Buying/selling 24/7.
- More reach to customers, there is no theoretical geographic limitations.
- Low operational costs and better quality of services.
- No need of physical company set-ups.
- Easy to start and manage a business.
- Customers can easily select products from different providers without moving around physically.

14. CONCLUSION

The main objective of this thesis work was to develop an e-commerce Java web application for a small retail store where the store owner manages products, customers. Although all the requirements set out for the e-commerce web application have been met, there are still areas to improve on. A mobile version can be developed for the application so that users can have a better access to the application

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