ONLINE RETAIL MANAGEMENT SYSTEM

by

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This project report entitled "**ONLINE RETAIL MANAGEMENT SYSTEM**" is a bonafide work of SHASHANK. D (13BCE1036), HARSHWARDHAN AGARWAL (13BCE1052), NIKESH. S (13BCE1136) and KOUTIKA GOURAV (13BCE1068) carried out the Project work under the supervision and guidance of Prof. VISHNU PRIYA. We wish to express our sincere thanks and deep sense of gratitude to our project guide, Prof. VISHNU PRIYA, Professor, School of Computing Sciences and Engineering, for her consistent encouragement and valuable guidance offered to us in a pleasant manner throughout the course of the project work

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ABSTRACT

Online Retail Management Software is a software application to be developed for the use in any retail unit/shop. The software aims at computerizing all the activities related to the retail unit. It should be a comprehensive one to cover all the aspect of a retail shop.

The application has 13 modules consisting of several sub modules each:
Module 1: Supplier/Creditor Detail
Module 2: Customer/Debtor Detail
Module 3: Item Details
Module 4: Purchase
Module 5: Purchase Return
Module 6: Stock Maintenance
Module 7: Order Processing
Module 8: Sales
Module 9: Sales Return
Module 10: Accounts
Module 11: Query
Module 12: Reports
Module 13: Feedback

INTRODUCTION

Online Retail Management System is a form of electronic shopping store where the buyer is directly online to the seller's computer usually via the internet. There is no intermediary service. The sale and purchase transaction is completed electronically and interactively in real-time. The development of this new system contains the following activities, which try to develop on-line application by keeping the entire process in the view of database integration approach. User gets its email id and password to access their account.

Administrator of Online Retail Management System has multiple features such as Add, Delete, Update shopping Items.

Customer of Online Retail Management System has multiple features such as Sign up, Login, Shop online, Get an invoice.

Features of Online Retail Management System:

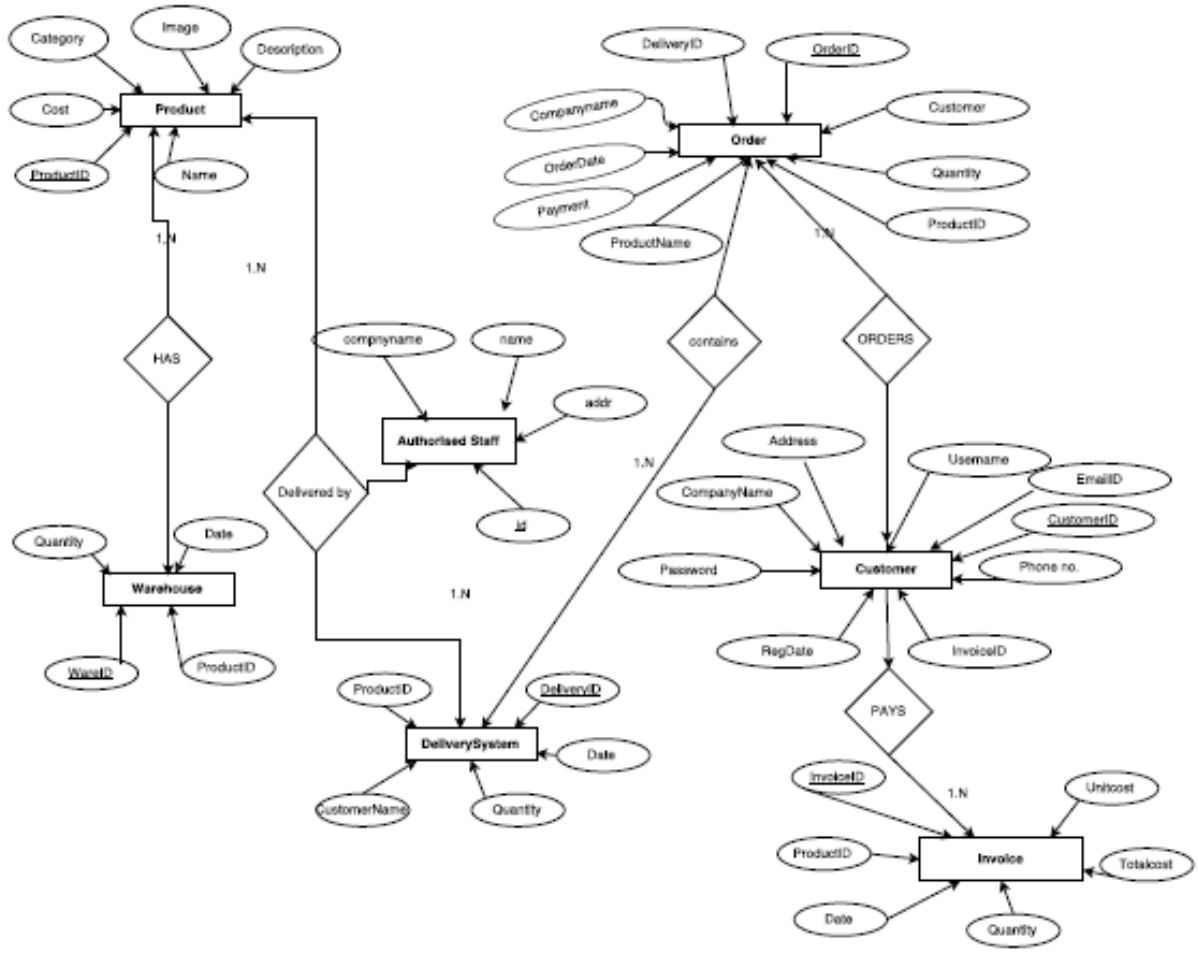
1. Secure registration and profile management facilities for Customers.
2. Browsing through the e-Mall to see the items that are there in each category of products like Apparel, Kitchen accessories,
   Bath accessories, Food items etc.
3. Creating a Shopping cart so that customer can Shop N number of items and checkout finally with the entire shopping cart

4. Customers should be able to mail the Shop about the items they would like to see in the Shop
5. Secured mechanism for checking out from the Shop (Credit card verification mechanism). Updates to customers about the Recent Items in the Shop.
6. Uploading Most Purchased Items in each category of products in the Shop like Apparel, Kitchen accessories, Bath accessories,
   Food items etc.

SQL

SQL stands for Structured Query Language. SQL is used to communicate with a database. According to ANSI (American National Standards Institute), it is the standard language for relational database management systems. SQL statements are used to perform tasks such as update data on a database, or retrieve data from a database. Some common relational database management systems that use SQL are: Oracle, Sybase, Microsoft SQL Server, Access, Ingres, etc. Although most database systems use SQL, most of them also have their own additional proprietary extensions that are usually only used on their system. However, the standard SQL commands such as "Select", "Insert", "Update", "Delete", "Create", and "Drop" can be used to accomplish almost everything that one needs to do with a database. This tutorial will provide you with the instruction on the basics of each of these commands as well as allow you to put them to practice using the SQL Interpreter.

ER DIAGRAM



MODULES

Our project consists of several modules namely,

- Administrator
    - Add a product
    - Modify a product
    - Delete a product
    - Search a product
- Customers
    - Login
    - Sign up
    - Shop products
    - Generate an invoice

Now we are going to see the various queries used in building these modules individually.

ESTABLISH CONNECTION WITH THE DATABASE:

```php
$row_count=0;
$host="localhost";
$user="harsh";
$password="";
$database="mydb";
$connect=mysqli_connect($host,$user,$password,$database);
if($connect)
        {//echo "<p align='center'>Connected to the server...!!";
        }
else
die(mysqli_error());

/*$select = mysql_select_db("mydb");
if($select)
        {//echo "<p align='center'>Selected Database...!!";
        }
else
die(mysql_error());*/
```

ADMINISTRATOR:

1) Add a product:

```php
$create = "CREATE TABLE product(
            p_id VARCHAR(30)  PRIMARY KEY,
            p_name VARCHAR(30) NOT NULL,
            p_cost INT(6) NOT NULL,
            p_category VARCHAR(30) NOT NULL,
            p_quantity INT(4) NOT NULL,
            p_description VARCHAR(150) NOT NULL
            )";

    $result = mysqli_query($connect,$create);
            if($result)
                echo " Table created...!!";
            else
                die(mysqli_error($connect));
```

```php
$insert = "INSERT INTO product (p_name, p_cost, p_category, p_quantity, p_description)
VALUES ('$pname', '$cost', '$category','$quantity', '$description')";
$result = mysqli_query($connect,$insert);
if($result)
echo " Your data is entered into the database...!!";
else
{
    // echo "Enter a unique Product ID";
    // exit();
    die(mysqli_error($connect));
}
```

2) Modify a product

```
$query = "SELECT*
            FROM product
            WHERE id='$mpid1'";

$result = mysqli_query($connect,$query) or die(mysqli_error());

while($rows = mysqli_fetch_assoc($result))
{
    $row_count++;
    extract($rows);
```

```
$update="UPDATE product
          SET id='$mpid2',
              p_name ='$mpname' ,
              p_cost ='$mcost' ,
              p_category ='$mcategory' ,
              p_quantity ='$mquantity' ,
              p_description ='$mdescription'
          WHERE id = '$mpid3' ";
$result=mysqli_query($connect,$update) or die(mysqli_error($connect));
if($result)
echo " <p align='center'>Your data is modified into the database...!!";
else
die(mysqli_error());
```

3) Delete a product

```
$query = "SELECT*
            FROM product
            WHERE p_id='$pid'";

$result = mysqli_query($connect,$query) or die(mysqli_error());
```

```
$delete = "DELETE FROM product
           WHERE p_id = '$pid'" ;
$result = mysqli_query($connect,$delete);
if($result)
{
echo "<p align='center'>Record Deleted..!!</p>";
```

4) Search a product

Searching is done based on productID,product Name,productCategory etc.

For example, if searching is done based on product name then the query would be:

```
$query = "SELECT*
            FROM product
            WHERE p_name='$spname'";

$result = mysqli_query($connect,$query) or die(mysqli_error());
```

CUSTOMERS

1) Sign up

```
$create = "CREATE TABLE customer(
    fname VARCHAR(30) NOT NULL,
    lname VARCHAR(30) NOT NULL,
    username VARCHAR(30) PRIMARY KEY NOT NULL,
    email VARCHAR(30) NOT NULL,
    phone BIGINT(10) NOT NULL,
    password VARCHAR(50) NOT NULL,
    address VARCHAR(50) NOT NULL
    )";

$result = mysqli_query($connect,$create);
if($result)
echo"table created";
else
die(mysqli_error($connect));

$data = "INSERT INTO customer VALUES
('$fname','$lname','$username','$email','$phone','$userpassword','$address'); ";

$result = mysqli_query($connect,$data);
if($result)
{
    echo "<p align='center'>Congratulations!! Your account have been created!!!<br>
```

2) Login

```
$myusername = mysqli_real_escape_string($connect,$_POST['username']);
$mypassword = mysqli_real_escape_string($connect,$_POST['password']);

// Retrieve username and password from database according to user's input
    $login = mysqli_query($connect, " SELECT email FROM customer WHERE username = '$myusername'
     and password = '$mypassword' ") or die(mysqli_error($connect));
```

3) **Shop products**

Displaying products categorywise

```
$query = "SELECT * FROM product WHERE p_category = 'beverages'";
$result = mysqli_query($connect,$query) or die(mysqli_error());
```

```
$query = "SELECT * FROM product WHERE p_category = 'snacks'";
$result = mysqli_query($connect,$query) or die(mysqli_error());
```

```
$query = "SELECT * FROM product WHERE p_category = 'Fruits&Vegetables'";
$result = mysqli_query($connect,$query) or die(mysqli_error());
```

```
$query = "SELECT * FROM product WHERE p_category = 'grocery'";
$result = mysqli_query($connect,$query) or die(mysqli_error());
```

```
$query = "SELECT * FROM product WHERE p_category = 'others'";
$result = mysqli_query($connect,$query) or die(mysqli_error());
```

Also "Recommendations" have been provided based on the past purchases of a particular customer:

```
$query = "SELECT *
FROM product
WHERE p_name = (SELECT product_name FROM invoice WHERE customer_email = '$email'
AND product_quantity = (SELECT max(product_quantity) FROM invoice WHERE customer_email = '$email'))";
```

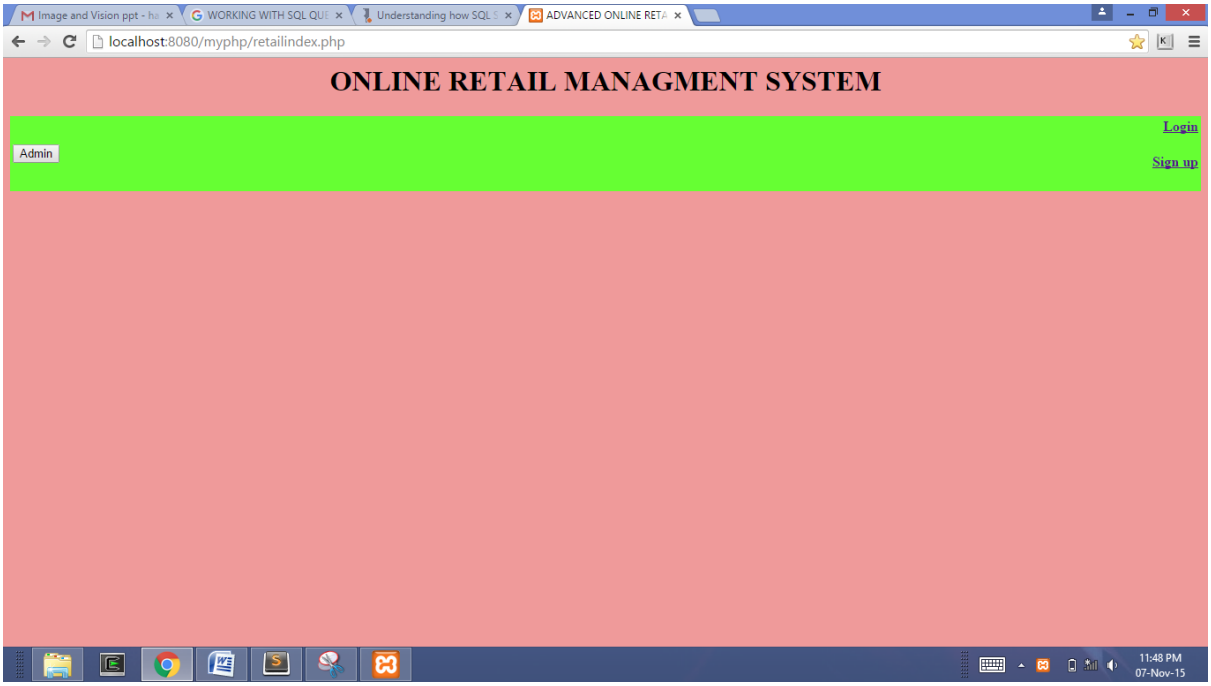
4) Generate an invoice

```
$create = "CREATE TABLE invoice(

                order_date DATE NOT NULL,
                customer_email VARCHAR(50) NOT NULL,
                product_name VARCHAR(30) NOT NULL,
                product_category VARCHAR(40) NOT NULL,
                product_cost INT(10) NOT NULL,
                product_quantity INT(10) NOT NULL,
                total_cost int(10) NOT NULL

                )";

            $result = mysqli_query($connect,$create);
            if($result)
            echo"table created";
            else
            die(mysqli_error($connect));
```

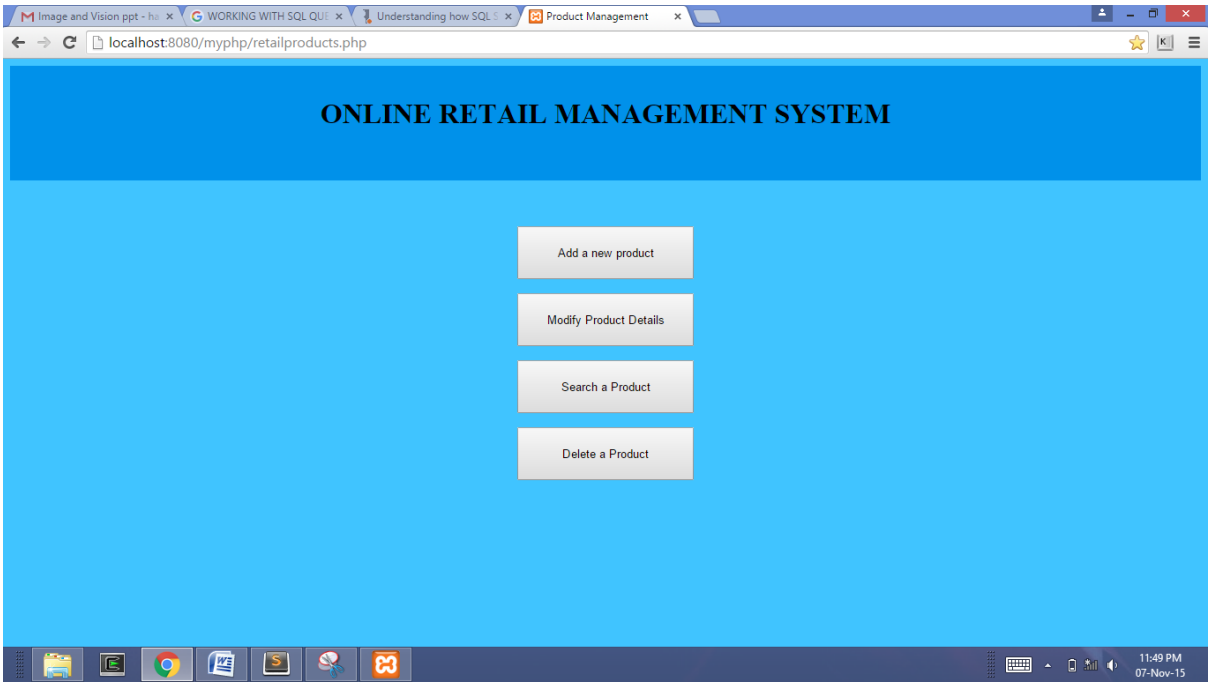
```
$query = "SELECT*
    FROM product
    WHERE id='$myid'";
$result = mysqli_query($connect,$query) or die(mysqli_error());

while($rows = mysqli_fetch_assoc($result))
    {
        extract($rows);
        $total = $p_cost * $myquantity;

        $query = "INSERT INTO invoice (order_date,customer_email,product_name,product_category,
        product_cost,product_quantity,total_cost) VALUES
        (now(),'$email','$p_name','$p_category',$p_cost,$myquantity,$total)";
        $result = mysqli_query($connect,$query);
        if($result)
        echo"RECORD ENTERED!!!";
        else
        die(mysqli_error($connect));

    }
```

OUTCOME

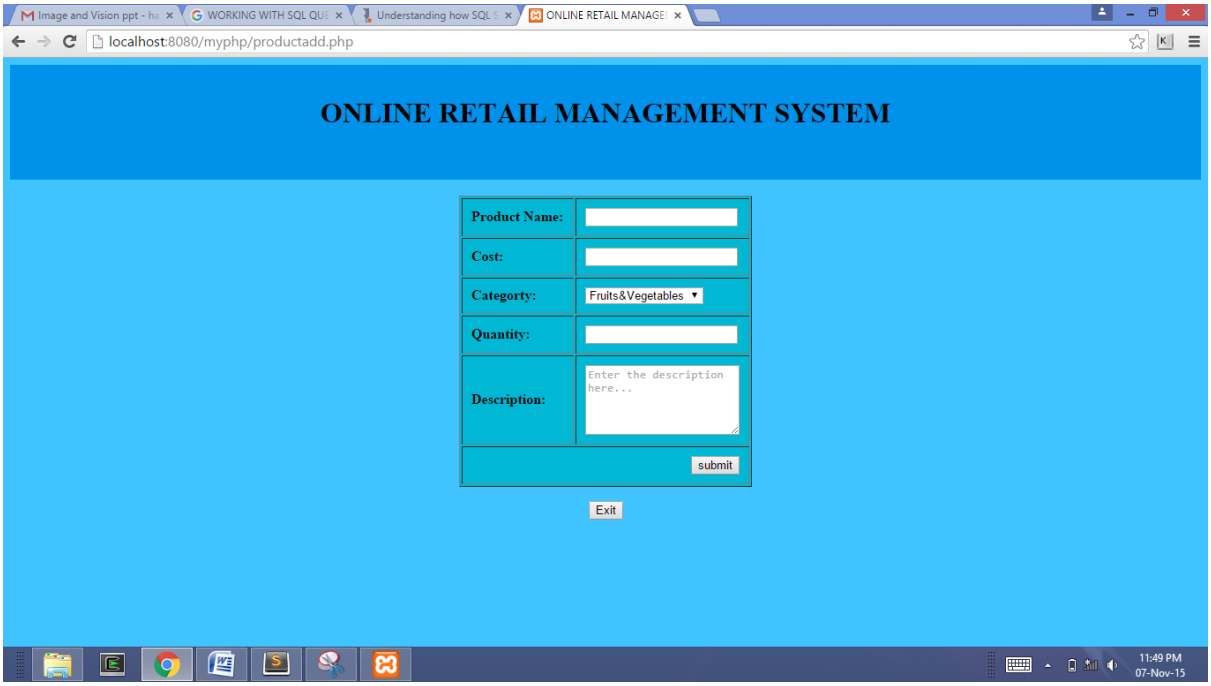
Index Page:



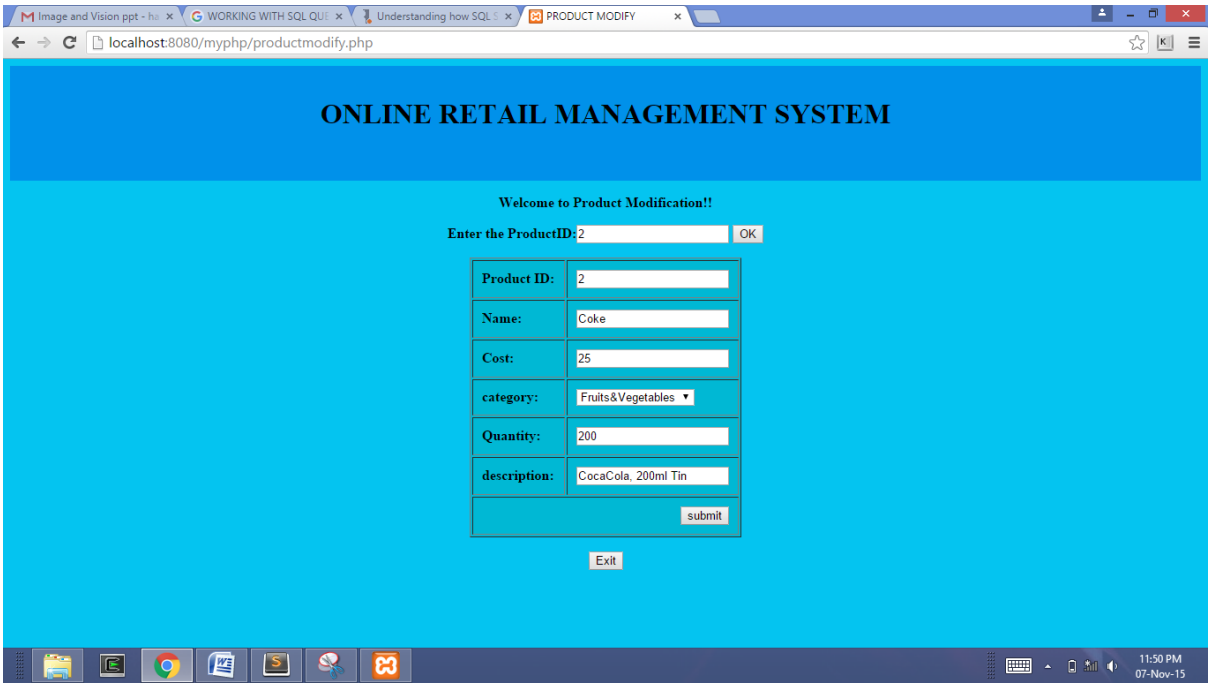
Admin Portal:



Add a product:

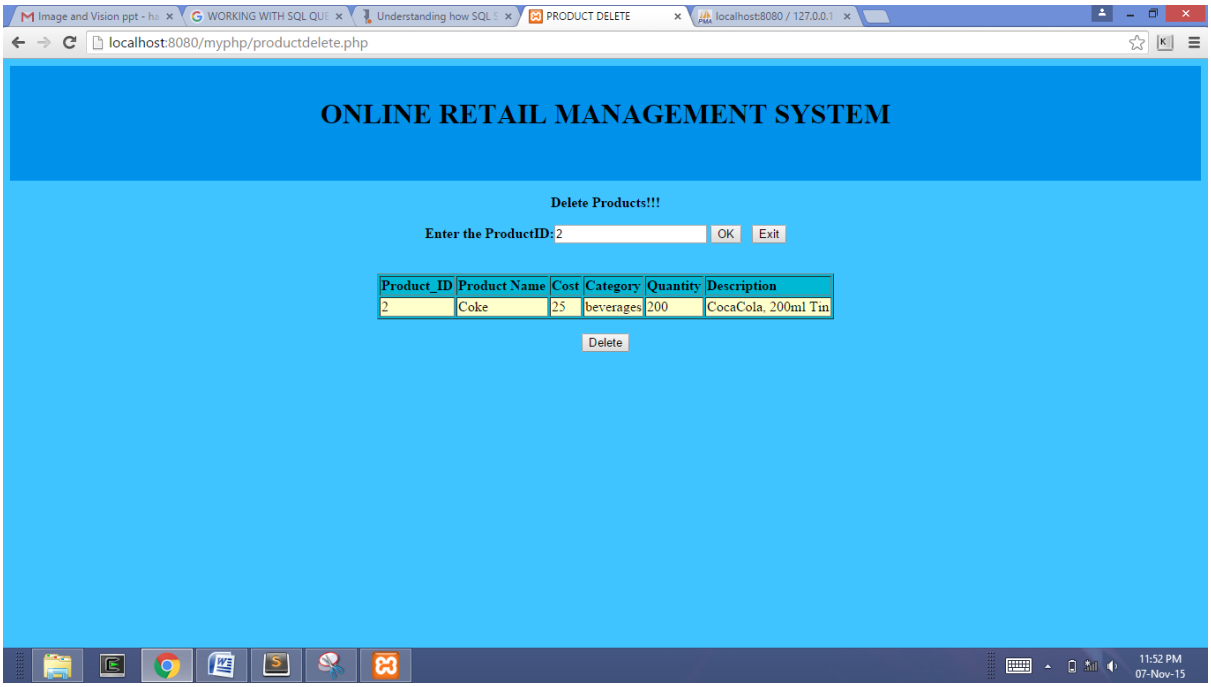


Modify a product:



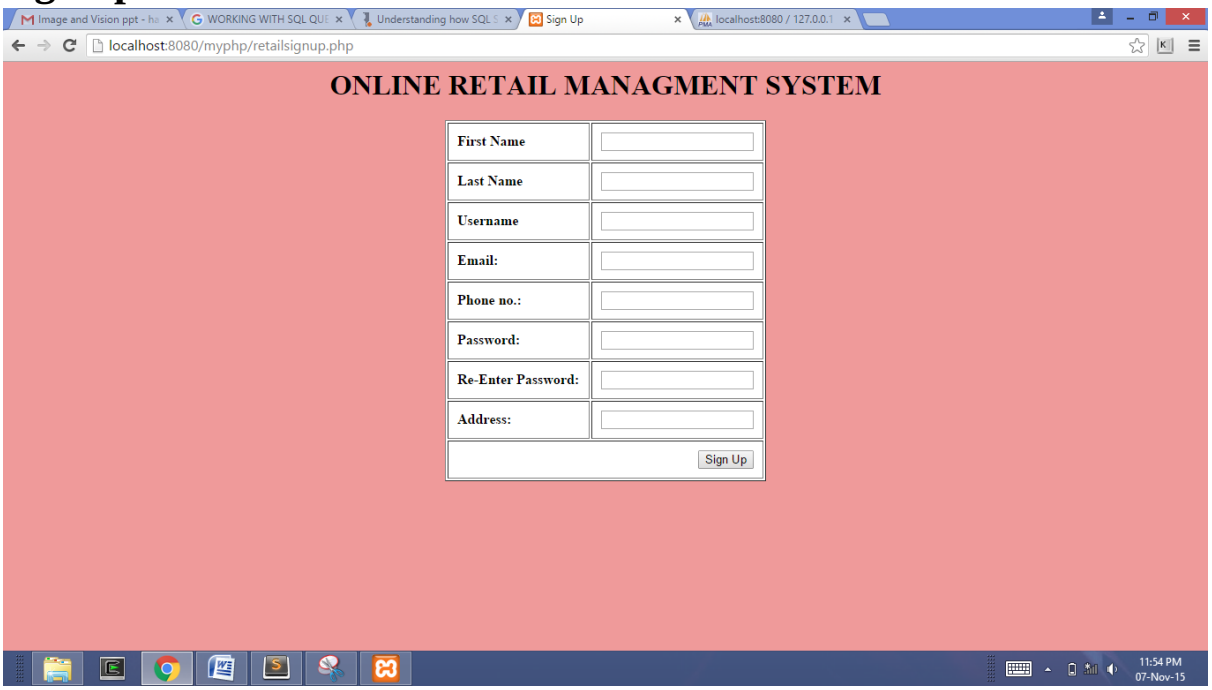
Search a product:

Delete a product:

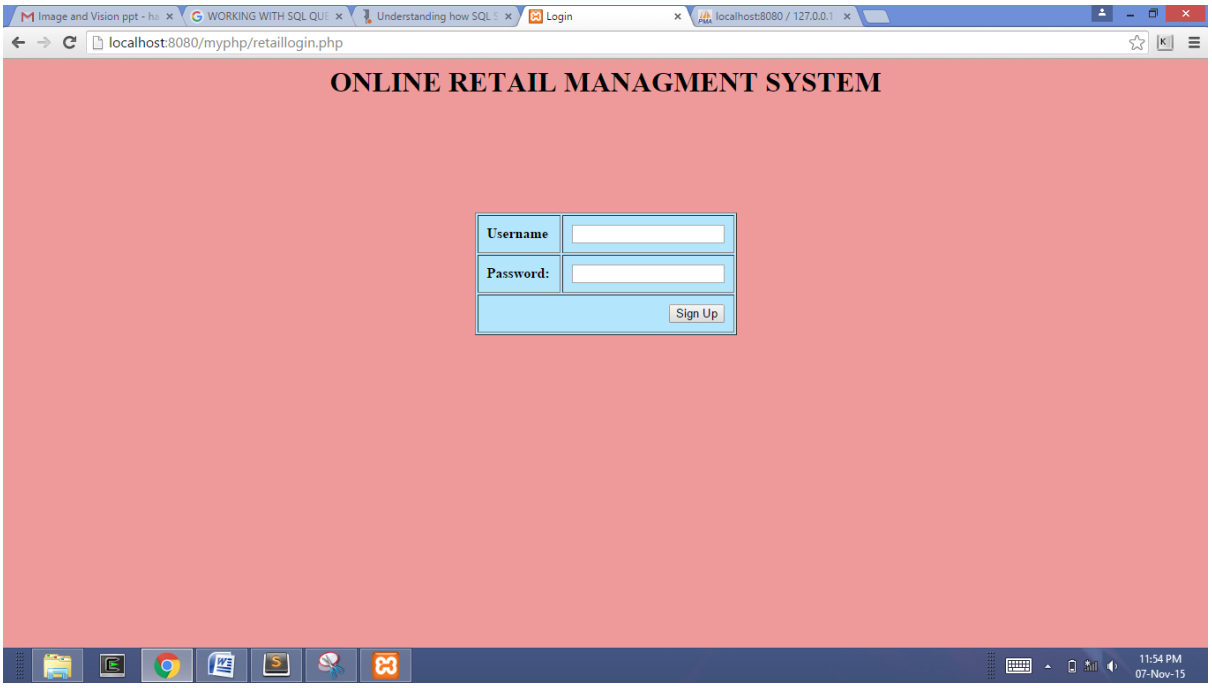


CUSTOMERS:

- **Sign up**

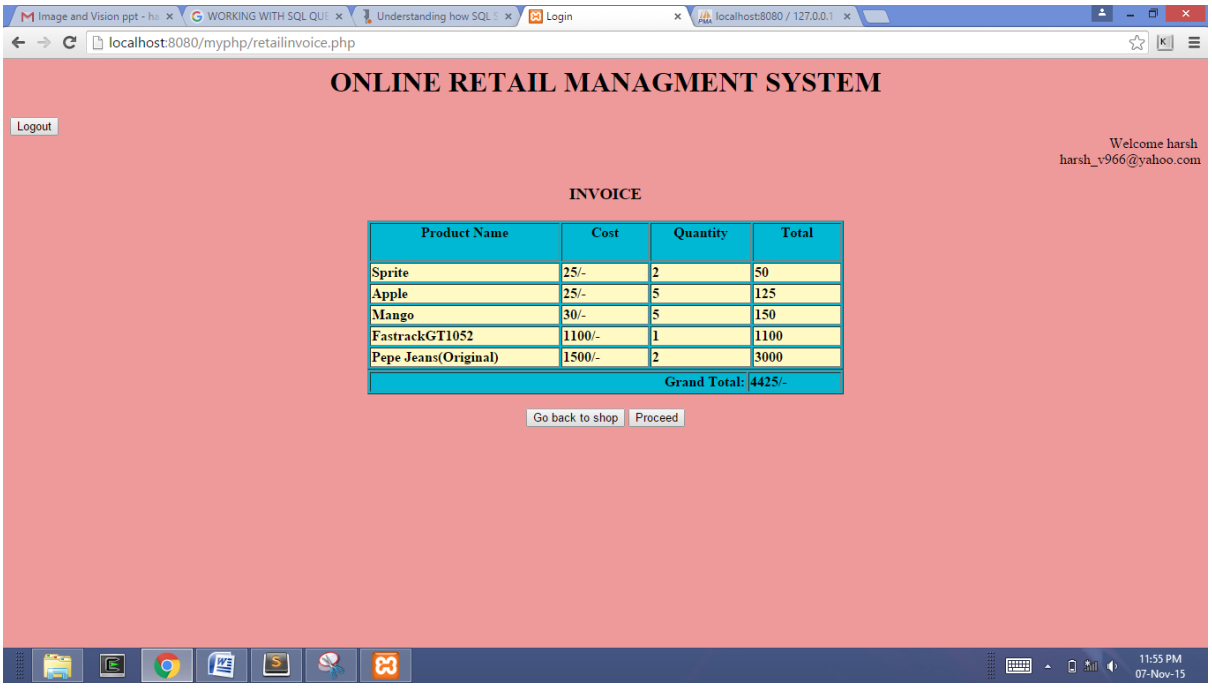


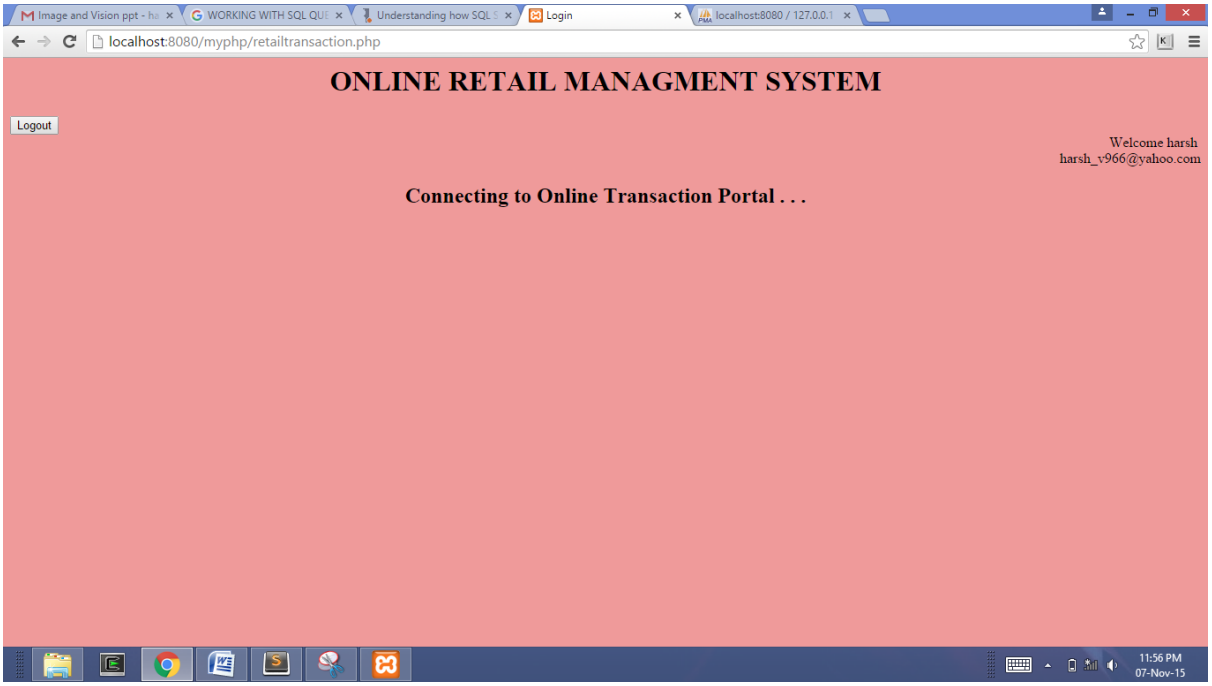
- **Login**



- **Product shop**

- **Invoice**





DIFFICULTY/CHALLENGES & LEARNING:

- Initial challenges involved understanding the functioning of SQL queries.
- Since we have made use of web development using PHP,HTML a firm knowledge these languages was required.
- Integrating all the admin and customer modules to work together through a common database and operate simultaneously over a common table.
- Designing SQL queries using PHP variables that helps us take direct input from the user.

FUTURE ADVANCEMENTS:

- **Administrator Side:**
  Tools can be built for the administrator to make analyzing the data easier. Tools such as **graph/chart generator** , **automatic query generator** can be built so as to serve this purpose.
- **Customer Side:**
  Recommendations can be made more accurate and precise to a particular customer by taking several other parameters into consideration such as Location, Age, Quantity, Cost, Frequent visit counter ,etc.
- **Warehouse** status can be analyzed by the administrator on the same portal by getting the warehouse details onto the database.

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