

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI, KARNATAKA**



Mini Project Report

On

“INVENTORY MANAGEMENT SYSTEM”

Submitted to

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

In partial fulfillment of the requirements for the award of degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE ENGINEERING

PROJECT ASSOCIATES

BHARGAVI U -3VC20CS036

DIVYA SHREE-3VC20CS044

Under the Guidance of

Mrs.APARNA K S

Assistant Professor , Dept of CSE



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

RAO BAHADUR Y.MAHABALESHWARAPPA COLLEGE OF ENGINEERING

(AFFILIATED TO VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI & APPROVED

BY AICTE & ACCREDITED BY NBA, NEW DELHI)

BALLARI - 583104, KARNATAKA

2022-2023

VEERASHAIVA VIDYAVARDHAKA SANGHA'S

RAO BAHADUR Y MAHABALESHWARAPPA ENGINEERING COLLEGE

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C E R T I F I C A T E

Certified that the Mini Project work entitled **"INVENTORY MANAGEMENT SYTSEM"** carried out by **BHARGAVI U(3VC20CS036), DIVYA SHREE(3VC20CS044)** are bonafide students of **Rao Bahadur Y.Mahabaleswarappa College of Engineering** in partial fulfillment for the award of **Bachelor of Engineering in Computer Science Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2022-2023**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The Mini project report has been approved as it satisfies the academic requirements in respect of Mini Project work prescribed for the said Degree.

Signature of the Project Guide

Mrs. APARNA K S
Assistant Professor ,Dept of CSE

Signature of the HOD

Dr. H. GIRISHA
HOD, Dept of CSE

External viva

Name of the Examiners

Signature with date

1. _____

2. _____

| CO No | | Description | | | | | | | | | | | | |
|--------|-----------------|--|---|---|---|---|---|---|---|----|----|----|------------------|----|
| C308.1 | | Use DDL and DML commands for database creation and manipulation. | | | | | | | | | | | | |
| C308.2 | | Demonstrate the working of different concepts of DBMS | | | | | | | | | | | | |
| C308.3 | | Use SQL commands for processing the queries. | | | | | | | | | | | | |
| C308.4 | | Implement, analyse and evaluate the project developed for an application | | | | | | | | | | | | |
| CO | Program Outcome | | | | | | | | | | | | Specific Outcome | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | S1 | S2 |
| 1 | 2 | 3 | 3 | | 3 | 2 | | | | | 2 | | | 2 |
| 2 | 2 | 2 | | | 3 | 2 | | | | | 2 | | | 2 |
| 3 | 2 | 2 | 3 | 2 | 3 | 2 | | | 3 | 2 | 2 | | | 2 |
| AVG | 2 | 2.3 | 3 | 2 | 3 | 2 | | | 3 | 2 | 2 | | | 2 |

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Project associates:

BHARGAVI U(3VC20CS036)
DIVYA SHREE(3VC20CS044)

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Chapter 1: INTRODUCTION

“INVENTORY MANAGEMENT SYSTEM” Inventory management system which is helpful for the business operators, where shopkeeper keep the records of purchase and sales. Mismanaged inventory means disappointed customers, too much cash tied up in slower sale and warehouses. This inventory is eliminate paper work, human faults, manual delay and speed up process. This inventory management system will have the ability to track sales and available inventory, tells a shopkeeper when it's time to reorder and how much to purchase. Inventory management system is windows application developed for windows operating systems which focused in the area of inventory control and generate. The software is made up of two parts: The frontend is developed using Microsoft Visual basic 2010 and the Backend from SQL server Database 2008. Keywords: Database, Inventory, public, software.

This simple project is a **Simple Inventory Management System**. This is a web-based application project developed in **PHP** and **MySQL Database**. This project's main goal is to provide certain shops, stores, or any business with an online platform to manage their **Inventory or Product Stock**. The application helps the business to easily store, retrieve, and monitor their product stock. It has a simple and pleasant user interface with the help of **Bootstrap 5 Framework** and **jQuery** that also gives the management or end-users a better experience while using the application. This project is consists of user-friendly features and functionalities

Chapter 2 : SOFTWARE REQUIREMENTS

Requirement are major source to develop a project.

Here the number and specifications of the bikes are mentioned by the dealer,

The user gives his info to the dealer while logging in the system, this is used while booking.

An estimate cost of the bike's rent can be shown.

The database must store the details such as number and email of the. It must ensure that it is accessible only for the authorized users of the system.

And all the requirement are identified it then analyzed to understand the problem, thus implementation of the requirements can be done.

2.1 Functional requirement:

2.1.1 Admin:

This module brings about the administrator to enter the designation It helps in adding of products and product brands and other information.

2.1.2 Login form:

This module is very much of importance.

This module is useful in authorizing the user.

This prevents malicious user to access the database.

It is only accessed by the admin.

2.2 Non-Functional requirement:

2.2.1 Performance requirements

The overall system should be fast and error free.

It should have error checking facilities.

The system should be able to handle large amount of data.

It should be user friendly.

2.2.2 Reliability:

In order to ensure reliability, the system is designed using software that is established to be stable and easy to use.

It should handle invalid inputs without crashing.

2.2.3 Availability:

The system is designed to run anytime, and is readily available for the user.

Run on any system supporting the software used in this project.

2.2.4 Security:

The access of the software is given only to valid operators. The specific ID and password is used to get access the software.

Unauthorized user is denied of using the software.

Chapter 3 : DESIGN

After the requirements are collected and analyzed, we create a schema for the database.

Schema Diagram:

Brand table

| | | | |
|----|-------------|--------|--------|
| Id | Category id | b name | status |
|----|-------------|--------|--------|

Category table

| | | |
|-------------|------|--------|
| category id | Name | Status |
|-------------|------|--------|

Customer table

| | | | | |
|----|------|---------|--------|---------|
| Id | name | address | mobile | Balance |
|----|------|---------|--------|---------|

Order table

| | | | | |
|----------|------------|---------------|-------------|------------|
| Order_id | Product_id | Total_shipped | Customer_id | Order_date |
|----------|------------|---------------|-------------|------------|

Product table

| | | | | | | | | |
|-----|------------|---------|-------|-------|-------------|----------|------|------------|
| pid | categoryid | grandid | pname | model | description | quantity | unit | Base_price |
|-----|------------|---------|-------|-------|-------------|----------|------|------------|

| | | | | |
|-----|---------------|----------|--------|------|
| Tax | Minimum_order | supplier | status | date |
|-----|---------------|----------|--------|------|

Purchase table

| | | | | |
|-------------|-------------|------------|----------|------------|
| Purchase_id | Supplier_id | Product_id | quantity | Purchse_id |
|-------------|-------------|------------|----------|------------|

Supplier table

| | | | | |
|-------------|---------------|--------|---------|--------|
| Supplier_id | Supplier_name | mobile | address | status |
|-------------|---------------|--------|---------|--------|

User table

| | | | | | |
|--------|-------|----------|------|------|--------|
| Userid | email | Password | name | type | Status |
|--------|-------|----------|------|------|--------|

Fig : SCHEMA DIAGRAM

Entity-Relation Diagram:

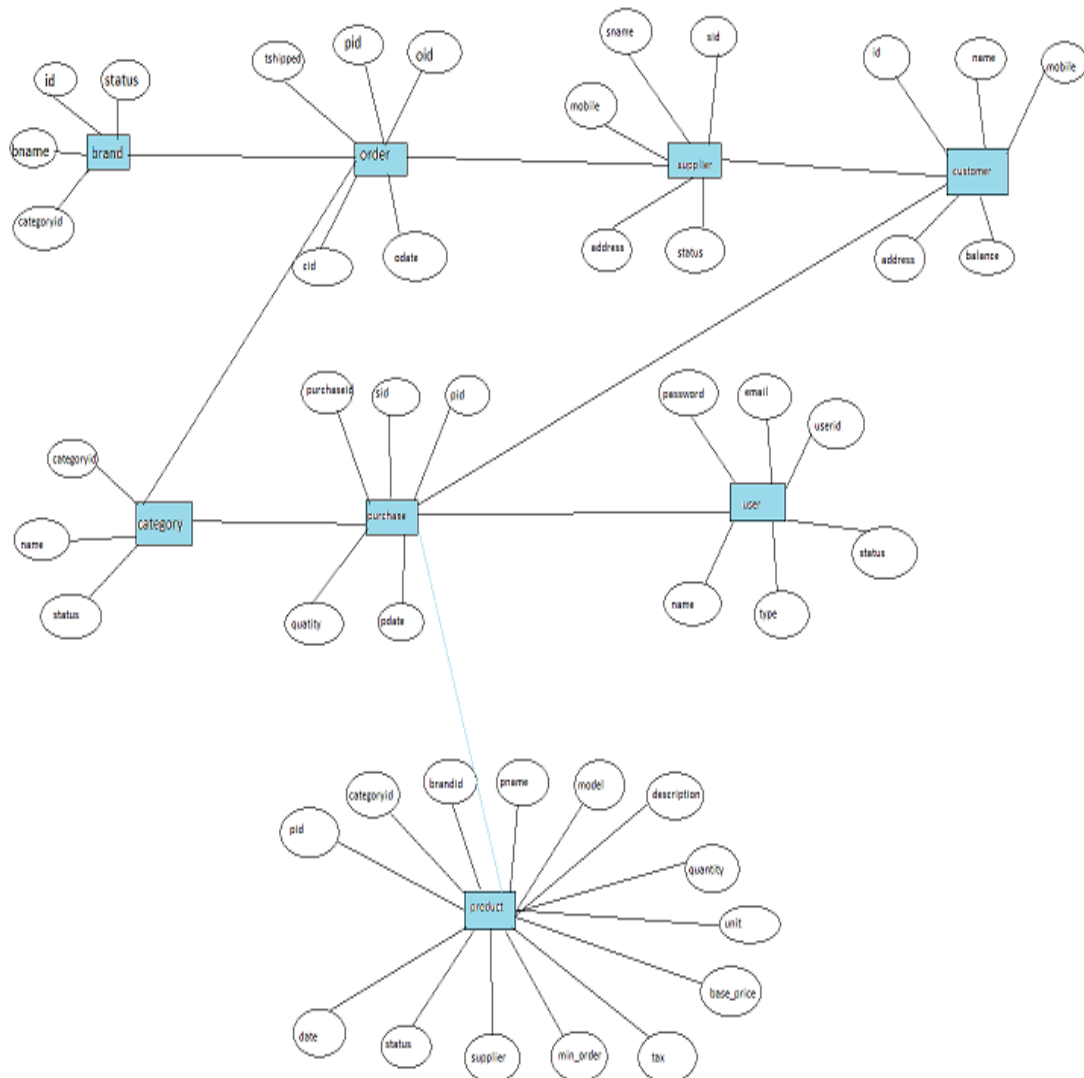


Fig : ER-DIAGRAM

Chapter 4: IMPLEMENTATION

It is an important process of development. Consisting of the following modules:

4.1 Login:

- Administrator logs into the system with validated credentials.
- The credentials of Admin includes valid username and password.
- After logging in Administrator can access the system, he/she can perform various operation.

4.2 Home Page:

- After the admin enters into the system. Home Page is displayed.
- It consists of welcome page and other information about page. The Module is used to jump to different tables.
- A disclaimer is displayed on home page. The navigation bar contains links to other modules, so that the admin can perform required operation.

4.3 Customer Details:

- This module is connected with the customer table of the database.
- It contains all the details regarding the customer or viewer. The details include name, address, gender, phone number, email

Chapter 5: TESTING

Testing can be vital for as to incur any if all discrepancy or problems with the software and take necessary precautions and make changes as possible. Testing is vital before rolling out or implementing the software

5.1 Test 1:

Case Description: Check response when valid user id and password is entered.

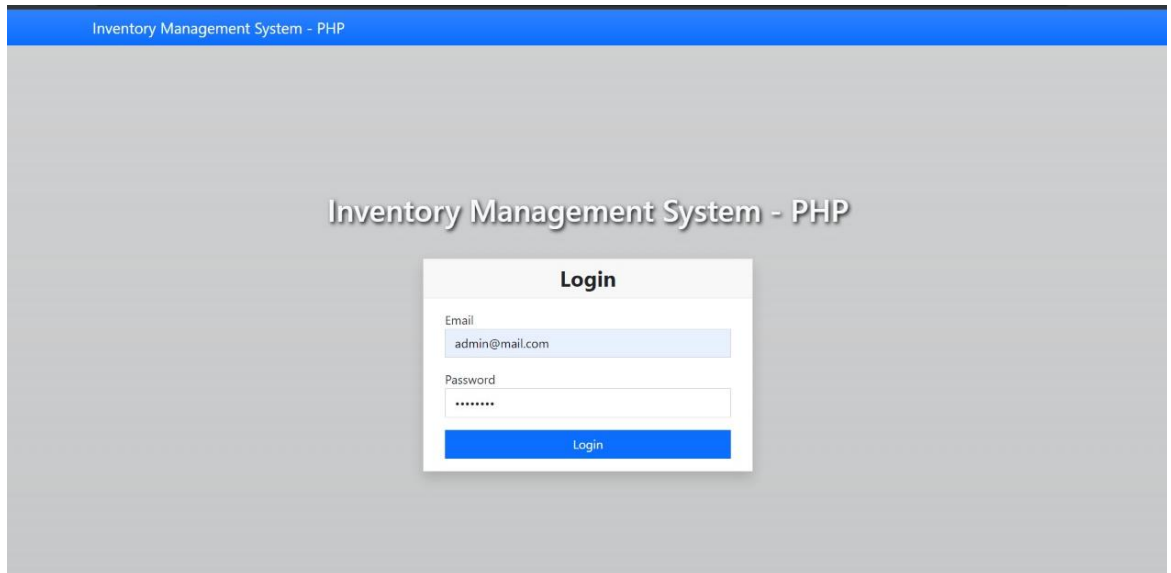
Test data :username-admin@mail.com,

password-admin123

Expected result: Login should be successful.

Actual result: Login was successful.

Test Pass/Fail: Pass.



5.2 Test 2:

Case Description: Check response when invalid or unauthenticated user id and password is entered.

Test data: username- admin@mial.com,

password-12453

Expected result: Login should be failed.

Actual result: login is failed.

Test Pass/Fail: Pass.

Inventory Management System - PHP

Inventory Management System - PHP

Login

Invalid email or password!

Email

admin@mail.com

Password

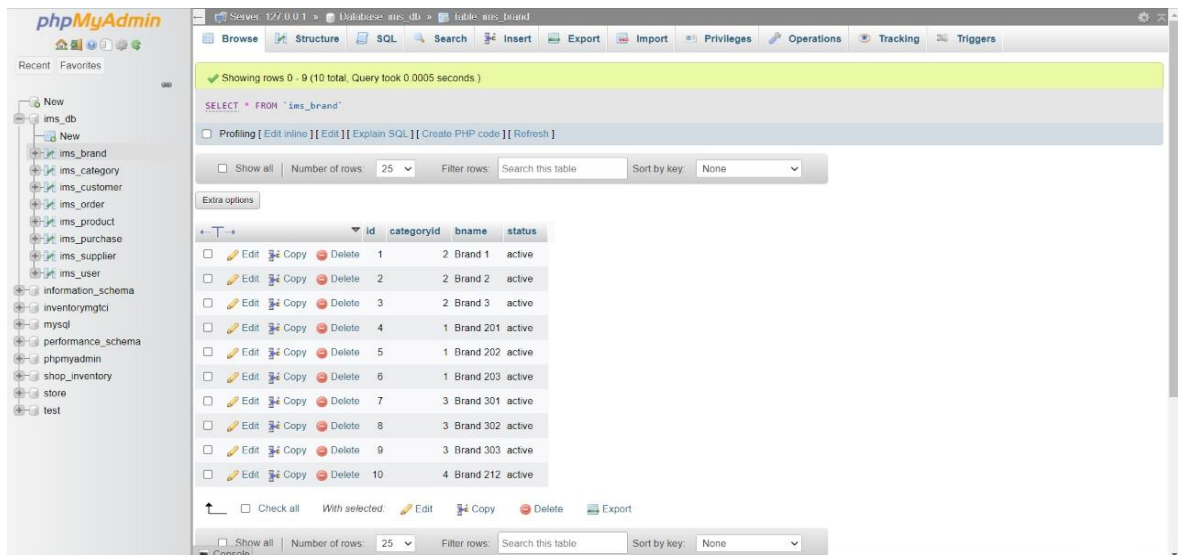
Password

Login

Chapter 6 : TABLES

All the tables used in the project are shown here.

6.1 Brand list table:

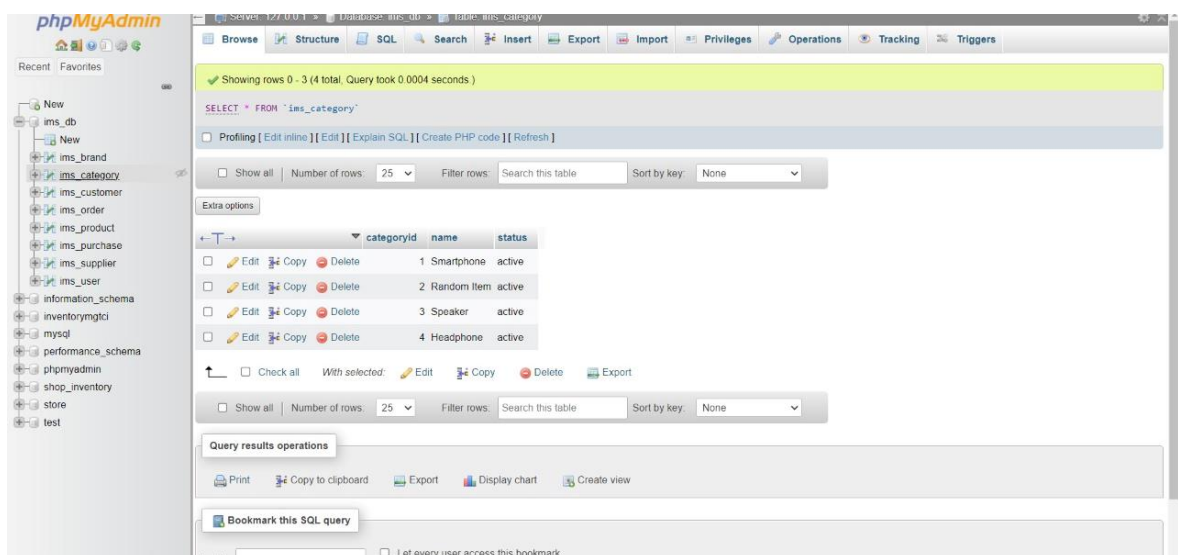


The screenshot shows the phpMyAdmin interface for the 'ims_db' database. The 'ims_brand' table is selected, and the 'Browse' tab is active. The table structure is shown as follows:

| id | categoryid | bname | status |
|----|------------|-----------|--------|
| 1 | 2 | Brand 1 | active |
| 2 | 2 | Brand 2 | active |
| 3 | 2 | Brand 3 | active |
| 4 | 1 | Brand 201 | active |
| 5 | 1 | Brand 202 | active |
| 6 | 1 | Brand 203 | active |
| 7 | 3 | Brand 301 | active |
| 8 | 3 | Brand 302 | active |
| 9 | 3 | Brand 303 | active |
| 10 | 4 | Brand 212 | active |

Fig : Brand list Table

6.2 Category list table

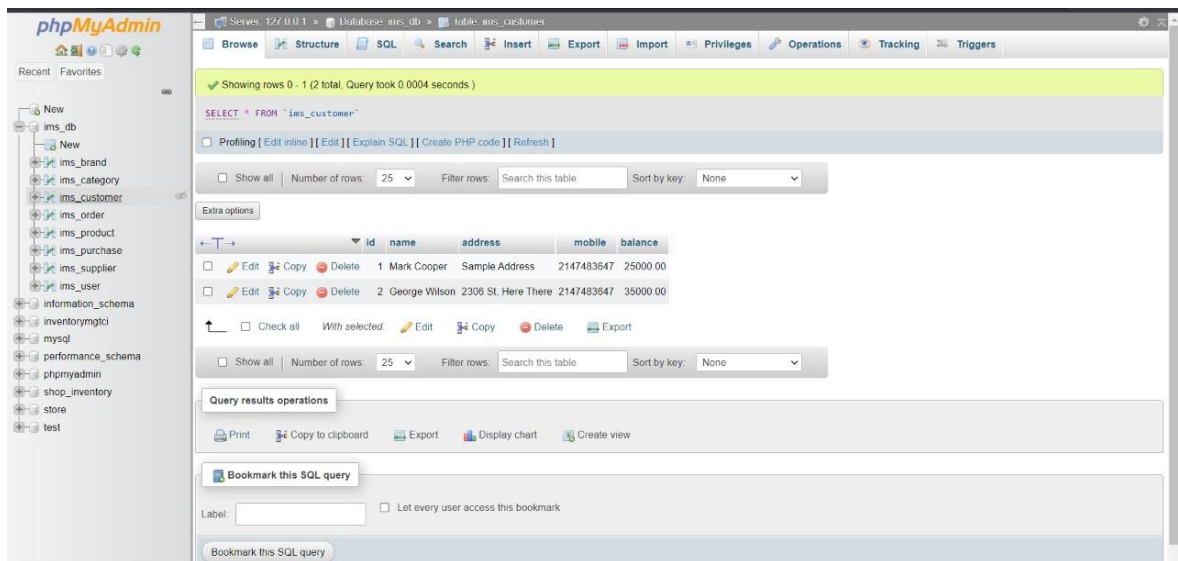


The screenshot shows the phpMyAdmin interface for the 'ims_db' database. The 'ims_category' table is selected, and the 'Browse' tab is active. The table structure is shown as follows:

| categoryid | name | status |
|------------|-------------|--------|
| 1 | Smartphone | active |
| 2 | Random Item | active |
| 3 | Speaker | active |
| 4 | Headphone | active |

Fig : Category list Table

6.3 Customer table:



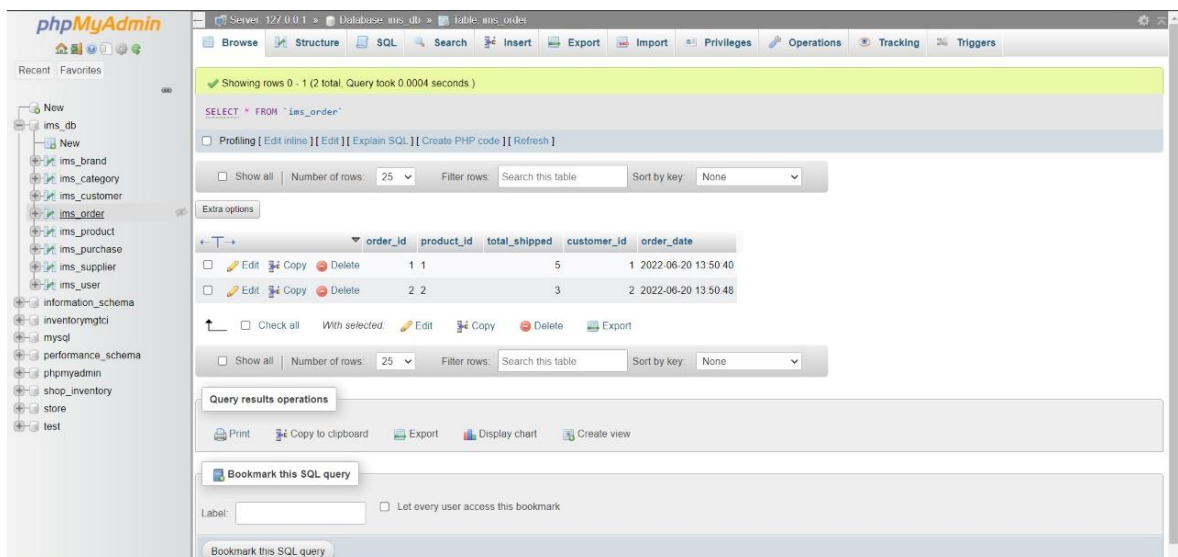
The screenshot shows the phpMyAdmin interface for the 'ims_db' database. The 'ims_customer' table is selected, displaying 2 rows. The table structure is as follows:

| id | name | address | mobile | balance |
|----|---------------|---------------------|------------|----------|
| 1 | Mark Cooper | Sample Address | 2147483647 | 25000.00 |
| 2 | George Wilson | 2306 St. Here There | 2147483647 | 35000.00 |

The interface includes a left sidebar with a database tree, a top navigation bar with tabs like 'Browse', 'Structure', 'SQL', etc., and a main content area with query results, filtering options, and a 'Bookmark this SQL query' section.

Fig : Customer Table

6.4 Order list table:



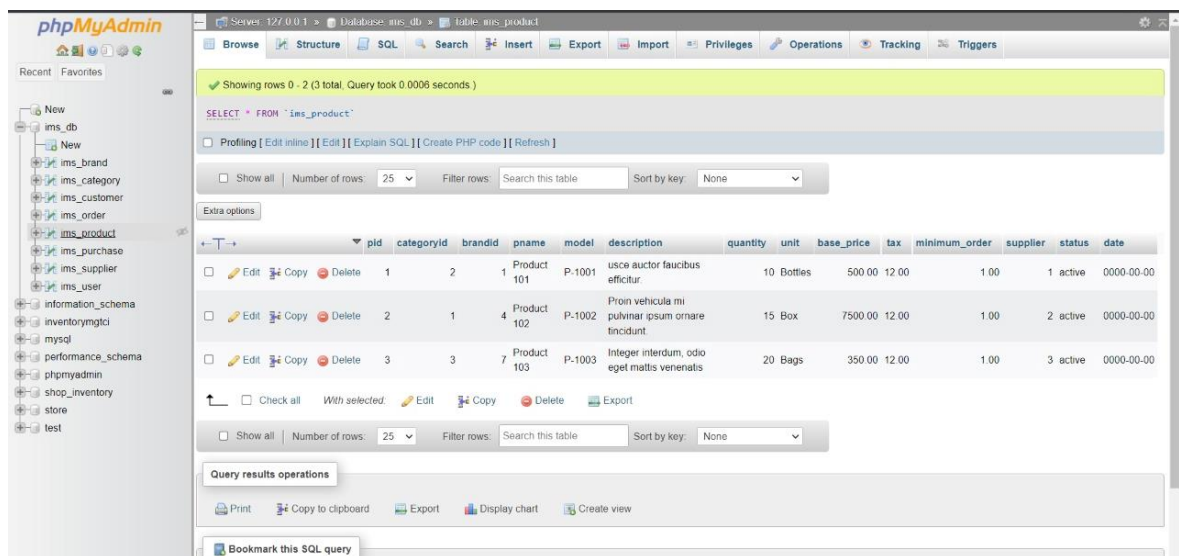
The screenshot shows the phpMyAdmin interface for the 'ims_db' database. The 'ims_order' table is selected, displaying 2 rows. The table structure is as follows:

| order_id | product_id | total_shipped | customer_id | order_date |
|----------|------------|---------------|-------------|---------------------|
| 1 | 1 | 5 | 1 | 2022-06-20 13:50:40 |
| 2 | 2 | 3 | 2 | 2022-06-20 13:50:48 |

The interface includes a left sidebar with a database tree, a top navigation bar with tabs like 'Browse', 'Structure', 'SQL', etc., and a main content area with query results, filtering options, and a 'Bookmark this SQL query' section.

Fig : Order list Table

6.5 Product table:

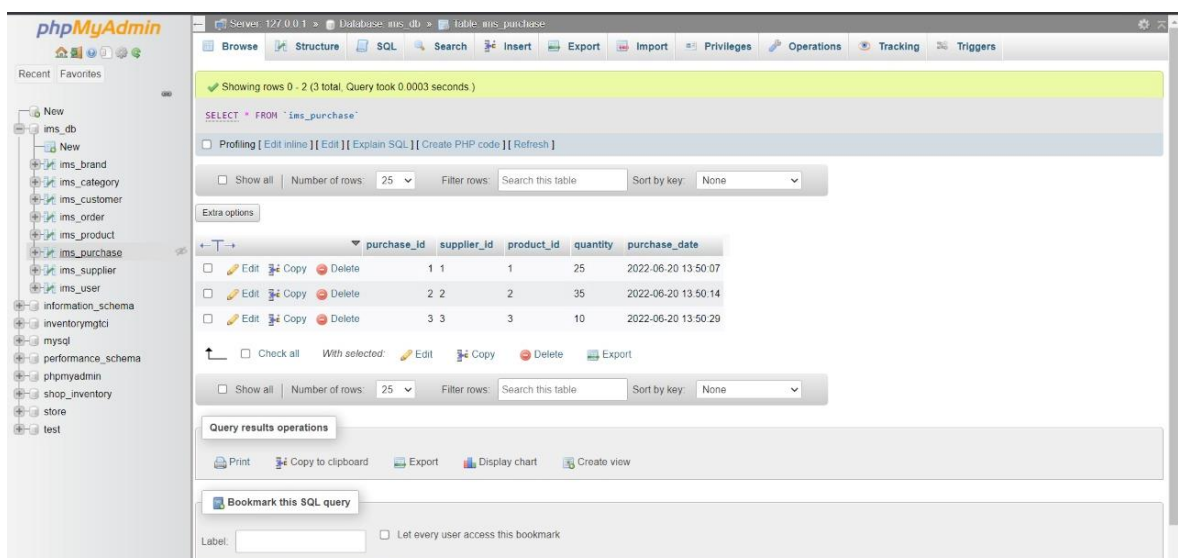


The screenshot shows the phpMyAdmin interface for the 'ims_db' database, specifically the 'ims_product' table. The table structure is displayed with columns: pid, categoryid, brandid, pname, model, description, quantity, unit, base_price, tax, minimum_order, supplier, status, and date. The table contains three rows of data.

| pid | categoryid | brandid | pname | model | description | quantity | unit | base_price | tax | minimum_order | supplier | status | date |
|-----|------------|---------|-------------|--------|--|----------|---------|------------|-------|---------------|----------|--------|------------|
| 1 | 2 | 1 | Product 101 | P-1001 | usce auctor faucibus efficitur | 10 | Bottles | 500.00 | 12.00 | 1.00 | 1 | active | 0000-00-00 |
| 2 | 1 | 4 | Product 102 | P-1002 | Pron vehicula mi pulvinar ipsum ornare tincidunt | 15 | Box | 7500.00 | 12.00 | 1.00 | 2 | active | 0000-00-00 |
| 3 | 3 | 7 | Product 103 | P-1003 | Integer interdum, odio eget mattis venenatis | 20 | Bags | 350.00 | 12.00 | 1.00 | 3 | active | 0000-00-00 |

Fig : Product list Table

6.6 Purchase table:



The screenshot shows the phpMyAdmin interface for the 'ims_db' database, specifically the 'ims_purchase' table. The table structure is displayed with columns: purchase_id, supplier_id, product_id, quantity, and purchase_date. The table contains three rows of data.

| purchase_id | supplier_id | product_id | quantity | purchase_date |
|-------------|-------------|------------|----------|---------------------|
| 1 | 1 | 1 | 25 | 2022-06-20 13:50:07 |
| 2 | 2 | 2 | 35 | 2022-06-20 13:50:14 |
| 3 | 3 | 3 | 10 | 2022-06-20 13:50:29 |

Fig : Purchase list Table

6.7 Supplier list table

Showing rows 0 - 2 (3 total). Query took 0.0006 seconds.

```
SELECT * FROM `ims_supplier`
```

Number of rows: 25 Filter rows: Search this table Sort by key: None

| | supplier_id | supplier_name | mobile | address | status |
|--------------------------|-------------|---------------|--------------|----------------|--------|
| <input type="checkbox"/> | 1 | Supplier 101 | 09645987123 | Over Here | active |
| <input type="checkbox"/> | 2 | Supplier 102 | 094568791252 | Over There | active |
| <input type="checkbox"/> | 3 | Supplier 103 | 09789897879 | Anywhere There | active |

Query results operations: Print, Copy to clipboard, Export, Display chart, Create view

Bookmark this SQL query

Fig : Supplier list table

6.8 User list table

Showing rows 0 - 0 (1 total). Query took 0.0005 seconds.

```
SELECT * FROM `ims_user`
```

Number of rows: 25 Filter rows: Search this table

| | userid | email | password | name | type | status |
|--------------------------|--------|----------------|----------------------------------|---------------|-------|--------|
| <input type="checkbox"/> | 1 | admin@mail.com | 0192023a7bbd73250516f069df18b500 | Administrator | admin | Active |

Query results operations: Print, Copy to clipboard, Export, Display chart, Create view

Bookmark this SQL query

Fig : User list table

Chapter 7 : SCREENSHOTS

Screenshots show how the user end perceives the software

7.1 Login page:

This is where the user enters the login credentials

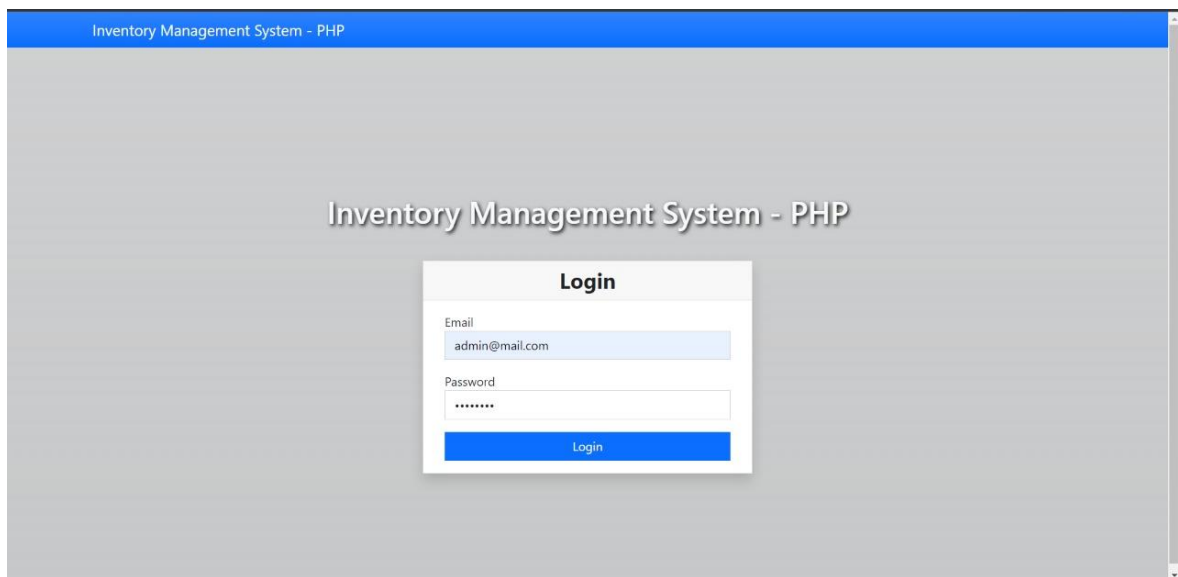


Fig : Login page

7.2 Wrong login page:

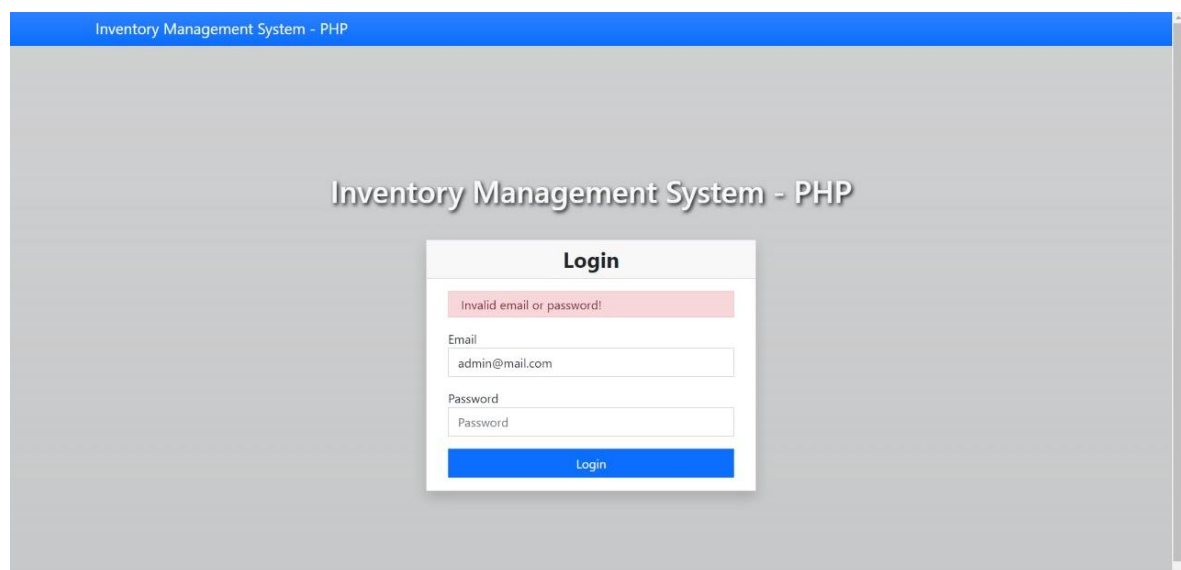


Fig : wrong login page

7.3 Home page:

Inventory Management System - PHP

Home Customer Category Brand Supplier Product Purchase Orders Administrator

Inventory

Search:

| # | Product/Code | Starting Inventory | Inventory Recieved | Inventory Shipped | Inventory on Hand |
|---|-----------------------|--------------------|--------------------|-------------------|-------------------|
| 1 | Product 103 P-1003 | 20 | 10 | 0 | 30 |
| 2 | Product 102 P-1002 | 15 | 35 | 3 | 47 |
| 3 | Product 101 P-1001 | 10 | 25 | 5 | 30 |

Showing 1 to 3 of 3 entries

Previous 1 Next

Fig : Home Page

7.4 Customer Page:

Inventory Management System - PHP

Home Customer Category Brand Supplier Product Purchase Orders Administrator

Customer List

[New Customer](#)

Search:

| ID | Name | Address | Mobile | Balance | Action |
|----|---------------|---------------------|------------|-----------|---|
| 2 | George Wilson | 2306 St, Here There | 2147483647 | 35,000.00 | Edit Delete |
| 1 | Mark Cooper | Sample Address | 2147483647 | 25,000.00 | Edit Delete |

Showing 1 to 2 of 2 entries

Previous 1 Next

Fig : Customer Page

7.5 Category Page:

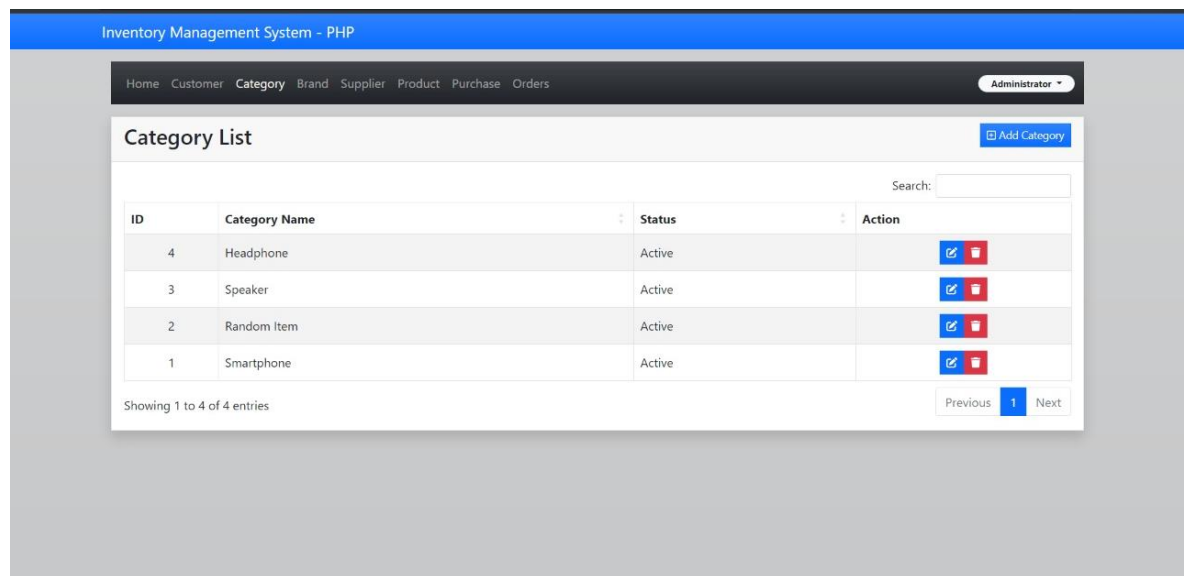


Fig : Category Page

7.6 Brand Page:

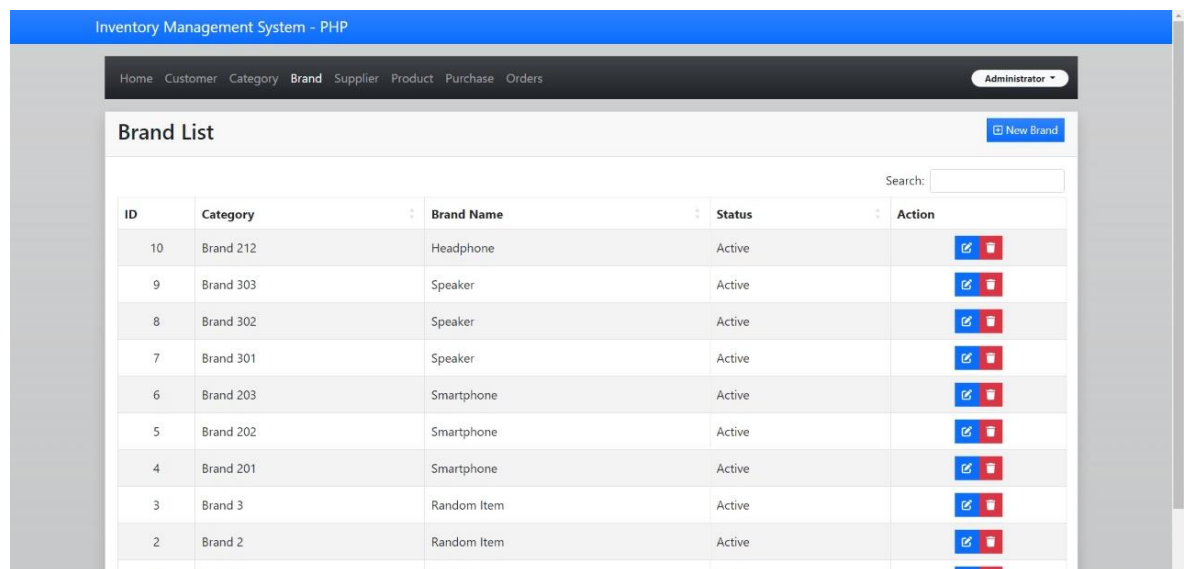


Fig : Brand Page

7.7 Supplier Page:

The screenshot shows the 'Supplier List' page of an 'Inventory Management System - PHP'. The page has a blue header with the system name and a navigation bar with links: Home, Customer, Category, Brand, Supplier, Product, Purchase, and Orders. The 'Supplier' link is active. A user dropdown shows 'Administrator'. Below the navigation bar, there's a 'Supplier List' title and an 'Add Supplier' button. A search bar is present. The main content is a table with columns: ID, Name, Mobile, Address, Status, and Action. It lists three suppliers. At the bottom, it says 'Showing 1 to 3 of 3 entries' and has pagination controls for 'Previous', '1', and 'Next'.







| ID | Name | Mobile | Address | Status | Action |
|----|--------------|--------------|----------------|--------|---|
| 3 | Supplier 103 | 09789897879 | Anywhere There | Active |   |
| 2 | Supplier 102 | 094568791252 | Over There | Active |   |
| 1 | Supplier 101 | 09645987123 | Over Here | Active |   |

Fig : Supplier Page

7.8 Product Page:

The screenshot shows the 'Product List' page of the 'Inventory Management System - PHP'. The navigation bar is similar to the previous page, but the 'Product' link is active. The 'Product List' title and 'Add Product' button are present. A search bar is also there. The table has columns: ID, Category, Brand Name, Product Name, Product Model, Quantity, Supplier Name, Status, and Action. It lists three products. At the bottom, it says 'Showing 1 to 3 of 3 entries' and has pagination controls for 'Previous', '1', and 'Next'.










| ID | Category | Brand Name | Product Name | Product Model | Quantity | Supplier Name | Status | Action |
|----|-------------|------------|--------------|---------------|----------|---------------|--------|---|
| 3 | Speaker | Brand 301 | Product 103 | P-1003 | 20 | Supplier 103 | Active |    |
| 2 | Smartphone | Brand 201 | Product 102 | P-1002 | 15 | Supplier 102 | Active |    |
| 1 | Random Item | Brand 1 | Product 101 | P-1001 | 10 | Supplier 101 | Active |    |

Fig: Product Page

7.9 Purchase page:

The screenshot shows the 'Purchase List' page in the 'Inventory Management System - PHP'. The page has a blue header with the system name and a dark navigation bar with links: Home, Customer, Category, Brand, Supplier, Product, Purchase, and Orders. The 'Purchase' link is highlighted. A user dropdown shows 'Administrator'. Below the navigation bar, the 'Purchase List' title is followed by an 'Add Purchase' button. A search bar is located above the table. The table has five columns: ID, Product, Quantity, Supplier, and Action. It contains three entries. At the bottom, it says 'Showing 1 to 3 of 3 entries' and has 'Previous', '1', and 'Next' pagination links.

| ID | Product | Quantity | Supplier | Action |
|----|-------------|----------|--------------|---|
| 3 | Product 103 | 10 | Supplier 103 | Edit Delete |
| 2 | Product 102 | 35 | Supplier 102 | Edit Delete |
| 1 | Product 101 | 25 | Supplier 101 | Edit Delete |

Fig : Purchase Page

7.10 Order page:

The screenshot shows the 'Manage Orders' page in the 'Inventory Management System - PHP'. The page has a blue header with the system name and a dark navigation bar with links: Home, Customer, Category, Brand, Supplier, Product, Purchase, and Orders. The 'Orders' link is highlighted. A user dropdown shows 'Administrator'. Below the navigation bar, the 'Manage Orders' title is followed by a 'New Order' button. A search bar is located above the table. The table has five columns: ID, Product, Total Item, Customer, and Action. It contains two entries. At the bottom, it says 'Showing 1 to 2 of 2 entries' and has 'Previous', '1', and 'Next' pagination links.

| ID | Product | Total Item | Customer | Action |
|----|-------------|------------|---------------|---|
| 2 | Product 102 | 3 | George Wilson | Edit Delete |
| 1 | Product 101 | 5 | Mark Cooper | Edit Delete |

Fig : Order page

Chapter 8 : CONCLUSION

In this study, a computerized inventory system was developed and was also improved with the association rule. The system has been developed to get updates of an item in stock, to ensure proper record taking of products both to be sold and to be purchased, to know when to order for products, to make an order for products, and to generate reports from time to time when required to aid decision making process and progress of the store. The system would ensure proper inventory management and improve business performance. There will be a great improvement in inventory valuation management and control, which would lead to profit maximization. This work can still be improved by using more association rule techniques and algorithms.

Chapter 9 : BIBLIOGRAPHY

[1]. www.google.com

[2]. www.youtube.com

[3] www.github.com