CHAPTER 1

INTRODUCTION

1.1 Overview

Inventory management is the backbone of any business operations. With the development of technology and availability of process driven software applications, inventory management has undergone revolutionary changes. In any business or organization, all functions are interlinked and connected to each other and are often overlapping. Some key aspects like supply chain management, logistics and inventory form the backbone of the business delivery function. Therefore, these functions are extremely important to marketing managers as well as finance controllers.

Inventory management is a very important function that determines the health of the supply chain as well as the impacts the financial health of the balance sheet. Every organization constantly strives to maintain optimum inventory to be able to meet its requirements and avoid over or under inventory that can impact the financial figures. Inventory is always dynamic. Inventory management requires constant and careful evaluation of external and internal factors and control through planning and review. Most of the organizations have a separate department or job function called inventory planners who continuously monitor, control and review inventory and interface with production, procurement, and finance departments.

1.2 Background and Motivation

The definition of our problem lies in manual system and a fully automated system.

Manual system: The system is very time consuming and lazy. This system is more prone to Errors and sometimes the approaches to various problems are unstructured.

Technical system: With the advent of latest technology if we do not update our system then Our business results in losses gradually with time. The technical systems contain the tools of latest. Trend i.e., computers printers, fax, Internet etc. The systems with this technology are very fast, Accurate, user-friendly, and reliable.

Need of Online Shopping

1) Convenience
2) Better prices
3) More variety
4) Price comparisons
5) No crowds

1.3 Methodology

To implement the above goals, the following methodology needs to be followed:

1. Specifying the Application and various components of the Architecture.
2. Specifying the bindings between the tasks and the resources either manually or by the design Tools.
3. Specifying the port interconnections between the resources.

CHAPTER 2

SCOPE OF PROJECT

It may help collecting perfect management in detail. In less time, the collection will be obvious, simple, and sensible. Inventory management is one of the crucial tasks that the industries need to handle at times. Businesses ranging from small to large businesses must manage, control and track the inventory from time to time and from anywhere. Control and management of the inventories may be the small or large businesses are very important. The inventory control management database system is the documenting the details of the inventories present in the industries to reach the goal.

Inventory management is a process of tracking the products. This includes all the inventory management until it reached to the final customer. It includes finished products manufactured by the company and the raw material which may be required for production on finished goods.

It helps to manage the stock of the company. It provides proper details of the products what kind of raw material, what are the sizes we require etc. to the purchasing department. When the inventory management provides proper information to management, they buy according to them which helps the company to store fewer products.

Inventory management helps to improve the productivity of the machines and manpower. Employees are aware of stocks and the quantity that require to produce, and it also helps to improve the profits of the company and then provide proper information about stocks, that saves the unnecessary expenses on stocks.

CHAPTER 3

REQUIREMENTS

Software requirements

The software requirements deal with defining software resource requirements and prerequisites that need to be installed on a computer to provide optimal functional of an application.

Front End

User interface: HTML, CSS, JAVASCRIPT

Operating system: Windows 11

Web browser: Chrome, Internet Explorer

Back End

Database: MySQL

Application server: XAMPP SERVER (v8.2.0) for Apache server (localhost) PHP Storm (v2022.3) for server - side scripting

Hardware Requirement:

The software should run on any sort of desktop or laptop environment, regardless of the operating system. Essential input/output devices are keyboards, mouse, and printer.

Processor – Intel core i5

RAM – 4GB

Storage – 256GB

CHAPTER 4

DATA DIRECTORY

4.1 Schema Diagram

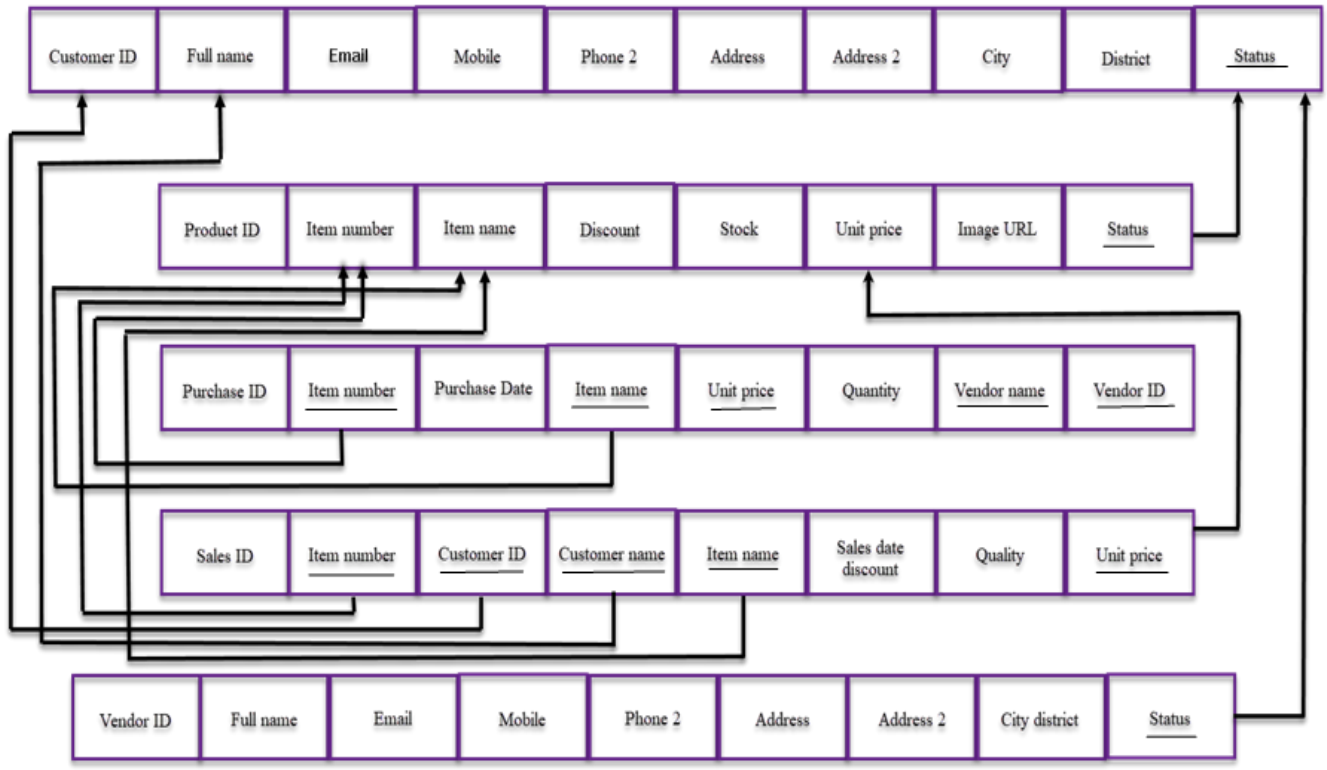

Figure:4.1 Schema Diagram

The above figure:4.1 shows the schema diagram of the inventory management system. A schema diagram is a diagram which contains entities and the attributes that will define schema. It shows only the database design of the inventory management system.

4.2 E-R Diagram

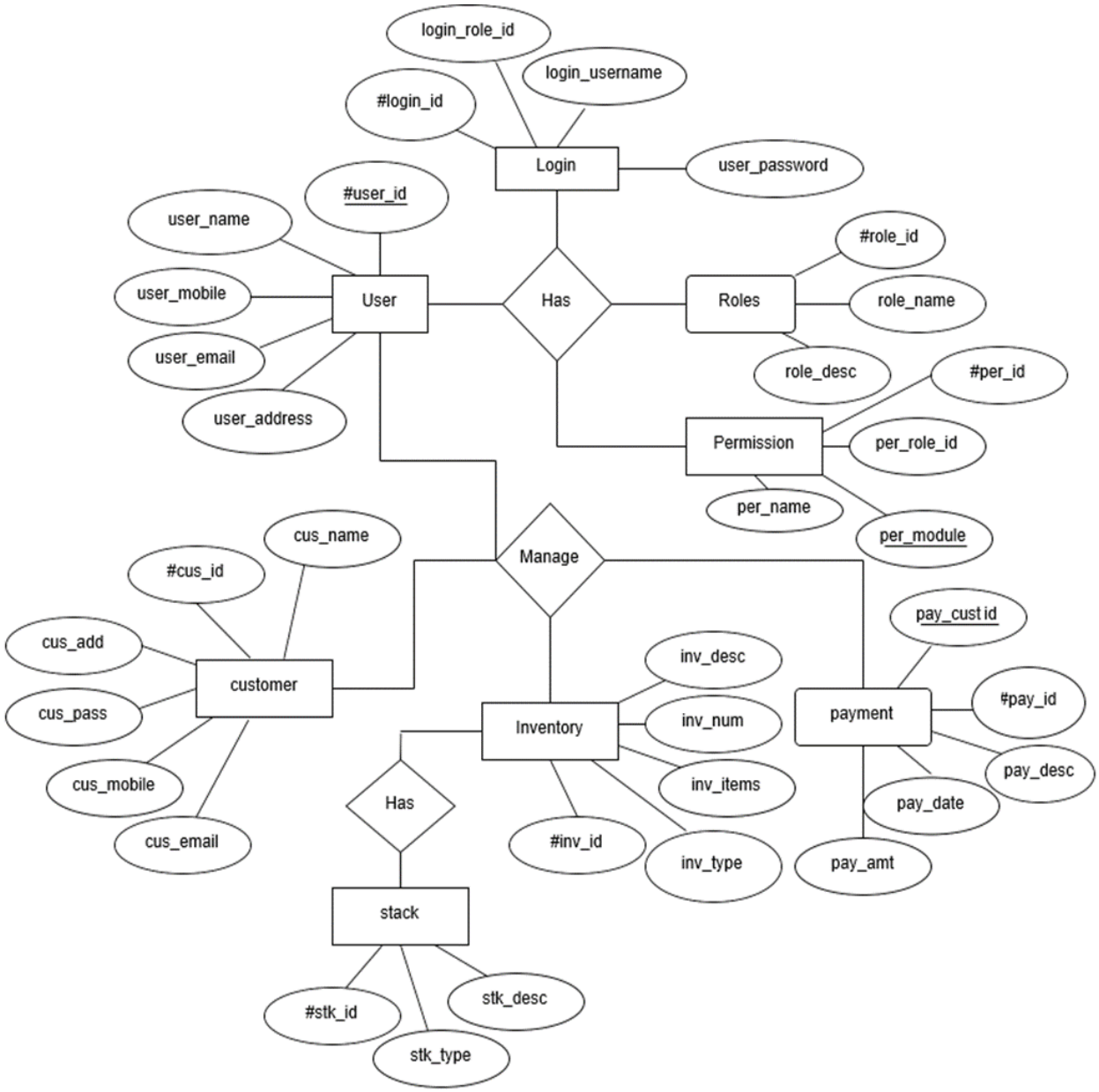

Figure:4.2 ER Diagram

The above figure:4.2 shows the ER Diagram of the inventory management system. An entity relationship diagram (ERD), also known as an entity relationship model, is a graphical representation that depicts relationships among people, objects, places, concepts or events within an information technology(IT) system.

CHAPTER 5

RELATIONAL DATA BASE DESIGN

Relational database design (RDD) models information and data into a set of tables with rows and columns. Each row of a relation or table represents a record, and each column represents an attribute of data. The Structured Query Language (SQL) is used to manipulate relational database.

Customer: The customer relational database design table consists of the field name means the name of the attribute and the attribute's data type of which it is consisting of and the constrain.

SL.NO	FIELD NAME	DATA TYPE	CONSTRAIN
1	CUSTOMERID	INT (11)	PRIMARY KEY
2	FULLNAME	VARCHAR (30)	NOT NULL
3	EMAIL	VARCHAR (30)	NOT NULL
4	MOBILE	INT (11)	NOT NULL
5	PHONE2	INT (11)	NOT NULL
6	ADDRESS	VARCHAR (30)	NOT NULL
7	ADDRESS2	VARCHAR (30)	NOT NULL
8	CITY	VARCHAR (30)	NOT NULL
9	DISTRICT	VARCHAR (30)	NOT NULL
10	STATUS	INT (0)	NOT NULL

ITEM: The item relational database design table consists of the field name means the name of the attribute and the attribute's data type of which it is consisting of and the constrain.

SL.NO	FIELD NAME	DATA TYPE	CONSTRAIN
1	PRODUCTID	INT (11)	NOT NULL
2	ITEMNUMBER	INT (11)	PRIMARY KEY
3	ITEMNAME	VARCHAR (30)	NOT NULL
4	DISCOUNT	INT (12)	NOT NULL
5	STOCK	INT (12)	NOT NULL
6	UNIT PRICE	INT (12)	NOT NULL
7	IMAGEURL	VARCHAR (200)	NOT NULL
8	STATUS	INT (10)	NOT NULL

PURCHASE: The purchase relational database design table consists of the field name means the name of the attribute and the attribute's data type of which it is consisting of and the constrain.

SL.NO	FIELD NAME	DATA TYPE	CONSTRAIN
1	PURCHASEID	INT (15)	PRIMARY KEY
2	ITEMNUMBER	INT (15)	FOREIGN KEY
3	PURCHASEDATE	DATE	NOT NULL
4	ITEMNAME	VARCHAR (30)	FOREIGN KEY
5	UNITPRICE	INT (11)	NOT NULL
6	QUALITY	INT (100)	NOT NULL
7	VENDORNAME	VARCHAR (30)	FOREIGN KEY
8	VENDORID	INT (11)	FOREIGN KEY

SALE: The purchase relational database design table consists of the field name means the name of the attribute and the attribute's data type of which it is consisting of and the constrain.

SL.NO	FIELD NAME	DATA TYPE	CONSTRAIN
1	SALEID	INT (11)	PRIMARY KEY
2	ITEMNUMBER	INT (11)	FOREIGN KEY
3	CUSTOMERID	INT (11)	FOREIGN KEY
4	CUSTOMERNAME	VARCHAR (30)	FOREIGN KEY
5	ITEMNAME	VARCHAR (30)	FOREIGN KEY
6	SALEDATE	DATE	NOT NULL
7	DISCOUNT	INT (11)	NOT NULL
8	QUALITY	INT (11)	NOT NULL
9	UNITPRICE	INT (11)	NOT NULL

VENDOR: The vendor relational database design table consists of the field name means the name of the attribute and the attribute's data type of which it is consisting of and the constrain.

SL.NO	FIELD NAME	DATA TYPE	CONSTRAIN
1	VENDORID	INT (15)	PRIMARY KEY
2	VENDORNAME	VARCHAR (30)	NOT NULL
3	EMAIL	VARCHAR (30)	NOT NULL
4	MOBILE	INT (15)	NOT NULL
5	PHONE	INT (15)	NOT NULL
6	ADDRESS	VARCHAR (30)	NOT NULL
7	ADDRESS1	VARCHAR (30)	NOT NULL
8	CITY	VARCHAR (30)	NOT NULL
9	DISTRICT	VARCHAR (30)	NOT NULL
10	STATUS	INT (1)	NOT NULL

CHAPTER 6

GRAPHICAL USER INTERFACE

The application is very user friendly and uses a GUI interface implemented in PHP and HTML to Communicate with the user. Various features are self – explanatory. Forms are easy to fill in and components can be added, removed and updated very easily through a Single dialog box. The application includes tool-tip hints to give a brief description of the particular input Field.

List boxes are used to display all the components at once so that user can see all the components of a Particular type at once. One can just select the component and modify and remove the component.(based on the access control of the person)

Features

1. Clean separation of various components to facilitate easy modification and revision.
2. All the data is maintained in a separate file to facilitate easy modification
3. All the data required for different operations is kept in a separate file.
4. Quick and easy saving and loading of database file.

CHAPTER 7

7.1 Snapshots of the application

A snapshot is an image that shows the contents of a computer display. Snapshots let you capture exactly what you're seeing on your screen to share with others or reference later.

Customer

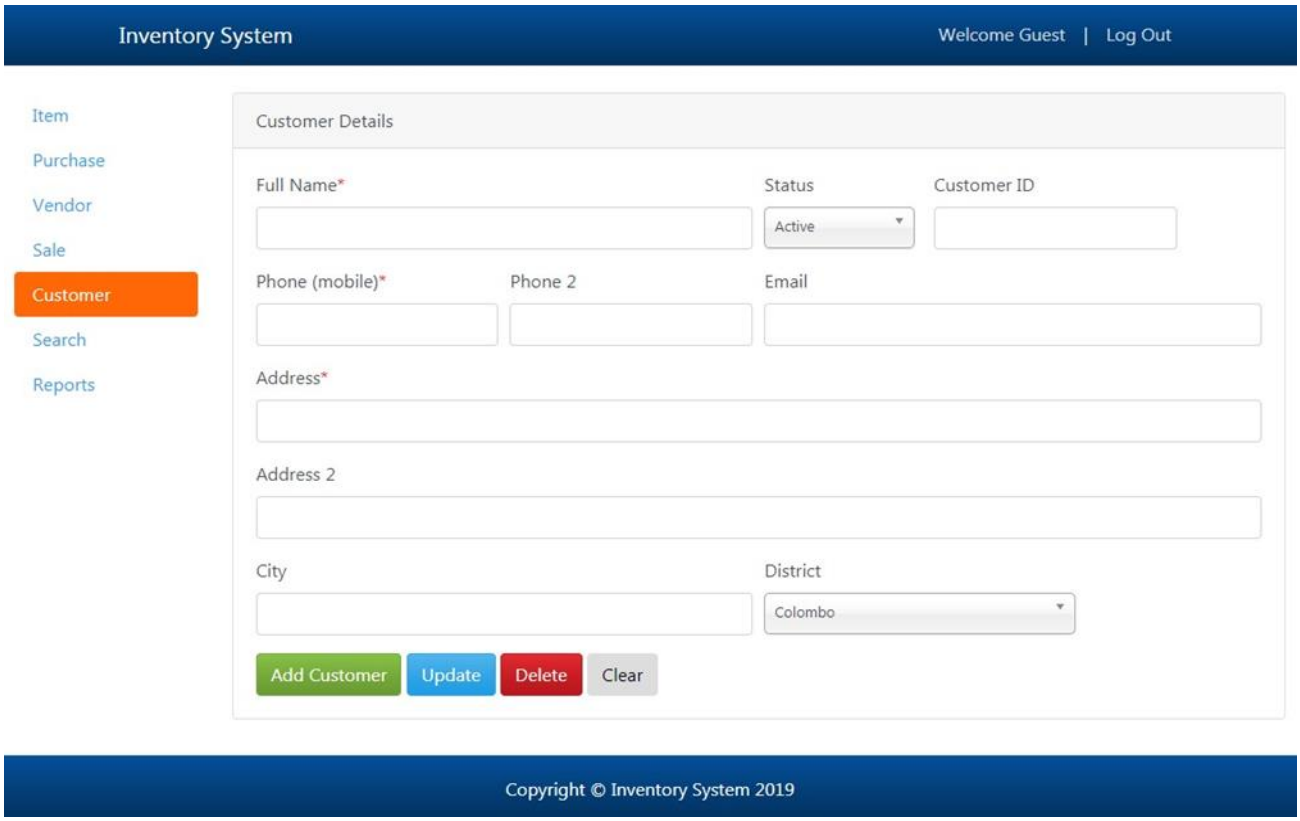

Figure:7.1 Customer Page

The above figure:7.1 shows the snapshot of customer page. The admin can add, update or delete the customer details in this option.

Item

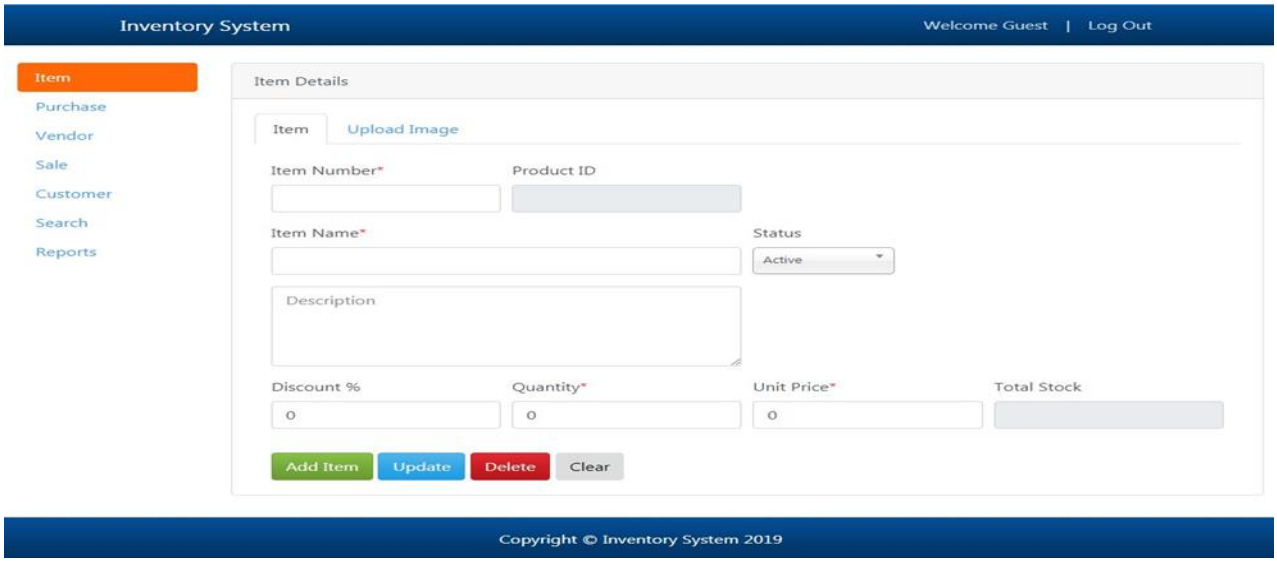

Figure:7.2 Item Page

The above figure:7.2 shows the snapshot of the item page. The admin can add, update or delete the item details and also upload the image to the item which are added.

Sale

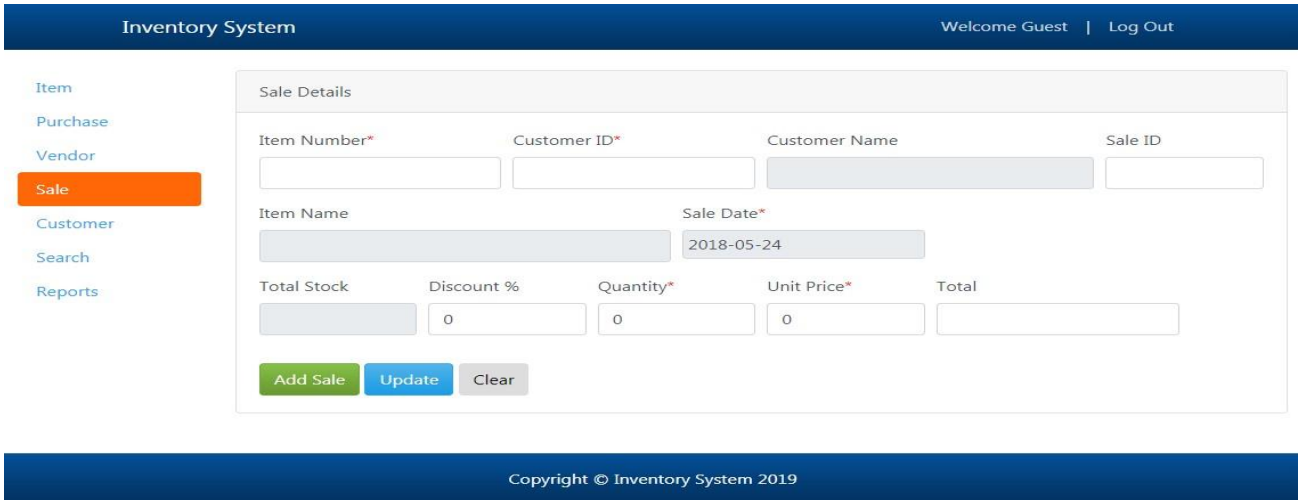

Figure:7.3 Sale Page

The above figure:7.3 shows the snapshot of the sale page. This section adds, update the admin about the sale details.

Search

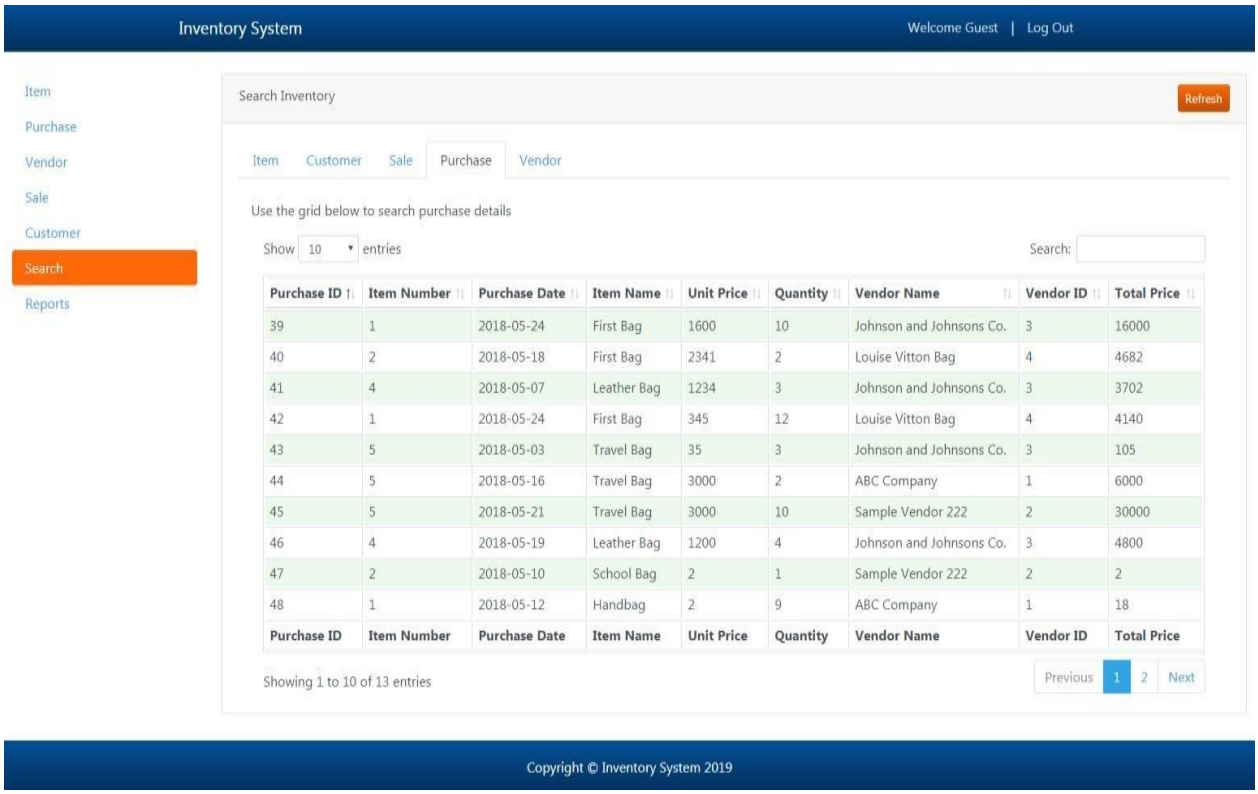

Figure:7.4 Search Page

The above figure:7.3 shows the snapshot of the search page. The admin can search all the details in this section. The details like item, purchase, vendor, sale, customer etc.

Vendor

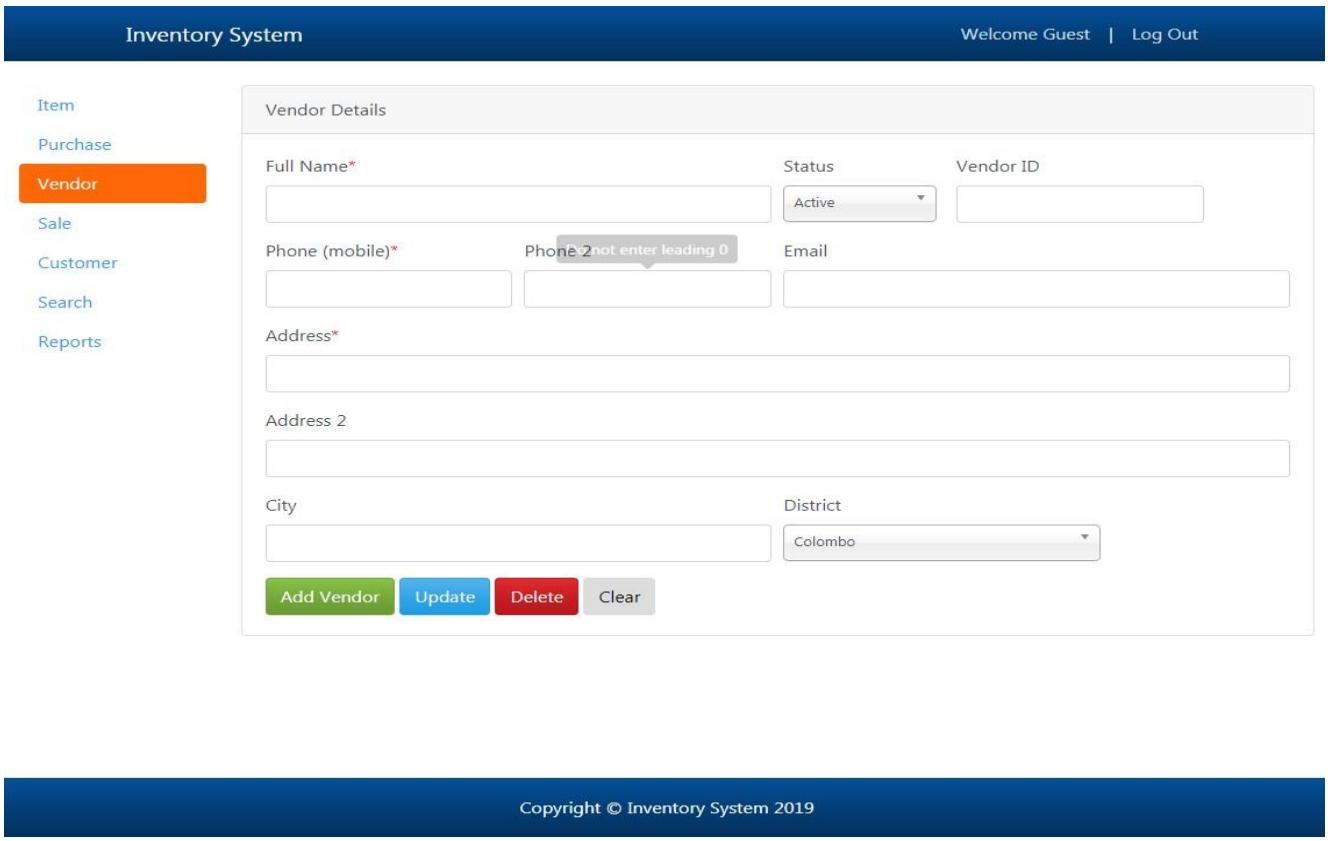

Figure:7.5 Vendor Page

The above figure:7.3 shows the snapshot of the vendor page. The admin can add, update, delete the vendor details in this section

CONCLUSION AND FUTURE ENHANCEMENT

The project titled as Inventory Management System was deeply studied and analyzed to design the code and implement. It was done under the guidance of the experienced project guide. All the current requirements and possibilities have been taken care during the project time.

In addition to the features aforementioned, the proposed PHP project on Inventory Management System is very flexible and can incorporate many new features and modules.
In addition to the features, the proposed PHP project on Inventory Management System is very flexible and can incorporate many new features and modules. Based on the user requirements, modifications to various parts of the system can be done for all the modules in the system.

Collaboration with supply chain partners, coupled with a holistic approach to supply chain management, will be key to effective inventory management.

The supply chain concept has been encouraging practitioners for decades to knock down the walls of communication and destroy functional silos that interfere with collaboration. Visionary companies will see that there is lot more work to do to fully embrace the ethic.
It is the only by taking a system-wide view of inventory investment that practitioners can hope to optimize its deployment. At each stage of production, from raw materials to finished consumer goods, and at all transportation activities in between, the economies and trade-offs need to be analysed. After analysis, the result needs to be synthesized and impact of various solutions assessed from the perspective of benefit to the entire supply chain.

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