Project Report

On

INVENTORY MANAGEMNET

Submitted by

Team Members

MITALI SHENDE (2020BCS039, A19)

SHUBHAM PETHE (2020BCS018, B09)

SHRINIJA KONALE (2020BCS034, B17)

UNDER THE GUIDANCE OF

PROF. JAYSHREE WAGHMARE

T.Y Computer Science and Engineering

SHRI GURU GOBIND SINGHJI INSTITUTE OF ENGINEERING AND TECHNOLOGY VISHNUPURI, NANDED (431606) M.S. INDIA

Department of Computer Science and Engineering

ACADEMIC YEAR 2022-2023

CERTIFICATE

This is to certify that, the Project report entitled **" INVENTORY MANAGEMENT"**. Submitted by **Mitali Shende (A19) , Shubham Pethe (B09) , Shrinija Konale (B17)**. As the partial fulfillment of Database Management System For the academic year 2022-2023. This project is a record of student's own work, carried out by them under our supervision and guidance.

PROF. JAYSHREE WAGHMARE

H.O.D

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ABSTRACT

This project is aimed at developing a desktop based application named Inventory Management System for managing the inventory system of an organization. The Inventory Management System(IMS) refers to a system and processes to manage stock of organization . This system can be used to store the details of the inventory, stock maintenance, update the inventory etc. This inventory eliminates paper work, human faults, manual delay and speeds up the process. Mismanaged inventory means disappointed customers, too much cash tied up in slower sale and warehouses. Without proper inventory control, a large retail store may run out of stocks of an important item. A good Inventory Management System will alert the wholesaler when it is time to record. The software is made up of two parts: The frontend is developed using HTML, CSS and PHP with the help of Visual Studio Software and the Backend from SQL server Database.

CHAPTER-1: INTRODUCTION

1.1 Introduction to Inventory Management System :

The project Inventory Management system is a complete desktop based application design on Net technology using Visual Studio Software. The main aim of the project is to develop Inventory Management System Model software in which all the information regarding the stock of the organization will be presented. It is an intranet based desktop application which has admin component to manage the inventory and maintenance of the inventory system.

This desktop application is based on the management of stock of an organization. The application contains general organization sales details, Purchase details and the remaining stock that are presented in the organization. There is a provision of updating the inventory also. This application also provides the remaining balance of the stock as well as the details of the balance of transaction.

Each new stock is created and entitled with the named it can also be update any time when required as per the transaction or the sales is returned in case. Here the login page is created in order to protect the management of the stock of organization in order to prevent it from the threads and misuse of the inventory.

1.2 Problem Statement :

The problem faced by the company is they do not have any systematic system to record and keep their inventory data. It is difficult for the admin to record the inventory data quickly and safely because they only keep it in the logbook and not properly organized.

We defined our problem statement as:

1) To make the system easily managed and can be secured.

2)To make desktop based application of IMS for small organization.

3) To cover all the areas of IMS like purchase details, order details, product details, Inventory details.

1.3 Features of projects :

This application is used to show the inventory remaining and details about the sales and purchase. It gives the details about the stock on daily basis. The details components are described below:

Login page: As application starts the login page appears. Admin login is determined by the username and password that has all the authority to add, update and delete the stock of the organization as per the requirement.

Home Page: Home page shows all the inventory details i.e the stock details at the starting point, receiving point, stock shipped and the total inventory on hand.

Customer page: It shows the customer details

Category & Brand page: It shows the category and brands of different products available with their status.

Supplier page: It shows the list of suppliers.

Product page: It shows the list of the product with the action button showing the product details.

Purchase & Order page: It shows the details about the purchase and order.

CHAPTER-2: TECHNOLOGIES USED

2.1 Database Theory :

A database is a collection of information that is in organized form so that it can easily be accessed, managed and updated. In computing, databases are sometimes classified according to their organizational approach. A distributed database is one that can be dispersed or replicated among different points in a network.

2.1.1 Relational Database :

IMS has the relational database model. A relational database is a digital database whose organization is based on the relational model of data. This model organizes data into one or more tables of rows and columns. These tables here have the relation. The relation is maintained by the unique key defined in each row. The key can be primary and foreign depending on their nature of connection. The standard user and application program interface to a relational database is the structured query language (SQL). SQL statement are used both for interactive queries for information from relational database and for gathering data for reports.

Primary Key :

The primary key of a relational table uniquely identifies each record in the table. It can either be a normal attribute that is guaranteed to be unique or it can be generated by the DBMS. A primary key's main features are:

- It must contain a unique value for each row of data.
- It cannot contain null value.

Foreign Key :

A foreign key is a column or group of column in a relational database table that provides a link between data in two tables. In foreign key reference, a link is created between two tables when the column or columns that hold the primary key value for one table are referenced by the column or column in another table thereby establishing a link between them. Creating a foreign key manually includes the following advantages:

- Changes to primary key constraints are checked with foreign key constraints in

  relation table.
- An index enables the Database Engine to quickly find related data in the foreign

  key tables.

2.1.2 Structured Query Language (SQL) :

The structured Query language (SQL) is the set of instructions used to interact with a relational database. In fact, SQL is the only language the most database actually understand. Whenever you interact with such a database, the software translates your commands into SQL statement that the database knows how to interpret. SQL has two major Components:

- Data Manipulation Language (DML)
- Data Definition Language (DDL)

CHAPTER-3: TOOLS AD TECHNOLOGY

3.1 DEVELOPMENT TOOLS:

3.1.1 MICROSOFT VISUAL STUDIO :

Visual Studio is an integrated development environment (IDE) from Microsoft. It is used to develop computer programs including websites, web apps, web services and mobile apps. Visual Studio uses Microsoft software development platforms such as Windows API, Windows Forms, Windows Presentation Foundation, Windows Store and Microsoft Silverlight. It can produce both native code and managed code.

The Visual Studio code editor now highlights references; whenever a symbol is selected; all other usages of the symbol are highlighted. It also offers a Quick Search feature to incrementally search across all symbols in C++, C# and VB.NET projects. Quick Search supports substring matches and camel Case searches. The Call Hierarchy feature allows the developers to see all the methods that are called from a current method as well as the methods that call the current one. IntelliSense in Visual Studio supports a consume-first mode which developers can opt into. In this mode, IntelliSense will not auto-complete identifiers; this allows the developer to use undefined identifiers (like variable or method names) and define those later. Visual Studio can also help in this by automatically defining them, if it can infer their types from usage.

We have used Visual Studio Community version 1.73 for developing the Inventory Management System Application.

3.1.2 XAMPP SERVER:

XAMPP is a cross-platform web server that is free and open-source. XAMPP is a short form for Cross-Platform, Apache , MySQL , PHP, and Perl. XAMPP is a popular cross-platform web server that allows programmers to write and test their code on a local webserver . It was created by Apache Friends , and the public can revise or modify its native source code. It includes MariaDB , Apache HTTP Server , and interpreters for PHP and Perl , among other computer languages.

Need for a XAMPP

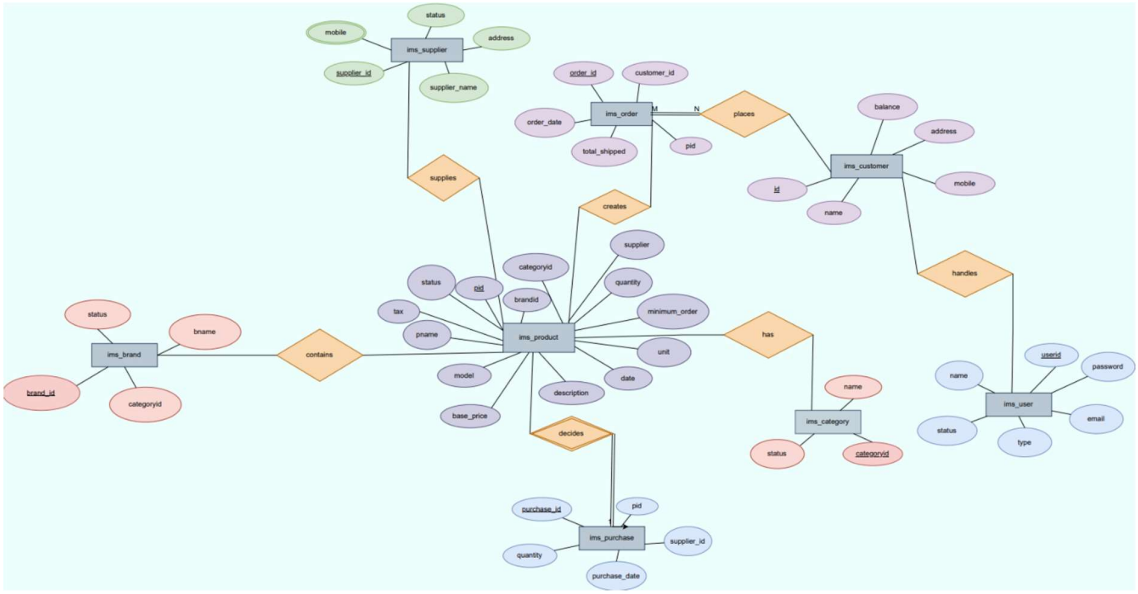
- XAMPP is simply a local host or server. It is used to test clients or websites before publishing them to a remote web server.
- On a local computer, the XAMPP server software provides a suitable environment for testing MYSQL, PHP, Apache, and Perl projects.

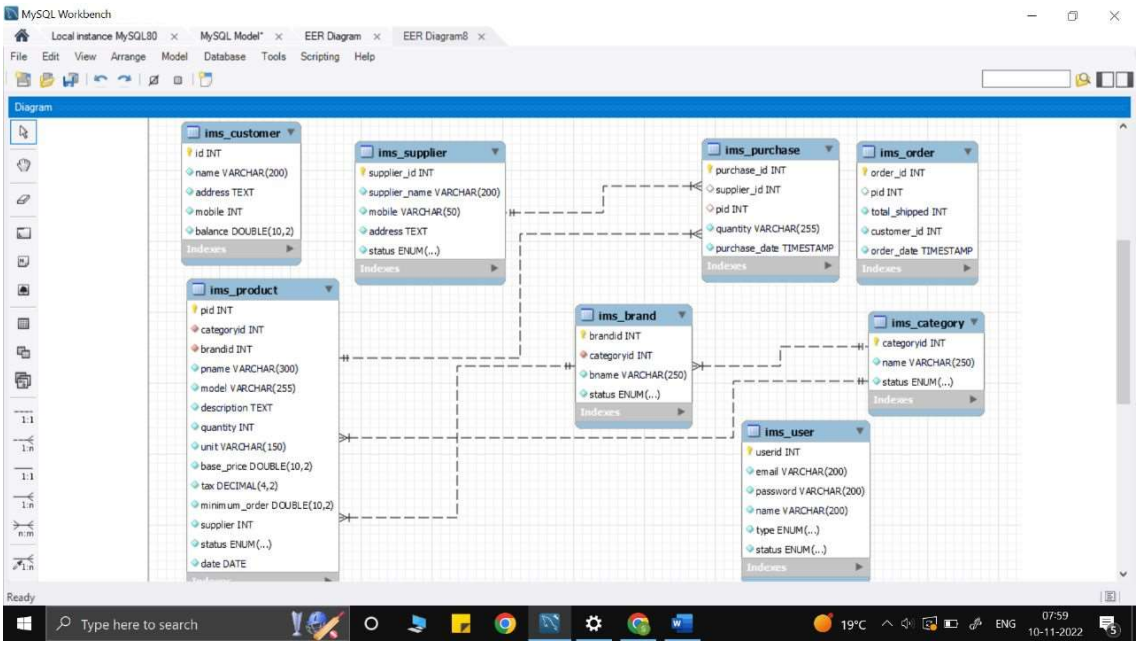
3.2 TECHNOLOGY :

3.2.1 WEB TECHNOLOGY:

- The **Hypertext Markup Language** is the standard markup language for documents designed to be displayed In a web browser. It can be assisted by technology such as css and javascript.
- **Cascading Style Sheets(CSS)** is a style sheet language used for describing the presentation of a document written in HTML.
- **Bootstrap** is a free open source css framework directed at responsive , mobile-first front-end web development.
- **PHP** is a general-purpose scripting language geared toward web development.
- **Javascript** often abbreviated as JS, is a programming language that is one of the core technologies of the World Wide Web, alongside HTML and CSS.
- **Databases/Data storage**
  MYSQL

CHAPTER-4: ER-DAIGRAM





CHAPTER-5: CODE

There are various number of program files of our project, hence here we provide you with home page program and rest codes can be visited in our GitHub account with project link as: ***https://github.com/imskipper/Inventory_Management_system***

DATABASE QUERY :

```
SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
START TRANSACTION;
SET time_zone = "+00:00";

CREATE DATABASE ims_db;
USE ims_db;

CREATE TABLE `ims_brand` (
  `id` int(11) NOT NULL,
  `categoryid` int(11) NOT NULL,
  `bname` varchar(250) NOT NULL,
  `status` enum('active','inactive') NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


INSERT INTO `ims_brand` (`id`, `categoryid`, `bname`, `status`)
VALUES
(1, 2, 'DELL', 'active'),
(2, 2, 'ANCHOR', 'active'),
```

```
(3, 2, 'SYSKA', 'active'),
(4, 1, 'BOLT', 'active'),
(5, 1, 'REALME', 'active'),
(6, 1, 'ONEPLUS', 'active'),
(7, 3, 'BOAT', 'active'),
(8, 3, 'MIVI', 'active'),
(9, 3, 'JNL', 'active');

CREATE TABLE `ims_category` (
  `categoryid` int(11) NOT NULL,
  `name` varchar(250) NOT NULL,
  `status` enum('active','inactive') NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `ims_category` (`categoryid`, `name`, `status`)
VALUES
(1, 'Smartphone', 'active'),
(2, 'smartwatch', 'active'),
(3, 'Speaker', 'active');


CREATE TABLE `ims_customer` (
  `id` int(11) NOT NULL,
  `name` varchar(200) NOT NULL,
  `address` text NOT NULL,
  `mobile` int(50) NOT NULL,
  `balance` double(10,2) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

```
INSERT INTO `ims_customer` (`id`, `name`, `address`, `mobile`, `balance`) VALUES
(1, 'SIDDHANT SANGOLE', '123,MOON', 8547962154, 350000.00),
(2, 'Shubham Pethe', 'KHARBI CHOWK NAGPUR,440024', 7589654125, 950000.00);


CREATE TABLE `ims_order` (
  `order_id` int(11) NOT NULL,
  `product_id` varchar(255) NOT NULL,
  `total_shipped` int(11) NOT NULL,
  `customer_id` int(11) NOT NULL,
  `order_date` timestamp NOT NULL DEFAULT current_timestamp()
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `ims_order` (`order_id`, `product_id`, `total_shipped`, `customer_id`, `order_date`) VALUES
(1, '1', 5, 1, '2022-06-20 08:20:40'),
(2, '2', 3, 2, '2022-06-20 08:20:48');


CREATE TABLE `ims_product` (
  `pid` int(11) NOT NULL,
  `categoryid` int(11) NOT NULL,
  `brandid` int(11) NOT NULL,
  `pname` varchar(300) NOT NULL,
```

```
  `model` varchar(255) NOT NULL,
  `description` text NOT NULL,
  `quantity` int(11) NOT NULL,
  `unit` varchar(150) NOT NULL,
  `base_price` double(10,2) NOT NULL,
  `tax` decimal(4,2) NOT NULL,
  `minimum_order` double(10,2) NOT NULL,
  `supplier` int(11) NOT NULL,
  `status` enum('active','inactive') NOT NULL,
  `date` date NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


INSERT INTO `ims_product` (`pid`, `categoryid`, `brandid`,
`pname`, `model`, `description`, `quantity`, `unit`, `base_price`, `tax`,
`minimum_order`, `supplier`, `status`, `date`) VALUES
(1, 3, 9, 'JBL FLIP 6', 'BLUE', 'Louder , more powerful sound IP67
waterproof and dust proof 12 hours of play time ', 15, 'NOS',
11999.00, '18.00', 1.00, 2, 'active', '0000-00-00'),
(2, 3, 7, 'Stone 1200', 'Black', '14 W portable Wireless speaker with
RGB LEDs, Up to 9hours of playtime, AUX ,USB and FM modes',
20, 'Box', 3999.00, '18.00', 1.00, 3, 'active', '0000-00-00'),
(3, 8, 16, 'BRAVIA', 'X75K', '4K ULTRA HD | High Dyanamic
Range(HDR) |
Smart TV (Google Tv)', 5, 'Bags', 69900.00, '12.00', 1.00, 1, 'active',
'0000-00-00');


CREATE TABLE `ims_purchase` (
  `purchase_id` int(11) NOT NULL,
  `supplier_id` varchar(255) NOT NULL,
```

```
  `product_id` varchar(255) NOT NULL,
  `quantity` varchar(255) NOT NULL,
  `purchase_date` timestamp NOT NULL DEFAULT
current_timestamp()
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


INSERT INTO `ims_purchase` (`purchase_id`, `supplier_id`,
`product_id`, `quantity`, `purchase_date`) VALUES
(1, '1', '1', '25', '2022-06-20 08:20:07'),
(2, '2', '2', '35', '2022-06-20 08:20:14'),
(3, '3', '3', '10', '2022-06-20 08:20:29');


CREATE TABLE `ims_supplier` (
  `supplier_id` int(11) NOT NULL,
  `supplier_name` varchar(200) NOT NULL,
  `mobile` varchar(50) NOT NULL,
  `address` text NOT NULL,
  `status` enum('active','inactive') NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


INSERT INTO `ims_supplier` (`supplier_id`, `supplier_name`,
`mobile`, `address`, `status`) VALUES
(1, 'DTC', '09645987123', 'Nagpur', 'active'),
(2, 'FED-EX', '094568791252', 'Over There', 'active'),
(3, 'EKART', '09789897879', 'All over Maharashtra', 'active');
```

```
CREATE TABLE `ims_user` (
  `userid` int(11) NOT NULL,
  `email` varchar(200) NOT NULL,
  `password` varchar(200) NOT NULL,
  `name` varchar(200) NOT NULL,
  `type` enum('admin','member') NOT NULL,
  `status` enum('Active','Inactive') NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


INSERT INTO `ims_user` (`userid`, `email`, `password`, `name`,
`type`, `status`) VALUES
(1, 'shubhamkpethe@gmail.com',
'535459ac771f32c399074c86f69eebb9', 'Administrator', 'admin',
'Active');

ALTER TABLE `ims_brand`
  ADD PRIMARY KEY (`id`);

ALTER TABLE `ims_category`
  ADD PRIMARY KEY (`categoryid`);

ALTER TABLE `ims_customer`
  ADD PRIMARY KEY (`id`);

ALTER TABLE `ims_order`
  ADD PRIMARY KEY (`order_id`);

ALTER TABLE `ims_product`
```

```
  ADD PRIMARY KEY (`pid`);

ALTER TABLE `ims_purchase`
  ADD PRIMARY KEY (`purchase_id`);

ALTER TABLE `ims_supplier`
  ADD PRIMARY KEY (`supplier_id`);

ALTER TABLE `ims_user`
  ADD PRIMARY KEY (`userid`);

ALTER TABLE `ims_brand`
  MODIFY `id` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=50;

ALTER TABLE `ims_category`
  MODIFY `categoryid` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=10;

ALTER TABLE `ims_customer`
  MODIFY `id` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=9;

ALTER TABLE `ims_order`
  MODIFY `order_id` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=5;

ALTER TABLE `ims_product`
```

```
  MODIFY `pid` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=99;

ALTER TABLE `ims_purchase`
  MODIFY `purchase_id` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=8;

ALTER TABLE `ims_supplier`
  MODIFY `supplier_id` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=4;

ALTER TABLE `ims_user`
  MODIFY `userid` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=5;
COMMIT;
```

INDEX.PHP

```
<?php
ob_start();
session_start();
include('inc/header.php');
include 'Inventory.php';
$inventory = new Inventory();
$inventory->checkLogin();
?>
<style>
    .bg{
```

```
    width:100%;
    position:absolute;
    z-index:-1;
    opacity=0.7;
}
</style>
<script src="js/jquery.dataTables.min.js"></script>
<script src="js/dataTables.bootstrap.min.js"></script>
<link rel="stylesheet" href="css/dataTables.bootstrap.min.css" />
<script src="js/common.js"></script>
<?php include('inc/container.php');?>
<img class="bg"  src="pic.png" alt="inventory image">

<div class="container">
    <?php include("menus.php"); ?>
    <div class="row">
        <div class="col-lg-12">
            <div class="card card-default rounded-0 shadow">
                <div class="card-header">
                    <div class="row">
                        <div class="col-lg-10 col-md-10 col-sm-8 col-xs-6">
                            <h3 class="card-title">Inventory</h3>
                        </div>
                    </div>
                </div>
                <div class="card-body">
                    <div class="row"><div class="col-sm-12 table-responsive">
                        <table id="inventoryDetails" class="table table-bordered table-
striped">
                            <thead><tr>
                                <th>#</th>
```

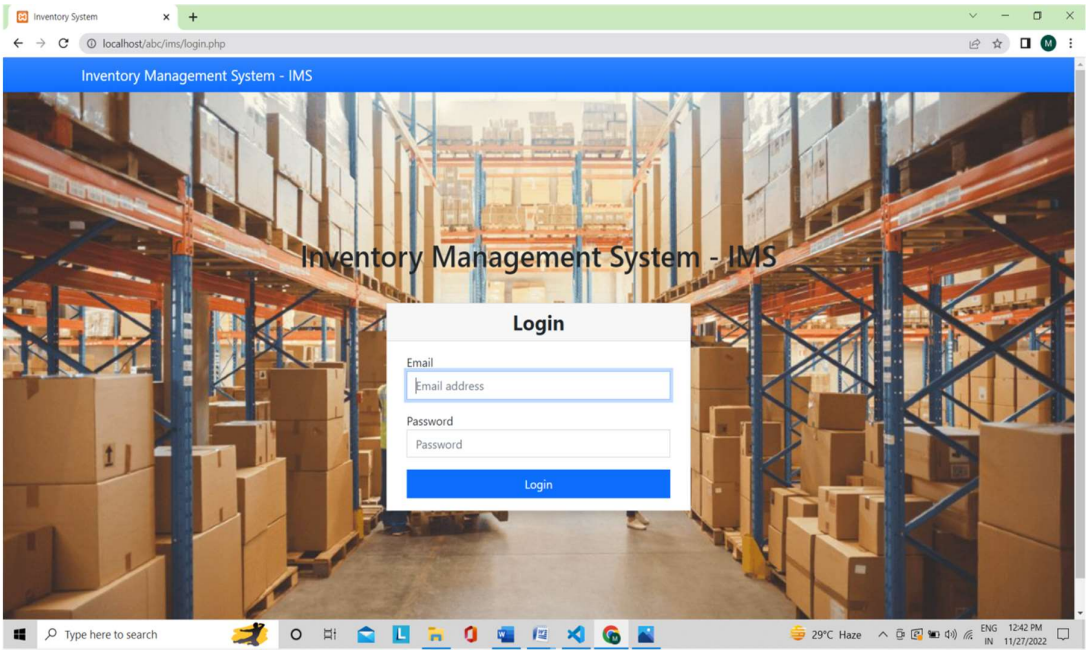
```
                        <th>Product/Code</th>
                        <th>Starting Inventory</th>
                        <th>Inventory Recieved</th>
                        <th>Inventory Shipped</th>
                        <th>Inventory on Hand</th>
                    </tr></thead>
                </table>
            </div></div>
        </div>
    </div>
</div>

</div>
<?php include('inc/footer.php');?>
```

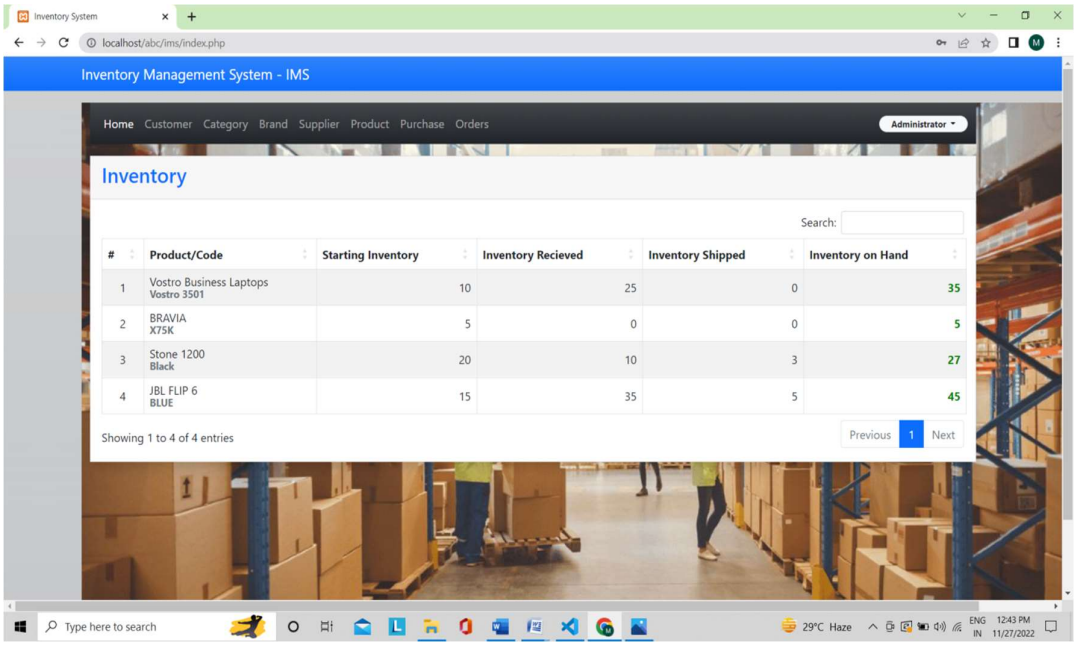
All other code files can be visited from GitHub Link.

CHAPTER-6:PROJECT SCREENSHOTS

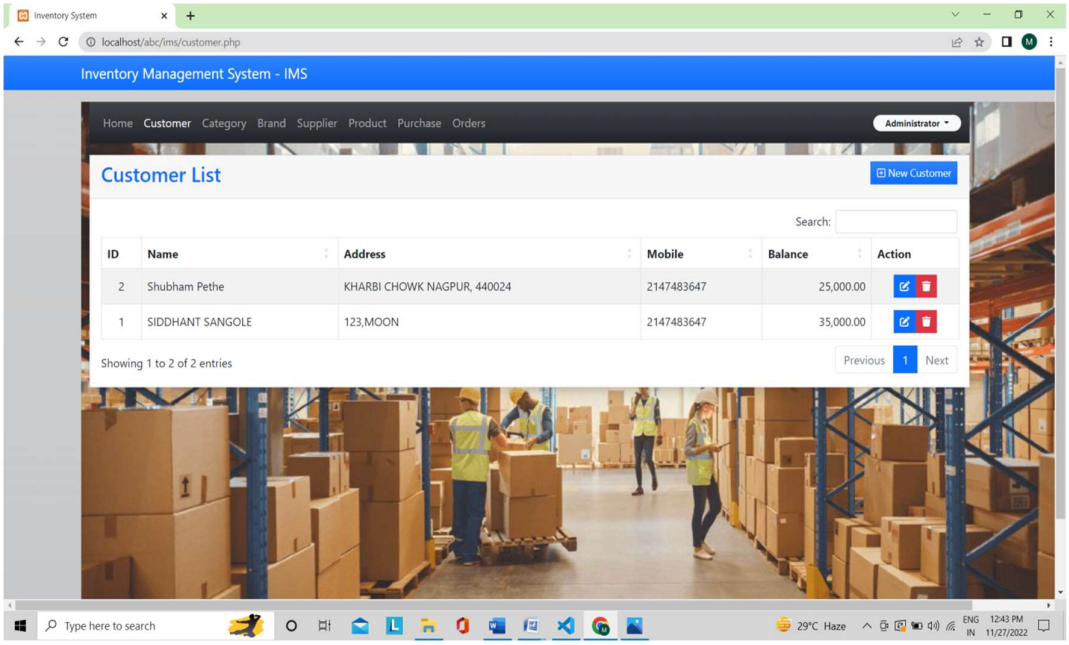
LOGIN PAGE:



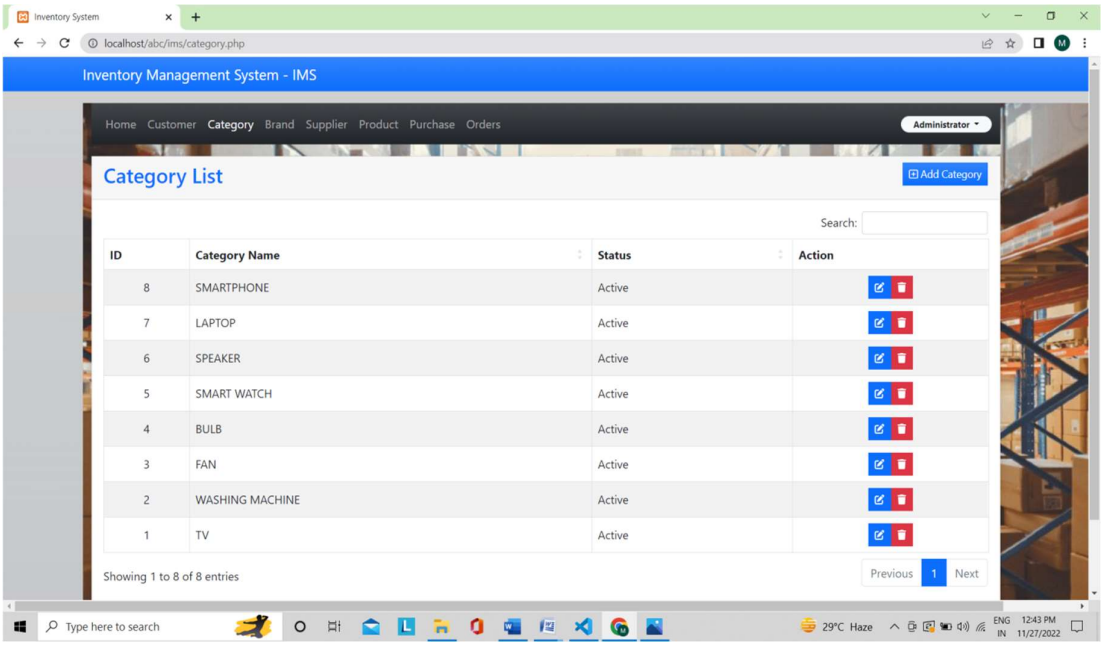
INDEX PAGE:



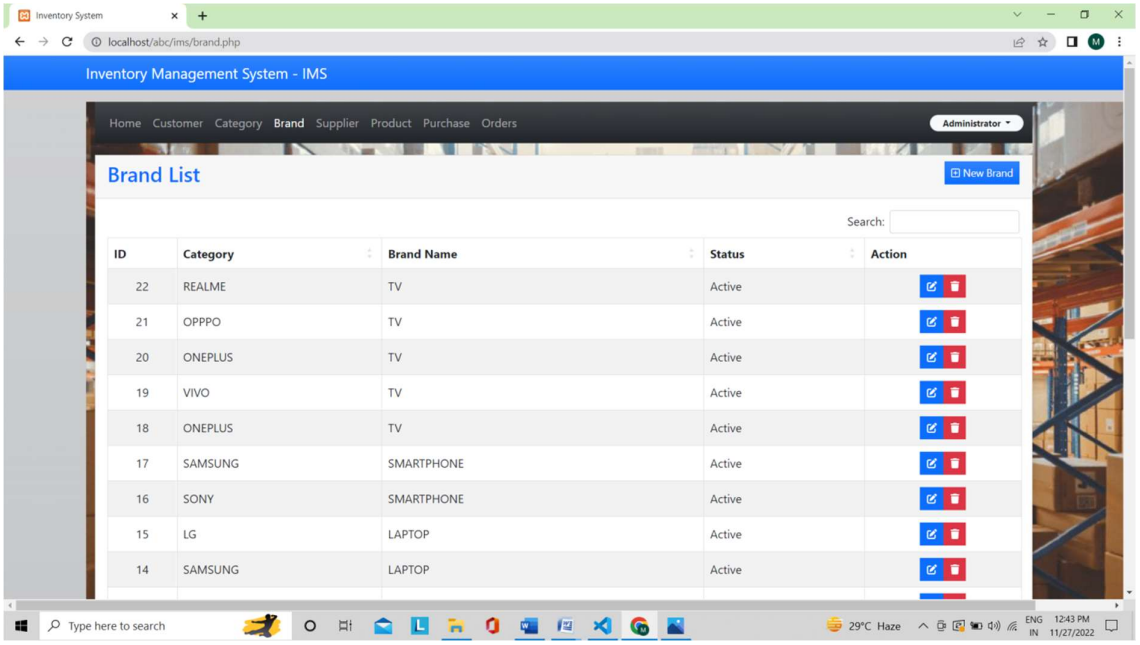
CUSTOMER LIST:



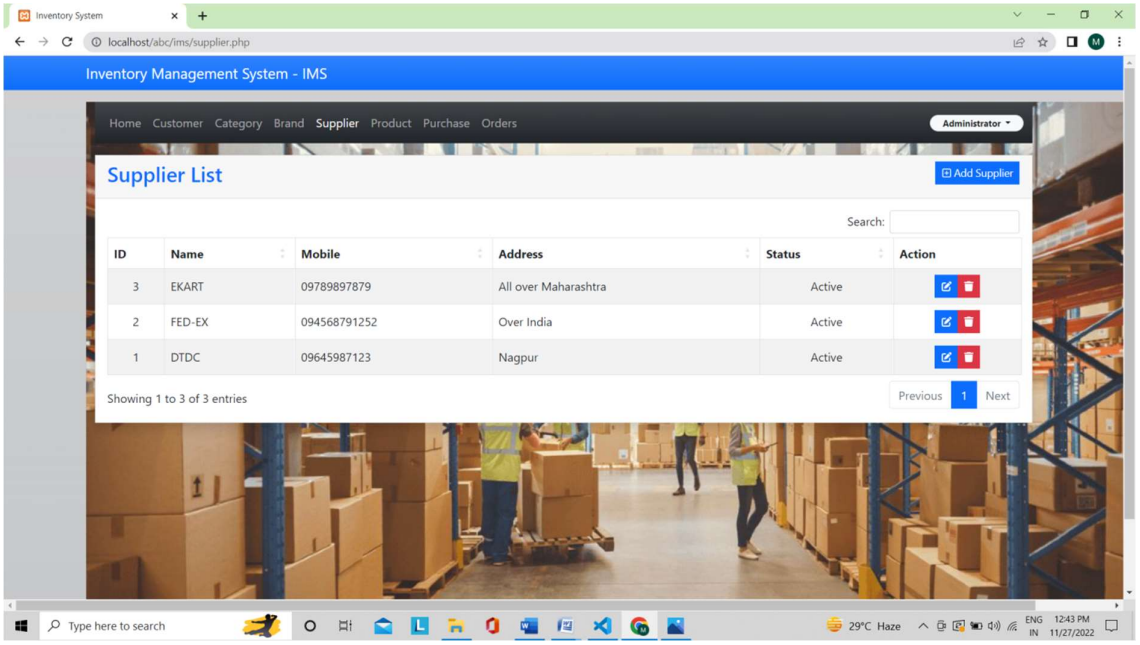
CATEGORY LIST:



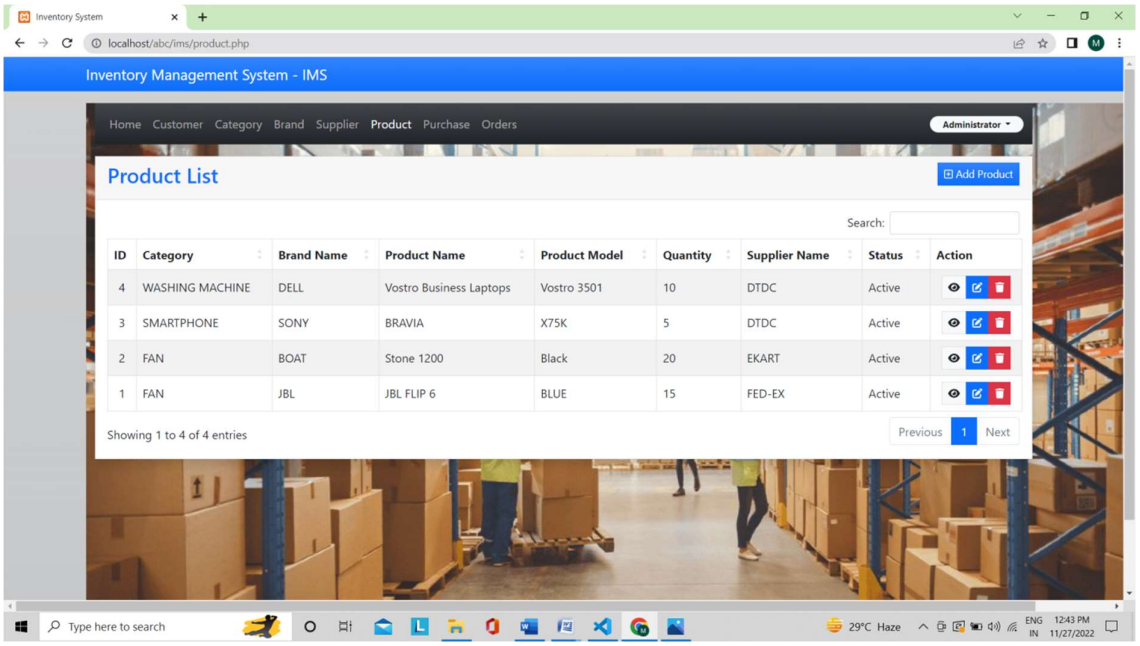
BRAND LIST:



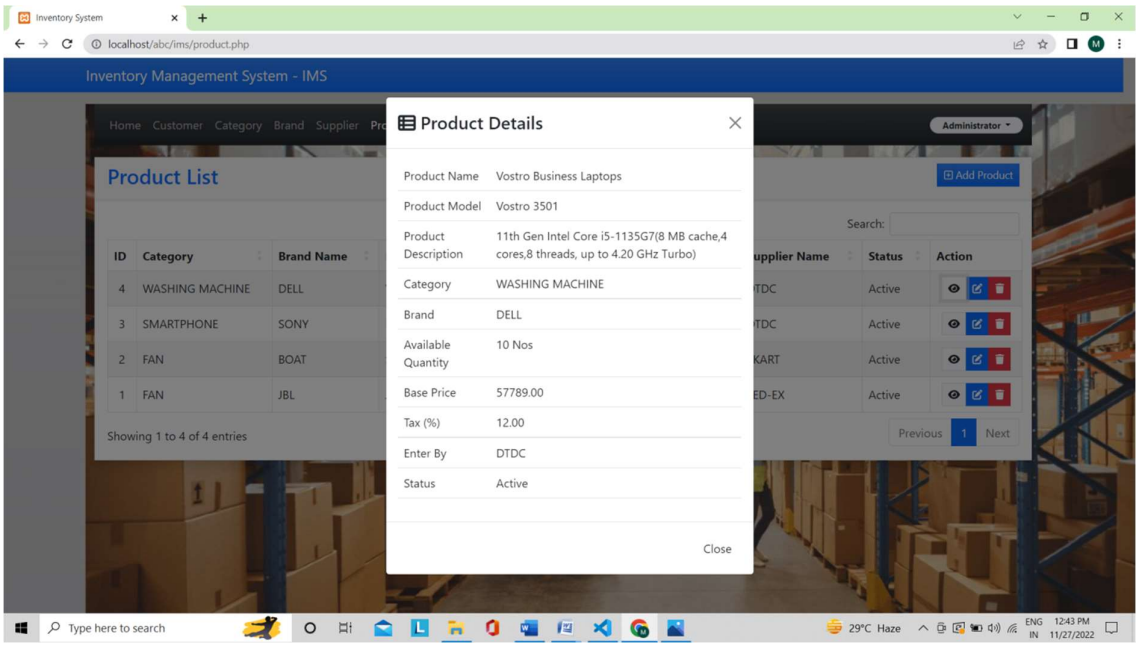
SUPPLIER LIST:



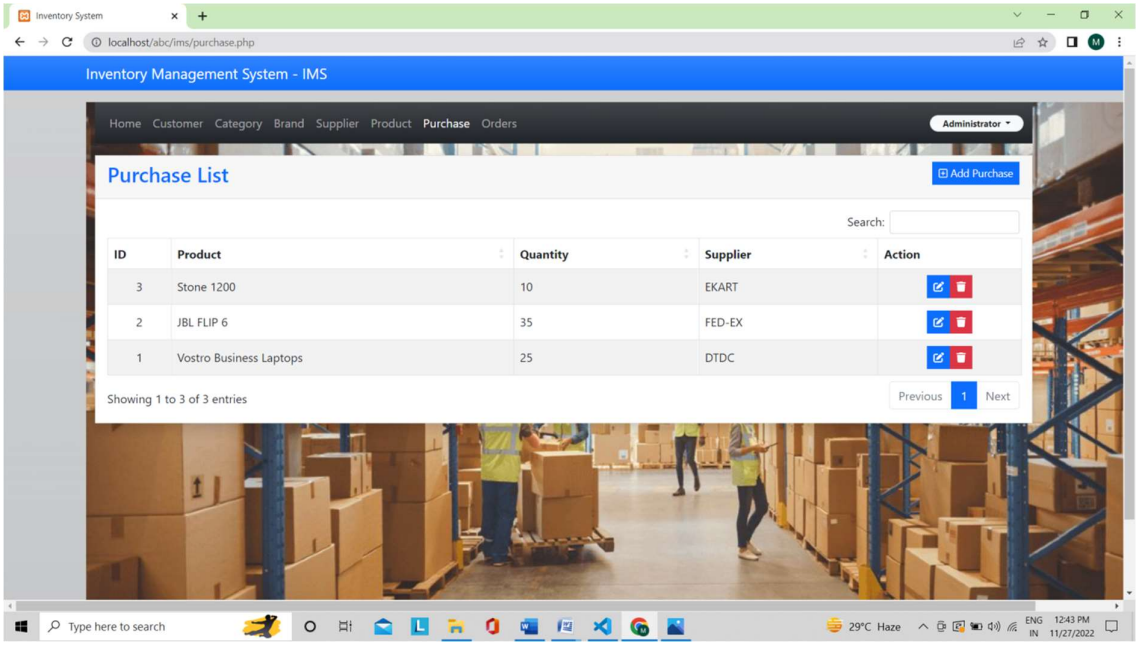
PRODUCT LIST:



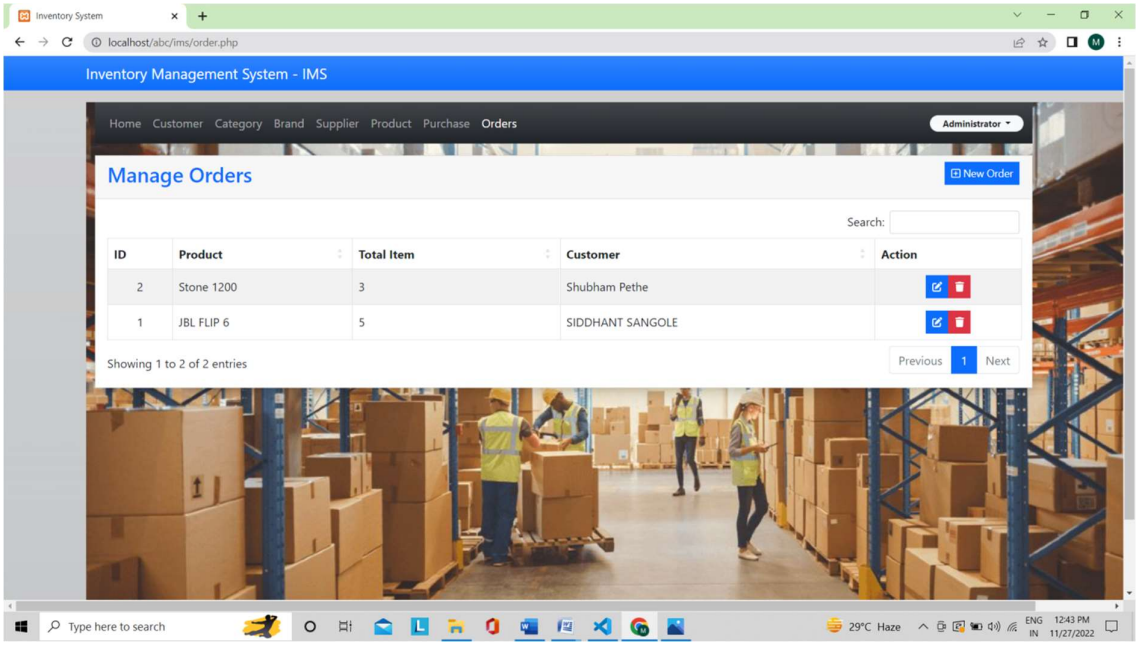
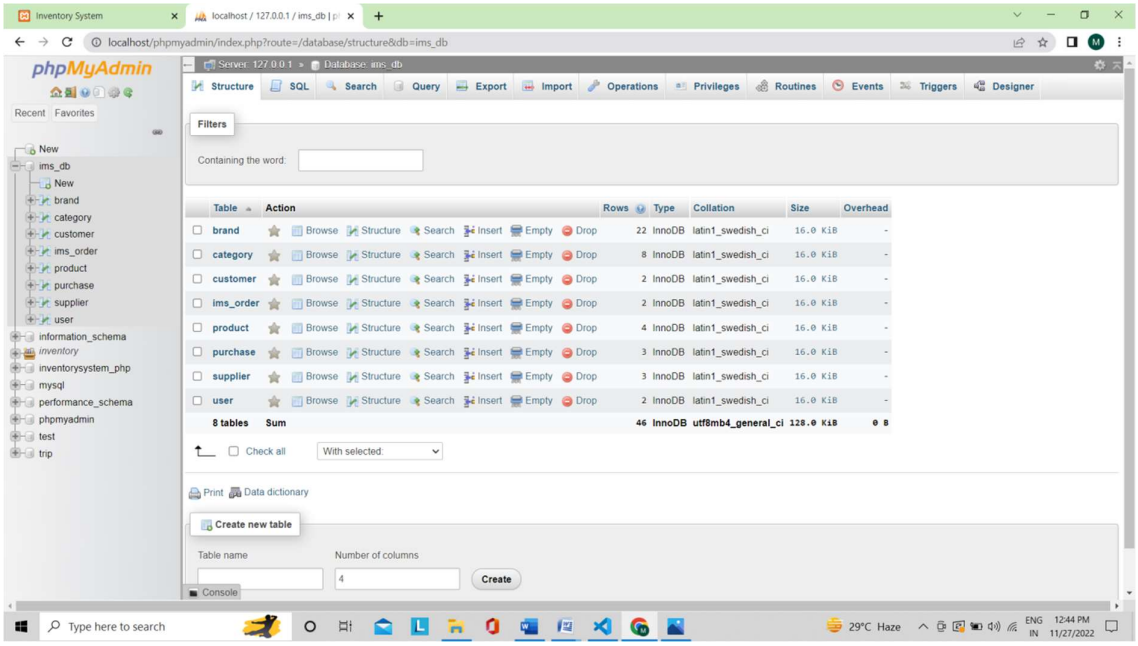
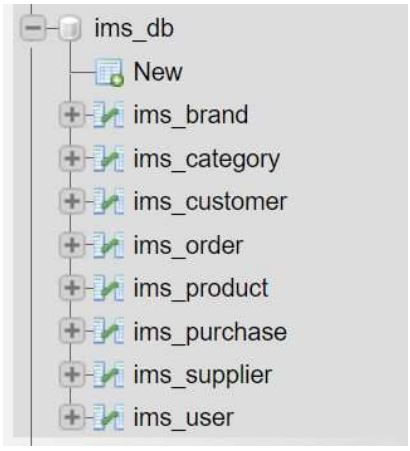
PRODUCT DETILS:



PURCHASE LIST:



MANAGE ORDER:



SOME DATABASE SCREENSHOTS: