VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA, BELAGAVI – 590 018

A Mini Project Report on

INVENTORY MANAGEMENT SYSTEM

Submitted in partial fulfillment of the requirements as a part of the DBMS Lab for the V Semester of degree of ***Bachelor of Engineering in Information Science and Engineering*** *of Visvesvaraya Technological University, Belagavi*

Submitted by

ADITYA D 1RN19IS011
AKSHAY P 1RN19IS018

Under the Guidance of

Faculty Incharge
Dr. R Rajkumar
Asso. Professor
Dept. of ISE, RNSIT

Guide
Ms.Sowmya S K
Asst. Professor
Dept. of ISE, RNSIT

ESTD:2001
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Department of Information Science and Engineering
RNS Institute of Technology
Channasandra, Dr. Vishnuvardhan Road, RR Nagar Post,
Bengaluru – 560 098

2021 – 2022

RNS Institute of Technology

Channasandra, Dr.Vishnuvardhan Road, RR Nagar Post,
Bengaluru – 560 098

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

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CERTIFICATE

This is to certify that the Mini project report entitled ***INVENTORY MANAGEMENT SYSTEM*** has been successfully completed by **ADITYA D** bearing **USN 1RN19IS011** & **AKSHAY P** bearing **USN 1RN19IS018**, presently V semester students of **RNS Institute of Technology** in partial fulfillment of the requirements as a part of the DBMS Laboratory for the award of the degree ***Bachelor of Engineering in Information Science and Engineering*** under **Visvesvaraya Technological University, Belagavi** during academic year 2021 – 2022. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the reportdeposited in the departmental library. The mini project report has been approved as it satisfiesthe academic requirements as a part of DBMS Laboratory for the said degree.

Ms. Sowmya S K Rajkumar Guide Incharge	**Dr. R** Faculty	**Dr. Suresh L** Professor and HOD

External Viva

Name of the Examiners	**Signature with date**
1. _____	_____
2. _____	

DECLARATION

We, **ADITYA D [USN: 1RN19IS011] & AKSHAY P [USN: 1RN19IS018],** students of V Semester BE, in Information Science and Engineering, RNS Institute of Technology hereby declare that the Mini project entitled ***Inventory Management System*** has been carried out by us and submitted in partial fulfillment of the requirements for the *V Semester degree of* ***Bachelor of Engineering in Information Science and Engineering*** *of Visvesvaraya Technological University, Belagavi* during academic year 2021-2022.

Place: Bengaluru

Date:

ADITYA D

(1RN19IS011)

AKSHAY P

(1RN19IS018)

ABSTRACT

This project is aimed at developing a desktop-based application namedInventory Management System for managing the inventory system of any organization. The Inventory Management System (IMS) refers to the system and processes to manage the stock of organization with the involvement of Technology system. This system can be used to store the details of the inventory, stock maintenance, update the inventory based on the sales details,generate sales and inventory report daily or weekly based.

This project is categorize individual aspects for the sales and inventory management system. In this system we are solving different problem affectingto direct sales management and purchase management. Inventory ManagementSystem is important to ensure quality control in businesses that handle transactions resolving around consumer goods.Without proper inventory control, a large retail store may run out of stockon an important item.

A good inventory management system will alert the wholesaler when it istime to record. Inventory Management System is also on important means of automatically tracking large shipment. An automated Inventory Management System helps to minimize the errors while recording the stock.

ACKNOWLEDGMENT

The fulfillment and rapture that go with the fruitful finishing of any assignment would be inadequate without the specifying the people who made it conceivable, whose steady directionand support delegated the endeavors with success.

We would like to profoundly thank **Management** of **RNS Institute of Technology** for providing such a healthy environment to carry out this Project work.

We would like to express our thanks to our Principal **Dr. M K Venkatesha** for his support and inspired us towards the attainment of knowledge.

We wish to place on record my words of gratitude to **Dr. Suresh L** Professor and Head of the Department, Information Science and Engineering, for being the enzyme and master mind behind our Project work.

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We would like to express our profound and cordial gratitude to our Guide **Ms. Sowmya S K**, Assistant Professor, Department of Information Science and Engineering for her valuable guidance in preparing the project report.

We would like to thank all other teaching and non-teaching staff of Information Science & Engineering who have directly or indirectly helped us to carry out the project work.

And lastly, We would hereby acknowledge and thank our parents who have been a source of inspiration and also instrumental in carrying out this Project work.

Aditya D
USN: 1RN19IS011

Akshay P
USN: 1RN19IS018

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ABBREVIATIONS

PHP	-	Hypertext Preprocessor
API	-	Application Programming Interface
CGI	-	Common Gateway Interface
CSS	-	Cascading style sheets
DBMS	-	Database Management System
ER	-	Entity Relationship
GDS	-	Global Distribution System
GPL	-	General Public License
HTML	-	Hypertext Markup Language
HTTP	-	Hypertext Transfer Protocol
IMS	-	Inventory Management System
JS	-	JavaScript
MVD	-	Multi Valued Dependency
SQL	-	Structured Query Language

Chapter 1

INTRODUCTION

1.1 Background

A database is an organized collection of data, generally stored and accessed electronically from a computer system. Where databases are more complex they are often developed using formal design and modelling techniques.

The database management system (DBMS) is the software that interacts with end users, applications, the database itself to capture and analyse the data and provides facilities to administer the database. The sum total of the database, the DBMS and the associated applications can be referred to as a "database system". Often the term "database" is also used to loosely refer to any of the DBMS, the database system or an application associated with the database. The DBMS manages three important things: the data, the database engine that allows data to be accessed, locked and modified and the database schema, which defines the database‟s logical structure. These three foundational elements help provide concurrency, security, data integrity and uniform administration procedures. Typical database administration tasks supported by the DBMS include change management, performance monitoring/tuning and backup and recovery. Many database management systems are also responsible for automated rollbacks, restarts and recovery as well asthe logging and auditing of activity.

1.2 Introduction to INVENTORY MANAGEMENT SYSTEM

The project Inventory Management System is a complete desktop-based application. 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 profile, 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 oftransaction.

Each new stock is created and entitled with the named and the entry date of that stock and 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 orderto prevent it from the threads and misuse of the inventory

Online Inventory Management Software will help you to manage your product stock in manageable way. This system is a second version and more advance than previous. This system isbuilt on CodeIgniter with proper management of users, groups, brand, stores, product, orders and reports. You can create as many users as you want and assigned them with required modules. The system features are listed below section. In addition, We will also teach you how to install the system successfully.

This system can be also used for small business. It is free web based inventory management software. This system is based on the store inventory system. The products are controlled by the store.

Chapter 2

E R DIAGRAM AND RELATIONAL SCHEMADIAGRAM

2.1 Description of ER Diagram

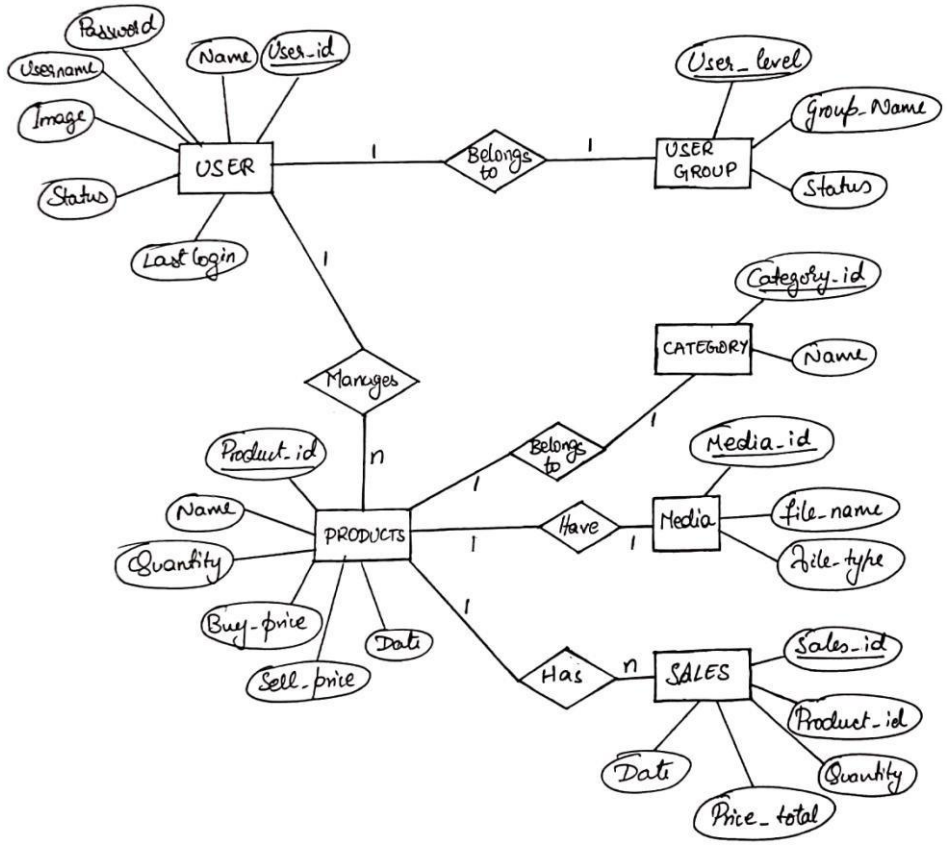


Figure 2.1: E-R Diagram for INVENTORY MANAGEMENT SYSTEM

Entity relationship diagram displays the relationships of entity set stored in a database. In other words, we can say that ER diagrams help you to explain the logical structure of databases. At first look, an ER diagram looks very similar to the flowchart. However, ER Diagram includes many specialized symbols, and its meanings make this model unique.

2.1.1 Components of INVENTORY MANAGEMENT SYSTEM, E-R Diagram

Entity types like **USER** and **PRODUCT** are in rectangular boxes.

1. Relationships like **MANAGES, HAS, HAVE** and **BELONGS TO** are indiamond boxes, attached to entitytypes with straight lines.
2. Attributes are shown in ovals like **Name** and **Status**, each attached by a straightlineto entity or relationship type.
3. Key attributes like **Product_ID** and **Sales_id** are underlined..

2.1.2E-R Diagram Relationships Description

ER Schema Description:

1. **USER** : User is in HAS relationship with USER GROUP with a cardinality ratioof 1:1.
2. **USER GROUP** : has a relation a relation with USER which specifies certainprivileges to USER
3. **PRODUCTS** : is connected to USER with a cardinality ratio of 1:n. USER is connected to PRODUCTS with the relation Manages. So, the user has full accessto the products inventory and has the permission to manage products.
4. **CATEGORY** : is in „Belongs to“ relationship with Products. As each product willbe belonging to a certain category
5. **MEDIA** : Each product has media such as to add image to the product logo etc.
6. **SALES** : is connect to PRODUCT with „has“ relationship where in we cangenerate the total sales for a month or even a particular period of time.

2.2 Description of Relational Schema Diagram

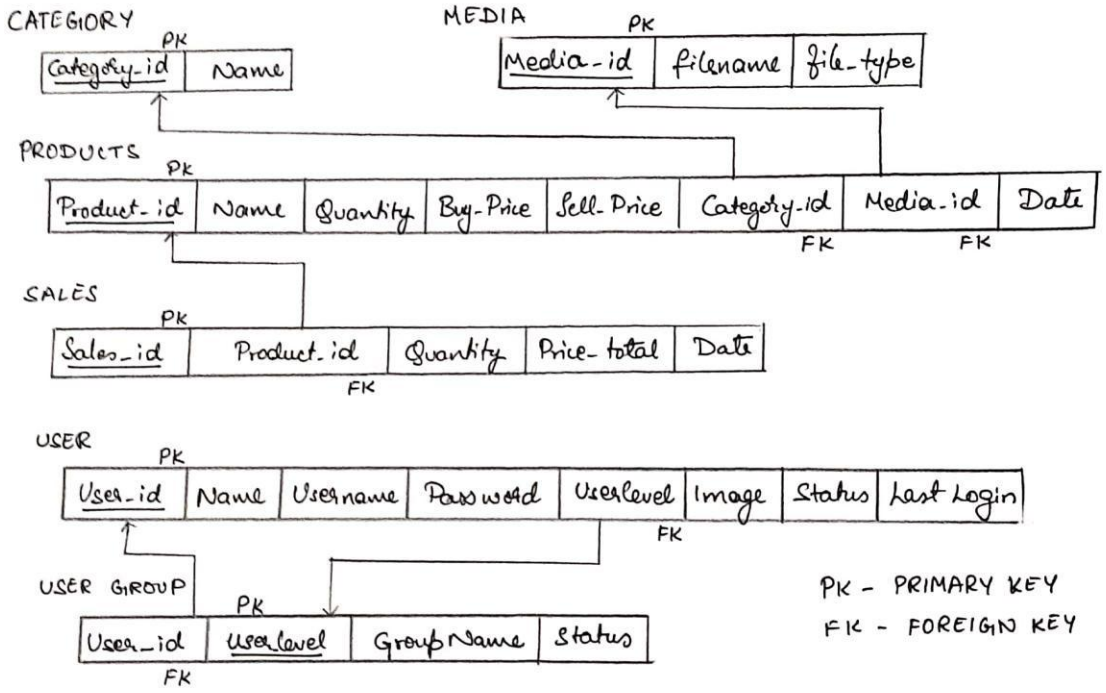


Figure 2.2 Relational Schema Diagram for INVENTORY MANAGEMENT SYSTEM

2.2.1 General Constraints

1. **NULL Constraint**: Attributes that are under NOT NULL constraints have to be filled compulsorily. Almost all the attributes in the project are under NOT NULL constraint.

2. Entity Integrity Constraint: This constraint makes sure that no primary key can have aNULL value assigned to it. The primary keys involved in the project include:

- Category_id
- Media_id
- Product_id
- Sales_id
- User_id
- User_level

3. Referential Integrity Constraints: A table in the back end of the project may have references pointing to an attribute in another table. For example: User_id in the INVOICE table refers to Id in USER table. The various tables are also linked with multiple foreign keys which areall set to cascade any update or delete operation on the attribute in the main table. The various Foreign Key attributes are:

- Category_id.
- Media_id
- Product_id
- User_id
- User_level

2.2.2 Schema Description

The above Figure.2.2 shows the relational schema of INVENTORY MANAGEMENTSYSTEM. It has the following entities.

1. **CATEGORIES:** This table consists of **Category_id** , Type of product.
2. **MEDIA:** This table consists of **Media_id,** Filename, File_type.
3. **PRODUCT:** This table consists of **Product_id,** Name, Quantity, Buy_price, Sell_price, Category_id, Media_id, Date.
4. **SALES:** This table consists of **Sales_id,** Product_id, Quantity, Price_total, Date.
5. **USERS:** This table consists of **User_id,** Name, Username, Password, User_level, Image, Status, Last_Login.
6. **USER GROUP:** This table consists of User_id, **User_level,** GroupName, Status.

Chapter 3

SYSTEM DESIGN

3.1 Table Description

CATEGORIES

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(11)		UNSIGNED	No	None		AUTO_INCREMENT
2	name	varchar(60)	utf8_general_ci		No	None		

Table 3.1 categories

MEDIA

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(11)		UNSIGNED	No	None		AUTO_INCREMENT
2	file_name	varchar(255)	latin1_swedish_ci		No	None		
3	file_type	varchar(100)	latin1_swedish_ci		No	None		

Table 3.2 media

PRODUCTS

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(11)		UNSIGNED	No	None		AUTO_INCREMENT
2	name	varchar(255)	utf8_general_ci		No	None		
3	quantity	varchar(50)	utf8_general_ci		Yes	NULL		
4	buy_price	decimal(25,2)			Yes	NULL		
5	sale_price	decimal(25,2)			No	None		
6	categorie_id	int(11)		UNSIGNED	No	None		
7	media_id	int(11)			Yes	0		
8	date	datetime			No	None		

Table 3.3 Products

SALES

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(11)		UNSIGNED	No	None		AUTO_INCREMENT
2	product_id	int(11)		UNSIGNED	No	None		
3	qty	int(11)			No	None		
4	price	decimal(25,2)			No	None		
5	date	date			No	None		

Table 3.4 Sales

USERS

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(11)		UNSIGNED	No	None		AUTO_INCREMENT
2	name	varchar(60)	latin1_swedish_ci		No	None		
3	username	varchar(50)	latin1_swedish_ci		No	None		
4	password	varchar(255)	latin1_swedish_ci		No	None		
5	user_level	int(11)			No	None		
6	image	varchar(255)	latin1_swedish_ci		Yes	no_image.jpg		
7	status	int(1)			No	None		
8	last_login	datetime			Yes	NULL		

Table 3.5 Users

USER GROUPS

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id	int(11)		UNSIGNED	No	None		AUTO_INCREMENT
2	name	varchar(60)	latin1_swedish_ci		No	None		
3	username	varchar(50)	latin1_swedish_ci		No	None		
4	password	varchar(255)	latin1_swedish_ci		No	None		
5	user_level	int(11)			No	None		
6	image	varchar(255)	latin1_swedish_ci		Yes	no_image.jpg		
7	status	int(1)			No	None		
8	last_login	datetime			Yes	NULL		

Table 3.6 User Groups

3.1 Stored Procedures

The stored procedure below calculates the total price of the items purchased .

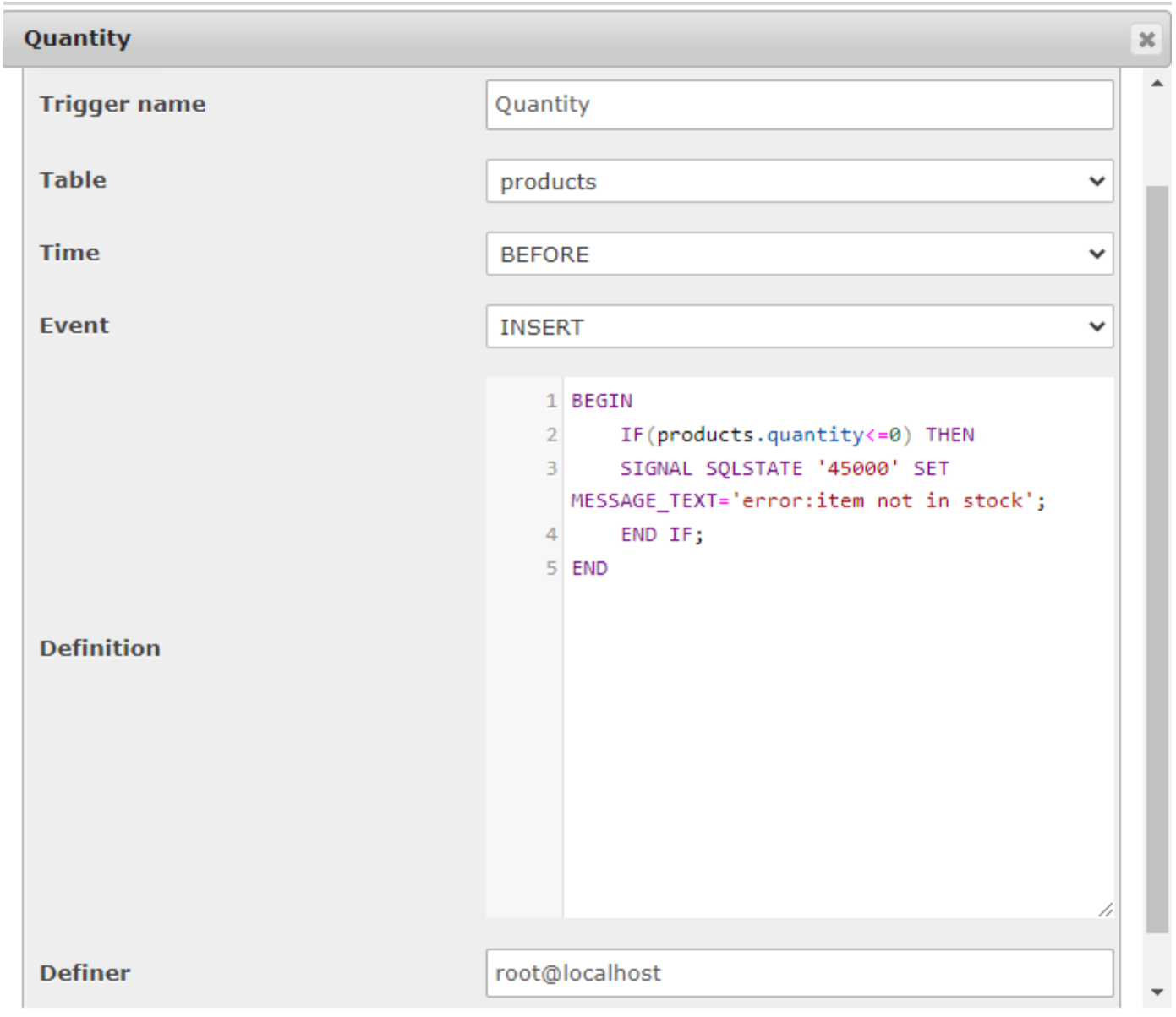
```
DELIMITER $$
CREATE DEFINER=`root`@`localhost` PROCEDURE `price update`()
UPDATE sales SET sales.price=products.sale_price*sales.qty$$DELIMITER ;
```

3.2 Trigger

A trigger is a stored procedure in database which automatically invokes whenever a specialevent inthe database occurs. For example, a trigger can be invoked when a row is insertedinto a specified table or when certain table columns are being updated.

In this project a trigger is added to display a error message if stock is less than/equal to 0 While ordering the product.

```
CREATE TRIGGER `Quantity` BEFORE INSERT ON `products`FOR EACH ROW
BEGIN
if(products.quantity<=0) THEN
        SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT="Error: item out of stock";END IF
END
```


Quantity
Trigger name
Quantity
Table
products
Time
BEFORE
Event
INSERT
Definition
1 BEGIN
2 IF(products.quantity<=0) THEN
3 SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT='error:item not in stock';
4 END IF;
5 END
Definer
root@localhost

Chapter 4

IMPLEMENTATION

4.1 Front-end Development

The front-end is built using a combination of technologies such as Hypertext Markup Language (HTML), JavaScript and Cascading Style Sheets (CSS). Front-end developers design and construct the user experience elements on the web page or app including buttons, menus, pages, links, graphics and more.

4.1.1 Hypertext Markup Language

HTML is a computer language devised to allow website creation. These websites can then be viewed by anyone else connected to the Internet. It is relatively easy to learn, with the basics being accessible to most people in one sitting; and quite powerful in what it allows you to create. HTML is the standard markup language for creating Web pages. It stands forHyper Text Markup Language. It describes the structure of a Web page. It consists of a series of elements. It elements tell the browser how to display the content. It elements are represented by tags. HTML tags label pieces of content such as "heading", "paragraph", "table", and so on. Browsers do not display the HTML tags, but use them to render the content of the page.

4.1.2 Cascading style sheets

CSS stands for Cascading Style Sheets. It is a style sheet language which is used to describethe lookand formatting of a document written in markup language. It provides an additional feature to HTML. It is generally used with HTML to change the style of web pages and user interfaces. CSSis used along with HTML and JavaScript in most websites to create user interfaces for web applications. Before CSS, tags like font, color, background style, element alignments, border and size had to be repeated on every web page. This was a verylong process. CSS solved that issue. CSS style definitions are saved in external CSS files so it is possible to change the entire website by changing just one file. CSS provides more detailed attributes than plain HTML to define the look and feel of the website.

4.1.3 JavaScript

JavaScript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the

user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities. Client-side JavaScript is the most common form of the language. The script should be included in or referenced by an HTML document for the code to be interpreted by the browser. It means that a web page need not be a static HTML,but can include programs that interact with the user, control the browser, and dynamically create HTML content. The JavaScript client-side mechanism provides many advantages over traditional CGI server-side scripts. The JavaScript code is executed when the user submits the form, and only if all the entries are valid, they would be submitted to the WebServer. JavaScript can be used to trap user-initiated events such as button clicks, link navigation, and other actions that the user initiates explicitly or implicitly. Advantages are: **Less server interaction, immediate feedback to the visitors, increased interactivity** and **richer interfaces.**

4.2 Back-end Development

Backend is server side of the website. It stores and arranges data, and also makes sure everything on the client-side of the website works fine. It is the part of the website that youcannot see and interact with. It is the portion of software that does not come in direct contactwith the users. The parts and characteristics developed by backend designers are indirectlyaccessed by users through a front-end application. Activities, like writing APIs, creating libraries, and working with system components without user interfaces or even systems ofscientific programming, are also included in the backend.

4.2.1 Backend scripting language - PHP Hypertext Pre-processor

PHP is used as the server side scripting language. PHP is an acronym for "PHP: Hypertext Preprocessor". PHP is a widely-used, open source scripting language. PHP scripts are executed on the server. It is compatible with all servers used today. It is easy to use and runs efficiently on the server side. It can run on various platforms like windows, Linux, UNIX, Mac OS-X etc. and since it is a scripting language, it comes with predefined functions which makes it easy to implement any logic necessary.

4.2.2 Web Server – Apache

Apache is an open-source and free web server software that powers around 46% of websitesaround the world. The official name is Apache HTTP Server, and it‟s maintained and developed by the Apache Software Foundation. It allows website owners to serve content on the web — hence the name "web server". Although we call Apache a web server, it is not a physical server, but rather a software that runs on a server. Its job is to establish a connection between a server and the browsers of website visitors (Firefox, Google Chrome,Safari, etc.) while delivering files back and forth between them (client-server structure). Apache is a cross-platform software, therefore it works on both UNIX and Windows servers.

4.2.3 Database – MySQL

MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. It is developed, marketed and supported by MySQL AB, which is a Swedish company. It is released under an open-source license. So you have nothing to pay to use it. It is a very powerful program in its own right. It handles a large subset of the functionality of the mostexpensive and powerful database packages. It uses a standard form of the well-known SQL data language. It works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc. It works very quickly and works well even with large datasets. It is very friendly to PHP, the most appreciated language for web development. MySQL supports large databases, up to 50 million rows or more in a table. The default filesize limit for a table is 4GB, but you can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB). It is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environments.

4.3 Discussion of Code Segment

This section talks about the important code sections and modules that are implemented in the INVENTORY MANAGEMENT SYSTEM project. These modules add logic to the complete system, and make it function the way it is supposed to. It also talks about the integration between the front end HTML code and the back end MySQL database.

4.3.1 Login Module :

```
<?php include_once('includes/load.php'); ?>
<?php
$req_fields = array('username','password' );validate_fields($req_fields);
$username = remove_junk($_POST['username']);
$password = remove_junk($_POST['password']);

if(empty($errors)){
  $user_id = authenticate($username, $password);if($user_id){
    //create session with id
     $session->login($user_id);
    //Update Sign in time updateLastLogIn($user_id);
     $session->msg("s", "Welcome to Inventory Management System");redirect('admin.php',false);

  } else {
    $session->msg("d", "Sorry Username/Password incorrect.");redirect('index.php',false);
  }

} else {
   $session->msg("d", $errors);redirect('index.php',false);
}

?>
```

4.3.2 Manage And Add product details:

```
<?php
  $page_title = 'All Product'; require_once('includes/load.php');
  // Checkin What level user has permission to view this pagepage_require_level(2);
  $products = join_product_table();
?>
<?php include_once('layouts/header.php'); ?>
```

```
<div class="row">
  <div class="col-md-12">
    <?php echo display_msg($msg); ?>
  </div>
 <div class="col-md-12">
   <div class="panel panel-default">
    <div class="panel-heading clearfix">
     <div class="pull-right">
       <a href="add_product.php" class="btn btn-primary">Add New</a>
     </div>
    </div>
    <div class="panel-body">
     <table class="table table-bordered">
       <thead>
         <tr>
           <th class="text-center" style="width: 50px;">#</th>
           <th> Photo</th>
           <th> Product Title </th>
           <th class="text-center" style="width: 10%;"> Categories </th>
           <th class="text-center" style="width: 10%;"> In-Stock </th>
           <th class="text-center" style="width: 10%;"> Buying Price </th>
           <th class="text-center" style="width: 10%;"> Selling Price </th>
           <th class="text-center" style="width: 10%;"> Product Added </th>
           <th class="text-center" style="width: 100px;"> Actions </th>
         </tr>
       </thead>
       <tbody>
         <?php foreach ($products as $product):?>
         <tr>
           <td class="text-center"><?php echo count_id();?></td>
           <td>
             <?php if($product['media_id'] === '0'): ?>
               <img class="img-avatar img-circle" src="uploads/products/no_image.png" alt="">
             <?php else: ?>
               <img class="img-avatar img-circle" src="uploads/products/<?php echo
$product['image']; ?>" alt="">
           <?php endif; ?>
           </td>
           <td> <?php echo remove_junk($product['name']); ?></td>
           <td class="text-center"> <?php echo remove_junk($product['categorie']); ?></td>
           <td class="text-center"> <?php echo remove_junk($product['quantity']); ?></td>
           <td class="text-center"> <?php echo remove_junk($product['buy_price']); ?></td>
           <td class="text-center"> <?php echo remove_junk($product['sale_price']); ?></td>
           <td class="text-center"> <?php echo read_date($product['date']); ?></td>
           <td class="text-center">
             <div class="btn-group">
               <a href="edit_product.php?id=<?php echo (int)$product['id'];?>" class="btn btn-infobtn-xs"
title="Edit" data-toggle="tooltip">
                 <span class="glyphicon glyphicon-edit"></span>
```

```
                </a>
                <a href="delete_product.php?id=<?php echo (int)$product['id'];?>" class="btn btn-danger btn-xs"  title="Delete" data-toggle="tooltip">
                  <span class="glyphicon glyphicon-trash"></span>
                </a>
              </div>
            </td>
          </tr>
          <?php endforeach; ?>
        </tbody>
      </tabel>
    </div>
  </div>
 </div>
 </div>
 <?php include_once('layouts/footer.php');
?>
```

4.3.3 Get Sales Data :

```
<?php
  $page_title = 'All sale'; require_once('includes/load.php');
  // Checkin What level user has permission to view this pagepage_require_level(3);
?>
<?php
$sales = find_all_sale();
?>
<?php include_once('layouts/header.php'); ?>
<div class="row">
  <div class="col-md-6">
    <?php echo display_msg($msg); ?>
  </div>
</div>
  <div class="row">
    <div class="col-md-12">
      <div class="panel panel-default">
        <div class="panel-heading clearfix">
          <strong>
            <span class="glyphicon glyphicon-th"></span>
            <span>All Sales</span>
          </strong>
          <div class="pull-right">
            <a href="add_sale.php" class="btn btn-primary">Add sale</a>
          </div>
        </div>
        <div class="panel-body">
          <table class="table table-bordered table-striped">
            <thead>
              <tr>
                <th class="text-center" style="width: 50px;">#</th>
                <th> Product name </th>
                <th class="text-center" style="width: 15%;"> Quantity</th>
                <th class="text-center" style="width: 15%;"> Total </th>
                <th class="text-center" style="width: 15%;"> Date </th>
                <th class="text-center" style="width: 100px;"> Actions </th>
              </tr>
            </thead>
           <tbody>
            <?php foreach ($sales as $sale):?>
            <tr>
              <td class="text-center"><?php echo count_id();?></td>
              <td><?php echo remove_junk($sale['name']); ?></td>
```

```
          <td class="text-center"><?php echo (int)$sale['qty']; ?></td>
          <td class="text-center"><?php echo remove_junk($sale['price']); ?></td>
          <td class="text-center"><?php echo $sale['date']; ?></td>
          <td class="text-center">
            <div class="btn-group">
              <a href="edit_sale.php?id=<?php echo (int)$sale['id'];?>" class="btn btn-warningbtn-xs"
title="Edit" data-toggle="tooltip">
                <span class="glyphicon glyphicon-edit"></span>
              </a>
              <a href="delete_sale.php?id=<?php echo (int)$sale['id'];?>" class="btn btn-dangerbtn-xs"
title="Delete" data-toggle="tooltip">
                <span class="glyphicon glyphicon-trash"></span>
                                                                                    </a>
                                                                                  </div>
          </td>
        </tr>
        <?php endforeach;?>
      </tbody>
    </table>
   </div>
  </div>
 </div>
</div>
<?php include_once('layouts/footer.php');
?>
```

4.4 Discussion of Results

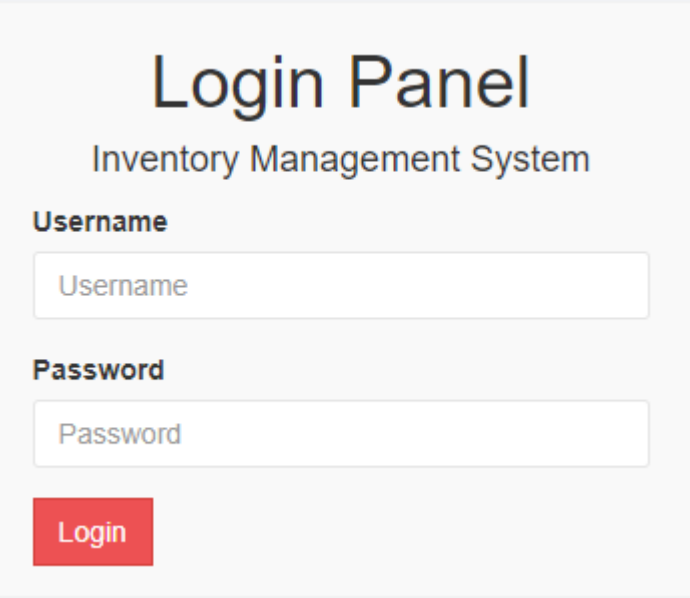
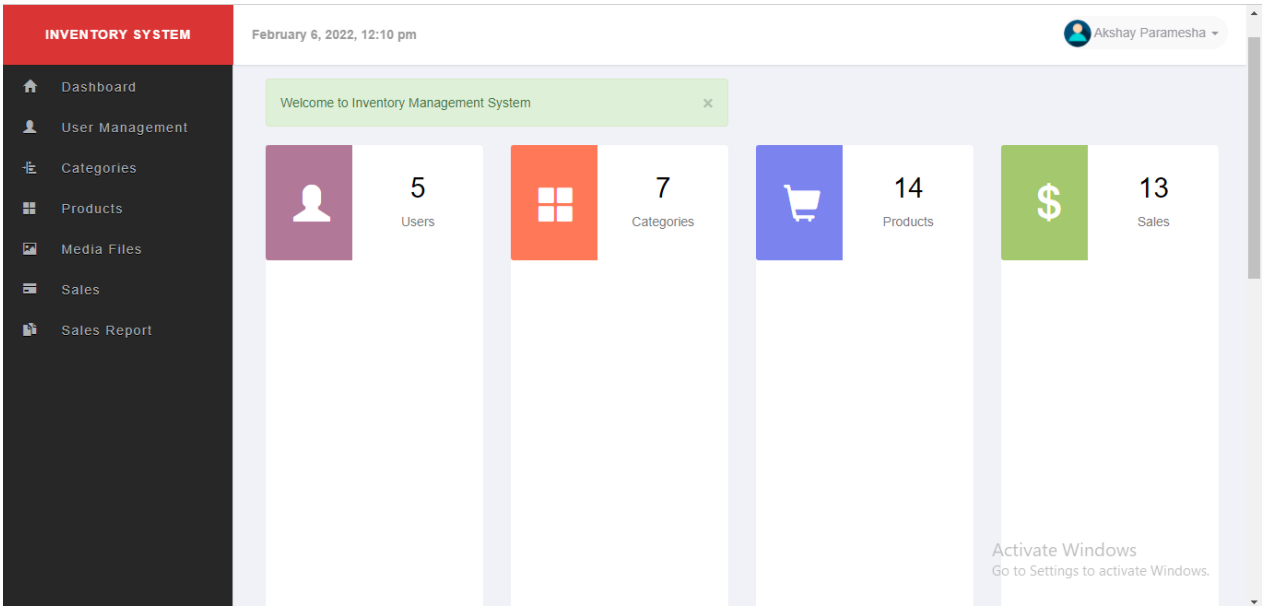


Figure 4.1 Homepage with login prompt

The above Figure 4.1 is the snapshot of the homepage with the login prompt. If the user hasalready registered with the website, he can login using his email ID or username which heused to register along with the valid password also which he set during sign up.



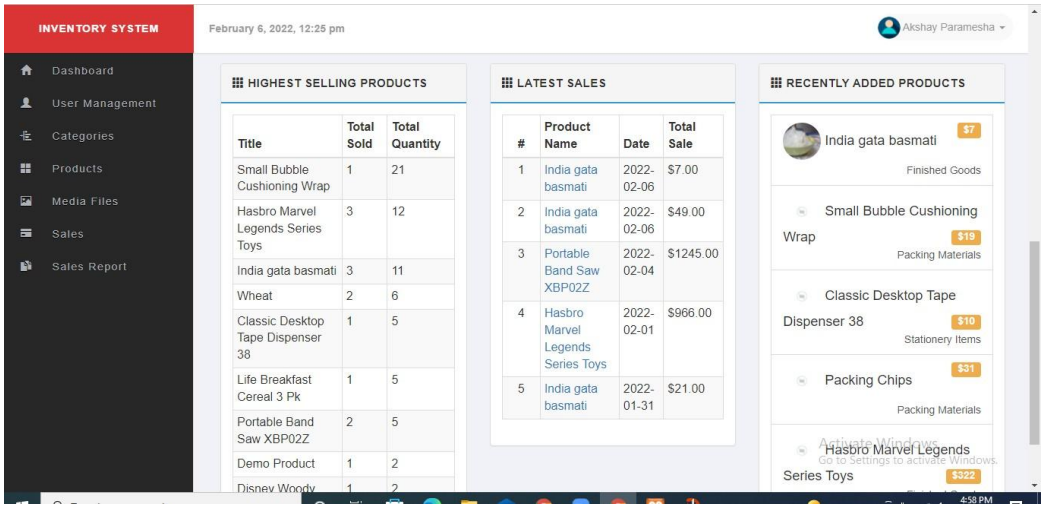


Figure 4.2 Dashboard of inventory

The above figure 4.2 shows the dashboard which displays Users, Categories, Products, No. of sales, highest sale, latest sales, recently added products with price and reports which will analyse the sales ofthe respective month. If the admin/user is done with updating the details then he can logoutfrom the page.

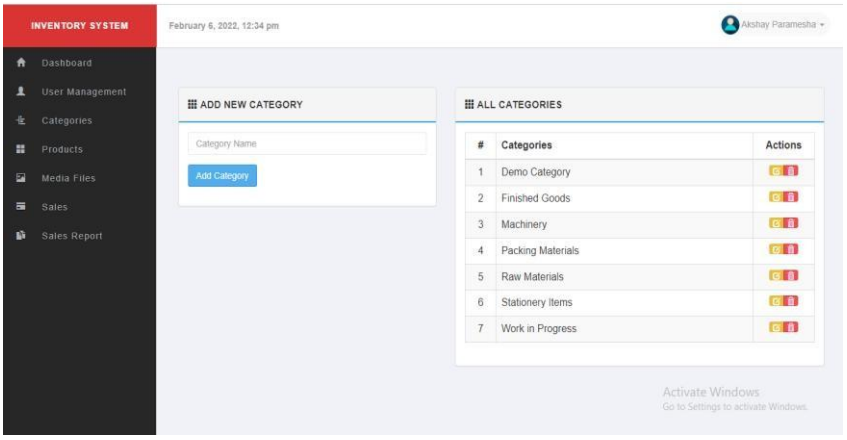


Figure 4.3 Categories of products

The above Figure 4.3 is about categories. When we add a product, it will be having different categories which can be viewed in these pages. The quantity column can be used to check the remaining stock

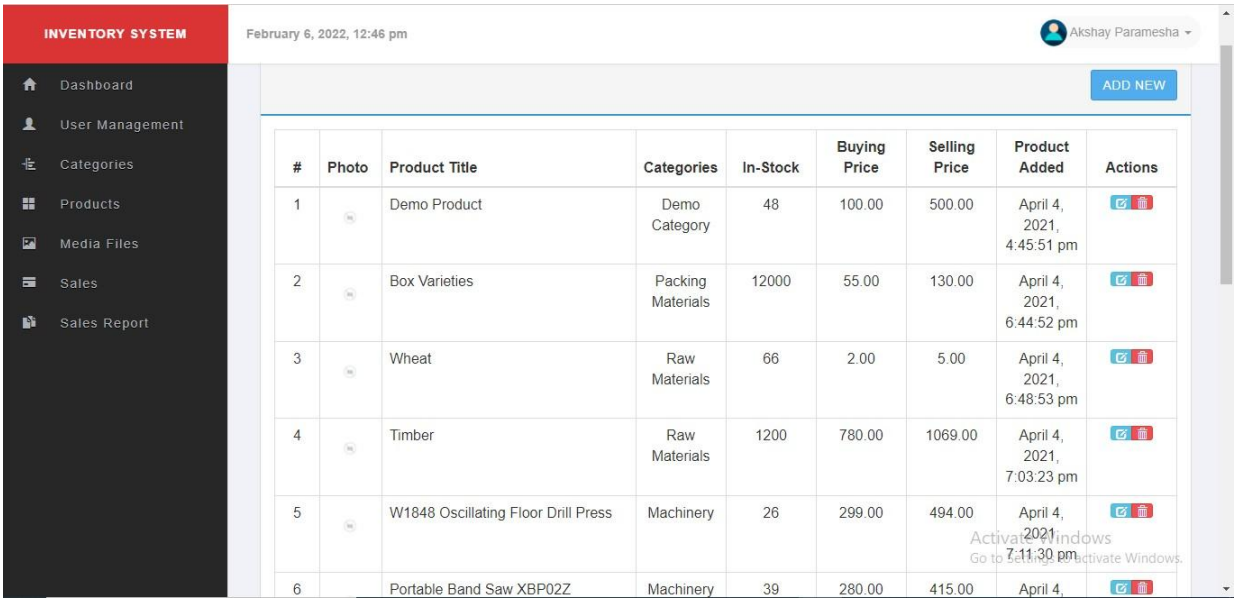
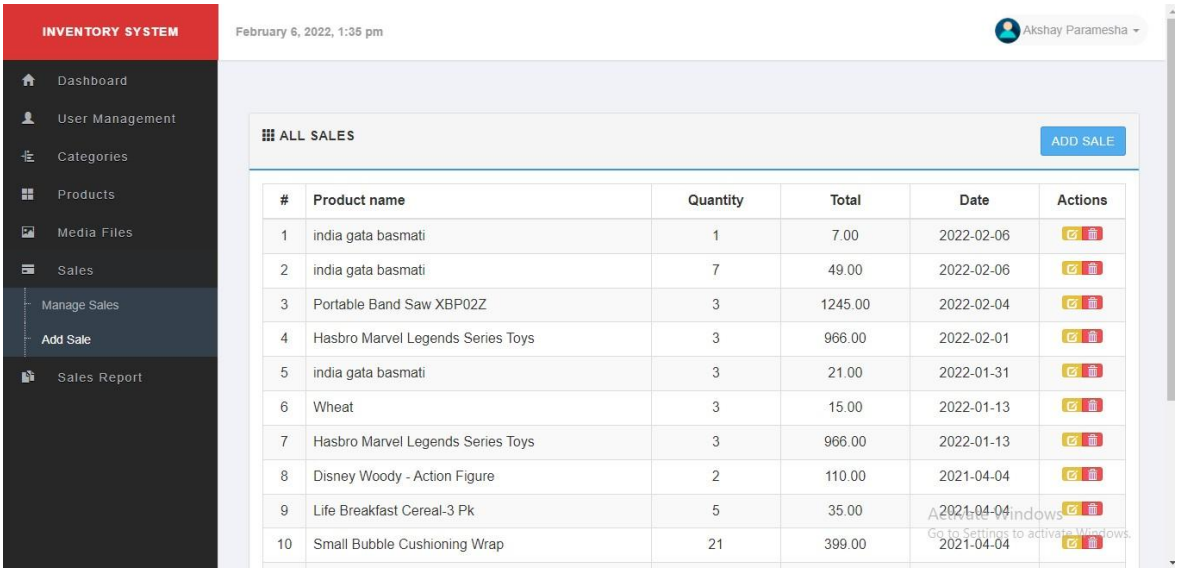


Figure 4.4 Products

The above figure 4.4 shows that all the products available in the store. We can update/delete the products and it will show a message if the stock is less than or equal to 0.

Basically this will give each and every detail about a product like quantity ,its category, selling and buying prices this is visible only to the admin and special user.



Inventory Management System - Sales Report

2022-01-01 TILL DATE 2022-01-31

Date	Product Title	Buying Price	Selling Price	Total Qty	TOTAL
2022-01-31	India gata basmati	4.00	7.00	3	21.00
2022-01-13	Hasbro Marvel Legends Series Toys	219.00	322.00	3	966.00
2022-01-13	Wheat	2.00	5.00	3	15.00
				GRAND TOTAL	$ 1,002.00
				PROFIT	$327.00

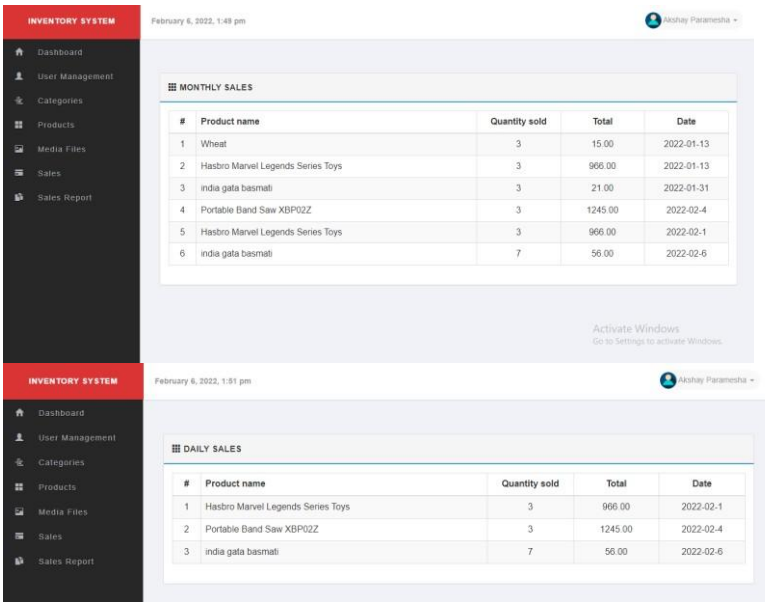


Figure 4.5 sales and sales reports

The above Figure 4.5 shows displays the sales made in by date and time Of the ordered product, quantity and displays total amount. Sales report displays the statistics of the sales that has been made in the respective month. This will help the company to keep track of sales.

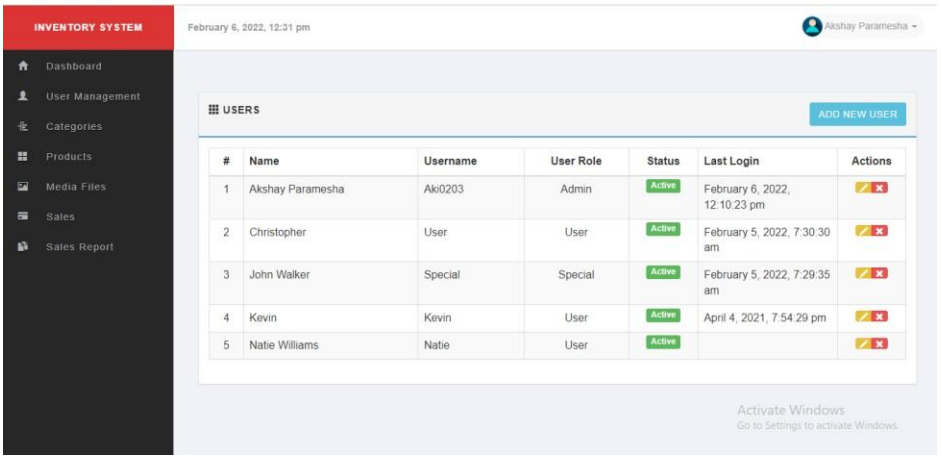


Figure4.6 Groups

In the above figure the admin can restrict the user about what they can access in the store. Here he can let the user to have specific permissions based on the group normal user who will be the employee in this case can only add sales and generate reports ,special users can only add new products and their images .Admin can do all the functions of both users and special users . Basically it will give full powers to admin to control user actions

4.5 System Features

- Manage Users
  - Add new user detail
  - View, Update, and remove user information
- Manage Groups
  - Add new group information
  - View, Update, and remove group information
- Manage Category
  - Add new category information
  - View, Update, and remove category information
- Manage Products
  - Add new product information
  - View, Update, and remove products information
- Manage Sales
  - Add new Sales information
  - View, Update, and remove sales information
- Reports
  - View total amount of sales generated based on
    - From specific date to specific date
    - Monthly
    - Daily
- Profile
  - View the logged in user information
- Setting
  - View, and Update logged in user information

Chapter 5

CONCLUSION AND FUTURE ENHANCEMENT

5.1 Conclusion

To conclude, Inventory Management System is a simple desktop based application basically suitable for small organization. It has every basic itemswhich are used for the small organization. Our team is successful in making the application where wecan update, insert and delete the item as per the requirement. This application also provides a simple report on monthly basis to know the monthly sales and purchasedetails.

This application matches for small organizations. Through it has some limitations, our team strongly believes that the implementation of this system will surely benefit the organization.

5.2 Future Enhancements

Since this project was started with very little knowledge about the Inventory Management System, we came to know about the enhancement capability during the process of building it. Some of the scope we can increase for the betterment and effectiveness oar listed below:

- Interactive user interface design.
- Manage Stock Godown wise.
- Use of Oracle as its database.
- Online payment system can be added.
- Making the system flexible in any type.
- Sales and purchase return system will be added in order to make return of products.
- Lost and breakage

Project Limitation

Since this is our first project it has some limitation. Due to less knowledge in particular fieldsand limited time we were not able to fulfil all our expectations that we expected we could do while the project got started. We hope this limitation are considerable. Some of the project limitations are:

- This application is not suitable for those organization where there is large quantity of product and different level of warehouses

- This software application is able to generate only simple reports.
- Single admin panel is only made.
- It is not suitable for large organization

This application will keep a high inventory turnover ratio to ensure our products aren‟t spoiling, becoming obsolete for our working capital. It‟ll help us to calculate how many times inventory sells in a year and see where we can make better use of our resources

Chapter 6

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