

NITTE MEENAKSHI INSTITUTE OF TECHNOLOGY

(AN AUTONOMOUS INSTITUTION, AFFILIATED TO VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

BELGAUM, APPROVED BY AICTE & GOVT.OF KARNATAKA



Application Development using JAVA (18CS45)

on

STORE MANAGEMENT SYSTEM

Submitted in partial fulfilment of the requirement for the award of Degree of

Bachelor of Engineering

in

Computer Science and Engineering

Submitted by:

SNEHA KUDARIHALMATH	1NT20CS178
RAKSHITHA N	1NT20CS139
MADHUSHREE PS	1NT20CS099

Under the Guidance of

Dr. Vijaya Shetty S

Professor, Dept. of CS&E, NMIT



Department of Computer Science and Engineering
(Accredited by NBA Tier-1)

2020-2021

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Department of Computer Science and Engineering (Accredited by NBA Tier-1)



CERTIFICATE

This is to certify that the Phase II Report on **STORE MANAGEMENT SYSTEM** is an authentic work carried out by Sneha Kudarihalmath (1NT20CS178), Rakshitha N (1NT20CS139) and Madhushree PS(1NT20CS099) bonafide students of **Nitte Meenakshi Institute of Technology**, Bangalore in partial fulfilment for the award of the degree of *Bachelor of Engineering* in COMPUTER SCIENCE AND ENGINEERING of Visvesvaraya Technological University, Belagavi during the academic year **2021-2022**. It is certified that all corrections and suggestions indicated during the internal assessment has been incorporated in the report.

Internal Guide

Dr. Vijaya Shetty S
Professor, Dept. CSE,
NMIT Bangalore

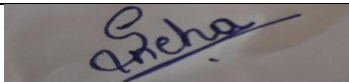
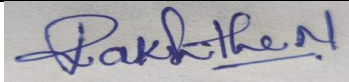
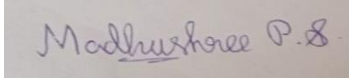
Signature of the HOD

Dr. Sarojadevi H.
Professor, Head, Dept. CSE,
NMIT Bangalore

DECLARATION

We hereby declare that

- (i) The project work is our original work
- (ii) This Project work has not been submitted for the award of any degree or examination at any other university/College/Institute.
- (iii) This Project Work does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
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NAME	USN	Signature
SNEHA KUDARIHALMATH	1NT20CS178	
RAKSHITHA N	1NT20CS139	
MADHUSHREE PS	1NT20CS099	

Date: 23-07-2022

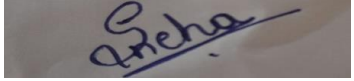
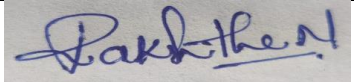
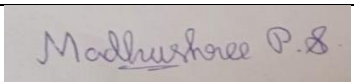
ACKNOWLEDGEMENT

The satisfaction and euphoria that accompany the successful completion of any task would be incomplete without the mention of the people who made it possible, whose constant guidance and encouragement crowned our effort with success. I express my sincere gratitude to our Principal **Dr. H. C. Nagaraj**, Nitte Meenakshi Institute of Technology for providing facilities.

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NAME	USN	Signature
SNEHA KUDARIHALMATH	1NT20CS178	
RAKSHITHA N	1NT20CS139	
MADHUSHREE PS	1NT20CS099	

Date:23-07-2022

ABSTRACT

Stores Management System is a project developed to automate the processes to reduce the clerical labor of the staff working in stores both technical and as well as accounts departments.

This system uses the latest technologies and cost-effective tools thereby providing the better control to the management by avoiding manual errors.

Stores management system is a web-based manufacturing system that enables a manufacturing industry to schedule its manufacturing operations based on the daily update of sales from its dealers.

The stores management system is an application that is mainly designed for the web based manufacturing industry. This application will help in maintaining or scheduling the day to day manufacturing operations based on the daily sales updated from the dealers. Once they update the daily sales of the last week as well as the orders of the next delivery, the schedule of the next week production can be drawn easily. This application will also help in generating the report based on the sales that have taken place. This will be one of the useful applications that will help the manufacturing industry. The order will be placed once the rates of the parts are been finalized. The stocks will be updated once the parts are been supplied. The database must be strong enough to hold all the records. The purposes of this application are the capital works, operation and maintenance work and other commercial activities like hiring equipments etc.

TABLE OF CONTENTS

1.CHAPTER 1: INTRODUCTION

1.1 Background

1.1.1 Brief history of Technology/concept

1.1.2 Applications

1.2 Research motivation and Problem statement

1.2.1 Research Motivation

1.2.2 Statement of the Problem

1.3 Research objectives and contributions

1.3.1 Primary objectives

1.3.2 Main contributions

1.4 Summary

2.CHAPTER 2: LITERATURE SURVE

2.1 Introduction

2.2 Study of Tools/Technology

2.2 Summary

3.CHAPTER 3: SYSTEM REQUIREMENTS SPECIFICATIONS

3.1 General Description

3.1.1 Product Perspective

3.2 System Requirements

3.2.1 Hardware Requirements

3.2.2 Software Requirements

3.3 Summary

4.CHAPTER 4: IMPLEMENTATION

4.1 Methodology

4.2 Description of Process

4.3 Pseudo-code

5. CHAPTER 5 : LIST OF TABLES

6. CHAPTER 6: RESULTS

7.CHAPTER 7: CONCLUSIONS

8.REFERENCES

INTRODUCTION

Background :

Material management is only possible if proper records of the stores are maintained. Stores are very important in carrying out day-to-day operations. The objective behind stores is the continuous supply and production of goods and services. Managing the stores ensures that every project, no matter how large or small is properly managed.

Store keeping's basic function is to receive the materials, recognize, place the same and issue the raw materials on the requisition made by the respective department.

The term "store management" refers to the efficient management of materials. It ensures that all the various activities involved during the process of storekeeping are carried out economically and efficiently.

JavaFX application with the basic CRUD (create, read, update, delete) functionalities. The application is called "Store Management System" and is designed to help the physical stores to digitally store the information about the everyday activities in the store. As for the working environment and software developing technologies I've used IntelliJ Idea as the integrated development environment, Amazon Correto 8 as the SDK (software development kit), JavaFX as GUI (graphical user interface). For the database I've used SQLite.

Brief history of Technology/concept :

The project Store Management System has used the java, the javafx, and the MySQL database system for storing the data.

Java was created at Sun Microsystems, Inc., where James Gosling led a team of researchers in an effort to create a new language that would allow consumer electronic devices to communicate with each other. Work on the language

began in 1991, and before long the team's focus changed to a new niche, the World Wide Web. Java was first released in 1995, and Java's ability to provide interactivity and multimedia showed that it was particularly well suited for the Web.

JavaFX is a software platform for creating and delivering desktop applications, as well as rich web applications that can run across a wide variety of devices. JavaFX has support for desktop computers and web browsers on Microsoft Windows, Linux, and macOS, as well as mobile devices running iOS and Android.

MySQL is free and open-source software under the terms of the GNU General Public License, and is also available under a variety of proprietary licenses. MySQL has stand-alone clients that allow users to interact directly with a MySQL database using SQL, but more often, MySQL is used with other programs to implement applications that need relational database capability.

Applications :

The application is designed for use from both store administrators and clients. Some of the application features are:`

Store Administrator

- Login/Logout
- Dashboard Overview
- List, Search, Add, Edit, View, Delete Product
- List Customers Orders
- List, Search, Delete Customers

Client

- Register/Login/Logout
- Dashboard Overview
- List Products
- Buy Products
- List own orders

Research motivation and Problem statement :

Research Motivation :

Motivation is from Digital India concept. The country is becoming digitalised so organising and maintaining all the data of customers and then the orders they ordered from the products available in the store. This will help the managers of the shopping stores to understand the shopping of customers. The orders selected are stored in the database and can be viewed by the customers. The main motivation is to make the country digitalised.

Statement of the Problem :

The problem faced by the company is they do not have any systematic system to record and keep their orders data. It is difficult for the admin to record the orders data quickly and safely because they only keep it in the logbook and not properly organized. The company problem is they using chaos system and it is difficult for the admin to estimate their profit. With the new system developed, the company can manage their orders data easily, quickly and more secured. To record the store data will cost a time. Admin of the company only one person so he needs to record every stock detail clearly or else it may lead to lack information about the data. The data can easily loss because they only use a logbook to record their orders data. With the system, it will help more on the

security of the data. Data loss hard to detect because admin need to review one by one page in the logbook, but with the system developed, it may help the admin to detect the orders ordered from the store.

Research objectives and contributions :

Primary objectives :

To ensure uninterrupted supply of materials without delay to various users of the organization. To ensure safe handling of materials and prevent their damage. To ensure proper and continuous control over the material

An efficient stores management has normally the following main objectives. To ensure uninterrupted supply of materials without delay to various users of the organization.

To prevent overstocking and under stocking of the materials

To ensure safe handling of materials and prevent their damage.

To protect materials from pilferage, theft, fire and other risks

To minimize the cost of storage

To ensure proper and continuous control over the materials.

To ensure most effective utilization of available storage space

To optimize the efficiency of the personnel engaged in the store

Main contributions :

The java,javfx and MySQL database is used in this project. The project is executed in the eclipse. In addition to simplifying web programming in general, Java innovated a new type of networked program called the applet that changed the way the online world thought about content. Java also addressed some of the thorniest issues associated with the Internet: portability and security.

JavaFX allows you to create Java applications with a modern, hardware-accelerated user interface that is highly portable. JavaFX builds on top of JDK and is a standalone component. MySQL is free and open-source software under the terms of the GNU General Public License, and is also available under a variety of proprietary licenses. MySQL was owned and sponsored by the Swedish company MySQL AB, which was bought by Sun Microsystems (now Oracle Corporation). In 2010, when Oracle acquired Sun, Widenius forked the open-source MySQL project to create MariaDB.

Summary :

Store management is the activity of running and monitoring all operations in a store. Its main responsibilities include working with employees, creating work schedules, communicating with suppliers, and dealing with customer complaints. Proper management will maintain effective control over your business and positively impact your overall productivity. Thus, you need to understand aspects of retail store management and its best practices to optimize your data and enhance customer experience. Store management is the actual handling of items received, held, and issued from a store. For small retailers, store administration will focus on inventory management. By maintaining optimal data levels, you can meet customer needs while minimizing unnecessary costs and achieving sales goals.

LITERATURE SURVEY

Introduction :

Store managers must ensure that the store runs smoothly that items are priced comparatively and that customers are satisfied. Previously it is developed by P.Riteesh which is super market management system. Drawbacks of super market management system is if we cancelled the ordered item the money not returned ie they didn't maintained cancelation option. In grocery management system we overcome the drawback and we create a option called wallet.

Study of Tools/Technology :

Operating System :The proposed software is targeted to run on Windows Xp, Windows NT version 2.0(Server/Workstation) and Windows 2000(Professional/Server) editions.

JavaFX is an open source, next generation client application platform for desktop, mobile and embedded systems built on Java. It is a collaborative effort by many individuals and companies with the goal of producing a modern, efficient, and fully featured toolkit for developing rich client applications. JavaFX Scene Builder is a visual layout tool that lets users quickly design JavaFX application user interfaces, without coding. Users can drag and drop UI components to a work area, modify their properties, apply style sheets, and the FXML code for the layout that they are creating is automatically generated in the background. The result is an FXML file that can then be combined with a Java project by binding the UI to the application's logic. MySQL Server is being used as Rack End for application's central repository. The reasons to choose it as back-end are It is very simple to maintain, It is highly secured, It can be integrated with JSP very easily, It can support and manage a large amount of data, It is a very scalable product and can support as many number of users as supported by the infrastructure.

Summary :

A supermarket is a large form of the traditional grocery store, it is as self service shop offering a wide variety of food and household products, organised into aisles. It is larger in site and has a wider selection than a traditional grocery store, but is smaller and more limited in the range of merchandise than a hypermarket or big market.

SYSTEM REQUIREMENTS SPECIFICATION**General Description :**

Store management is the activity of running and monitoring all operations in a store. Its main responsibilities include working with employees, creating work schedules, communicating with suppliers, and dealing with customer complaints. Proper management will maintain effective control over your business and positively impact your overall productivity. Thus, you need to understand aspects of retail store management and its best practices to optimize your inventory and enhance customer experience. Read on to discover “What is store management?” and how to manage a retail store successfully.

Product Perspective :

For product management, the product requirements specification is the core instrument that (a) defines product management’s response to stakeholder needs and demands, and (b) that communicates to development what shall be the product or the new features to be developed.

System Requirements :

The key store management system specifications involve providing a way to store, organize, manage and analyze data. Systems requirements include :

An easy-to-use interface that doesn't require advanced training, support or documentation.

Automation for eliminating manual processes of business functions related to inventory management.

A reliable, secure database that provides accurate, real-time data.

Performance that enables fast, actionable inventory monitoring and control.

The ability for administrators to easily add software modules with minimal configuration so that the system is scalable.

Software integrations and automated features that minimize manual inventory updates or inputs.

Hardware Requirements :

Hardware : 20 GB

Monitor : 15 VGA Colour

RAM : 256 Mb

Processor : intel CORE i5

Software Requirements :

Microsoft operating system

Java virtual machine and Java development kit

Java core / unofficial API

Windows 10

Eclipse

JavaFX

IMPLEMENTATION

Methodology :

This research work “design and implementation of a store and “warehouse management system” will be a web-based application and will be implemented on a relational database system(MySQL). Html(hypertext markup language), css(cascading style sheet) and JQuery will be used to design the web-user interface, php (hypertext preprocessor) will be used as the serve- side script language to link the interface and the database.

Description of Process :

Choosing a System Store management systems come with a range of different functions. Some are just a simple desktop computer-based database or spreadsheet. More-advanced software typically comes in one of two styles -- resident software that gets run on your company's server or cloudbased packages that are sold as a service, freeing you from purchasing, maintaining and upgrading them. One way to look for the right system is to try to find one that meets your business's basic needs without worrying too much about additional features that can be added in the future.

Implementing a System

Implementing an store management system starts with having good grocery management practices in place -- such as consistent stock locations and a set procedure for counting and verifying inventory. Once you have those

practices,you can work with a vendor to implement its chosen solution.

To have the system implementation become successful, training for every employee that will have to work with your system is crucial to increase their buy-in and to reduce the risk of errors.

Retail Use Orders tracking in the retail environment resembles that of the warehouse environment.Most retailers use a point-of-sale system to track

their inventory. Retail items typically carry a specific type of barcode designed to easily scan through a retailers POS system. Each time an item gets scanned through a POS system it automatically generates sales data back to the retailer. Retailers also use these barcodes to scan and track inventory upon delivery to the store. Tracking orders using POS systems and barcodes allows the retailer to have consistently up-to-date inventory status and sales information.

Pseudo-code :

LOGIN:

Receive "Username" and "Password"

Log in if the username and password is valid

Display "Invalid credentials" if not valid

REGISTER:

Receive "Name", "Username", "E-mail" and "Password"

Gets registered to a new user if credentials are valid

Display "Invalid credentials" if not valid

DASHBOARD:

Gives the count of products in the store

And count of orders ordered by the customers

ADDING PRODUCTS:

The products can be placed if they press "ok"

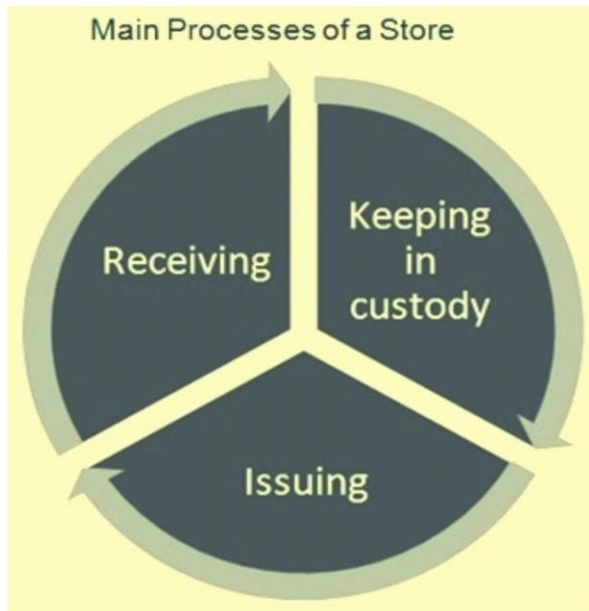
or not if "cancel"

DISPLAY:

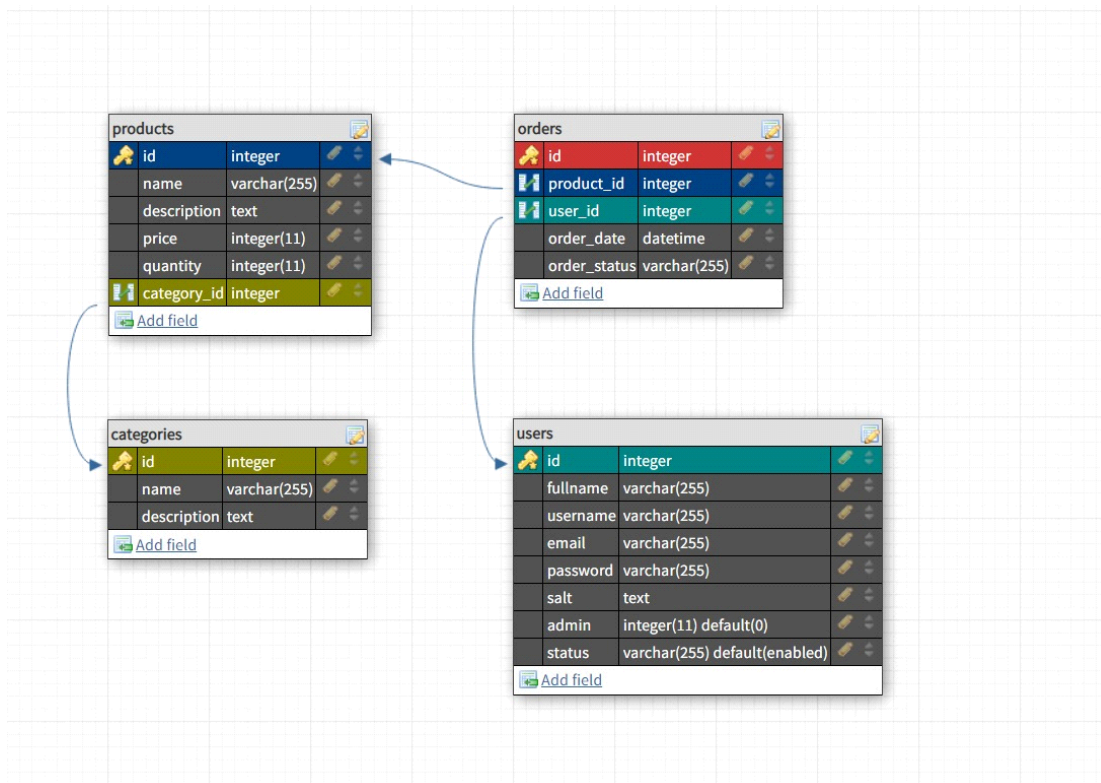
Shows the products ordered ,the status received and price pai

FIGURES

Main Processes of a store



The tables used in databases



LIST OF TABLES

The tables present in the database are :

- categories
- orders
- products
- sqlite_sequence

users

```
mysql> show tables;
+-----+
| Tables_in_db |
+-----+
| categories   |
| orders       |
| products     |
| sqlite_sequence |
| users        |
+-----+
5 rows in set (0.01 sec)
```

categories :

```
mysql> desc categories;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id         | tinyint       | YES  |     | NULL    |       |
| name       | varchar(19)   | YES  |     | NULL    |       |
| description | varchar(61)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

orders :

```
mysql> desc orders;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id         | tinyint       | YES  |     | NULL    |       |
| product_id | tinyint       | YES  |     | NULL    |       |
| user_id    | tinyint       | YES  |     | NULL    |       |
| order_date | varchar(20)   | YES  |     | NULL    |       |
| order_status | varchar(8)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

products :

```
mysql> desc products;
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id     | smallint  | YES  |     | NULL    |       |
| name   | varchar(32) | YES  |     | NULL    |       |
| description | text      | YES  |     | NULL    |       |
| price  | decimal(4,2) | YES  |     | NULL    |       |
| quantity | tinyint   | YES  |     | NULL    |       |
| category_id | tinyint   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

sqlite_sequence:

```
mysql> desc sqlite_sequence;
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(10) | YES  |     | NULL    |       |
| seq   | smallint  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

users:

```
mysql> desc users;
+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id     | tinyint   | YES  |     | NULL    |       |
| fullname | varchar(16) | YES  |     | NULL    |       |
| username | varchar(11) | YES  |     | NULL    |       |
| email   | varchar(24) | YES  |     | NULL    |       |
| password | varchar(44) | YES  |     | NULL    |       |
| salt    | varchar(30) | YES  |     | NULL    |       |
| admin   | tinyint   | YES  |     | NULL    |       |
| status  | varchar(7) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

RESULTS

Store Manager

Welcome

Enter your details below to create an account:

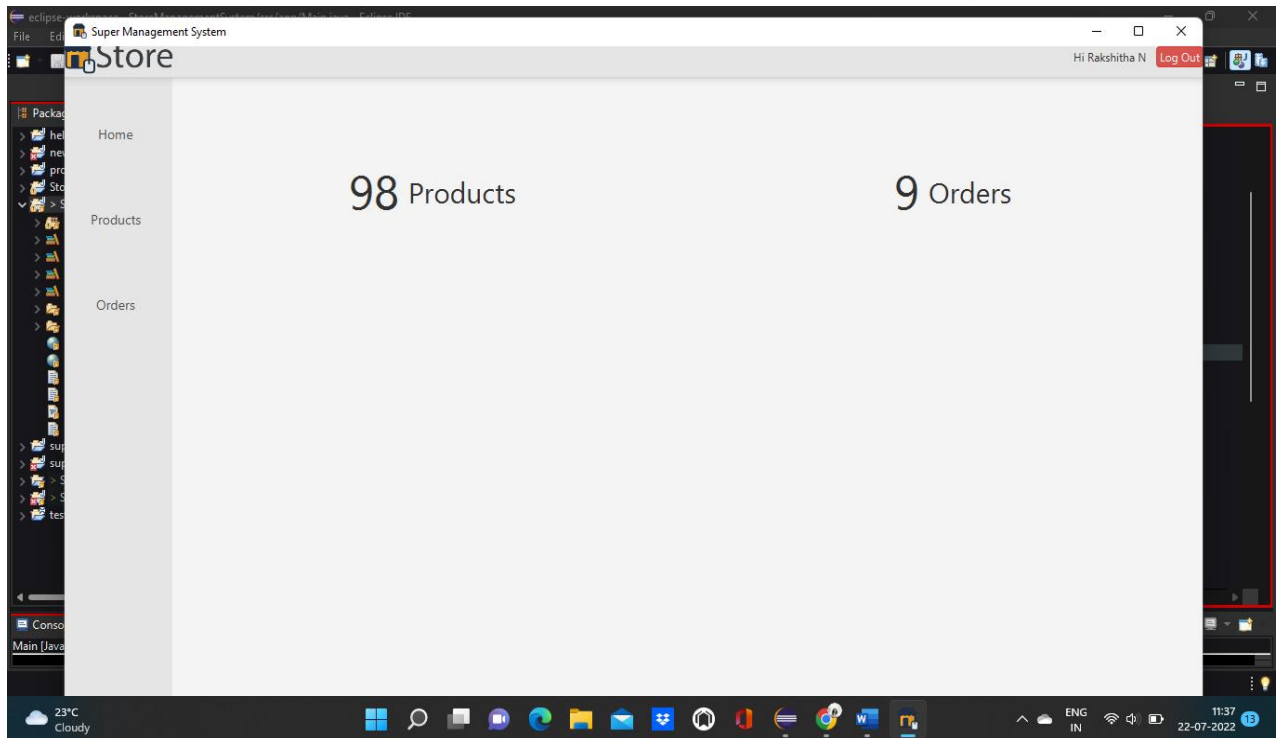
or

Store Manager

Welcome

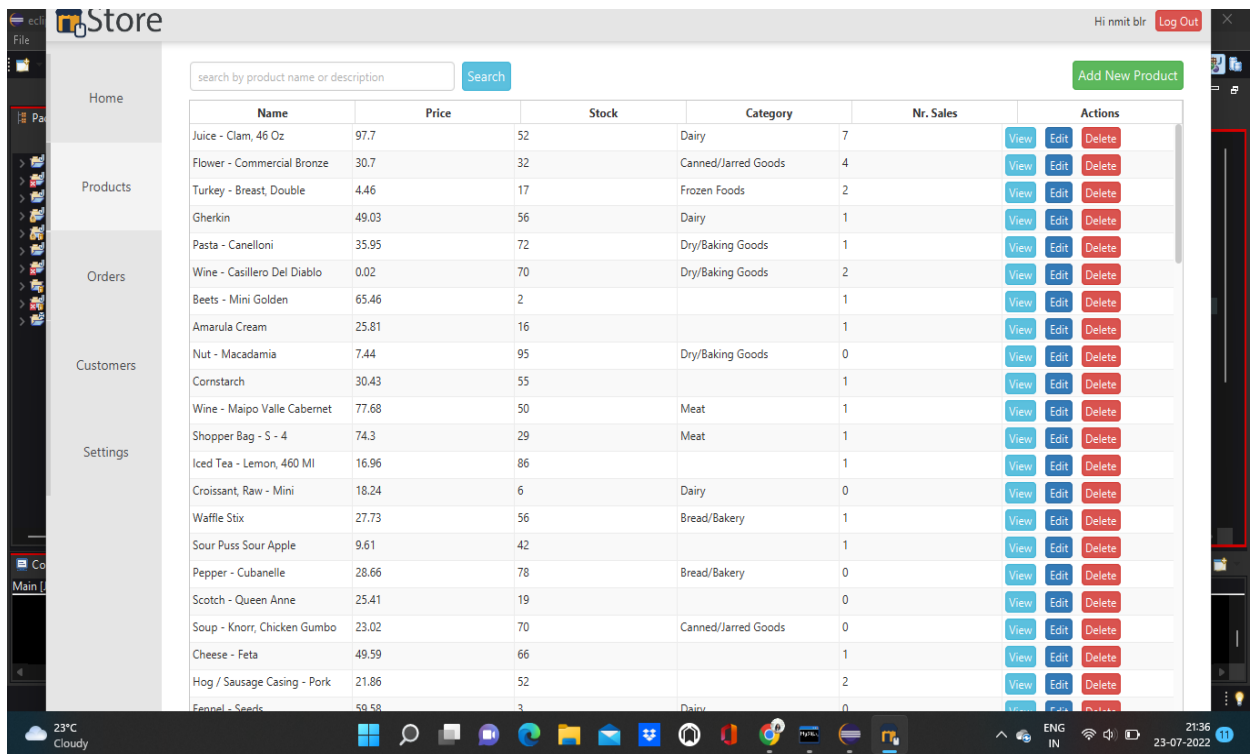
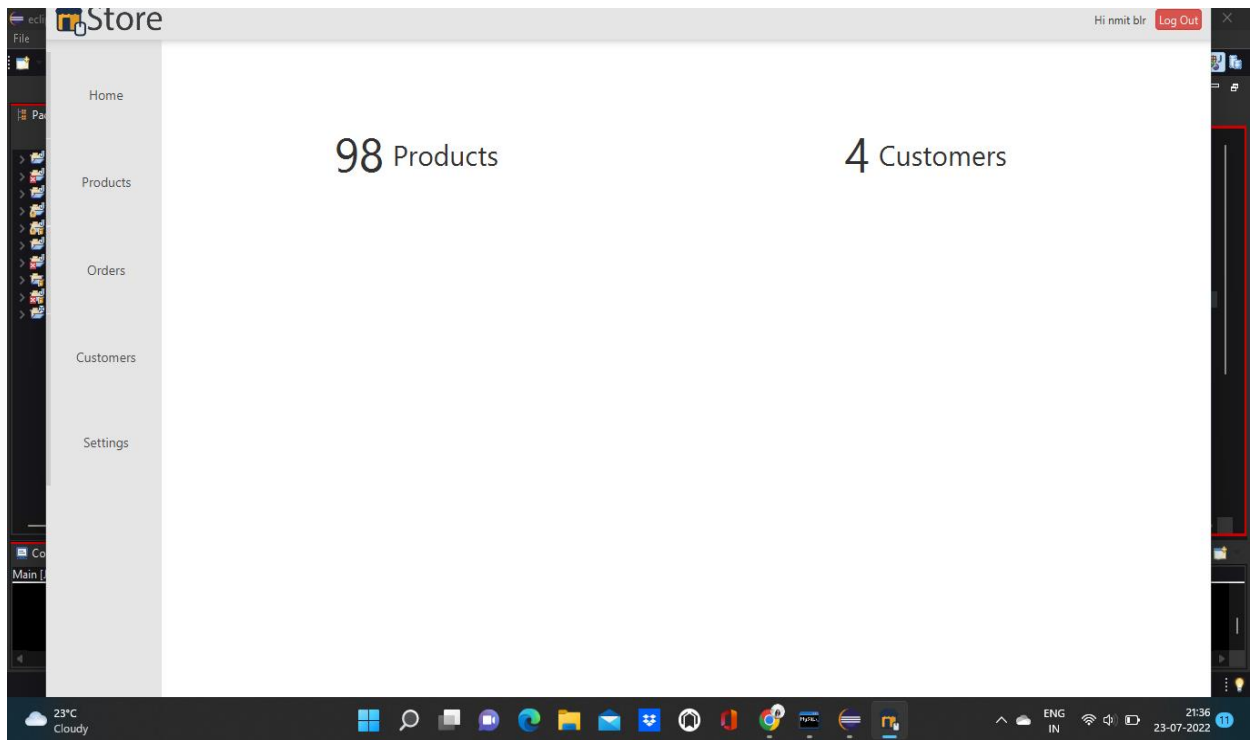
Enter username and password to login:

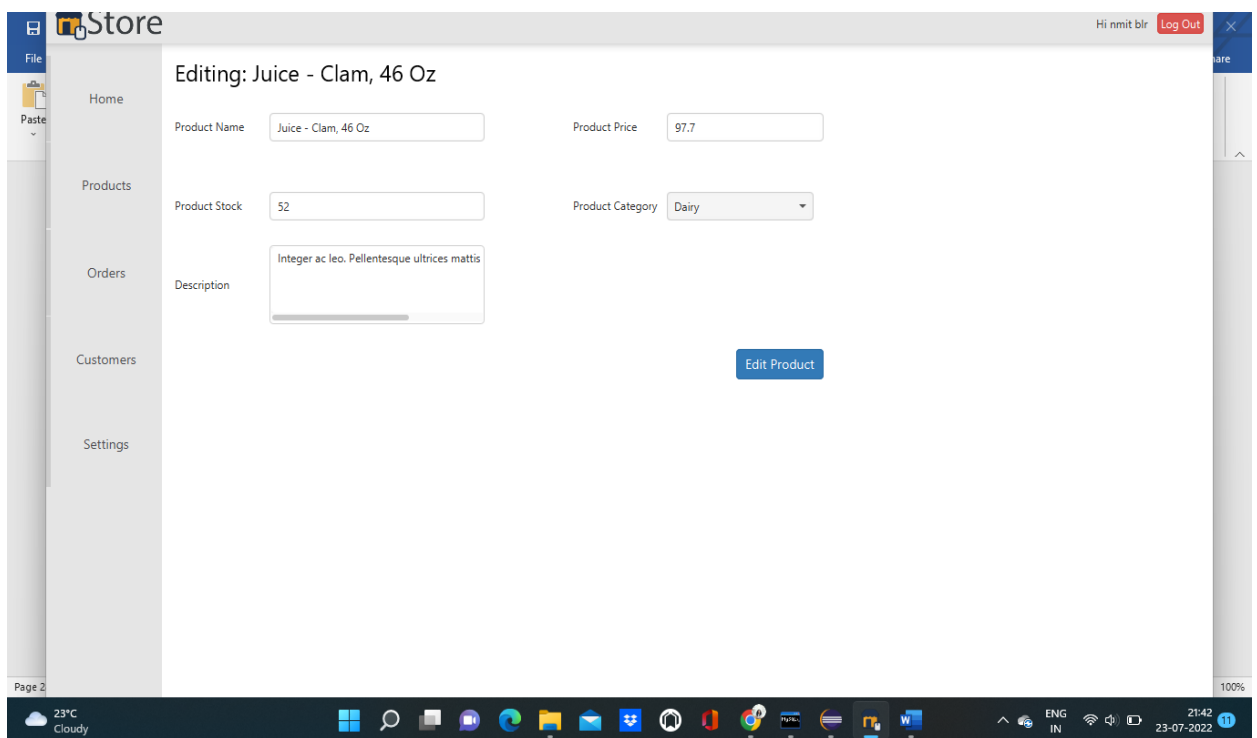
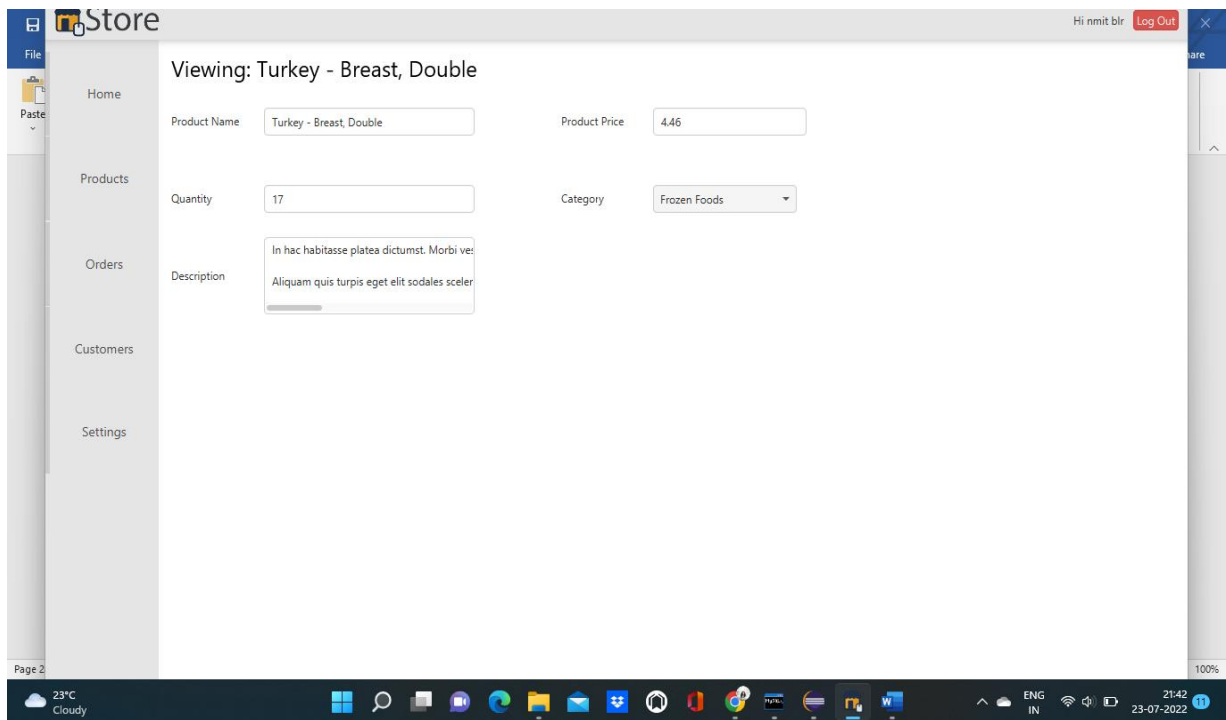
or

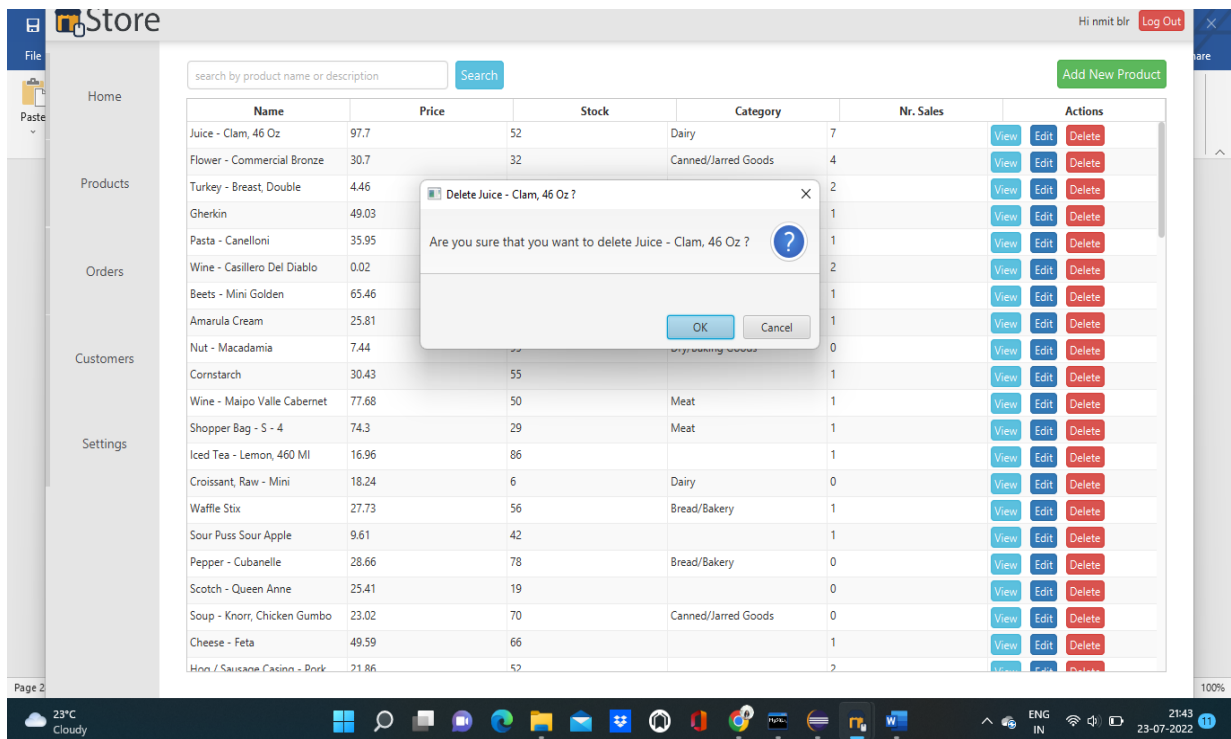
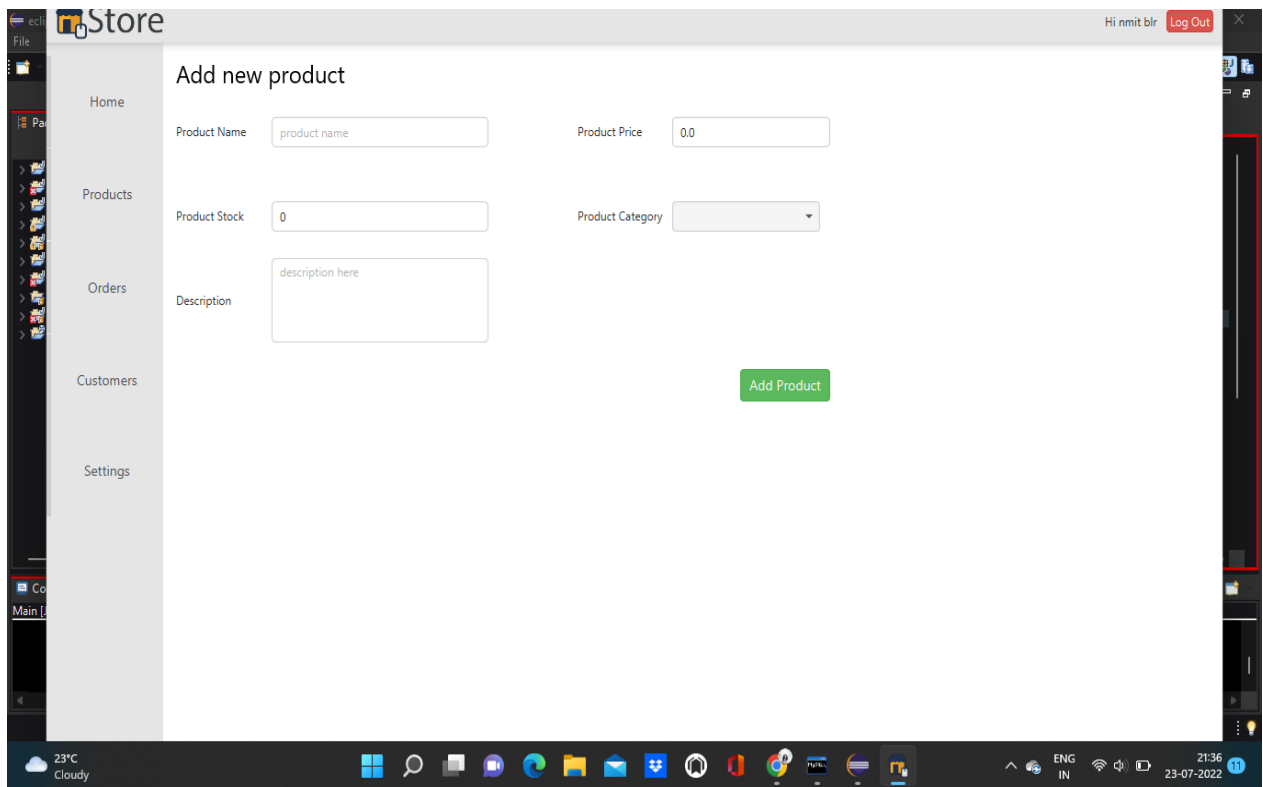


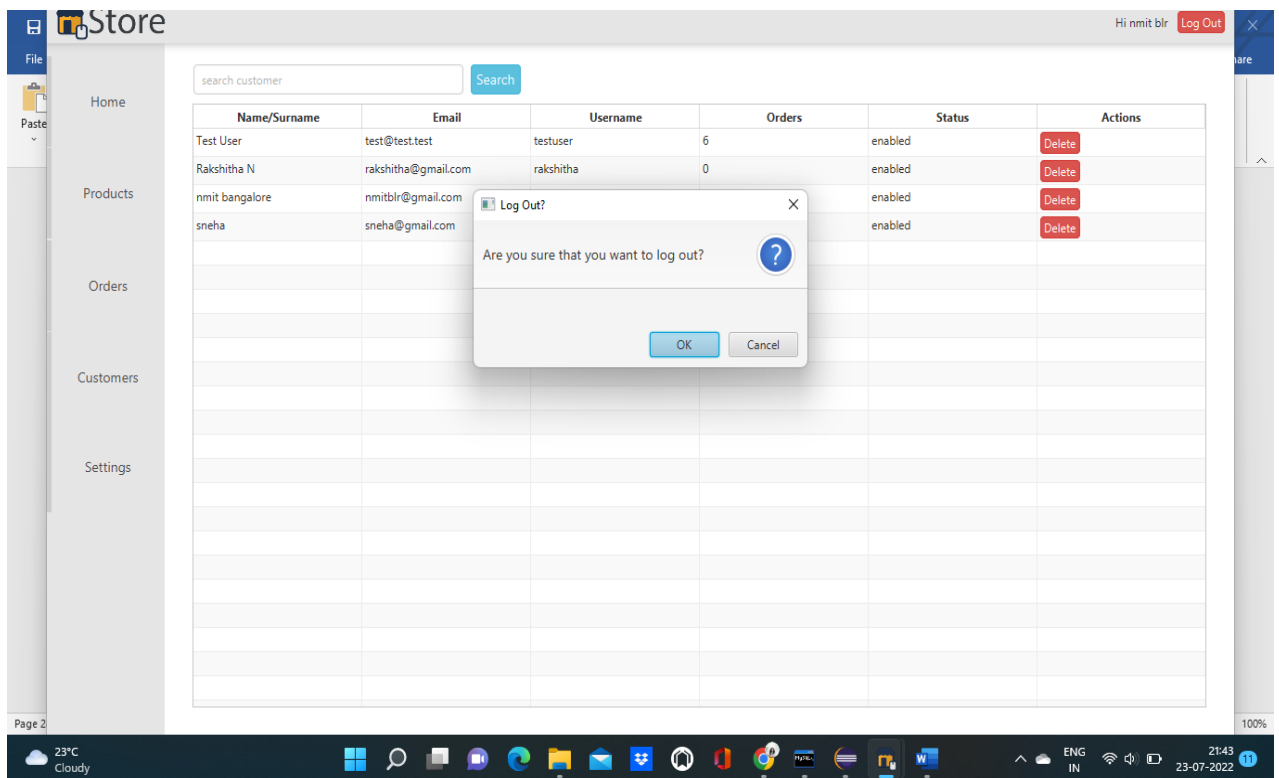
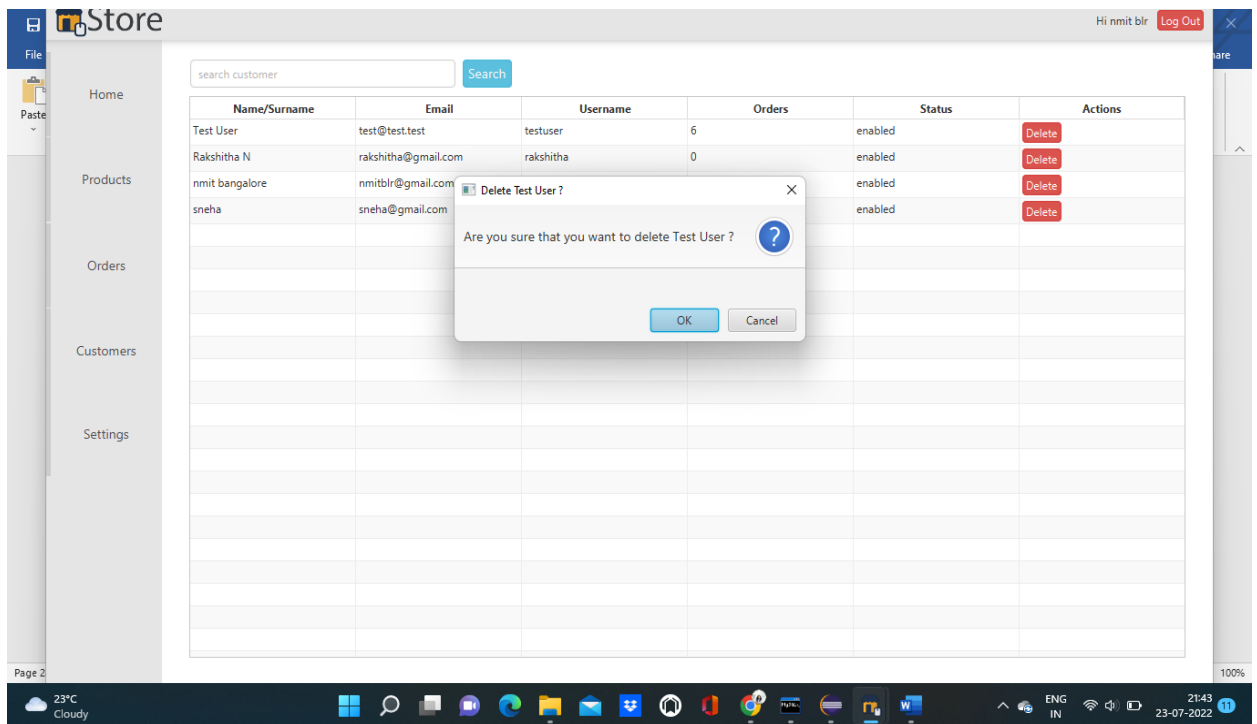
The screenshot shows the 'Products' section of the 'Super Management System'. It features a search bar and a table listing various products. The table has columns for Product Name, Price, Quantity, Category, Nr. Sales, and Actions. Each product entry includes a 'Buy' button in the Actions column.

Product Name	Price	Quantity	Category	Nr. Sales	Actions
Juice - Clam, 46 Oz	97.7	55	Dairy	5	Buy
Flower - Commercial Bronze	30.7	36	Canned/Jarred Goods	0	Buy
Turkey - Breast, Double	4.46	19	Frozen Foods	0	Buy
Gherkin	49.03	56	Dairy	2	Buy
Pasta - Canelloni	35.95	73	Dry/Baking Goods	1	Buy
Wine - Casillero Del Diablo	0.02	71	Dry/Baking Goods	1	Buy
Beets - Mini Golden	65.46	2		5	Buy
Amarula Cream	25.81	17		0	Buy
Nut - Macadamia	7.44	95	Dry/Baking Goods	1	Buy
Cornstarch	30.43	56		0	Buy
Wine - Maipo Valle Cabernet	77.68	51	Meat	1	Buy
Shopper Bag - S - 4	74.3	30	Meat	0	Buy
Iced Tea - Lemon, 460 MI	16.96	86		1	Buy
Croissant, Raw - Mini	18.24	6	Dairy	1	Buy
Waffle Stix	27.73	56	Bread/Bakery	2	Buy
Sour Puss Sour Apple	9.61	42		1	Buy
Pepper - Cubanelle	28.66	78	Bread/Bakery	0	Buy
Scotch - Queen Anne	25.41	19		0	Buy
Soup - Knorr, Chicken Gumbo	23.02	70	Canned/Jarred Goods	0	Buy
Cheese - Feta	49.59	67		0	Buy









CONCLUSION

The above coding helps a store manager to manage the store efficiently with

proper use of the above functions.

The System development Project has developed the ability on us to implement the theoretical Knowledge we have gained during BIM study in the real life scenario. Some of the lesson that we had learned from the project are:- Sharpen the knowledge of working cooperating in working organizational environment and work place. Know the value of time and discipline. Work in group and make group decision. Learnt communication skill, leadership, quality and to make good public relation.

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