

**Visvesvaraya Technological University**  
**Belgaum, Karnataka- 590014**



**A Mini Project Report On**  
**“Pharmacy Drug Management”**

**BACHELOR OF ENGINEERING**  
**In**  
**INFORMATION SCIENCE AND ENGINEERING**

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2021-2022

**DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING**  
**DAYANANDA SAGAR COLLEGE OF ENGINEERING**  
SHAVIGE MALLESHWARA HILLS, KUMARASWAMY LAYOUT, BANGALORE-78

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2021-2022

## Certificate

This is to certify that the Project Work entitled “ **Pharmacy Drug Management**” is a bonafide work carried out by **Ayush Sharma** (1DS19IS028), **and Hrut Gor** (1DS19IS046) in partial fulfillment for the 5<sup>th</sup> semester Bachelor of Engineering in Information Science & Engineering of the Visvesvaraya Technological University, Belgaum during the year 2021 - 2022. The Project Report has been approved as it satisfies the academics prescribed for the Bachelor of Engineering degree.

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Signature of Guide2  
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Signature of HOD  
[Dr. Udaya Kumar Reddy K R]

Name of the Examiners

Signature with Date

1.

2.

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## **ABSTRACT**

Nowadays , Pharmacy management system is one of the most essential tools that are mostly used in medical store . It is mostly used to manage pharmacy related activities such as medical inventory , record keeping , sales management as well as managing the drug stock and information of the expired medicines . Many pharmacies are still operating manually and need an assistant to check the expiry dates of all medicines.

In this project , we tried to develop a computerized and web based pharmacy management system. Our main intention is to allow this application to be used in most retailing pharmacies as well as customers to order medicines online.

There has been seen a drastic increase in the online orders for medicines to customer's door-step due to Covid-19 situation. These also has increased the number of medicines required by patients which in turn benefits the pharmacist. We provide a platform for both of them i.e. to buy and sell medicines on our platform with shorter delivery time with contactless payment.

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# 1) INTRODUCTION

This project is concerned about developing a Pharmacy Drug Management System that will be used for retail , wholesale as well as customers. The purpose of this project is to manage all data derived for a pharmacy and ease of customers to order and get medicine as soon as possible in this pandemic situation.

## 1.1 Background

Pharmacy Management System is a system that consists of data entry , retrieval and monitoring stock , sale , customer record , order details to the customer . String searching technique is also applied in this system. This system enables the seller to control and monitor the stocks effectively. The customer can order a particular medicine or drug from a particular seller. The date and time of the order is triggered as soon as the place order button is clicked. 'getsellerorder' and 'getorder' are the two stored procedures used in the project.

Due to size and quantity of the pharmacy , it has a very large seller and customer base .The number of customers is quickly increasing due to the increase in demand of drugs in many areas. The pharmacist(seller) has to ensure satisfaction in services to keep their records effectively at a reasonable time.

## 1.2 Database System Requirements

The program works on desktop PC and is executed using PHP 5 interface which interacts with a MySQL database running on localhost.

### 1) Functional Requirements

A description of the facility or feature required. Functional requirements deal with what the system should do or provide for users. They include description of the required functions, outlines of associated reports or online queries, and details of data to be held in the system.

### Interface Requirements:

- The system shall provide an option to order medicine and edit its quantity
- The system shall provide an option to add stock by a vendor
- The system should give option for login for vendors as well as customers
- The system shall provide option to see available sellers for a particular medicine

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## 2) Non – Functional Requirements

Non-functional requirements define the overall qualities or attributes of the resulting system.

**Usability:** Usability is the ease with which a user can learn to operate the online examination system and get results.

**Security:** Security requirements are included in a system to ensure

- All questions and users are well secured
- SQL injection is prevented

**Reliability:** Reliability is the ability of a system to perform its required functions under stated conditions for a specific period of time. Constraints on the run-time behavior of the system can be considered under two separate headings:

- Availability: is the system available for service when requested by end-users.
- Failure rate: how often does the system fail to deliver the service as expected by end-users.

### ○ SOFTWARE REQUIREMENTS

Programming language	:	JSP , MYSQL, HTML , CSS , JSP
Operating system	:	ANY OS (Recommended: Windows10)
Application required	:	Java Eclipse IDE , MySQL Server, Apache Tomcat 8.5

### ○ HARDWARE REQUIREMENTS

CPU	:	2.7 GHz
Memory (Primary)	:	2 GB or above
Hard Disk	:	128 or above
Monitor	:	15 VGA color

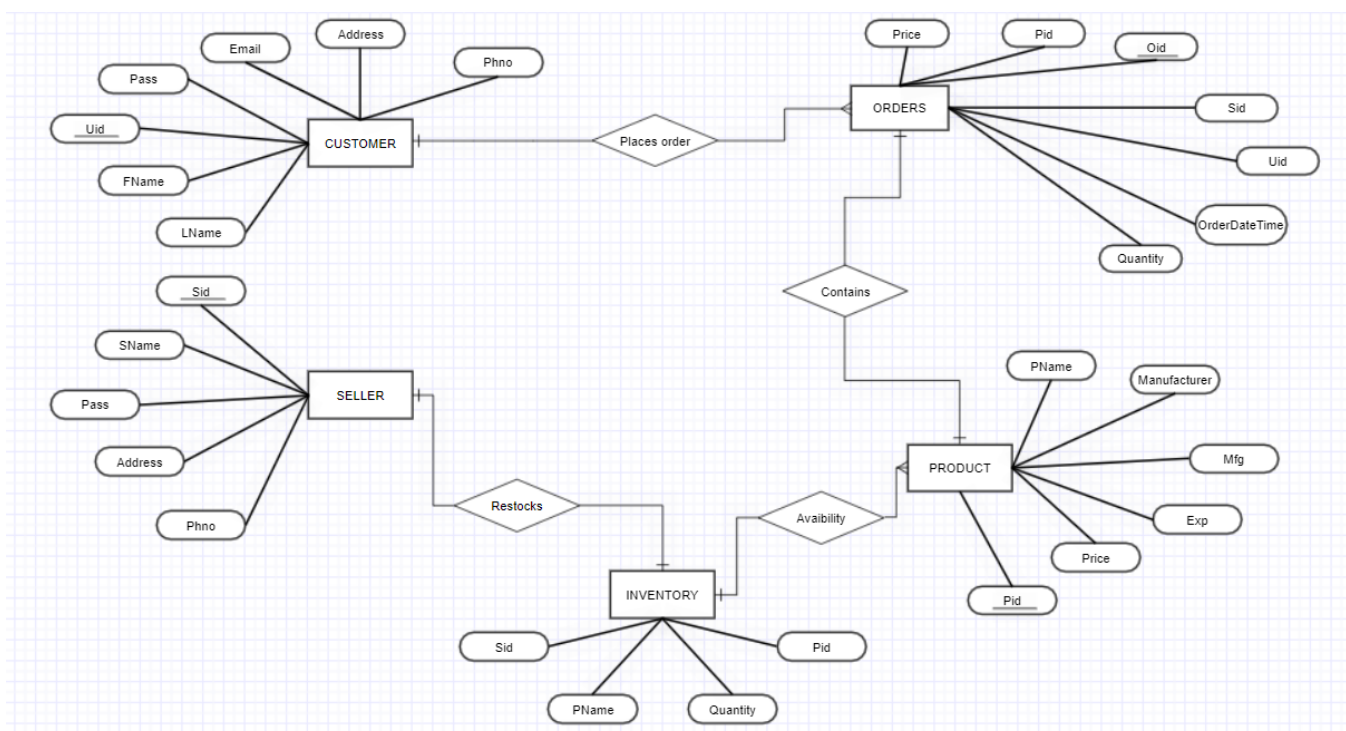
## 2) E R DIAGRAM AND RELATIONAL SCHEMA DIAGRAM

### 2.1 ER Diagram And Description

An entity relationship model, also called an entity-relationship (ER) diagram, is a graphical representation of entities and their relationships to each other, typically used in computing in regard to the organization of data within databases or information systems. An entity is a piece of data-an object or concept about which data is stored.

The cardinality or fundamental principle of one data aspect with respect to another is a critical feature. The relationship of one to the other must be precise and exact between each other in order to explain how each aspect links together. In simple words Cardinality is a way to define the relationship between two entities.

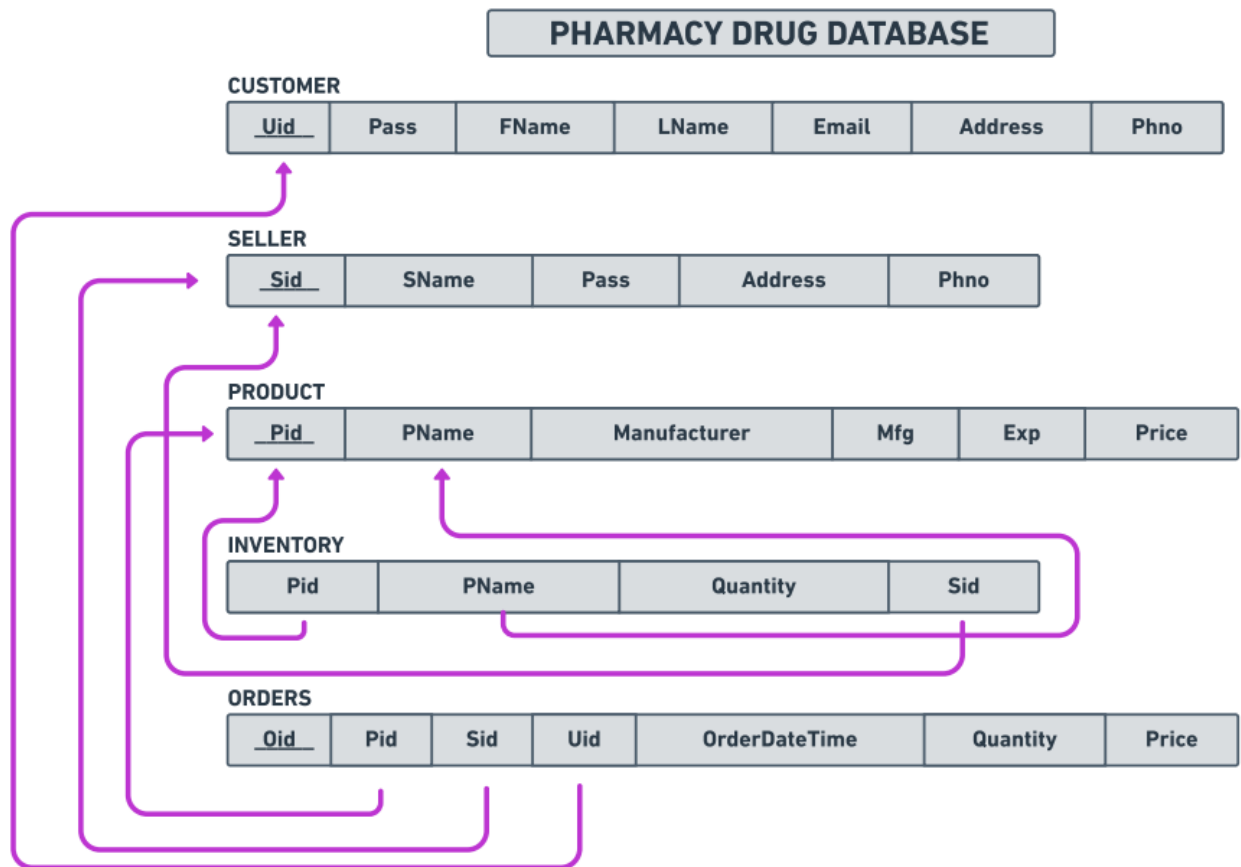
The ER diagram below shows the relationship between the many tables that exist in the database for the functioning of Pharmacy Drug Management System.





## 2.2 Relational Schema Diagram

### 2.2.1) SCHEMA DIAGRAM:



### 2.2.2) GENERAL CONSTRAINTS

Following are some of the most commonly used constraints available in SQL:

- NOT NULL Constraint – Ensures that a column cannot have NULL value.
- DEFAULT Constraint – Provides a default value for a column when none is specified.
- UNIQUE Constraint – Ensures that all values in a column are different.
- PRIMARY Key – Uniquely identifies each row/record in a database table.
- FOREIGN Key – Uniquely identifies a row/record in any of the given database table.
- CHECK Constraint – The CHECK constraint ensures that all the values in a column satisfies certain conditions.
- INDEX – Used to create and retrieve data from the database very quickly

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Constraints can be specified when a table is created with the CREATE TABLE statement or you can use the ALTER TABLE statement to create constraints even after the table is created.

Constraints used in **Pharmacy Drug Management System** are :

- Primary Key
- Foreign Key
- Unique Key
- Default NULL
- Not NULL

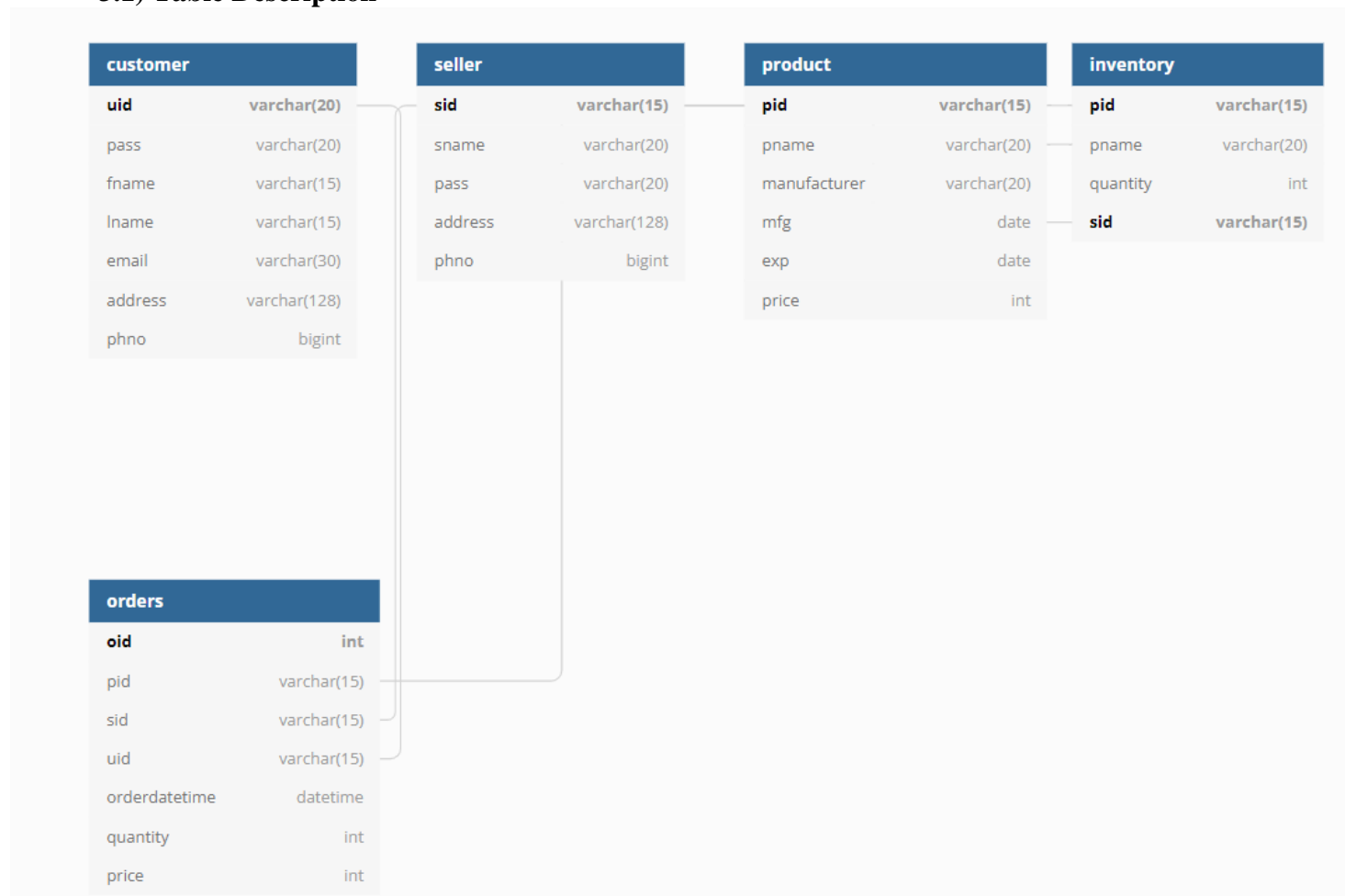
### **2.2.3) SCHEMA DESCRIPTION**

In any data model it is important to distinguish between the description of the database and the database itself. The description of a database is called the database schema, which is specified during database design and is not expected to change frequently.

A displayed schema is called a schema diagram. A schema diagram displays only some aspects of a schema, such as the names of record types and data items, and some types of constraints.

### 3) SYSTEM DESIGN:

#### 3.1) Table Description



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## 4) IMPLEMENTATION

### 4.1) Front-end Development

#### 4.4.1) Hyper Text Markup Language

Hypertext Markup Language is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets and scripting languages such as JavaScript.

#### 4.4.2) Cascading Style Sheet

Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript. Functional Modules

### 4.2) Back-end Development

#### 4.2.1) Back-end Language

**Java Server Page (JSP)** is a collection of technologies that helps software develop create dynamically generated web pages based on HTML , XML, SOAP or other document types.

#### 4.2.2) Web Server

**Apache Tomcat** is a free and open-source implementation of the Jakarta Servlet, Jakarta Expression Language, and WebSocket technologies. Tomcat provides a "pure Java" HTTP web server environment in which Java code can run.

#### 4.2.3 ) Database

**MySQL** is an open-source relational database management system. It deploys cloud-native applications . It can be used to store anything from a single record of information to an entire inventory of available products for an online store.

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## 5) STORED PROCEDURES

The stored procedure is SQL statements wrapped within the CREATE PROCEDURE statement. The stored procedure may contain a conditional statement like IF or CASE or the Loops. The stored procedure can also execute another stored procedure or a function that modularizes the code.

```
CREATE PROCEDURE getsellerorders(IN param1 VARCHAR(20))
BEGIN
    SELECT * FROM orders where sid=param1;
```

```
CREATE PROCEDURE getorders
(IN param1 VARCHAR(20))
BEGIN
    SELECT * FROM orders WHERE uid=param1;
```

## 6) TRIGGERS

A trigger is a stored procedure in database which automatically invokes whenever a special event in the database occurs.

In our project :

- 1) CREATE TRIGGER updatetime BEFORE INSERT ON orders FOR EACH ROW  
BEGIN  
    SET NEW.orderdatetime = NOW();  
END
- 2) CREATE TRIGGER inventorytrigger AFTER INSERT ON orders FOR EACH ROW  
begin  
    DECLARE qnty int;  
    DECLARE productid varchar(20);  
  
    SELECT pid INTO productid  
    FROM orders  
    ORDER BY oid DESC  
    LIMIT 1;  
  
    SELECT quantity INTO qnty  
    FROM orders  
    ORDER BY oid DESC  
    LIMIT 1;  
  
    UPDATE inventory  
    SET quantity=quantity-qnty  
    WHERE pid=productid; END

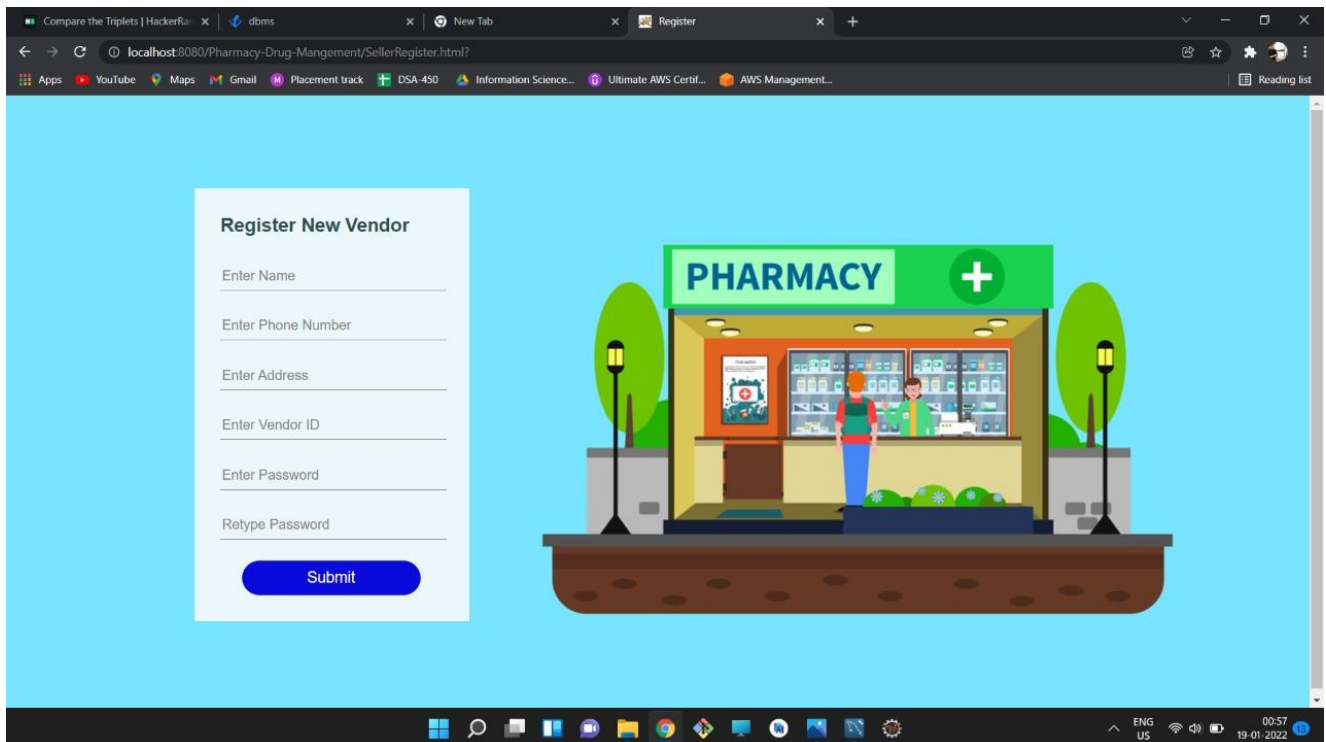
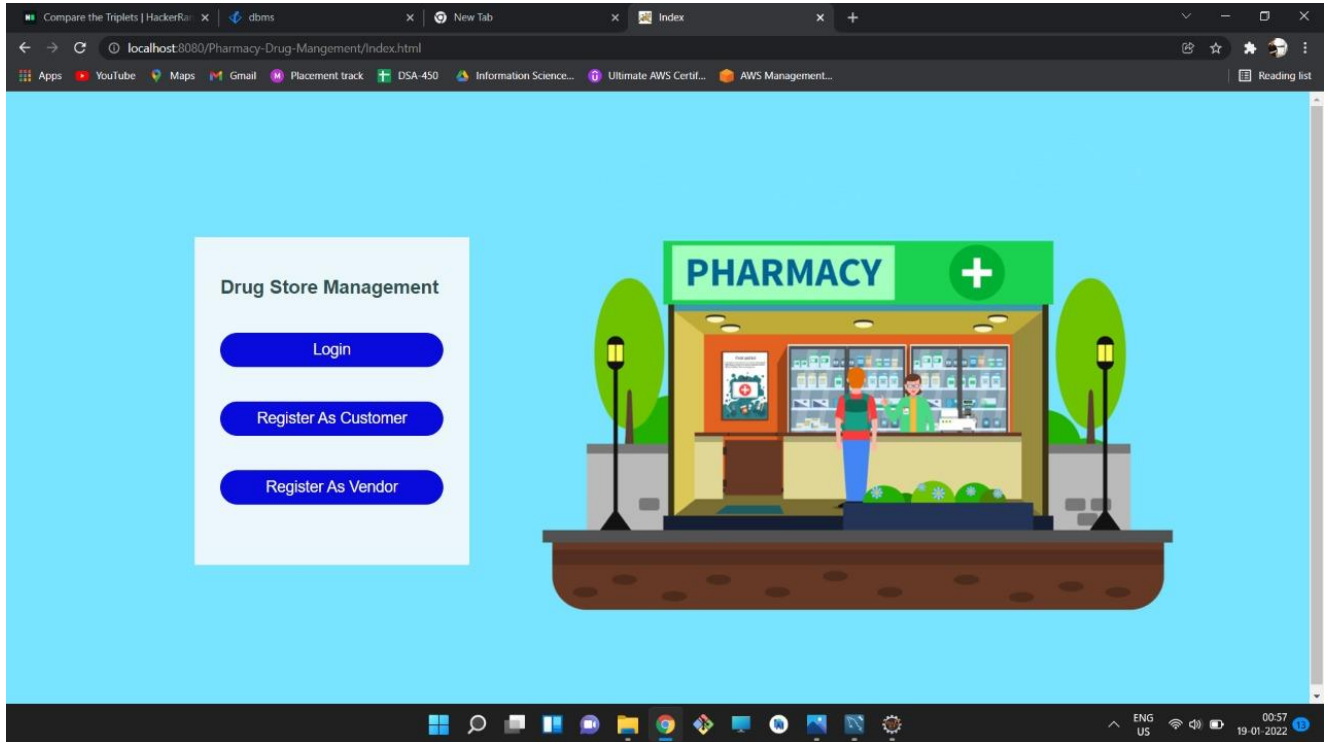
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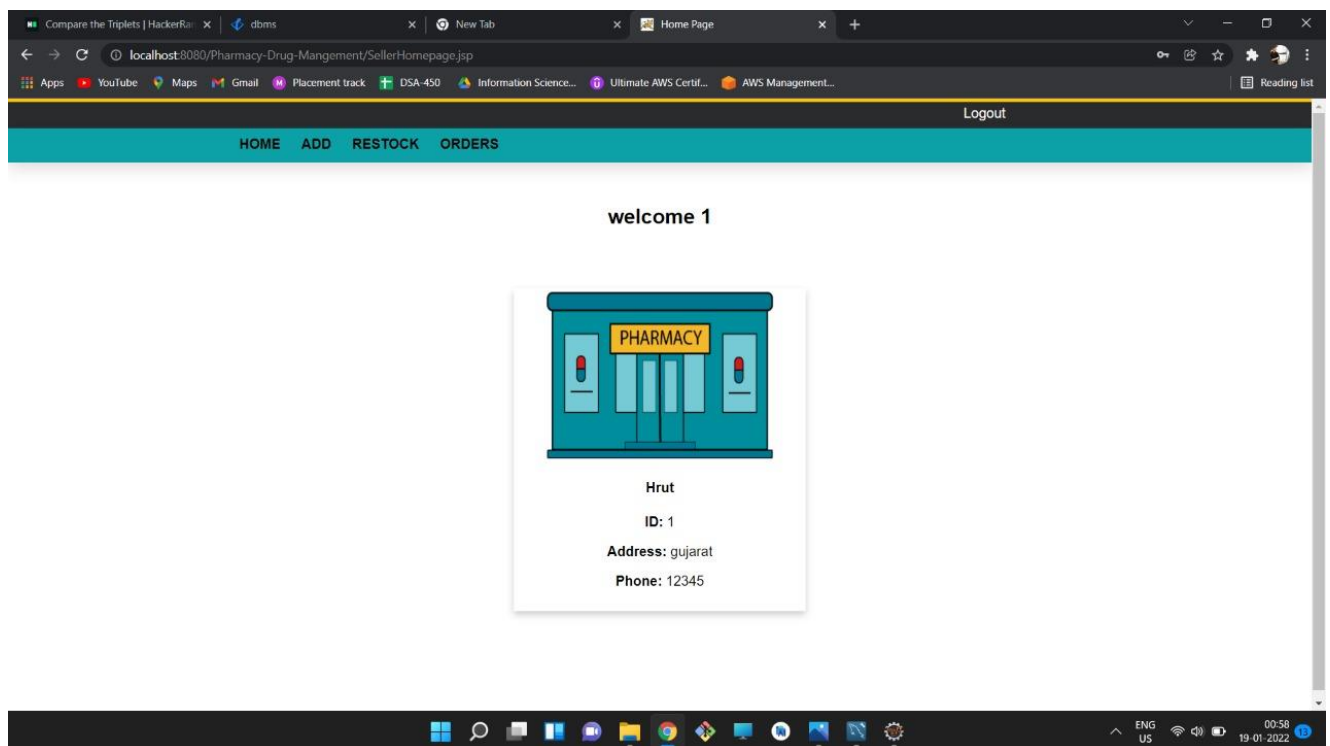
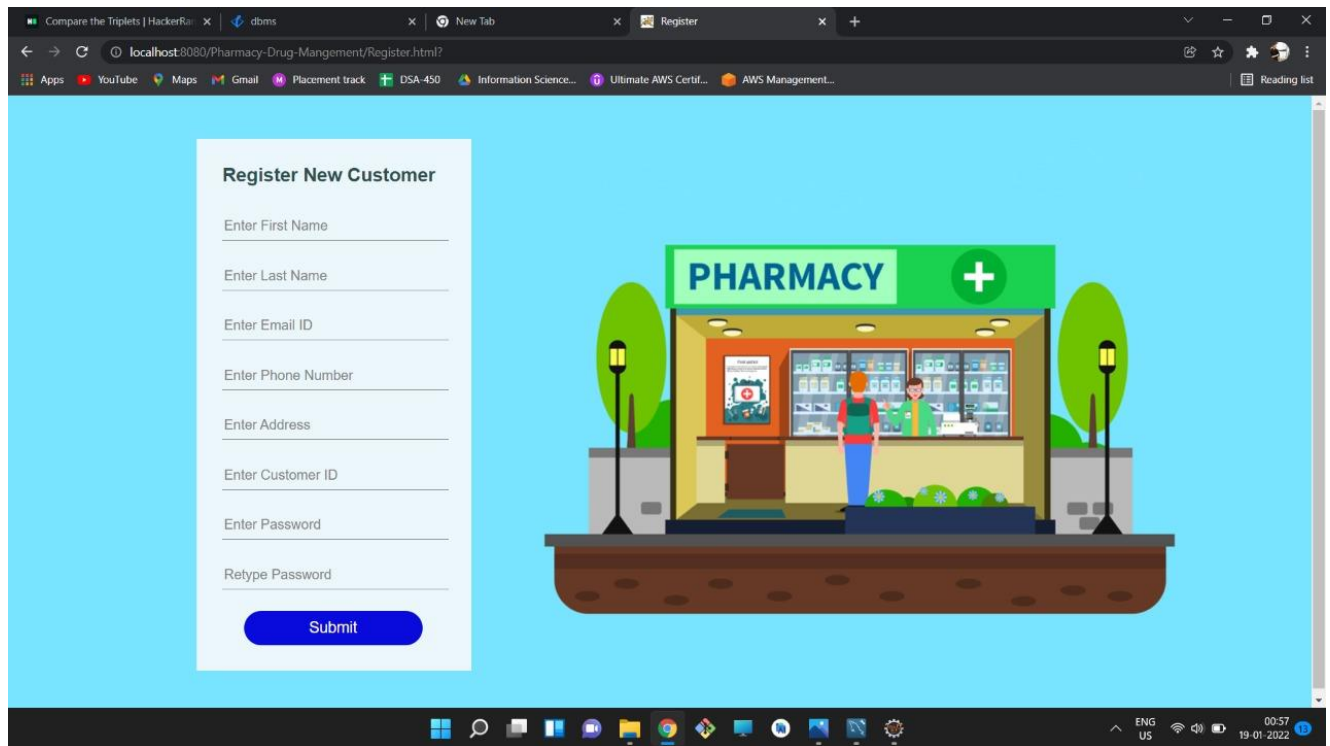
## 7) DISCUSSION OF CODE SEGMENT

The whole project development was divided into two parts, the front-end development and the backend development. The front-end development was creating the Pharmacy website with user-friendly interface. The backend development was to access the database stored on the server side as well as client side and updating the same. In this project, MySQL is used as the backend database. We have used HTML, CSS, JavaScript, Bootstrap for the front-end implementation. Next, JSP is used as server scripting language to access the database and update it.

The project is run on a local machine with the help of Apache Tomcat server which is accessed using Eclipse IDE . The database is accessed and updated using the MySQL queries .The MySQL queries used to implement the project include SELECT, INSERT, DELETE, UPDATE and JOIN.

## 8) SNAPSHOTS







Compare the Triplets | HackerRank dbms New Tab Add Product

localhost:8080/Pharmacy-Drug-Mangement/AddProduct.html

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Logout

HOME ADD RESTOCK ORDERS

### Add product

Enter Product Name

Enter Product ID

Enter Manufacturer Name

Enter Manufacture Date

Enter Expiry Date

Quantity

Price

Add

ENG US 00:50 19-01-2022


Compare the Triplets | HackerRank dbms New Tab ReStock

localhost:8080/Pharmacy-Drug-Mangement/AddInventory.jsp

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Logout


HOME ADD RESTOCK ORDERS



**Paracetamol**

ID: 11  
Manufacturer: Patanjali  
Mfg Date: 2020-12-12  
Exp Date: 2023-11-05  
Stock: 11  
Price: 50


ReStock



**Rantac**

ID: 17  
Manufacturer: hindustan unilever  
Mfg Date: 2018-06-21  
Exp Date: 2024-05-30  
Stock: 40  
Price: 20


ReStock



**Zotac**

ID: 27  
Manufacturer: Cipla  
Mfg Date: 2020-06-19  
Exp Date: 2025-10-16  
Stock: 50  
Price: 30

ReStock



**Dolo650**

ID: 52  
Manufacturer: WorkHardt  
Mfg Date: 2019-02-12  
Exp Date: 2023-08-15  
Stock: 20  
Price: 15

ReStock

ENG US 01:05 19-01-2022

Compare the Triplets | HackerRank dbms New Tab Orders

localhost:8080/Pharmacy-Drug-Mangement/Orders.jsp

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Logout

HOME BUY ORDERS

Order ID	Product ID	Price	Quantity	Seller ID	Order Date and Time
1000	11	150	3	1	2022-01-14 17:37:19.0
1001	32	60	30	2	2022-01-14 17:52:15.0
1002	11	50	1	1	2022-01-14 17:55:30.0
1003	32	40	20	2	2022-01-14 17:55:44.0
1004	11	100	2	1	2022-01-15 23:16:22.0
1005	11	100	2	1	2022-01-16 22:28:12.0
1006	32	10	5	2	2022-01-16 22:29:18.0

ENG US 01:06 19-01-2022

Compare the Triplets | HackerRank dbms New Tab Home Page


localhost:8080/Pharmacy-Drug-Mangement/index.jsp

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Logout

HOME BUY ORDERS

Welcome 1



**Ayush**

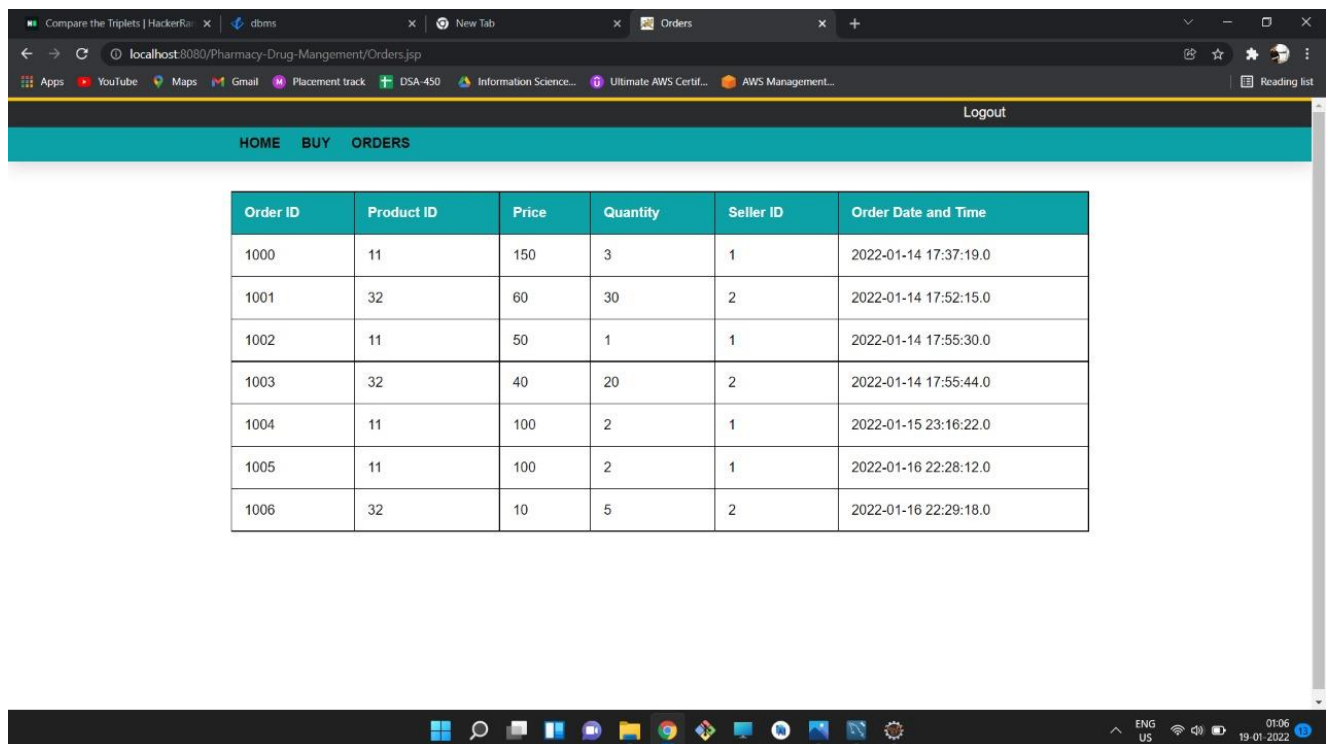
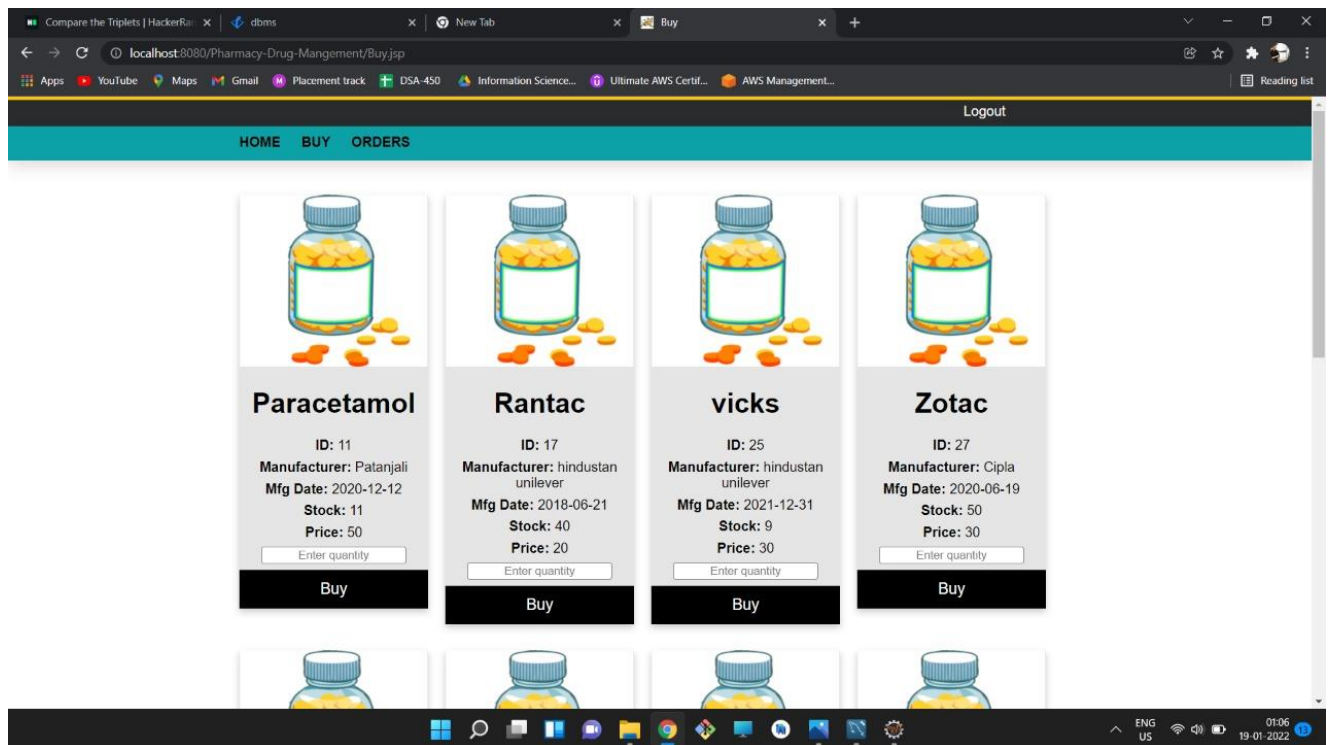
ID: 1

**Address:** Near Ramprasad Bismil School, Dom  
Main Road, Raipura, kota-4

**Phone:** 7734876014

**Email:** ayush9460246125@gmail.com

ENG US 01:06 19-01-2022



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## 9) CONCLUSION AND FUTURE SCOPE

### CONCLUSION :

The Pharmacy Management System provides better functionality for Vendors and Customers to be more efficient and beneficial to customers.

### SCOPE OF ENHANCEMENT :

There are also few features which can be integrated with the system to make it more flexible.

Below list shows the future points to be considered:

- Assured delivery within 45-min
- Automatic re-order for medicines which a customer wants it on regular basis such as Blood Pressure and Diabetes problem medicines
- Vendor is notified if the stock goes below a certain number
- Accounting for debtors or those who pay their bills on monthly basis

## 10) REFERENCES

### WEBSITES

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3. <https://www.php.net>
4. [www.google.com](http://www.google.com)
5. <https://www.w3schools.com>

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# THANK YOU