PHARMACY MANAGEMENT SYSTEM

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ABSTRACT:

The Pharmacy Management System, in all its uniqueness, is a comprehensive solution for efficient, quick and elegant management of a medical enterprise which includes a wide array of functional activities ranging from medicine and store management to supply and transaction processing.

The main aim of the project is to build a Management System that can efficiently handle all the functional activities of a pharmaceutical enterprise- Store Management, drug management, transactions, distribution and supply.

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1.INTRODUCTION:

The Pharmacy Management System comprises of three main units:

a. Administrator
b. Stores
c. Dealer

a. The Administrator is the owner of the pharmaceutical enterprise and is solely responsible for the management of the system. The functions of the administrator are to:

   i. Set up new records for a new store establishment, or for the removal a current establishment, and convey the authentication information to the respective store manager

   ii. Announce the arrival of new medicines to all the stores under the enterprise

   iii. Update the information of medicines regularly

   iv. Set up records for a new dealer which the enterprise ascribes to, and convey the authentication information to the respective dealer

   v. Update the dealer information regularly

   vi. Monitor the activities of stores, and keep a track on the transactions associated with every store that forms a part of the organization

vii. To assign the requests of medicines from the stores to the dealers based on his discretion (usually referring to the cost table hosted by each dealer).

viii. To analyze the statistical information gathered from all stores. Provisions are provided to view the details of a particular store or a dealer. For example, the administrator has to type in the dealer_id, and the stores that he supplies to along with the quantity are retrieved.

b. Stores are independent establishments or openings, from where medicines are sold to the customers. The administrator can create any number of stores and assign each of these stores with login credentials. Each store is managed by a store manager, who keeps track of the medicines, the rack number, and the quantity of each medicine and the expiry status of the medicines. If falling short of a medicine (or if more stock is desired), the store has to initiate a request to the administrator.

The request comprises the medicine and the quantity necessary.

The administrator looks up all the dealers' cost table (which shows the required medicine and the cost hosted by each dealer) and chose the dealer which he feels is viable to deal with.

After receiving the stock, the stores initiate transactions with the customer, and the details of the medicine bought, the quantity and the total amount is recorded and stored in the database. Appropriate triggers are used to alter the quantity of medicine in a store after a transaction between the store and a customer takes place or after a dealer supplies to a store.

c. The dealer represents the virtual link between the enterprise and the actual dealer. The dealer has two primary important functions. Intuitively,

i. The dealer is responsible for supplying the stores with the desired medicine and quantity. (The request for supply is directed to a dealer after the administrator chooses him for a particular medicine)

ii. The dealer hosts his cost table which contains information about the medicines and the cost that he intends to charge

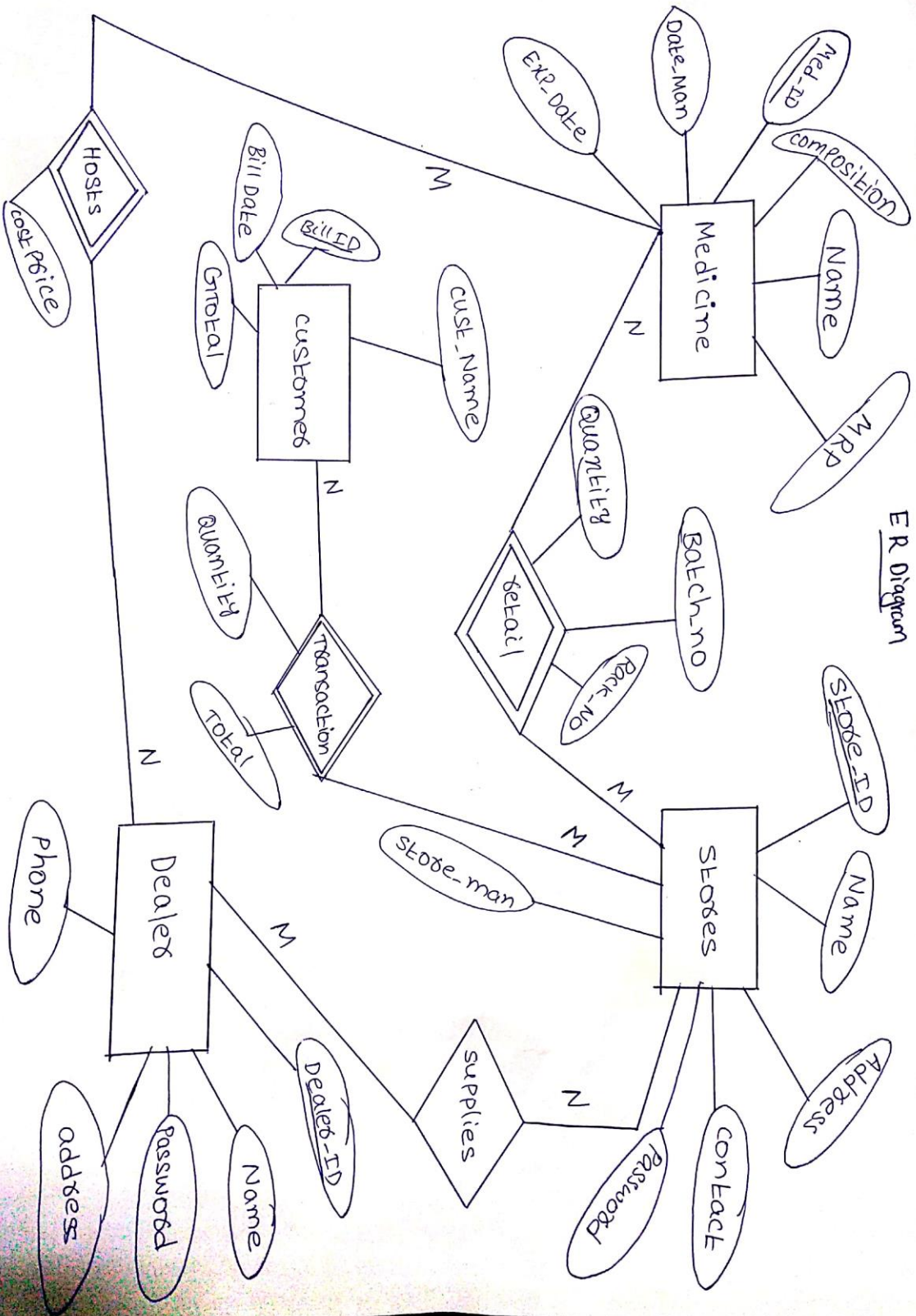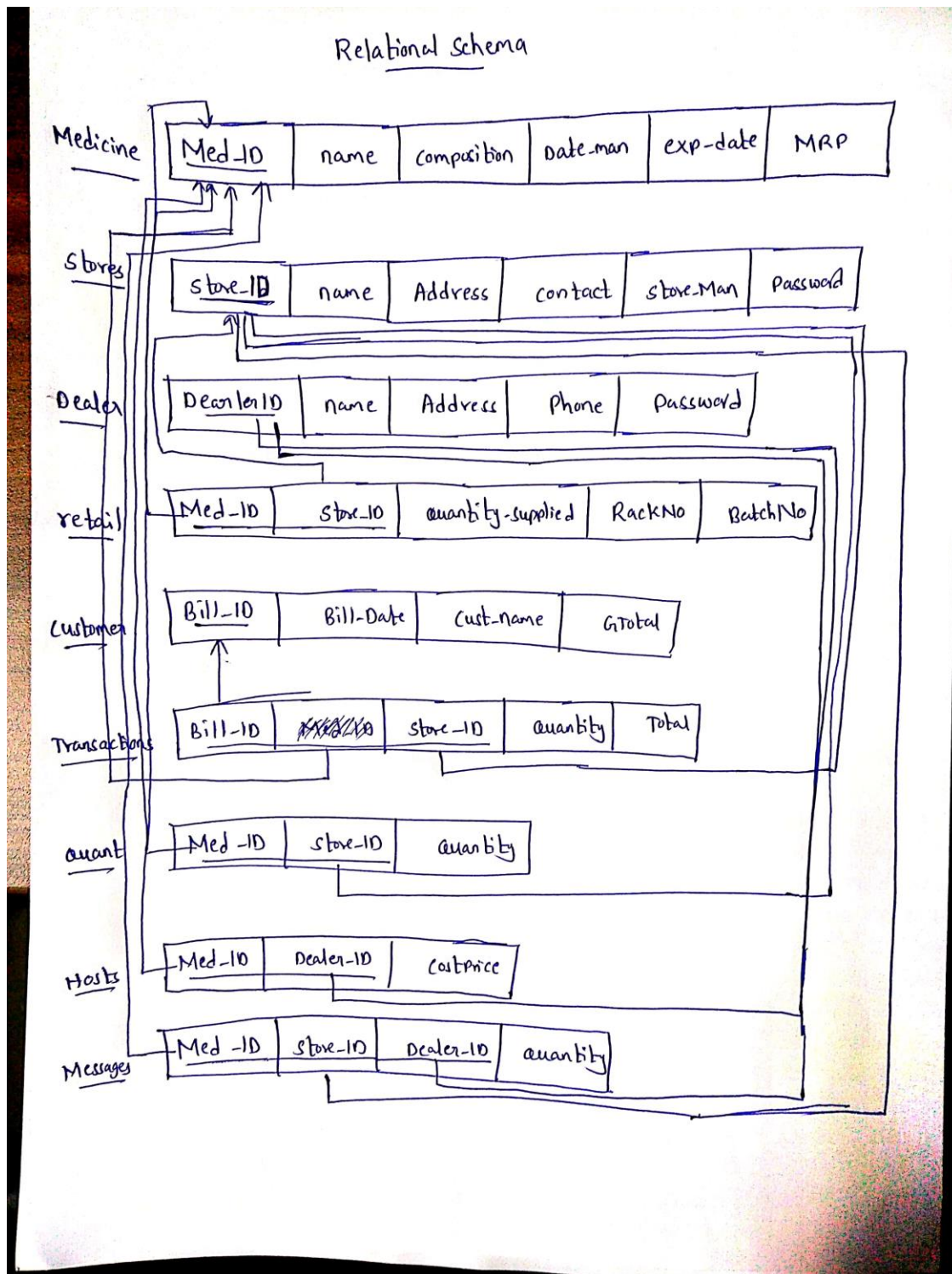## 2.REQUIREMENT ANALYSIS:

For this project the main requirements are

1.To analyze the way of data flow between admin, stores and dealer and creating the model accordingly

2.Analyzing the required tables and the attributes of each table.

3.Implementing the relational schema and creating the database

4.software for implementing the user interface

3. ER DIAGRAM:

E R Diagram

4. SCHEMA DIAGRAM:

Relational Schema

Medicine

Med_ID	name	Composition	Date-man	exp-date	MRP

Stores

Store_ID	name	Address	contact	Store-Man	Password

Dealer

DealerID	name	Address	Phone	Password

retail

Med_ID	Store_ID	Quantity-supplied	RackNo	BatchNo

Customer

Bill_ID	Bill-Date	Cust-name	GTotal

Transactions

Bill_ID	XXXXXXX	Store_ID	Quantity	Total

Quant

Med_ID	Store_ID	Quantity

Hosts

Med_ID	Dealer_ID	CostPrice

Messages

Med_ID	Store_ID	Dealer_ID	Quantity

5.FUNCTIONAL DEPENDENCIES(NORMALIZATION)

Functional Dependencies

Medicine:

Med_ID → { name, composition, Date_man, exp-date, MRP }

Stores:

Store_ID → { name, Address, Contact, Store-Man, password }

Dealer:

Dealer_ID → { name, Address, phone, password }

retail:

{ Med-ID, Store_ID } → { Quantity-supplied, Rack NO, Batch NO }

Customer:

{ Bill_ID → { Bill-Date, Cust-name, GTotal }

Transaction:

{ Bill_ID, Med-ID, Store-ID } → { Quantity, Total }

Quant:

{ Med_ID, Store-ID } → Quantity

Hosts:
{ Med-ID, Dealer-ID } → CostPrice

Messages: { Med-ID, Store-ID, Dealer-ID } → Quantity
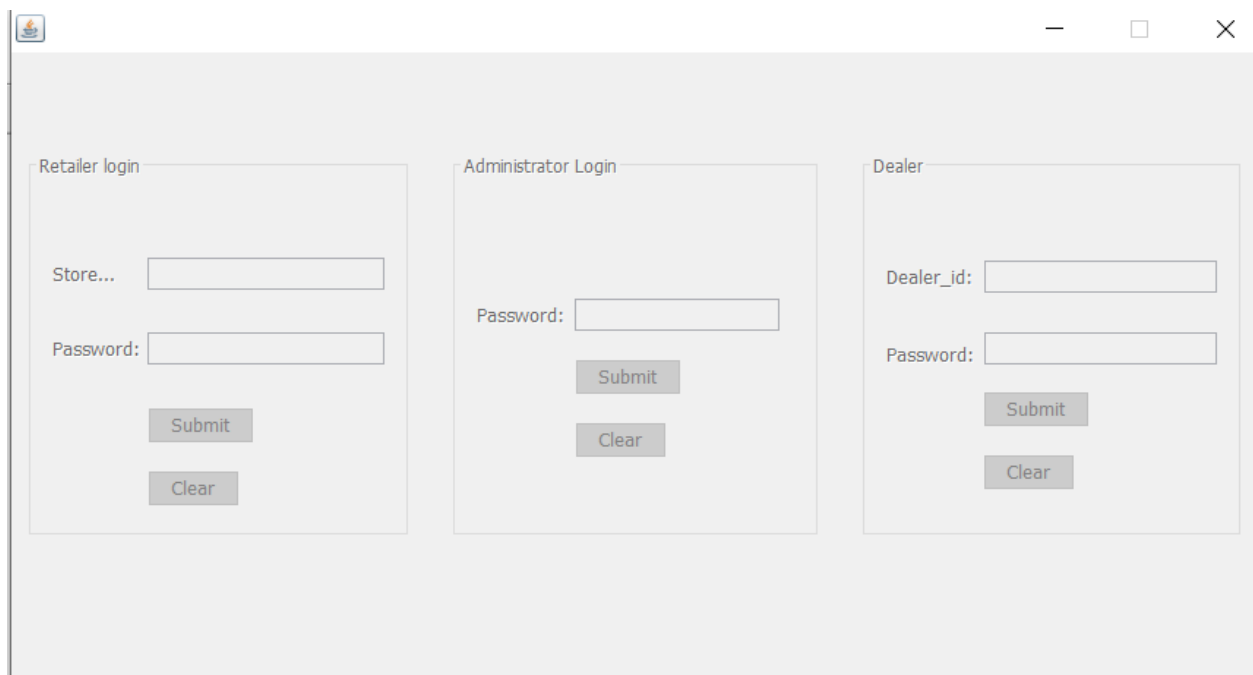
6.IMPLEMENTATION:

SOFTWARE DETAILS:

In this project the software used are

1.oracle database(10g express edition)

2.Netbeans

3.Java

SCREEN SHOTS:

LOGIN PAGE:

OPERATIONS PERFORMED BY ADMIN:

1. Managing medicines:

Manage Your Drugs

Add New..	Remove Medicine	Update

Search by name: [   ] [GO]

Search by Compositi [   ] [GO]

Med_id	Name	Composition	DateManf.	DateExp.	CostPerUnit
1	crocin	ab	12/12	12/20	100
2	paracetamol	c+d	12/19	12/20	100
3	sinarest	c+d	3/19	3/21	20
4	cold	a+b	12/19	12/20	20

2.Adding a new medicine:

File

Drug Information

Medicine_...: [   ]

Name: [   ]

Compositi...: [   ]

Manf.Date: [   ] (dd-mmm-yyyy)

Exp.Date: [   ] (dd-mmm-yyyy)

CostPerUnit: [   ] Rupees(INR)

Submit new Drug	Clear

med_id	Name	Composition	manf.Date	Exp.Date	CostPerUnit
1	crocin	ab	12/12	12/20	100
2	paracetamol	c+d	12/19	12/20	100
3	sinarest	c+d	3/19	3/21	20
4	cold	a+b	12/19	12/20	20

○ All Medicines   ○ Expired Medicines   ○ Medicines that expire five days from today

3.Managing Stores:

Store_id	Name	Store_address	contact	Store_Manager
202	abc	ducbliwehcb	123456790	ramesh
203	B	hyd	9561234568	suresh

Add n...   Del...   Quick upd...   update in d...

Search by Na...   ...   ...

4.Adding a new store:

Store Information

Store_id: 204
Name:
Address:
Contact:
Manager:

Password Information

Assign a password for store 204

Passwo...

Submit   Clear

Store_id	Name	address	contact	Manager
202	abc	ducbliwehcb	123456790	ramesh
203	B	hyd	9561234568	suresh

5.Managing Dealers:

Search by Name: [   ] [GO]

Dealer_id	Name	Address	contact
1	9874562310	hyd	abc
2	658749231	hyd	dealer2
3	7596842365	hyd	dealer3

[Add Ne...]

[update ...]

[Remove]

6.Adding a new Store:

[Back]

Dealer_Information

Dealer_id: [   ]

Name: [   ]

Address: [   ]

Phone: [   ]

Password: [   ]

[Submit]   [Clear]

Dealer_id	Phone	Address	Name
1	9874562310	hyd	abc
2	658749231	hyd	dealer2
3	7596842365	hyd	dealer3

7.Assigning request for dealer:

GIVE THE RETAILERS WHAT THEY WANT!

Store_Id	Store_name	med_id	Medicine_...	Quantity
202	abc	3	sinarest	10
202	abc	1	crocin	10
202	abc	2	paracetamol	2
202	abc	4	cold	5
202	abc	4	cold	5
202	abc	2	paracetamol	1
202	abc	4	cold	10
202	abc	4	cold	5
202	abc	4	cold	5

Dealer_ID	Med_ID	Med_Name	Cost

Request sent ✕

ⓘ Request assigned to the selected dealer

OK

(The table gives you the stores with their requests for medicines)

(Select a dealer from this table from whom you wish to get the medicin

Med_id: 4

Quantity_Required: 5

Store_id: 202

Dealer_ID: 2

Send Request>>

CostPrice_per_Unit: 10

8.Viewing the transactions of all stores:

LIST OF ALL TRANSACTIONS

Select a transaction to view the det...

bill_id	bill_date	customer_name	Grand total
1	2019-03-16 00:00:00	a	0
2	2019-03-17 00:00:00	cust	0
3	2019-03-17 00:00:00		0
4	2019-03-17 00:00:00		0
5	2019-03-18 00:00:00		0
6	2019-03-18 00:00:00		0
7	2019-03-20 00:00:00		0
8	2019-03-20 00:00:00		0
9	2019-03-20 00:00:00		0
10	2019-03-20 00:00:00		0
11	2019-03-20 00:00:00		0
12	2019-03-20 00:00:00		0
13	2019-03-20 00:00:00		0
14	2019-03-20 00:00:00		0
15	2019-03-20 00:00:00		0
16	2019-03-20 00:00:00		0
17	2019-03-21 00:00:00		0
18	2019-03-21 00:00:00		0
19	2019-03-21 00:00:00		0
20	2019-03-21 00:00:00		0
21	2019-03-21 00:00:00		0
22	2019-03-21 00:00:00		0
23	2019-03-21 00:00:00		0

Bill_ID:

View Transaction

1.Manage Medicines in Store:

Medicines that are currently available in your store

Med_id	Med_name	Exp.Date	quantity_available
2	paracetamol	12/20	0
3	sinarest	3/21	0
4	cold	12/20	0

Medicines that you may request   SHOP #202

Med_id	Med_name	Exp.date	cost_per_unit
1	crocin	12/20	100
2	paracetamol	12/20	100
3	sinarest	3/21	20
4	cold	12/20	20

Med_id:

Med_name:

Exp.Date:

Quantity_available:

Quantity_request:

◯ All medicines   ◯ Expired medicines

Request for supply

Med_id	Med_name	Quantity_req

Revert^

Request>>

2.Requesting Medicine:

Medicines that are currently available in your store

Med_id	Med_name	Exp.Date	quantity_available
2	paracetamol	12/20	0
3	sinarest	3/21	0
4	cold	12/20	0

Medicines that you may request   SHOP #202

Med_id	Med_name	Exp.date	cost_per_unit
1	crocin	12/20	100
2	paracetamol	12/20	100
3	sinarest	3/21	20
4	cold	12/20	20

Med_id: 1

Med_name: crocin

Exp.Date: 12/20

Quantity_available:

Quantity_request: 6

◯ All medicines   ◯ Expired medicines

Request for supply

Reqested   ✕

ⓘ   Request sent

OK

Med_id	Med_name	Quantity_req

Revert^

Request>>

3.Making Transactions:

BILL #23

Med_id	Name	Rackno.	MRP
1	crocin	1	100
4	cold	2	20

Med_ID: 4   Name: cold

RackNo. 2   Date Man. 12/19   Exp.Date 12/20

Quantity_Available: 0   Quantity_Required:

Add to Bill   MRP: 20

Revert recor...

Med_id	Med_Name	Quantity	Cost

Bill_ID: 23

Customer_name: Cancel Bill

Bill_Date: 21-mar-2019   GRAND TOTAL:

Generate Bill

OPERATIONS PERFORMED BY DEALER:

1.Supplying medicines for stores:

SUPPLY THE RETAILERS

store_id	address	med_id	med_Name	Quantity
202	ducbliwehcb	3	sinarest	10
202	ducbliwehcb	1	crocin	10

Enter the batch no.   1

Supply

2.Managing cost price:

SAMPLE CODE:

```java
public class admin extends javax.swing.JFrame {


  DefaultTableModel mod;
  public admin() {
    initComponents();
    this.setSize(1366,767);
    mod=(DefaultTableModel)jTable1.getModel();
    try{
     DriverManager.registerDriver(new oracle.jdbc.OracleDriver());
    Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:XE","system","kushal1105");
    Statement stmt=con.createStatement();


  ResultSet rs=stmt.executeQuery("select * from retail");
  String a[]=new String[7];
  String b;
  int i=0;
  while(rs.next()==true)
  {
     mod.insertRow(mod.getRowCount(),new
Object[]{Integer.toString(rs.getInt(1)),Integer.toString(rs.getInt(2)),Integer.toString(rs.getInt(3)),Integer.t
oString(rs.getInt(4)),Integer.toString(rs.getInt(5)),Integer.toString(rs.getInt(6))});
  }

  con.close();
```

```
      }
      catch(Exception e)
      {
        System.out.println(e);
      }
```

7.CONCLUSION:

The Pharmacy Management System, (its conception, organization, development and integration), has been a tremendous task and the objectives have been well accomplished. The system provides the user with a user-friendly interface. Textual data entry (for obtaining information) is minimized as much as possible by replacing it with GUI constructs. The focus lies on displaying the right information to the user from a huge data. Relating the data, and retrieving the related data makes it easy to use.

8.SCOPE FOR FUTURE WORK:

- This system can be enhanced by having provisions to calculate the cost price incurred to buy medicines from the dealer, and to formulate the profit data (using the transaction data produced by each store). Appropriate statistical quantities may therefore by calculated, organized and shown.
- The details of prescription can also be included- the doctor name, the illness treated etc.
- Each bill can have a code (qr or bar) and a scanner can be used to scan this to retrieve information about the transaction
- An android based mobile application can be developed which is easy to use and portable.

9.REFERENCES:

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