VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELGAUM-590014

A DBMS Mini-Project Report

On

"WHOLESALES PESTICIDES MANAGEMENT SYSTEM"

A Mini-project report submitted in partial fulfillment of the requirements for the award of the degree of ***Bachelor of Engineering in Computer Science and Engineering*** *of Visvesvaraya Technological University, Belgaum.*

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(AFFILIATED TO VTU, BELGAVI AND APPRVOVED BY AICTE, NEW DELHI)
Kanakpura Road,Udayapura, Bangalore

2016-2020 BATCH

DAYANADA SAGAR ACADEMY OF TECHNOLOGY AND MANAGAEMENT,

(AFFILIATED TO VTU, BELGAVI AND APPRVOVED BY AICTE, NEW DELHI)

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CERTIFICATE

This is to certify that the Mini-Project on Database Management System (DBMS) entitled "**WHOLESALES PESTICIDES MANAGEMENT SYSTEM"** has been successfully carried out by **VIRAGANDHAM SAI KRISHNA (1DT16CS114) and RAKSHITH PK (1DT16CS077)** a bonafide students of **Dayananda sagar academy of technology and management** in partial fulfillment of the requirements for the award of degree in **Bachelor of Engineering in Computer Science and Engineering** of **Visvesvaraya Technological University, Belgaum** during academic year 2018-2019. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The mini project report has been approved as it satisfies the academic requirements in respect of project work for the said degree.

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(Department of CSE)

Examiners:

Signature with Date

1:

2:

ACKNOWLEDGEMENT

It gives us immense pleasure to present before you our project titled '**WHOLESALES PESTICIDES MANAGEMENT SYSTEM USING JFRAMES and MYSQL.** The joy and satisfaction that accompany the successful completion of any task would be incomplete without the mention of those who made it possible. We are glad to express our gratitude towards our prestigious institution **DAYANANDA SAGAR ACADEMY OF TECHNOLOGY AND MANAGEMENT** for providing us with utmost knowledge, encouragement and the maximum facilities in undertaking this project.

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ABSTRACT

Pesticide Management System provides a simple interface for maintenance of pesticide products in warehouse for wholesale customers.

The manufacture details of wholesale pesticides forum can be maintained using simple interface.

The contracts made by the owner of the forum can be notified for each due dates.

The details of all products and the products from manufacture using contract can be maintained.

The varied product cost of products for different customers like cash and credit customers can be displayed.

The owner of the forum can maintain all his sales independent of cash or credit payment.

The total invoice of each customer is displayed in this interface and the last date for his payment.

The sales of the forum can be improved by identifying whether the customer is of type cash or credit.

The owner of the forum can tally with the invoice sent from manufacturer and the invoice generated by the interface.

The owner of the forum can have up to date information about products, customers, manufacturers, contract and sales.

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CHAPTER 1

INTRODUCTION

1.1 Background

Considering the volumes of data that needs to be tracked in a Pesticide Product, it would be very difficult to manage the accuracy and quality of data manually. It would be almost impossible to get the details required in case of manual maintenance of data. The WHOLESALES PESTICIDES MANAGEMENT SYSTEM simplifies the manual work and allows smooth administration of the operations of a Pesticide Product Sale.

1.2 Problem Definition

This project is aimed to reduce the manual work involved in data maintenance in a Pesticide Product and automates the WHOLESALES PESTICIDES MANAGEMENT SYSTEM. This project is developed mainly to simplify the manual work and allows smooth administration of the operations of a Pesticide Product Sale. The purpose of the project is to computerize the administrative operations of a Pesticide Product Sale and to develop software which is user friendly, simple, fast, and cost – effective. It deals with the details of Manufacturer,Customers,Products information,Order and Credit etc. Traditionally, it was done manually. The main function of the system is to enter and store Manufacturer, Customer and Product details and retrieve these details as and when required, and also to manipulate these details meaningfully.

1.3 Motivation

Manual System: The system is very time consuming and lazy. This system is more prone to errors and sometimes the approaches to various problems are unstructured.

Technical System: With the invent of latest technology, we should update our systems which are very fast, accurate, user-friendly and reliable.

1.4 Objective

Main goal of this project is to simplify the manual operation of Pesticide Products sales with the following advantages:

1. Faster System
2. Accuracy
3. Reliability
4. Cost Effective
5. User Friendly
6. Immediate access to the data and statistics

1.5 Scope of the project

The project provides a very simple application which simplifies the manual work done by the operations team of Pesticide Wholesalers. This application saves the data of manufacturer, customer,products and their volumes and contract in the database. Allows users to enter the details, update / delete the existing details. Our project allows users to view the data stored in the database and to see the statistics.

CHAPTER 2

REQUIREMENTS

The requirements can be broken down into 2 major categories namely hardware and software requirements. The former specifies the minimal hardware facilities expected in a system in which the project has to be run. The latter specifies the essential software needed to build and run the project.

2.1 Hardware Requirements

The Hardware requirements are very minimal and the program can be run on most of the machines.

- Processor - Intel 486/Pentium processor or better
- Processor Speed - 500 MHz or above
- Hard Disk - 20GB(approx.)
- RAM - 64MB or above
- Storage Space - Approx. 4MB

2.2 Software Requirements

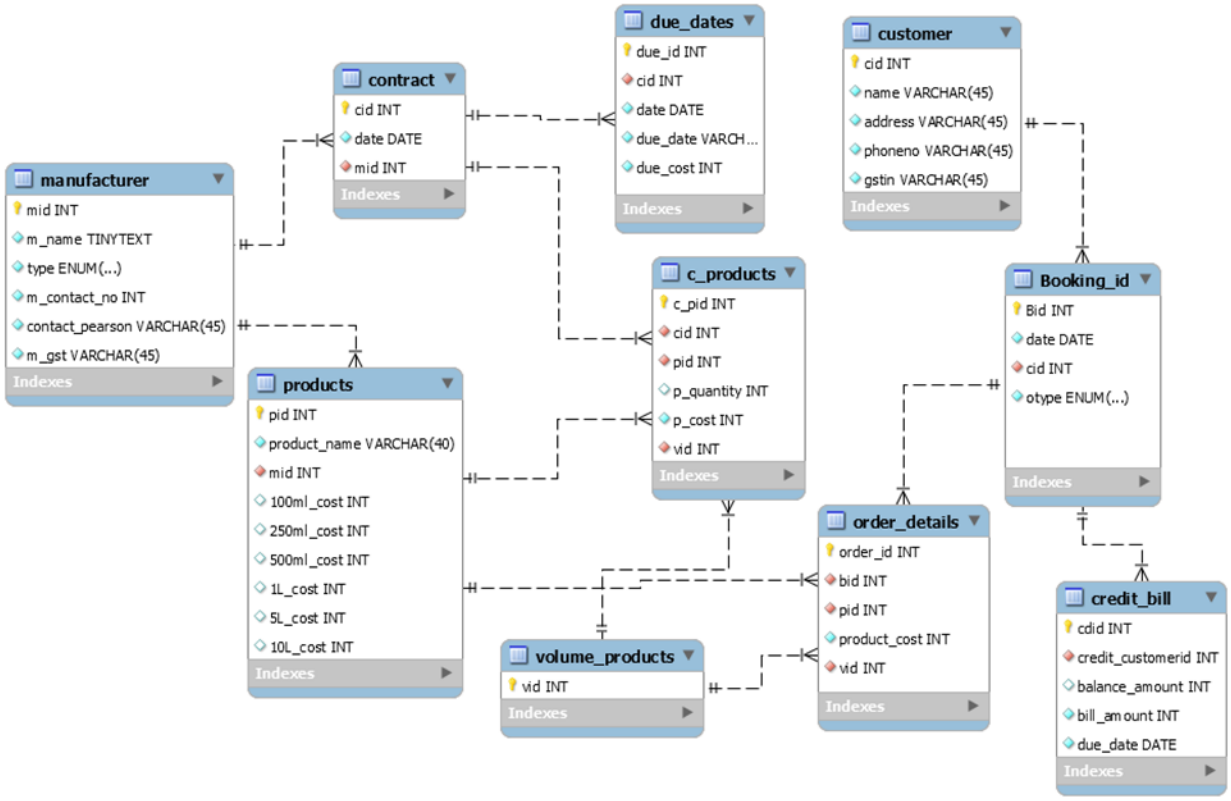
- Technology Implemented : MySQL Server
- Language Used : J2EE
- Database : My SQL
- User Interface Design : JFrames
- Web Browser : Google Chrome
- Software : NetBeans, MySQL Server

CHAPTER 3

DESIGN

3.1 Database Design

3.1.1 E-R Diagram



3.1.2 Database Schema

Database: Mini_project

Table: Manufacturer

Column	Type	Primary key	Not Null	UQ	AI
MID	INT	YES	YES	YES	YES
m_name	TINYTEXT	NO	YES	YES	
type	ENUM('PESTICIDES','FERTILIZERS','BIO')	NO	YES	YES	
m contact no	INT	NO	YES	YES	
contact person	VARCHAR(45)	NO	YES	YES	
m gst	VARCHAR(45)	NO	YES	YES	

Table: Products

Column	Type	Primary key	Not Null	UQ	AI
PID	INT	YES	YES	NO	YES
product name	VARCHAR(40)	NO	YES	NO	
mid	INT	NO	YES	YES	
100ml cost	INT				
250ml cost	INT				
500ml cost	INT				
1l cost	INT				
5l cost	INT				
10l cost	INT				

Table: Contract

Column	Type	Primary key	Not Null	UQ	AI
CID	INT	YES	YES	YES	YES
date	DATE	NO	YES		
mid	INT	NO	YES	YES	

Table: Due Dates

Column	Type	Primary key	Not Null	UQ	AI
DUE ID	INT	YES	YES	YES	YES
cid	INT	NO	YES	NO	
date	DATE	NO	YES	NO	
due date	VARCHAR(45)	NO	YES	NO	
due cost	INT	NO	YES	NO	

Table: C_Products

Column	Type	Primary key	Not Null	UQ	AI
C PID	INT	YES	YES	YES	YES
cid	INT	NO	YES	NO	
pid	INT	NO	YES	NO	
p quantity	INT	NO	NO	NO	
p cost	INT	NO	YES	NO	
vid	INT	NO	YES	NO	

Table: Volume_Products

Column	Type	Primary key	Not Null	UQ	AI
VID	INT	YES	YES	NO	YES

Table: Customer

Column	Type	Primary key	Not Null	UQ	AI
CID	INT	YES	YES	NO	YES
name	VARCHAR(45)	NO	YES	YES	
address	VARCHAR(45)	NO	YES	NO	
phoneno	VARCHAR(45)	NO	YES	YES	
gstin	VARCHAR(45)	NO	YES	YES	

Table: Booking id

Column	Type	Primary key	Not Null	UQ	AI
BID	INT	YES	YES	NO	YES
Date	DATE	NO	YES	NO	
cid	INT	NO	YES	YES	
Otype	ENUM('CASH,' CREDIT')	NO	YES	NO	

Table:Order Details

Column	Type	Primary key	Not Null	UQ	AI
ORDER ID	INT	YES	YES	NO	YES
bid	INT	NO	YES	NO	
pid	INT	NO	YES	NO	
product cost	INT	NO	YES	NO	
vid	INT	NO	YES	NO	

Table: Credit Bill

Column	Type	Primary key	Not Null	UQ	AI
CDID	INT	YES	YES	YES	YES
credit customerid	INT	NO	YES	NO	
balance amount	INT	NO	NO	NO	
bill amount	INT	NO	YES	NO	
Due date	DATE	NO	YES	NO	

3.2 Database Normalization

3.2.1 First Normal Form

All the Relations are designed in such a way that it has no repeating groups. Hence all tables are in 1st Normal Form.

3.2.2 Second Normal Form

A relation is said to be in second normal form if it is already in first normal form and it has no partial dependency. All the tables in the database are designed in such a way that there is no partial dependency. Hence all tables are in 2nd Normal Form.

3.2.3 Third Normal Form

A relation is said to be in third normal form if it is already in 1st and 2nd Normal Form and has no transitive dependency. All the tables in the database are designed in such a way that there is no transitive dependency. Hence all tables are in 3rd Normal Norm.

For Example:

- Every attribute of Contract depends on primary key so it is in 3rd normal form
- In Manufacturer table m_name depends upon mid, hence another table Contract with cid,date and mid is created to remove the transitive functional dependency.
- In Customer table, name depends upon cid, hence another table Booking_id with Bid,date,cid and otype is created to remove the transitive functional dependency.

3.3 User Interface

In WHOLESALES PESTICIDES MANAGEMENT SYSTEM ‘manufacturer’ can access all functionalities of the system. ‘contract’ can access manufacturer details and product details can add manufacturer,gives date of manufactured products and details of products as shown in Figure 3.3.1.

3.3.1 Frame 1

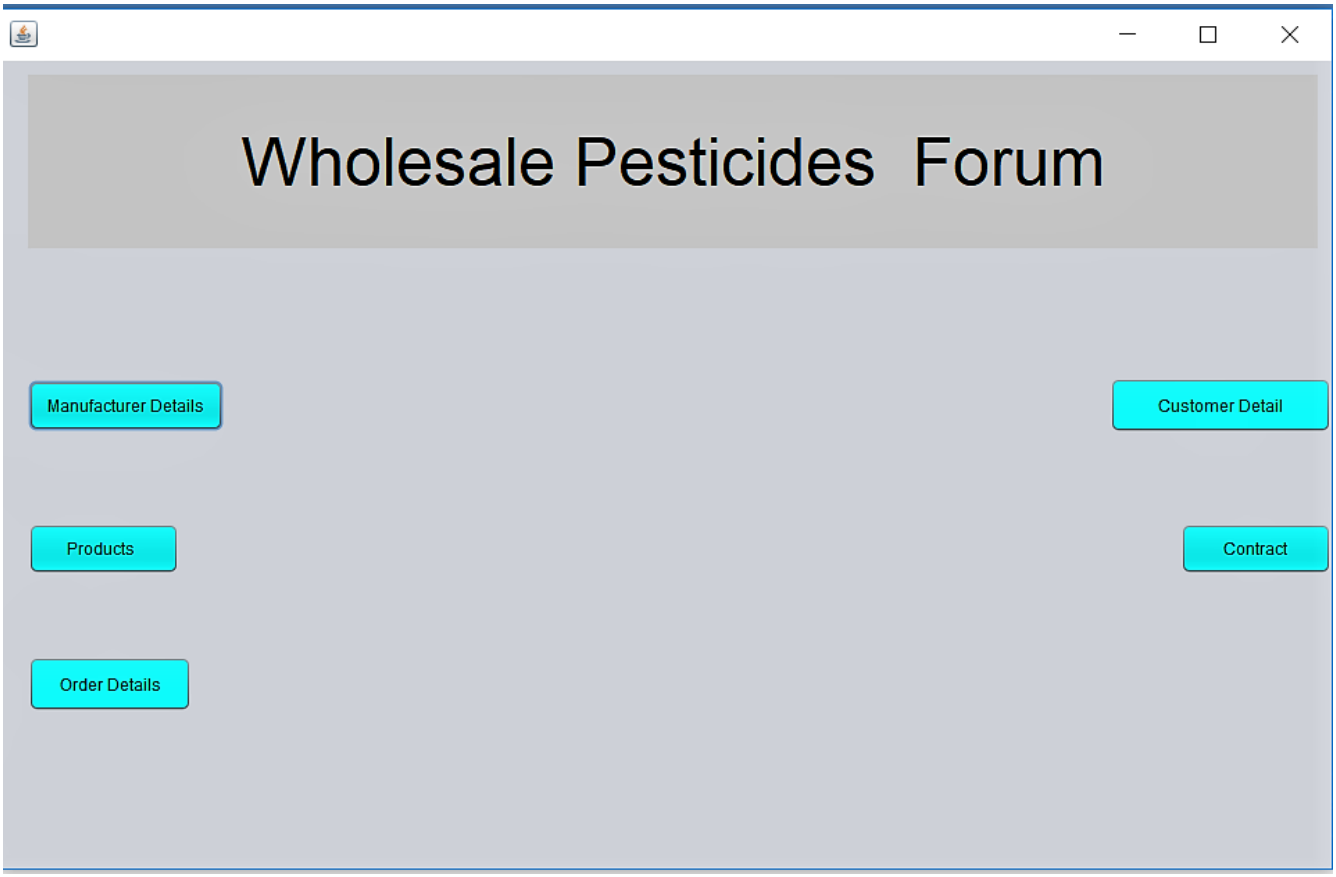


Figure 3.3.1 Frame 1

3.3.2 Manufacture Details:

Add Manufacturer:

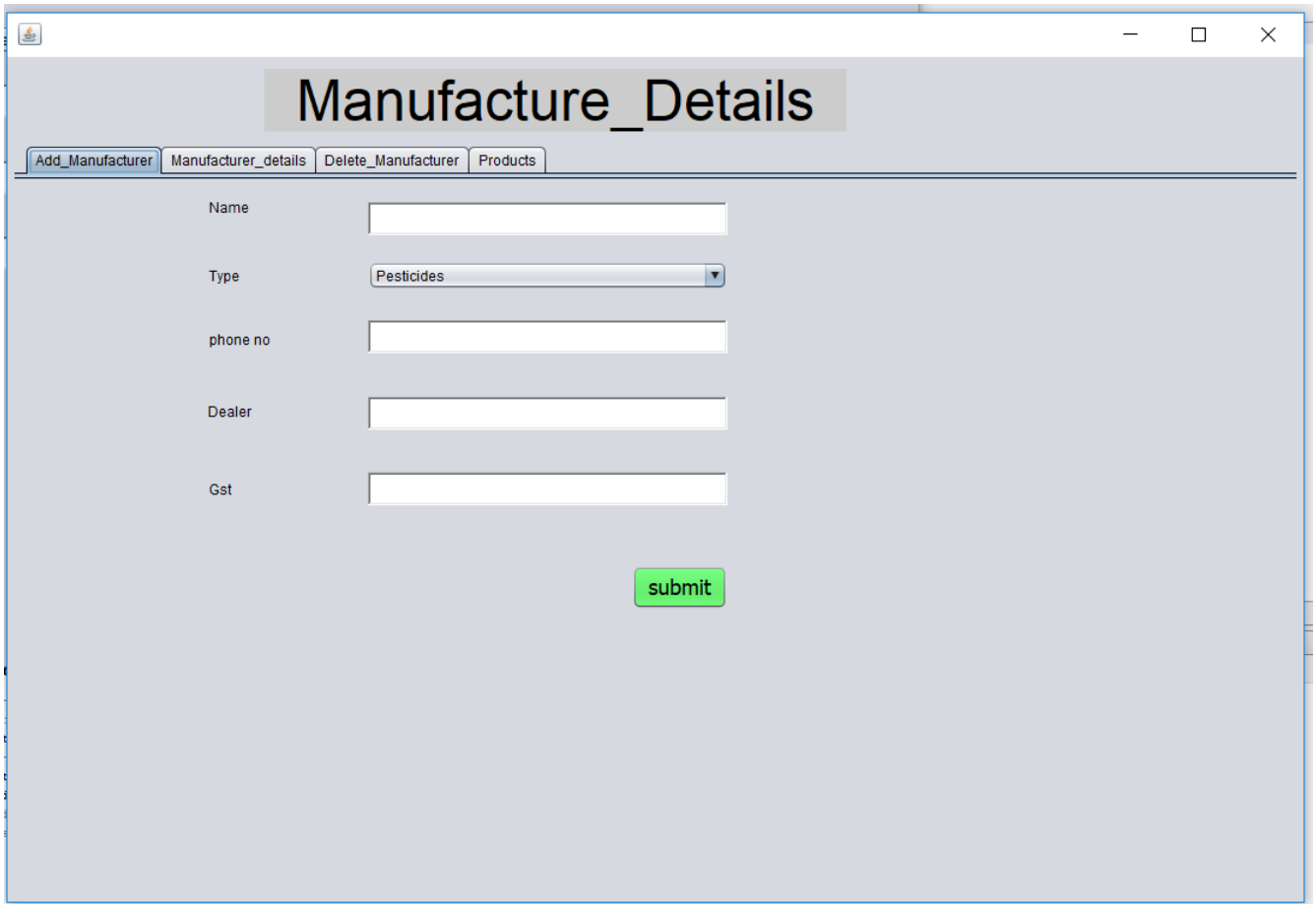


Fig 3.3.2 Manufacture Details

3.3.3 Manufacturer Details :

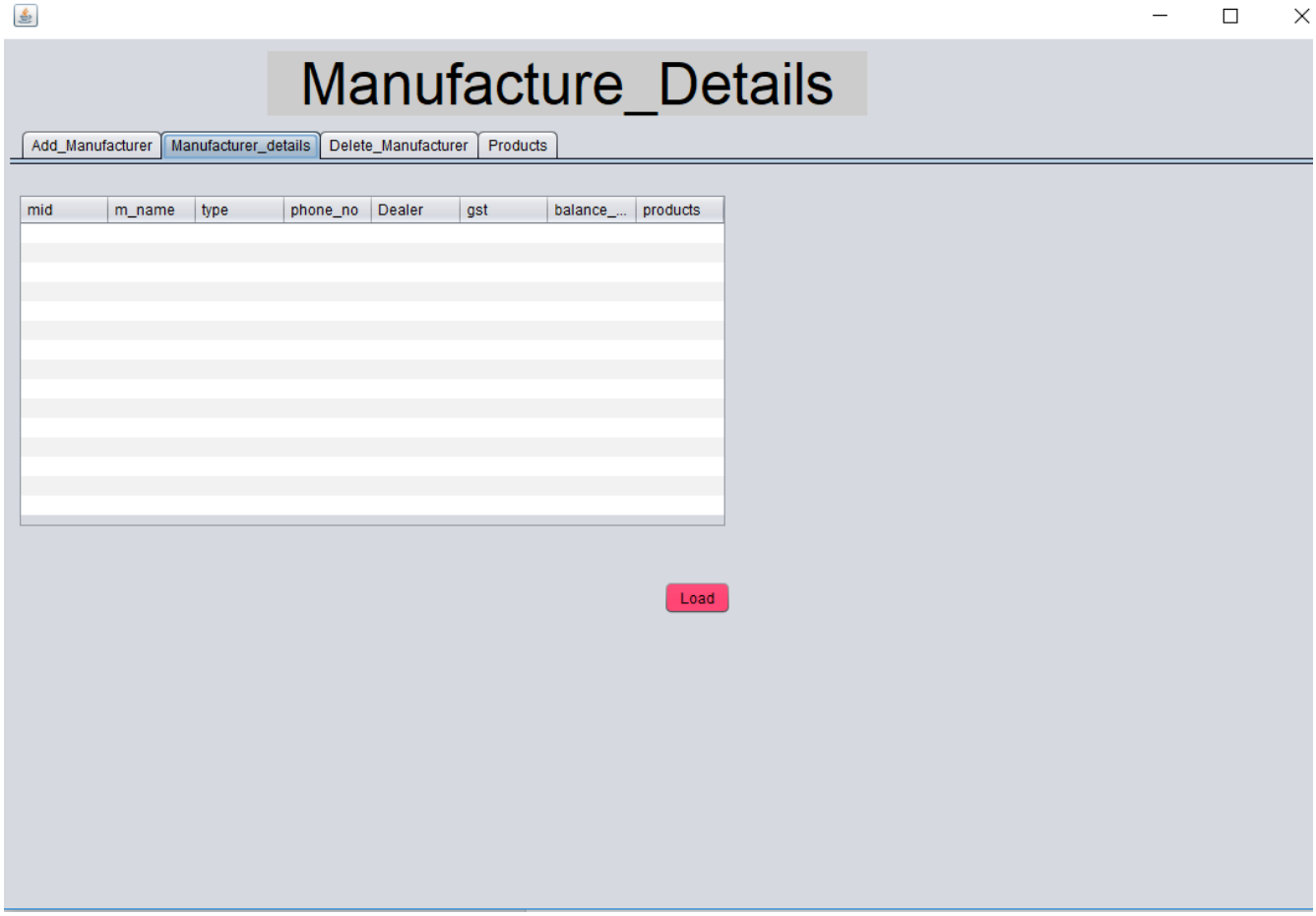


Fig 3.3.3 Manufacture Details

3.3.4 Delete Manufacturer

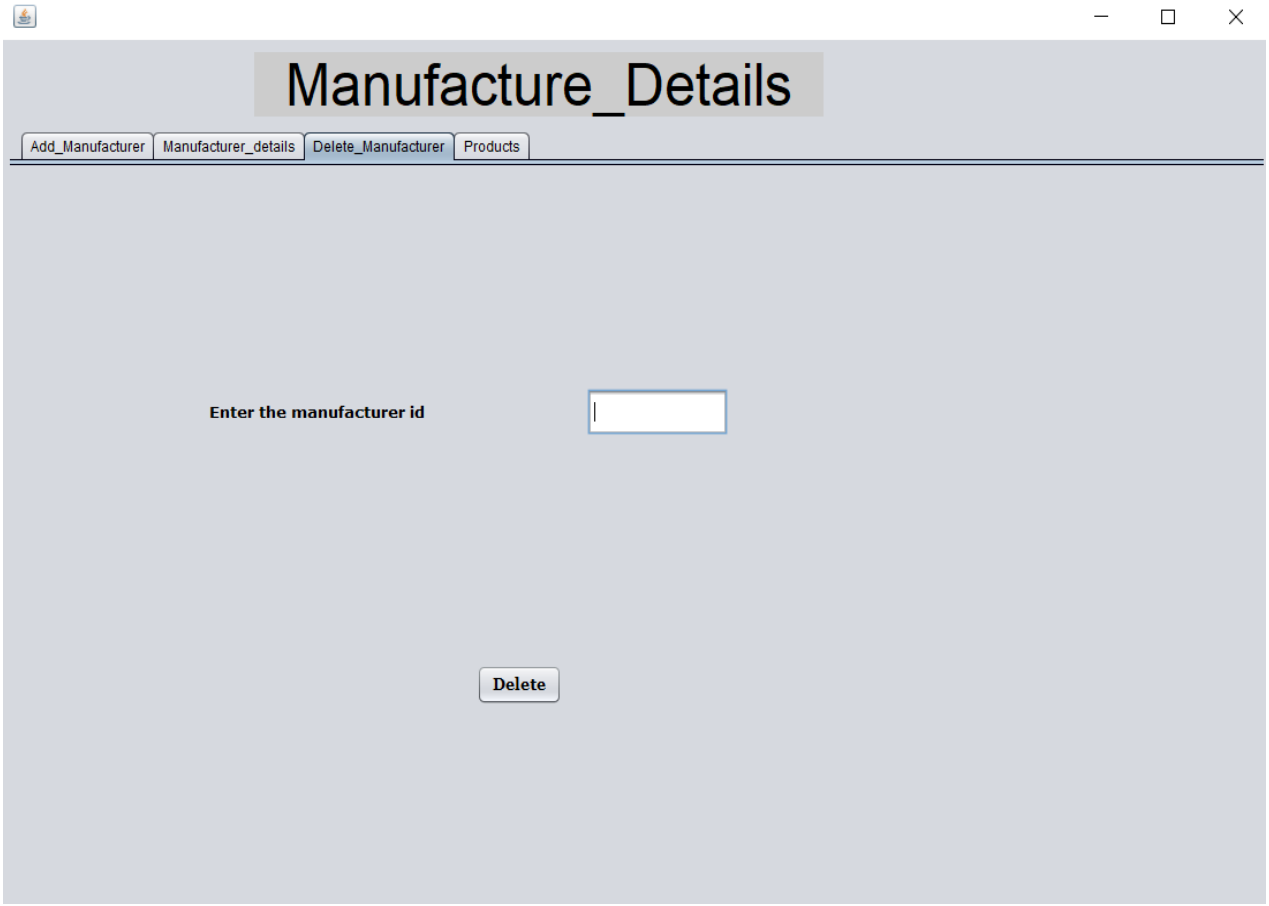


Figure 3.3.4 Delete Manufacturer

3.3.5 Products:

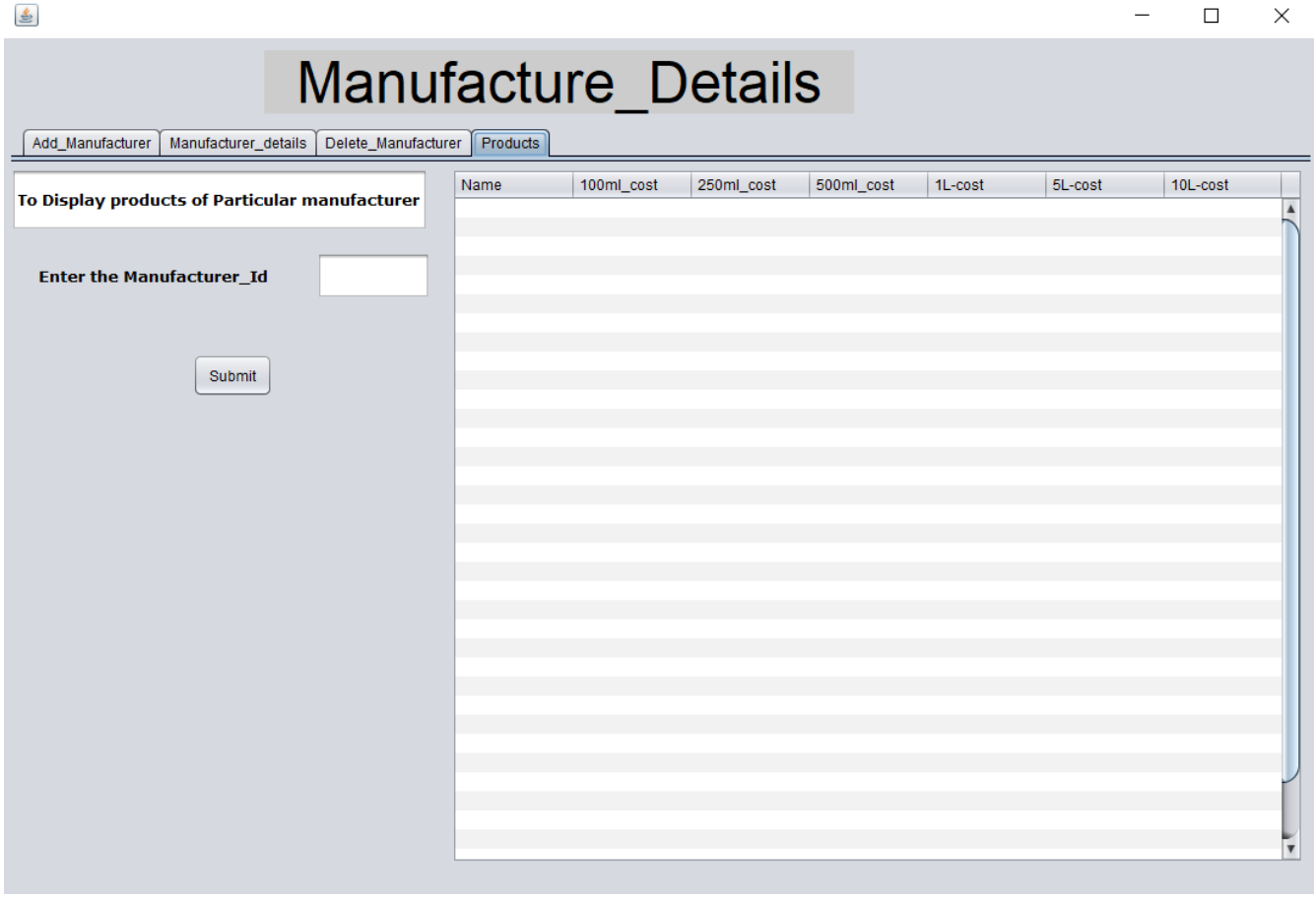


Figure 3.3.5 Products

3.3.6 Customer Details

Add Customer

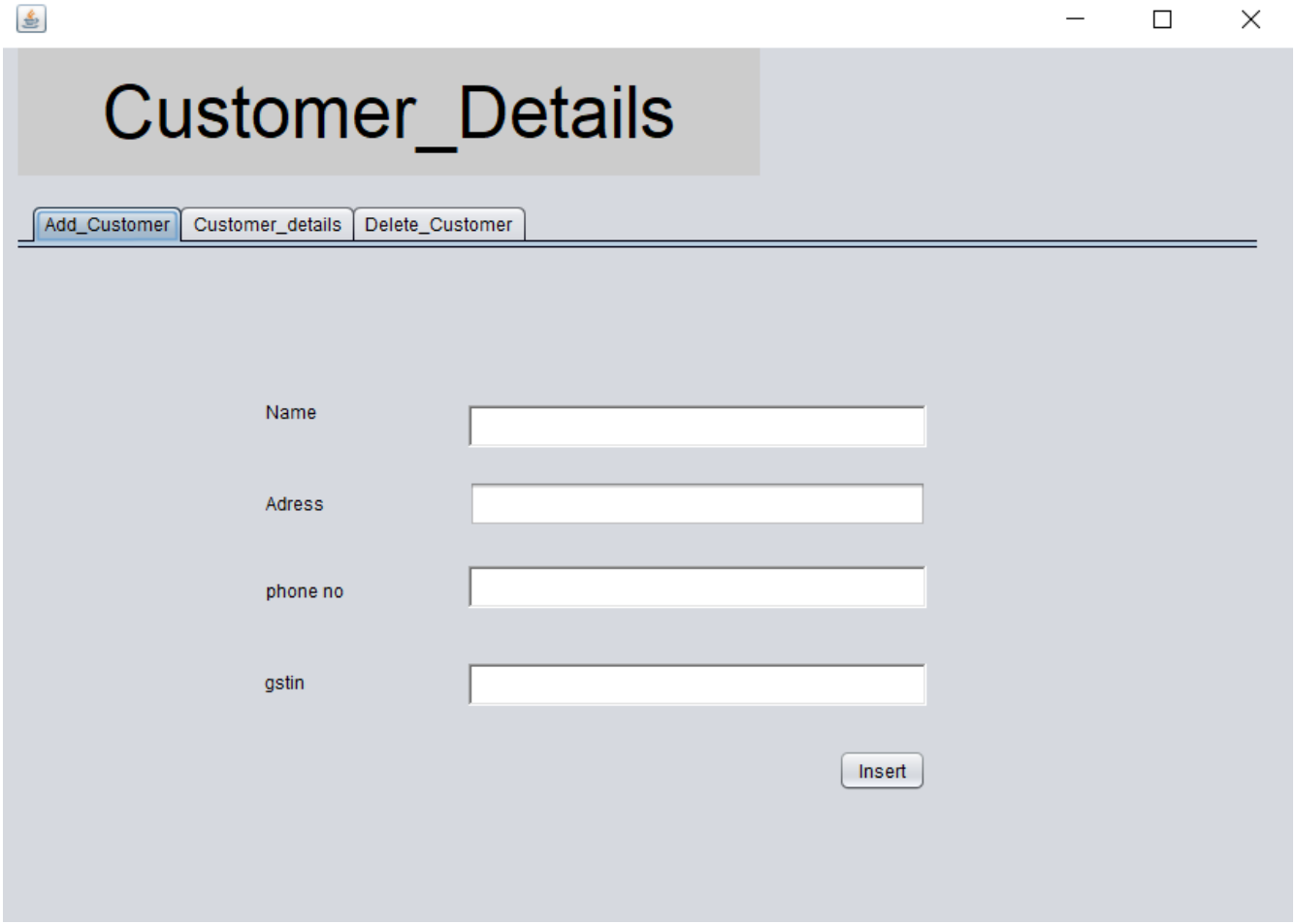


Figure 3.3.6 Customer Details

3.3.7 Customer Details:

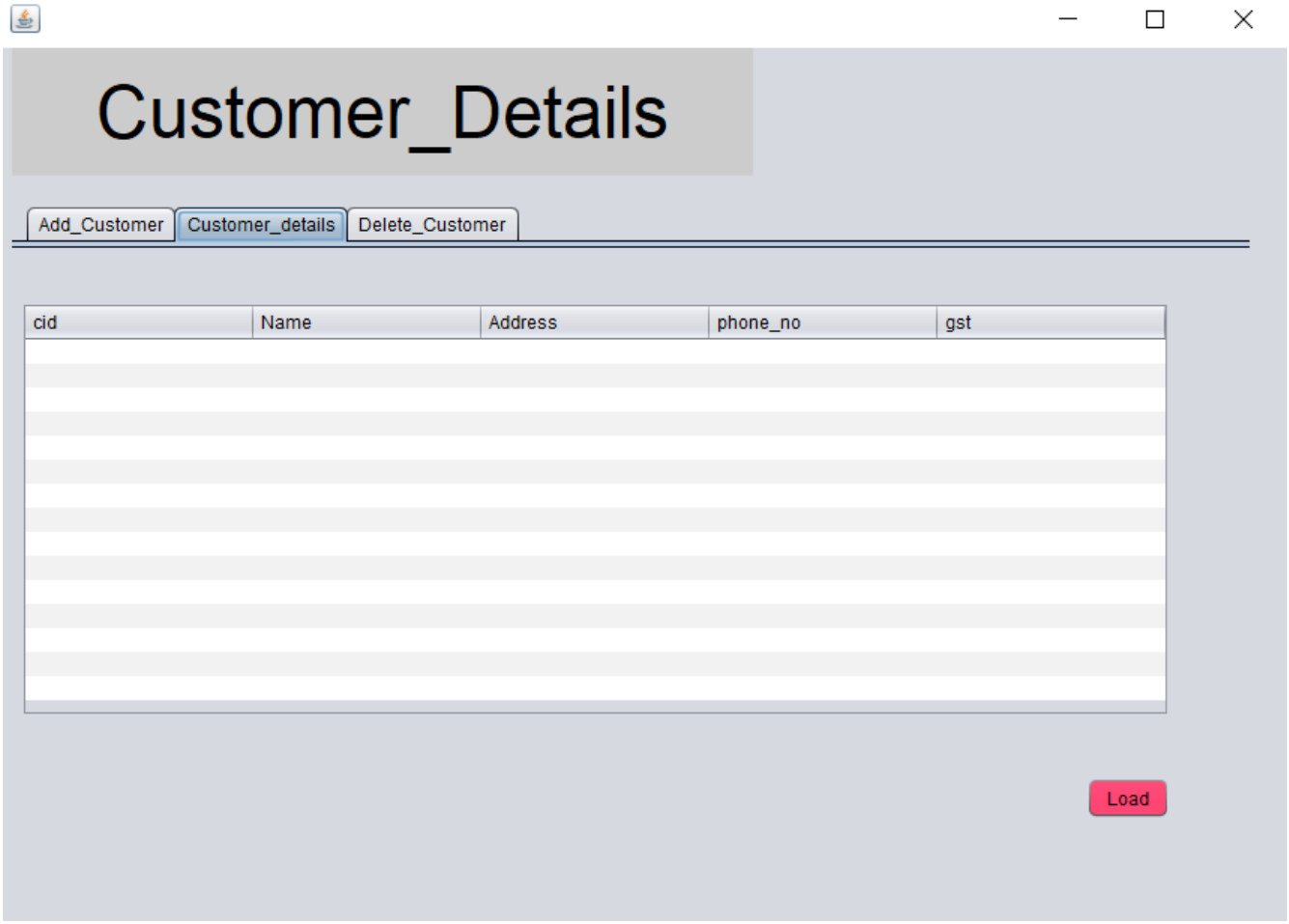


Fig 3.3.7 Customer Details

3.3.8 Delete Customer

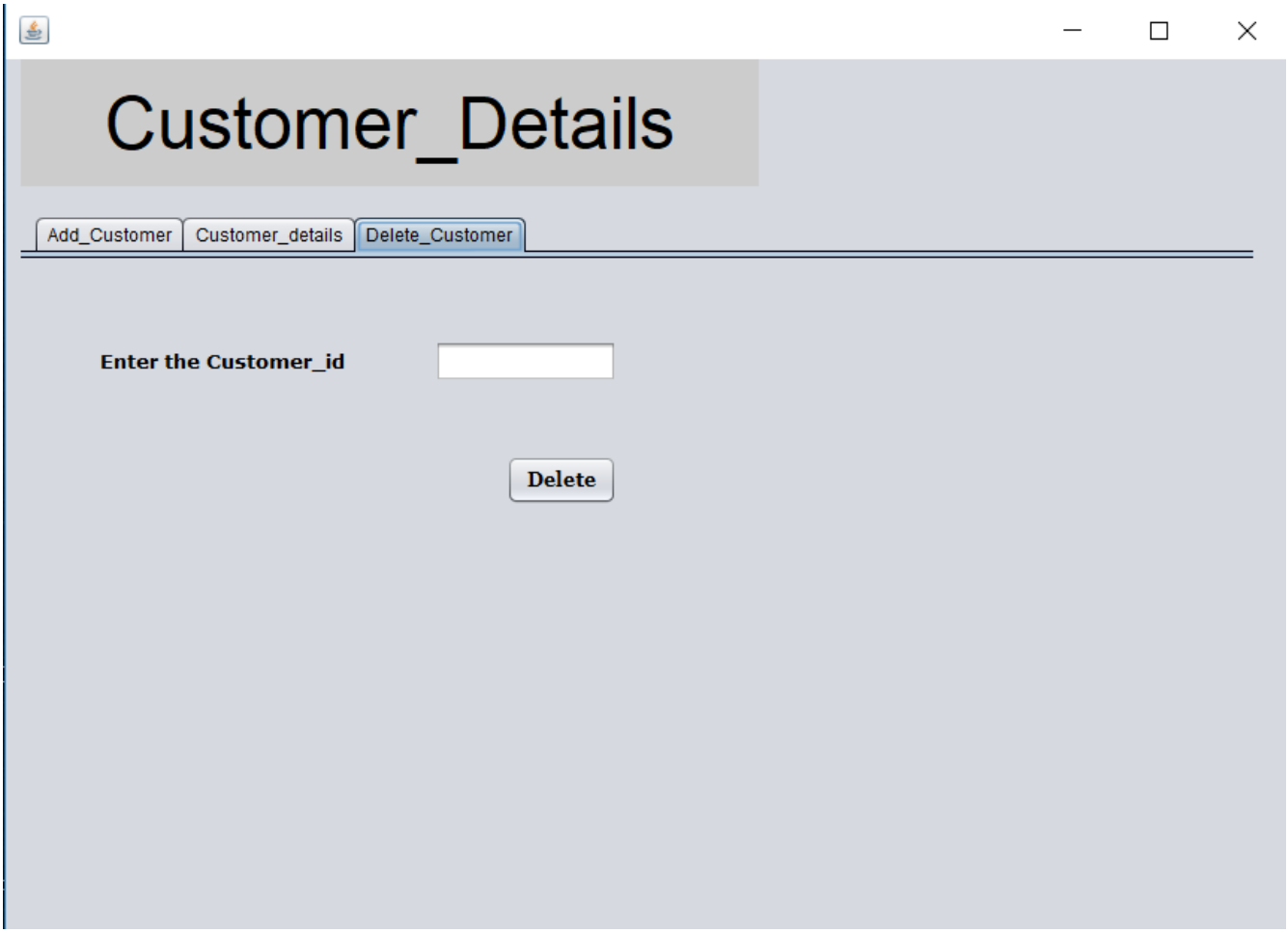


Fig 3.3.8 Delete Customer

3.3.9: Contract Details:

Add Contract

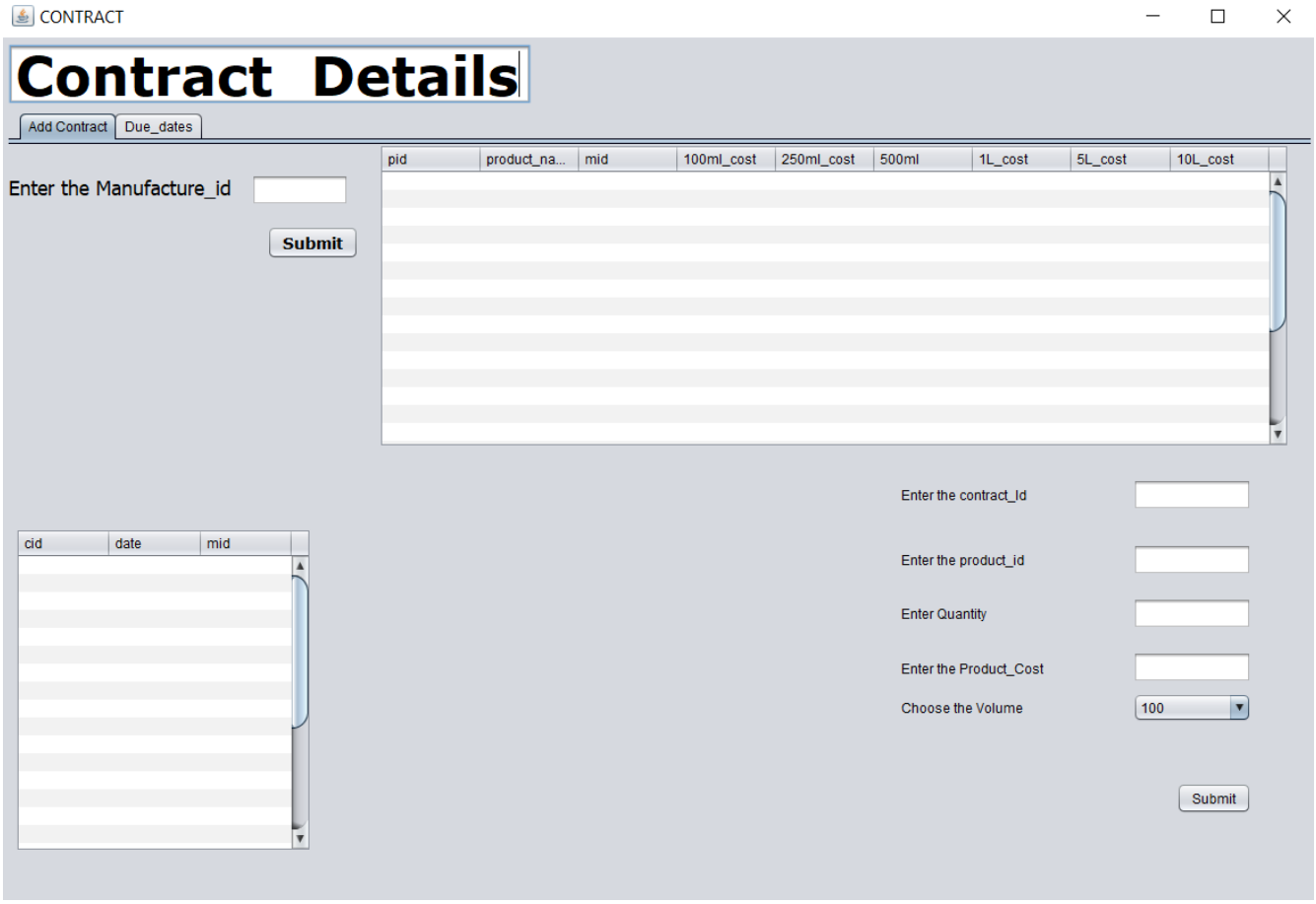


Fig 3.3.9 Contract Details

3.3.10: Due Dates:

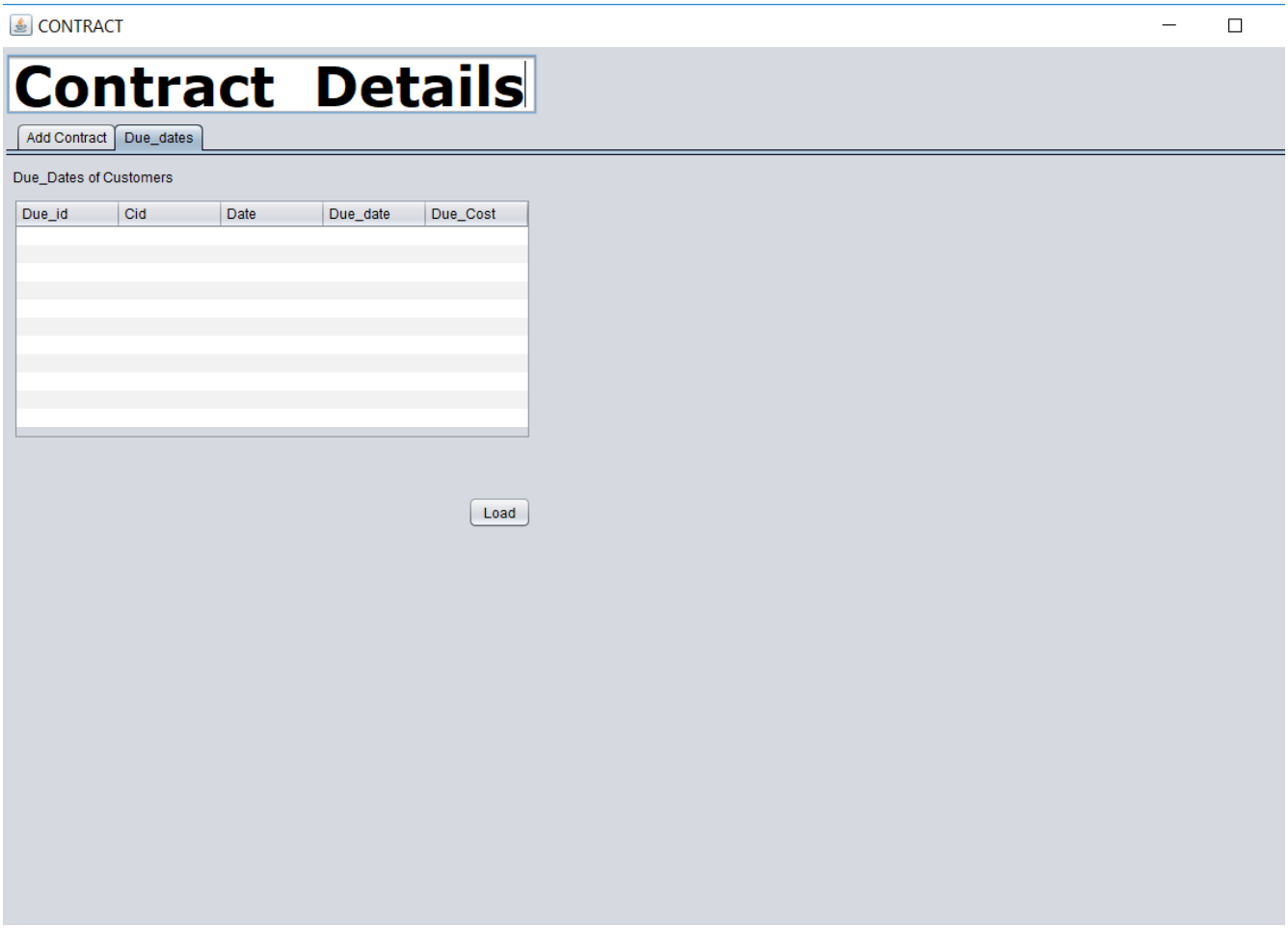


Fig 3.3.10 Due Dates

3.3.11 Booking Details

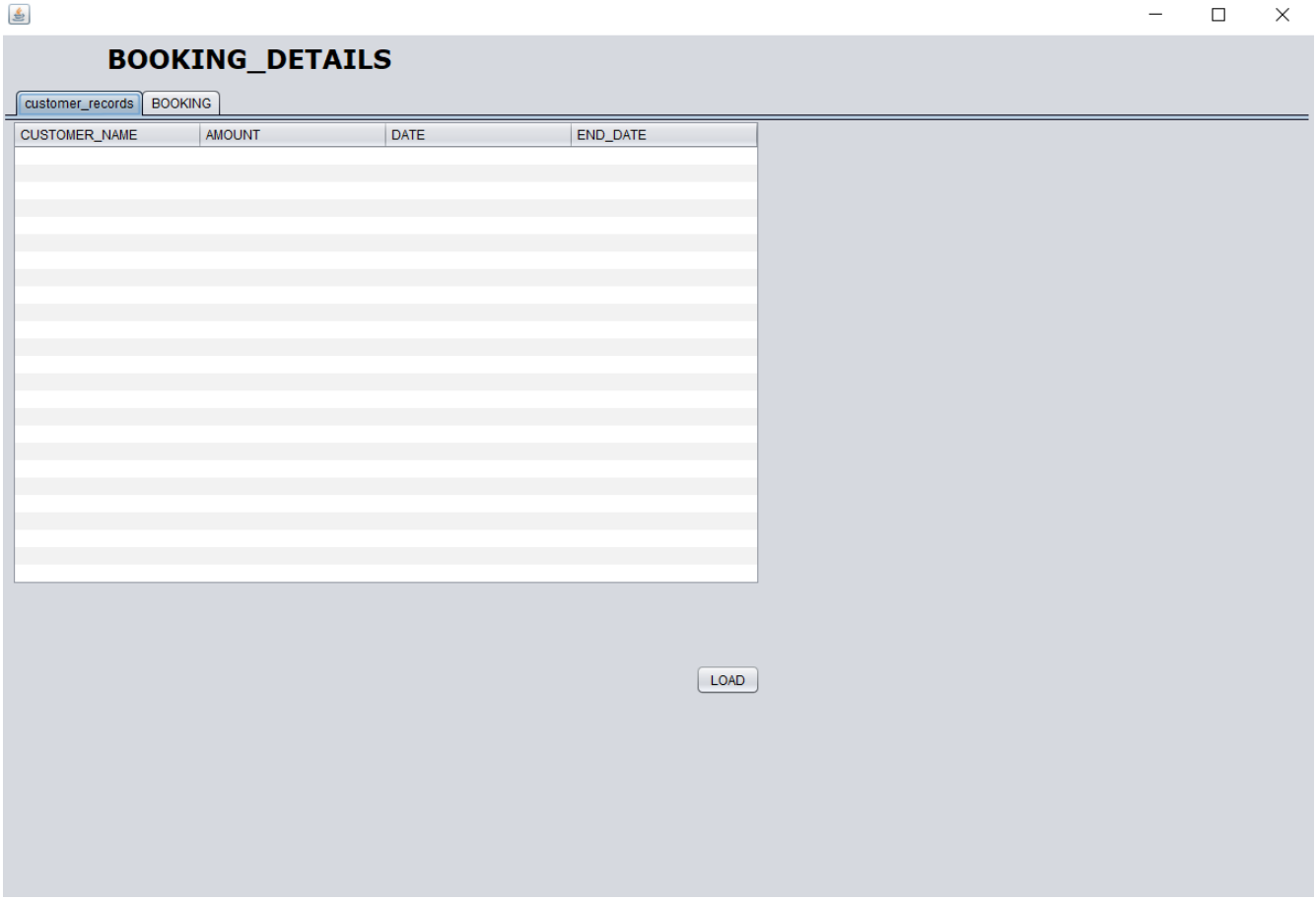


Fig 3.3.11 Customer Records

3.3.11 Booking Details

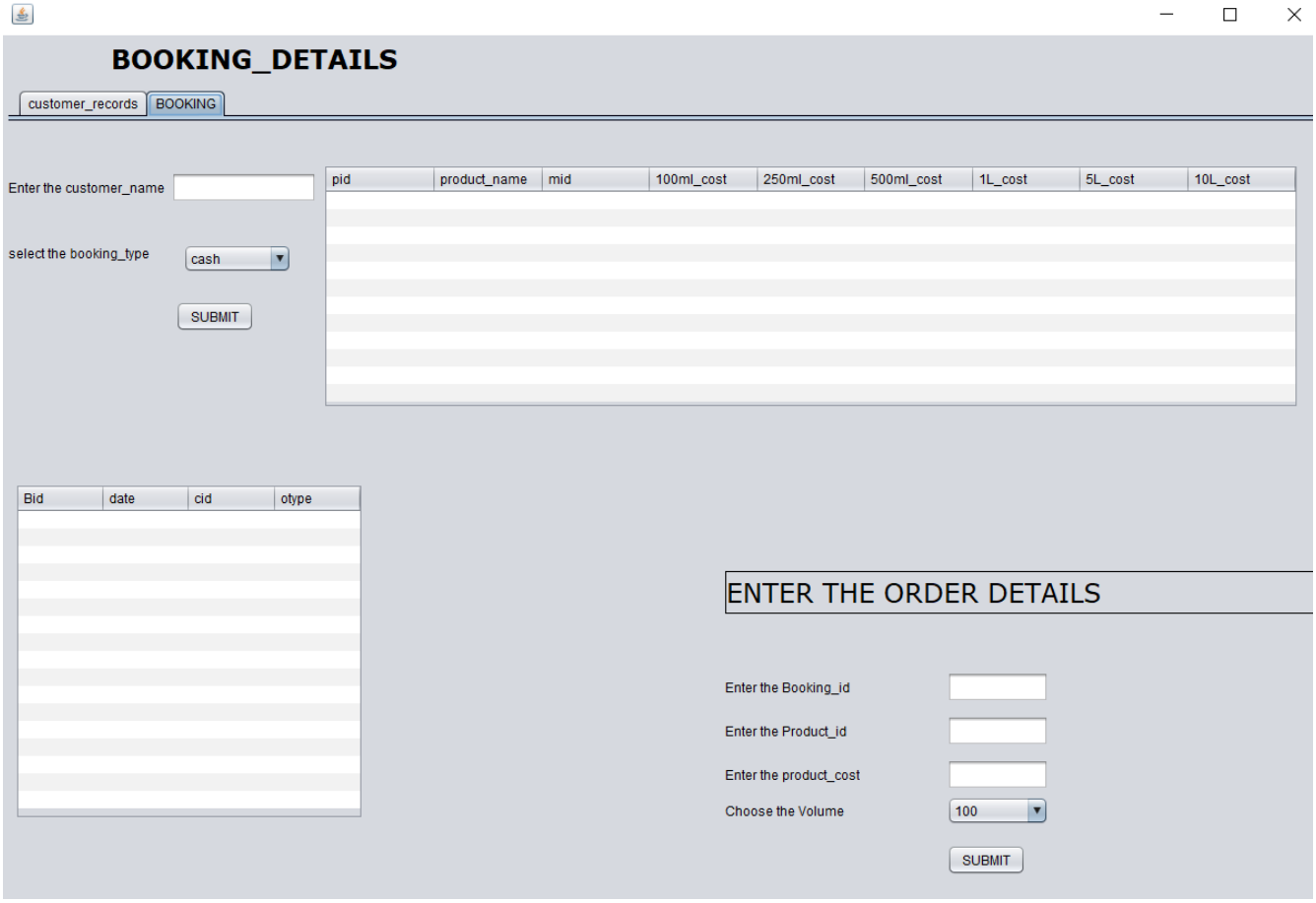


Fig 3.3.12 Booking

3.3.13 PRODUCT DETAILS

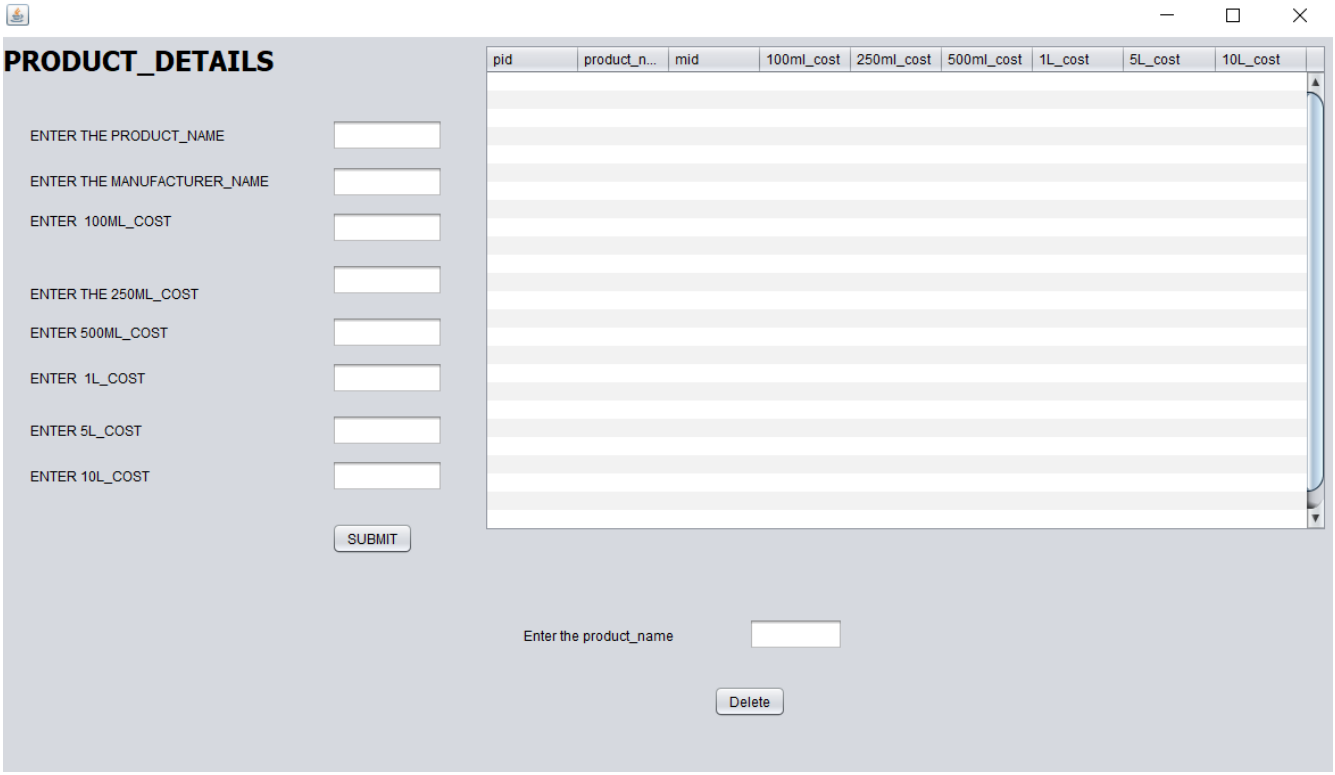


Fig 3.3.13 PRODUCT DETAILS

CHAPTER 4

IMPLEMENTATION

4.1 Frame 1

Process Name	**: Frame 1**
Process Number	: 1.1
Input	: User Name : Password
Output	: Status Message

4.2 Manufacture Details

Process Name	**: Add Manufacturer**
Process Number	: 2.1
Input	: Name : Type : Phone No : Dealer : Gst
Output	: Status Message
Error Condition	: All fields are Required : Unsuccessful

Process Name	**: Manufacturer Details**
Process Number	: 3.1
Input	: Mid : M name : Type : Phone no : Dealer : Gst : Balance : Products
Output	: Status Message
Error Condition	: All fields are Required : Unsuccessful

Process Name	**: Products**
Process Number	: 3.2
Input	: Enter the Manufacturer name
Output	: Status Message
Error Condition	: All fields are Required : Unsuccessful

Process Name	**: Delete Manufacturer**
Process Number	: 4.1
Input	: Enter the Manufacturer name
Output	: Status Message
Error Condition	: All fields are required : Unsuccessful

4.3 Products Details

Process Name	**: Product Details**
Process Number	: 4.1
Input	: Enter the product name : Enter the manufacturer name : Enter 100mL cost : Enter 250mL cost : Enter 500mL cost : Enter 1L cost : Enter 5Lcost : Enter 10L cost
Output	: Status Message
Error Condition	: All fields are required : unsuccessful

4.4 Customer Details

Process Name	**: Add Customer**
Process Number	: 4.1
Input	: Name : Address : Phone No : Gstin
Output	: Status Message
Error Condition	: All fields are required : Unsuccessful

Process Name	**: Customer Details**
Process Number	: 5.1
Input	: Cid : Name : Address : Phone No : Gst
Output	: Status Message
Error Condition	: All fields are required : Unsuccessful

Process Name	**: Delete Customer**
Process Number	: 4.1
Input	: Enter the Customer name
Output	: Status Message
Error Condition	: All fields are required : Unsuccessful

4.5 Contract Details

Process Name	**: Add Contract**
Process Number	: 6.1
Input	: Enter the Manufacturer Id : Enter the Contract Id : Enter the Product Id : Enter Quantity : Enter the Product Cost : Choose the Volume
Output	: Status Message
Error Condition	: All fields are required : Unsuccessful

Process Name	**: Due Dates**
Process Number	: 6.2
Input	: Due Id

	: Cid : Date : Due Date : Due Cost
Output	: Status Message
Error Condition	: All fields are required : Unsuccessful

Process Name	**: Invoice**
Process Number	: 6.2
Input	: Manufacturer Name : Amount : Date : Due Date
Output	: Status Message
Error Condition	: All fields are required : Unsuccessful

4.6 Booking Details

Process Name	: Booking
Process Number	: 6.4
Input	: Enter the Customer name : Select the booking type
Output	: Status Message
Error Condition	: All fields are required : Unsuccessful

4.7 Order Details

Process Name	: Customer Records
Process Number	: 6.4
Input	: Enter the booking id : Enter the product id : Enter the product cost : Choose the volume
Output	: Status Message
Error Condition	: All fields are required : Unsuccessful

CHAPTER 5

SOURCE CODE

MANUFACTURE DETAILS

```
        try{
    conn = MySqlConnect.ConnectDB();
    String sql1 = "select mid from manufacturer where m_name = ?";
    PreparedStatement st = conn.prepareStatement(sql1);
    st.setString(1,jTextField1_id.getText().toLowerCase());
    ResultSet result = st.executeQuery();
    result.next();
    int mid = result.getInt("mid");
    String sql2= "DELETE FROM `pesticides forum work flow`.`manufacturer` WHERE ( `mid` = ? )";
    PreparedStatement pst =  conn.prepareStatement(sql2);
    pst.setInt(1, mid);
    boolean x = pst.execute();
    if(x==false)
    delete_message.setText("manufacturer is deleted");
    }catch(SQLException ex){
        System.out.println(ex);
      }
```

CUSTOMER DETAILS

```
try{
    conn = MySqlConnect.ConnectDB();
    String sql = "INSERT INTO `pesticides forum work flow`.`customer` (`name`, `address`,
`phoneno`, `gstin`) VALUES (?,?,?,?);";
    PreparedStatement preparedStmt = conn.prepareStatement(sql);
    preparedStmt.setString(1, cname.getText().toUpperCase());
    preparedStmt.setString(2,Address.getText().toUpperCase());
    preparedStmt.setInt(3, (int) Double.parseDouble(cphone.getText()));
    preparedStmt.setString(4,gst.getText());
    System.out.print(preparedStmt);
    reparedStmt.executeUpdate();
    status.setText("Customer is Added");
    }
    catch  (SQLException ex) {
          System.out.println(ex);
      }
try{
    conn = MySqlConnect.ConnectDB();
    String sql = "select cid from customer where name = ?";
    PreparedStatement st = conn.prepareStatement(sql);
    st.setString(1,jTextField1_id.getText().toLowerCase());
    ResultSet result = st.executeQuery();
    result.next();
    int cid = result.getInt("cid");
    String sql2= "DELETE FROM `pesticides forum work flow`.`customer` WHERE ( `cid` = ? )";
    PreparedStatement pst =  conn.prepareStatement(sql2);
    pst.setInt(1, cid);
    pst.execute();
    int ex = pst.getUpdateCount();
    System.out.println(ex);
    if(ex == 0 ){
            delete_message.setText("There is No Customer to delete");
        } else {
                        delete_message.setText("Customer record is deleted ");
            }
```

CONTRACT DETAILS

```
Calendar now = Calendar.getInstance();
      String date =
Integer.toString(now.get(Calendar.YEAR))+"/"+Integer.toString(now.get(Calendar.MONTH)+1)+"/"+
Integer.toString(now.get(Calendar.DATE));
      try{
         conn = MySqlConnect.ConnectDB();
         String sql = "INSERT INTO `pesticides forum work flow`.`contract` (`date`, `mid`) VALUES
(?, ?)";
          String sql1 = "SELECT * FROM PRODUCTS WHERE MID = ?";
          pst1 = conn.prepareStatement(sql1);
           pst1.setString(1,mid.getText());
         PreparedStatement pst = conn.prepareStatement(sql);
         pst.setString(1, date);
         pst.setString(2,mid.getText());
         boolean x = pst.execute();
          rs = pst1.executeQuery();

           int rowcount=0;
         DefaultTableModel model = (DefaultTableModel) ptable.getModel();
         while (rs.next()) {
            String column1 = rs.getString(1);
            String column2 = rs.getString(2);
            String column3 = rs.getString(3);
            String column4 = rs.getString(4);
            String column5 = rs.getString(5);
            String column6 = rs.getString(6);
            String column7 = rs.getString(7);
            String column8 = rs.getString(8);
            String column9 = rs.getString(9);
            model.setRowCount(rowcount + 1);
            if (ptable.getModel() != null) {
               ptable.getModel().setValueAt(column1, rowcount, 0);
               ptable.getModel().setValueAt(column2, rowcount, 1);
               ptable.getModel().setValueAt(column3, rowcount, 2);
               ptable.getModel().setValueAt(column4, rowcount, 3);
               ptable.getModel().setValueAt(column5, rowcount, 4);
               ptable.getModel().setValueAt(column6, rowcount, 5);
               ptable.getModel().setValueAt(column7, rowcount, 6);
               ptable.getModel().setValueAt(column8, rowcount, 7);
               ptable.getModel().setValueAt(column9, rowcount, 8);
            }

            rowcount++;
         }
```

```
    //SET CUSTOM RENDERER TO TEAMS COLUMN
    ptable.getColumnModel().getColumn(1).setCellRenderer(new ButtonRenderer());;

    //SET CUSTOM EDITOR TO TEAMS COLUMN
    ptable.getColumnModel().getColumn(1).setCellEditor(new ButtonEditor(new JTextField()));

    //SCROLLPANE,SET SZE,SET CLOSE OPERATION

    if(x==true){
      ctextField.setText("Error occured while inserting into database");
    }else{
      ctextField.setText("Inserted succesfully into contract");
    }
        String sql2 = "SELECT * FROM CONTRACT";
        PreparedStatement pst2 = conn.prepareStatement(sql2);
         res= pst2.executeQuery(sql2);
         int rcount=0;
         DefaultTableModel md = (DefaultTableModel) cotable.getModel();
          while (res.next()) {
        String column1 = res.getString(1);
        String column2 = res.getString(2);
        String column3 = res.getString(3);
        model.setRowCount(rcount + 1);
        if (cotable.getModel() != null) {
            cotable.getModel().setValueAt(column1, rcount, 0);
            cotable.getModel().setValueAt(column2, rcount, 1);
            cotable.getModel().setValueAt(column3, rcount, 2);
         }
        rcount++;
    }

}
catch (SQLException ex){
    System.err.println(ex);
}
```

BOOKING DETAILS

```
try{
   conn=MySqlConnect.ConnectDB();
   String sql = "select a.name,sum(product_cost), b.date,DATE_ADD(b.date,interval 45 day) as
due_date from customer a,booking_id b,order_details c  where  a.cid=b.cid and b.bid = c.bid   group
by(a.name)";
   pst5 = conn.prepareStatement(sql);
   ResultSet r = pst5.executeQuery();
   int rowcount=0;
   DefaultTableModel model = (DefaultTableModel) itable.getModel();
   while(r.next()){
   String column1 = r.getString(1);
   String column2 = r.getString(2);
   String column3 = r.getString(3);
   String column4 = r.getString(4);
   model.setRowCount( rowcount + 1);
   if(itable.getModel()!= null){
                itable.getModel().setValueAt(column1, rowcount, 0);
                itable.getModel().setValueAt(column2, rowcount, 1);
                itable.getModel().setValueAt(column3, rowcount, 2);
                itable.getModel().setValueAt(column4, rowcount, 3);
               }
              rowcount++;
          }

      }
      catch(SQLException ex){
         System.out.println(ex);
      }
```

TRIGGERS:

```
CREATE DEFINER=`root`@`localhost` TRIGGER `booking_id_AFTER_INSERT` AFTER INSERT
ON `booking_id` FOR EACH ROW BEGIN
IF(NEW.OTYPE='credit')
THEN
INSERT INTO credit_customers(cid,customer_name)
SELECT  NEW.cid,c.name
FROM customer c
where cid = new.cid;
 END IF;
END
```

STORED PROCEDURE:

```
CREATE DEFINER=`root`@`localhost` PROCEDURE `sp_due_dates`(
IN cid INT(4),
IN dat DATE,
IN Qunatity INT(4),
 IN cost INT(6)
 )
BEGIN
DECLARE total_cost INT DEFAULT 0;
Set total_cost= Qunatity * cost;
INSERT into due_dates(`cid`,`date`,`due_date`,`due_cost`) values
(cid,dat,adddate(dat,45),total_cost);
END
```

CHAPTER 6

CONCLUSION AND FUTURE WORK

The Wholesales Pesticides Management System is a great improvement over the manual system which uses lots of manual work and paper. The computerization of the system speeds up the process.

1. Advantages

- The Wholesales Pesticides Management System is fast, efficient and reliable.
- Avoids data redundancy and inconsistency
- Number of personnel required is considerably less
- Provides more security and integrity to data

2. Future Enhancements

The Wholesales Pesticides Management System can be enhanced by including more functionality like track the no of products sold in a day and by hosting the whole project etc.

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