

PHARMACY DATABASE MANAGEMENT

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Problem Statement

The purpose of the project is to design and implement a Pharmacy Database Management Application . This project is to develop software for the effective management of a pharmaceutical store. We have developed this software for ensuring effective policing by providing statistics of the drugs in stock.

Tools And Technologies Used

- JDK
- MySQL connector java
- JDBC Driver

Implementation description

The project is done by creating a front end using **swing** and **awt**. The back end is then connected to the main program by using the interconnection of **JDBC Driver** and the database already created.

This program may be used by pharmaceutical stores having a database to preserve. The software used can generate reports, as according to the consumer's necessities. The software can print the drug name, description, stock quantity and price.

Below are functionalities of this project:

- Adding a new drug to the database
- Adding more stock for existing drugs
- Fetching details of a drug using drugname
- Removing stock
- ie insertion deletion and search

Source Code

```
import javax.swing.*;
import java.io.*;
import java.awt.*;
import java.awt.event.*;
import javax.sound.sampled.*;
import java.sql.*;
import java.util.*;

class start extends JFrame implements
ActionListener
{
    JRadioButton r1;
    JLabel l1,l2;
    Container c;
    JButton b1,b2,b3;
    int dw=0;
    Font f=new Font("Andika",Font.BOLD,15);

    start()
    {
        setLayout(null);
        r1=new JRadioButton("A");
        r1.setBounds(100,100,200,50);
        add(r1);
        l1=new JLabel("Label 1");
        l1.setBounds(100,150,200,50);
        add(l1);
        l2=new JLabel("Label 2");
        l2.setBounds(100,200,200,50);
        add(l2);
        b1=new JButton("B1");
        b1.setBounds(100,250,200,50);
        add(b1);
        b2=new JButton("B2");
        b2.setBounds(100,300,200,50);
        add(b2);
        b3=new JButton("B3");
        b3.setBounds(100,350,200,50);
        add(b3);
        c=(Container) getContentPane();
        c.setLayout(null);
        c.add(r1);
        c.add(l1);
        c.add(l2);
        c.add(b1);
        c.add(b2);
        c.add(b3);
        pack();
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setVisible(true);
    }

    public void actionPerformed(ActionEvent e)
    {
        if(r1.isSelected())
        {
            dw=dw+1;
            l1.setText("Label 1 "+dw);
        }
        else
        {
            dw=dw-1;
            l1.setText("Label 1 "+dw);
        }
    }
}
```

```
{  
    setTitle("PHARMACY DATA");  
  
    setDefaultCloseOperation(WindowConstants.EXIT  
    _ON_CLOSE);  
  
    r1=new JRadioButton("Dark/Light");  
    l1=new JLabel("PHARMACY DATABASE  
MANAGEMENT");  
    l2=new JLabel("WELCOME");  
    b1=new JButton("Get Details");  
    b2=new JButton("Enter data");  
    b3=new JButton("Delete data");  
  
    add(r1);  
    add(l1);  
    add(b1);  
    add(b2);  
    add(b3);  
    add(l2);  
  
    c=getContentPane();  
    l1.setFont(f);  
    l2.setFont(f);  
    c.setBackground(Color.lightGray);
```

```
b1.setBackground(Color.ORANGE);
b1.setForeground(Color.WHITE);
b2.setBackground(Color.ORANGE);
b2.setForeground(Color.WHITE);
b3.setBackground(Color.ORANGE);
b3.setForeground(Color.WHITE);
r1.setBackground(Color.LIGHT_GRAY);
r1.setForeground(Color.WHITE);
l1.setForeground(Color.BLACK);
l2.setForeground(Color.BLACK);

setSize(450,250);
r1.setBounds(410,10,20,20);
l1.setBounds(70, 20, 400, 40);
b1.setBounds(40, 90, 120, 50);
b2.setBounds(170, 90, 120, 50);
b3.setBounds(300, 90, 120, 50);
l2.setBounds(185, 160, 120, 50);
setLayout(null);
setVisible(true);

b1.addActionListener(this);
b2.addActionListener(this);
```

```
b3.addActionListener(this);
r1.addActionListener(this);

}

public void actionPerformed(ActionEvent ae)
{
    if (ae.getSource() == r1)

        /* on checking the radio button on the top right
        corner of the app page app turns to dark mode
        and back to light on deselecting */

        if(dw==0)

        {

c.setBackground(Color.DARK_GRAY);

b2.setBackground(Color.ORANGE);

        b2.setForeground(Color.WHITE);

r1.setBackground(Color.DARK_GRAY);

        r1.setForeground(Color.BLACK);

l1.setForeground(Color.WHITE);

l2.setForeground(Color.WHITE);

dw=1;
```

```
        }
    else
    {
        c.setBackground(Color.lightGray);

        b2.setBackground(Color.ORANGE);
        b2.setForeground(Color.WHITE);

        r1.setBackground(Color.LIGHT_GRAY);
        r1.setForeground(Color.WHITE);
        l1.setForeground(Color.BLACK);
        l2.setForeground(Color.BLACK);

        dw=0;
    }
}
```

/* on pressing b1 the getdetails page is
displayed using the following code..
likewise each class object is created*/

```
if (ae.getSource() == b1) {
    viewdata n = new viewdata();
}

if (ae.getSource() == b2) {
```

```
    enterdata e= new enterdata();

}

if (ae.getSource() == b3) {
    removedata rm=new removedata();
}

}

class enterdata extends JFrame implements
ActionListener

{

/* to setup connectivity to database connection
methods are declared in each classes in this
method jdbc driver is required and the
connection is made using the connector. Also the
username password port address etc are also
given to setup connectivity. Here PHARMACY is
the database that is connected to this file which
was previously created in mysql with a table
having few drug names and their some attributes
*/
public static Connection connect()
{
try {

    Class.forName("com.mysql.jdbc.Driver");
```

```
        Connection con =
DriverManager.getConnection("jdbc:mysql://local
host:3306/PHARMACY","root","sheriyenna");
        System.out.println("connected");
        return con;
    }
    catch (Exception ex)
    {
        ex.printStackTrace();
        return null;
    }
}
JRadioButton r1;
int dw1;
JLabel l1,l2,stock;
JTextField ta,st;
JButton back,b2,b3,pub;
JComboBox<String> jb;
ButtonGroup bg;
Container c;
String[] optionsToChoose=new String[200];
String sm="";
```

```
Font f=new Font("Andika",Font.BOLD,18);
enterdata()
{
    optionsToChoose[0]="Dolo 650";
    optionsToChoose[1]="Paracetamol";
    optionsToChoose[2]="Cetirizine";
    setTitle("PHARMACY DATA");

setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);

r1=new JRadioButton("Dark/Light");
l1=new JLabel("ADD TO EXISTING STOCK");
l2=new JLabel("Drug Name");
back=new JButton("Back");
b2=new JButton("New");
b3=new JButton("Submit");
stock=new JLabel("Stock Quantity");
st=new JTextField(20);
jb = new JComboBox<>(optionsToChoose);

add(back);
add(r1);
add(l1);
add(b3);
```

```
add(b2);
add(l2);
add(jb);
add(stock);
add(st);
c=getContentPane();
l1.setFont(f);
c.setBackground(Color.lightGray);
back.setBackground(Color.ORANGE);
back.setForeground(Color.WHITE);
b2.setBackground(Color.ORANGE);
b2.setForeground(Color.WHITE);
b3.setBackground(Color.ORANGE);
b3.setForeground(Color.WHITE);
r1.setBackground(Color.LIGHT_GRAY);
r1.setForeground(Color.WHITE);
l1.setForeground(Color.BLACK);
l2.setForeground(Color.BLACK);
stock.setForeground(Color.BLACK);
jb.setBackground(Color.WHITE);
setSize(500,300);
r1.setBounds(460,10,20,20);
l1.setBounds(140, 20, 300, 40);
```

```
back.setBounds(50,200,100,35);
b3.setBounds(350,200,100,35);
b2.setBounds(180,200,100,35);
l2.setBounds(50, 90, 120, 40);
stock.setBounds(50, 140, 120, 40);
st.setBounds(180, 140, 270, 40);
jb.setBounds(180, 90, 270, 40);
setLayout(null);
setVisible(true);
b2.addActionListener(this);
b3.addActionListener(this);
r1.addActionListener(this);

back.addActionListener(this);
}

Connection connection=connect();

public void actionPerformed(ActionEvent a)
{
/* The following line gets the currently selected
text in the dropdown list and stores it to a string
sm so that it can be used as drug name for
queries through which the user can select the
drug name through a JComboBox which is much
more easier */
}
```

```
sm = jb.getItemAt(jb.getSelectedIndex());
int i=0;

/* Here the query is stored in a string which is
later used to execute a query to make a resultset
and fetch the drugname column and get the
details to the array which stores the dropdown
list drug names ,But it didnt go well as expected.
This part of the programme needs a little
updation and should be also made use in the
newdrug session so that the drop down list gets
the values of the newly created drugs too*/

String ex="SELECT DRUGNAME FROM
MEDICINE";
try{
    PreparedStatement
jcb=connection.prepareStatement(ex);
    ResultSet jbc = jcb.executeQuery();
    while(jbc.next())
    {
        optionsToChoose[i]=
jbc.getString("DRUGNAME");
        i++;
    }
}
catch (SQLException e) {
```

```
// TODO Auto-generated catch block
e.printStackTrace();
System.out.println("Couldnt add to
database");

}

if (a.getSource() == r1) {

    if(dw1==0)
    {

c.setBackground(Color.DARK_GRAY);

r1.setBackground(Color.DARK_GRAY);
    r1.setForeground(Color.BLACK);
    l1.setForeground(Color.WHITE);
    l2.setForeground(Color.WHITE);

stock.setForeground(Color.WHITE);
    dw1=1;
    }

else
{
    c.setBackground(Color.lightGray);
```

```
r1.setBackground(Color.LIGHT_GRAY);
    r1.setForeground(Color.WHITE);
    l1.setForeground(Color.BLACK);
    l2.setForeground(Color.BLACK);

stock.setForeground(Color.BLACK);
    dw1=0;
}

}

if (a.getSource() == b2) {
    newdrug nd = new newdrug();
}

if (a.getSource() == back) {
    dispose();
}

if (a.getSource() == b3) {

    float price=0f;
    String description="";

    int
stk=Integer.parseInt(st.getText().trim());
try
```

```
{  
    String sq="SELECT STOCK FROM  
MEDICINE WHERE DRUGNAME=?";  
    PreparedStatement sw =  
connection.prepareStatement(sq);  
    sw.setString(1,sm);  
    ResultSet stoo=sw.executeQuery();  
    int stoc=0;  
  
    while(stoo.next())  
        stoc=stoo.getInt("STOCK");  
  
    String sql="SELECT  
PRICE,DESCRIPTION FROM MEDICINE WHERE  
DRUGNAME=?";  
    PreparedStatement  
stmt=connection.prepareStatement(sql);  
    stmt.setString(1,sm);  
    ResultSet pric = stmt.executeQuery();  
    while(pric.next())  
    {  
        price= pric.getFloat("PRICE");  
        description=pric.getString("DESCRIPTION");  
    }  
}
```

```
String sql1="UPDATE MEDICINE  
SET PRICE=? WHERE DRUGNAME=?";
```

```
PreparedStatement  
stmt1=connection.prepareStatement(sql1);  
stmt1.setFloat(1, price);  
stmt1.setString(2, sm);  
int n=stmt1.executeUpdate();
```

```
String sql2="UPDATE MEDICINE  
SET DESCRIPTION=? WHERE DRUGNAME=?";
```

```
PreparedStatement  
stmt2=connection.prepareStatement(sql2);  
stmt2.setString(1, description);  
stmt2.setString(2, sm);  
n=stmt2.executeUpdate();
```

```
stk=stk+stoc;
```

```
String sql3="UPDATE MEDICINE  
SET STOCK=? WHERE DRUGNAME=?";
```

```
PreparedStatement  
stmt3=connection.prepareStatement(sql3);  
stmt3.setInt(1, stk);  
stmt3.setString(2, sm);  
n=stmt3.executeUpdate();
```

```
/* this following code creates a dialogue box to
display some message to the user */

JOptionPane.showMessageDialog(null,"Added to
Database!");

        stmt.close();
    }
    catch (SQLException e)
    {
        e.printStackTrace();
        System.out.println("Couldnt
add to database");
    }
}

}

class removedata extends JFrame implements
ActionListener
{
    public static Connection connect()
    {
        try
        {
```

```
Class.forName("com.mysql.jdbc.Driver");
    Connection con =
DriverManager.getConnection("jdbc:mysql://local
host:3306/PHARMACY","root","sheriyenna");
    System.out.println("connected");
    return con;
}
catch (Exception ex)
{
    ex.printStackTrace();
}
return null;
}
```

```
JRadioButton r1;
int dw1;
JLabel l1,l2,stock;
JTextField ta,st;
JButton back,b3,pub;
JComboBox<String> jb;
ButtonGroup bg;
Container c;
```

```
String[] optionsToChoose={"Dolo  
650","Paracetamol", "Cetirizine"};  
Font f=new Font("Andika",Font.BOLD,18);  
String sm="";  
removedata()  
{  
  
setTitle("PHARMACY DATA");  
  
setDefaultCloseOperation(WindowConstants.EXIT  
_ON_CLOSE);  
r1=new JRadioButton("Dark/Light");  
l1=new JLabel("DELETE FROM STOCK");  
l2=new JLabel("Drug Name");  
back=new JButton("Back");  
b3=new JButton("Submit");  
stock=new JLabel("Stock Quantity");  
st=new JTextField(20);  
jb = new JComboBox<>(optionsToChoose);  
  
add(back);  
add(r1);  
add(l1);  
add(b3);
```

```
add(l2);
add(jb);
add(stock);
add(st);
c=getContentPane();
l1.setFont(f);

c.setBackground(Color.lightGray);
back.setBackground(Color.ORANGE);
back.setForeground(Color.WHITE);
b3.setBackground(Color.ORANGE);
b3.setForeground(Color.WHITE);
r1.setBackground(Color.LIGHT_GRAY);
r1.setForeground(Color.WHITE);
l1.setForeground(Color.BLACK);
l2.setForeground(Color.BLACK);
stock.setForeground(Color.BLACK);
jb.setBackground(Color.WHITE);

setSize(500,300);
r1.setBounds(460,10,20,20);
l1.setBounds(150, 20, 300, 40);
back.setBounds(50,200,100,35);
```

```
b3.setBounds(350,200,100,35);
l2.setBounds(50, 90, 120, 40);
stock.setBounds(50, 140, 120, 40);
st.setBounds(180, 140, 270, 40);
jb.setBounds(180, 90, 270, 40);
setLayout(null);
setVisible(true);

b3.addActionListener(this);
r1.addActionListener(this);
back.addActionListener(this);
String sm;
}

Connection connection=connect();

public void actionPerformed(ActionEvent a)
{
    sm = jb.getItemAt(jb.getSelectedIndex());
    if (a.getSource() == r1) {

        if(dw1==0)
        {

c.setBackground(Color.DARK_GRAY);
```

```
r1.setBackground(Color.DARK_GRAY);
    r1.setForeground(Color.BLACK);
    l1.setForeground(Color.WHITE);
    l2.setForeground(Color.WHITE);

stock.setForeground(Color.WHITE);
    dw1=1;
}

else
{
    c.setBackground(Color.lightGray);

r1.setBackground(Color.LIGHT_GRAY);
    r1.setForeground(Color.WHITE);
    l1.setForeground(Color.BLACK);
    l2.setForeground(Color.BLACK);

stock.setForeground(Color.BLACK);
    dw1=0;
}

}

if (a.getSource() == back) {
    dispose();
}
```

```
/* Here the stock in the database of the selected
drugname in the dropdown list is found and the
string from the textfield stock is fetched and
converted to integer and that much stock is
deleted from the database for the given drug */

if (a.getSource() == b3) {
    int
sto=Integer.parseInt(st.getText().trim());
    try {
        String sq="SELECT STOCK FROM
MEDICINE WHERE DRUGNAME=?";
        PreparedStatement stmt =
connection.prepareStatement(sq);
        stmt.setString(1,sm);
        ResultSet stoo=stmt.executeQuery();
        int stoc=0;
        while(stoo.next())
        stoc=stoo.getInt("STOCK");
        if(stoc>sto)
        {
            String sql="UPDATE
MEDICINE SET STOCK="+(stoc-sto)+" WHERE
DRUGNAME='"+""+sm+"'";
            stmt.execute(sql);
        }
    }
}
```

```
        JOptionPane.showMessageDialog(null,"Stock
modified!");
    }
    else

        JOptionPane.showMessageDialog(null,"Stock
empty!");
        stmt.close();
    }
    catch (SQLException e)
    {
        e.printStackTrace();
        System.out.println("Couldnt
add to database");
    }
}
}

class viewdata extends JFrame implements
ActionListener
{
    public static Connection connect()
    {
        try {

```

```
Class.forName("com.mysql.jdbc.Driver");

Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/PHARMACY","root","sheriyenna");

System.out.println("connected");

return con;

}

catch (Exception ex) {
    ex.printStackTrace();
}

return null;
}

JRadioButton r1;
int dw1;
JLabel l1,l2,desc,stock,pr;
JTextField ta,p,st;
JButton back,b1,clear,pub;
ButtonGroup bg;
JTextArea des;
Container c;
JComboBox<String> jb;
String[] optionsToChoose={"Dolo
650","Paracetamol","Cetirizine"};
```

```
Font f=new Font("Andika",Font.BOLD,18);
String sm="";de;
viewdata()
{
    setTitle("PHARMACY DATA");

setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);

r1=new JRadioButton("Dark/Light");
l1=new JLabel("FETCH DATA !");
l2=new JLabel("Drug Name");
ta=new JTextField(20);
b1=new JButton("Get Details");
back=new JButton("Back");
clear=new JButton("Clear");
desc=new JLabel("Description");
des=new JTextArea();
stock=new JLabel("Stock Quantity");
st=new JTextField(20);
pr=new JLabel("Price");
p=new JTextField(20);
jb = new JComboBox<>(optionsToChoose);
```

```
add(back);
add(r1);
add(l1);
add(jb);
add(b1);
add(clear);

add(l2);
add(ta);
add(desc);
add(des);
add(stock);
add(st);
add(pr);
add(p);
c=ContentPane();
l1.setFont(f);
c.setBackground(Color.lightGray);
back.setBackground(Color.ORANGE);
back.setForeground(Color.WHITE);
b1.setBackground(Color.ORANGE);
b1.setForeground(Color.WHITE);
```

```
clear.setBackground(Color.ORANGE);
clear.setForeground(Color.WHITE);
r1.setBackground(Color.LIGHT_GRAY);
r1.setForeground(Color.WHITE);
l1.setForeground(Color.BLACK);
l2.setForeground(Color.BLACK);
desc.setForeground(Color.BLACK);
pr.setForeground(Color.BLACK);
stock.setForeground(Color.BLACK);
jb.setBackground(Color.WHITE);
setSize(500,500);
r1.setBounds(460,10,20,20);
l1.setBounds(175, 20, 250, 40);
back.setBounds(50,390,100,35);
b1.setBounds(330, 80, 120, 40);
clear.setBounds(350,390,100,35);
l2.setBounds(50, 140, 120, 40);
ta.setBounds(180, 140, 270, 40);
desc.setBounds(50, 210, 120, 40);
des.setBounds(180, 190, 270, 80);
stock.setBounds(50, 280, 120, 40);
st.setBounds(180, 280, 270, 40);
pr.setBounds(50, 330, 120, 40);
```

```
    p.setBounds(180, 330, 270, 40);
    jb.setBounds(180, 80, 140, 40);
    setLayout(null);
    setVisible(true);

    b1.addActionListener(this);
    clear.addActionListener(this);
    r1.addActionListener(this);

    back.addActionListener(this);
}

Connection connection=connect();
public void actionPerformed(ActionEvent a)
{

    if (a.getSource() == r1) {

        if(dw1==0)
        {

c.setBackground(Color.DARK_GRAY);

r1.setBackground(Color.DARK_GRAY);
        r1.setForeground(Color.BLACK);
        l1.setForeground(Color.WHITE);
```

```
    l2.setForeground(Color.WHITE);

    desc.setForeground(Color.WHITE);
        pr.setForeground(Color.WHITE);

    stock.setForeground(Color.WHITE);
        dw1=1;

    }

    else

    {

        c.setBackground(Color.lightGray);

r1.setBackground(Color.LIGHT_GRAY);
        r1.setForeground(Color.WHITE);
        l1.setForeground(Color.BLACK);
        l2.setForeground(Color.BLACK);

desc.setForeground(Color.BLACK);
        pr.setForeground(Color.BLACK);

stock.setForeground(Color.BLACK);
        dw1=0;

    }

}
```

```
if (a.getSource() == clear) {  
    ta.setText("");  
    st.setText("");  
    des.setText("");  
    p.setText("");  
}  
if (a.getSource() == back) {  
    dispose();  
/* dispose is used to get back to the previous App  
page. So a back button can be implemented with  
this method */  
}  
/* When the get details button is pressed the  
details corresponding to the drugname selected  
in the JcomboBox is fetched from the database  
and shown in the appropriate fields*/  
if (a.getSource() == b1) {  
    sm =  
    jb.getItemAt(jb.getSelectedIndex());  
    ta.setText(sm);  
    int stocc=0;  
    float pri=0;  
    String de="";  
    try{
```

```
String sq="SELECT
STOCK,PRICE,DESCRIPTION FROM MEDICINE
WHERE DRUGNAME=?";

PreparedStatement stmt =
connection.prepareStatement(sq);

stmt.setString(1, sm);

ResultSet stoo=stmt.executeQuery();
while(stoo.next())
{
    stocc=stoo.getInt("STOCK");
    pri=stoo.getFloat("PRICE");

    de=stoo.getString("DESCRIPTION");
}

String stoccc="" +stocc;
String prii="" +pri;

des.setText(de);
p.setText(prii);
st.setText(stoccc);

}

catch (SQLException e) {
// TODO Auto-generated catch block
e.printStackTrace();
```

```
        }

    }

}

class newdrug extends JFrame implements
ActionListener
{
    public static Connection connect()
    {
        try {
            Class.forName("com.mysql.jdbc.Driver");

            Connection con =
DriverManager.getConnection("jdbc:mysql://local
host:3306/PHARMACY","root","sheriyenna");
            System.out.println("connected");

            return con;
        }
        catch (Exception ex) {
            ex.printStackTrace();
        }
    return null;
}
```

```
JRadioButton r1;
int dw1;
JLabel l1,l2,desc,stock,pr;
JTextField ta,p,st;
JButton back,b3,clear,pub;
ButtonGroup bg;
JTextArea des;
Container c;
Font f=new Font("Andika",Font.BOLD,18);
newdrug()
{
    setTitle("PHARMACY DATA");

    setDefaultCloseOperation(WindowConstants.EXIT_ON_CLOSE);

    r1=new JRadioButton("Dark/Light");
    l1=new JLabel("ADD NEW MEDICINE DATA");
    l2=new JLabel("Drug Name");
    ta=new JTextField(20);
    back=new JButton("Back");
    clear=new JButton("Clear");
    b3=new JButton("Submit");
    desc=new JLabel("Description");
```

```
des=new JTextArea();
stock=new JLabel("Stock Quantity");
st=new JTextField(20);
pr=new JLabel("Price");
p=new JTextField(20);

add(back);
add(r1);
add(l1);
add(clear);
add(b3);
add(l2);
add(ta);
add(desc);
add(des);
add(stock);
add(st);
add(pr);
add(p);
c=getContentPane();
l1.setFont(f);
```

```
c.setBackground(Color.lightGray);
back.setBackground(Color.ORANGE);
back.setForeground(Color.WHITE);
b3.setBackground(Color.ORANGE);
b3.setForeground(Color.WHITE);
clear.setBackground(Color.ORANGE);
clear.setForeground(Color.WHITE);
r1.setBackground(Color.LIGHT_GRAY);
r1.setForeground(Color.WHITE);
l1.setForeground(Color.BLACK);
l2.setForeground(Color.BLACK);
desc.setForeground(Color.BLACK);
pr.setForeground(Color.BLACK);
stock.setForeground(Color.BLACK);
setSize(500,500);
r1.setBounds(460,10,20,20);
l1.setBounds(100, 20, 300, 40);
back.setBounds(50,390,100,35);
clear.setBounds(180,390,100,35);
b3.setBounds(350,390,100,35);
l2.setBounds(50, 120, 120, 40);
ta.setBounds(180, 120, 270, 40);
desc.setBounds(50, 190, 120, 40);
```

```
des.setBounds(180, 170, 270, 80);
stock.setBounds(50, 260, 120, 40);
st.setBounds(180, 260, 270, 40);
pr.setBounds(50, 310, 120, 40);
p.setBounds(180, 310, 270, 40);
setLayout(null);
setVisible(true);

clear.addActionListener(this);
r1.addActionListener(this);
b3.addActionListener(this);
back.addActionListener(this);
}

public void actionPerformed(ActionEvent a)
{
    Connection connection=connect();
    if (a.getSource() == r1) {

        if(dw1==0)
        {

c.setBackground(Color.DARK_GRAY);
r1.setBackground(Color.DARK_GRAY);
```

```
r1.setForeground(Color.BLACK);
l1.setForeground(Color.WHITE);
l2.setForeground(Color.WHITE);

desc.setForeground(Color.WHITE);
pr.setForeground(Color.WHITE);

stock.setForeground(Color.WHITE);
dw1=1;

}

else

{
    c.setBackground(Color.lightGray);

r1.setBackground(Color.LIGHT_GRAY);
r1.setForeground(Color.WHITE);
l1.setForeground(Color.BLACK);
l2.setForeground(Color.BLACK);

desc.setForeground(Color.BLACK);
pr.setForeground(Color.BLACK);

stock.setForeground(Color.BLACK);
dw1=0;
}
```

```
}

if (a.getSource() == clear) {
    ta.setText("");
    st.setText("");
    des.setText("");
    p.setText("");
}

if (a.getSource() == back) {
    dispose();
}

if(a.getSource()==b3)
{
    String drugname=ta.getText();
    String description=des.getText();
    String stoc=st.getText();
    int stock=Integer.parseInt(stoc);
    String pric=p.getText();
    Float price=Float.parseFloat(pric);

    try {
        /* this creates a new row in the table and the
        values are given according to the values entered
        by user in the textfields and textarea */
    }
}
```

```
String sql="INSERT INTO  
MEDICINE(DRUGNAME,PRICE,DESCRIPTION,STOC  
K) "+ "VALUES (?,?,?,?,?)";  
  
PreparedStatement stmt =  
connection.prepareStatement(sql,Statement.RET  
URN_GENERATED_KEYS);  
  
stmt.setString(1, drugname);  
stmt.setFloat(2, price);  
stmt.setString(3,  
description);  
  
stmt.setInt(4, stock);  
  
int t =  
stmt.executeUpdate();  
  
/* assigning an integer this value is not necessary  
it is needed during the debugging time to check  
if the stmt is successfully executed or not */
```

```
JOptionPane.showMessageDialog(null,"New drug  
added!");  
  
stmt.close();  
}  
catch (SQLException e) {  
e.printStackTrace();  
}  
}
```

```
    }

}

public class App
{
    int dw=0;
    Clip clip;
    AudioInputStream audioInputStream;
    static String filePath;
    public App()
        throws UnsupportedAudioFileException,
        IOException, LineUnavailableException
    {
        audioInputStream =
        AudioSystem.getAudioInputStream(new
        File(filePath).getAbsoluteFile());
        clip = AudioSystem.getClip();
        clip.open(audioInputStream);
    }

    public static void main(String[] args)
```

```
{
```

```
/*This commented portion is a special addition to  
the code... It plays a wav file or another java  
supported audio formats in this case we included  
the audio in the same directory and filepath is  
given. The audio piece is played at the starting of  
the application.....
```

```
try
```

```
{
```

```
    filePath = "./pharmacystart.wav";
```

```
    App pl=new App();
```

```
    pl.play();
```

```
}
```

```
catch(Exception e)
```

```
{
```

```
    System.out.println("Error playing  
audio");
```

```
    e.printStackTrace();
```

```
 }*/
```

```
 start s = new start();
```

```
//the start page class is called here
```

```
}
```

```
public void play()
```

```
{
```

```
    clip.start();
```

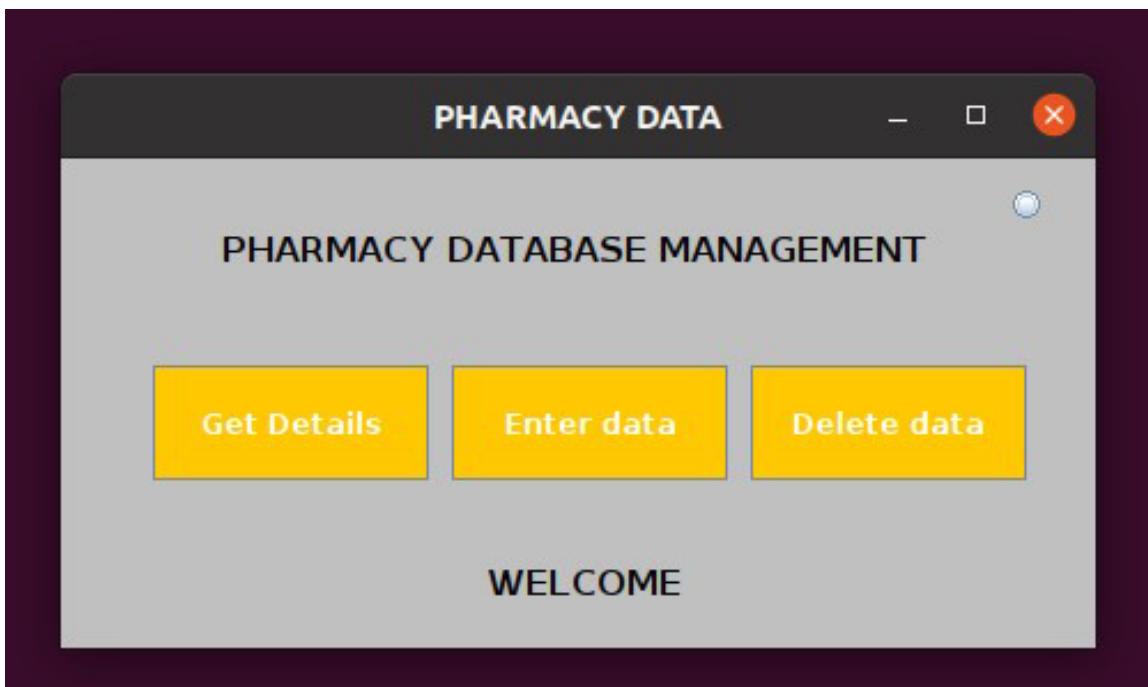
```
}
```

```
}
```

OUTPUT

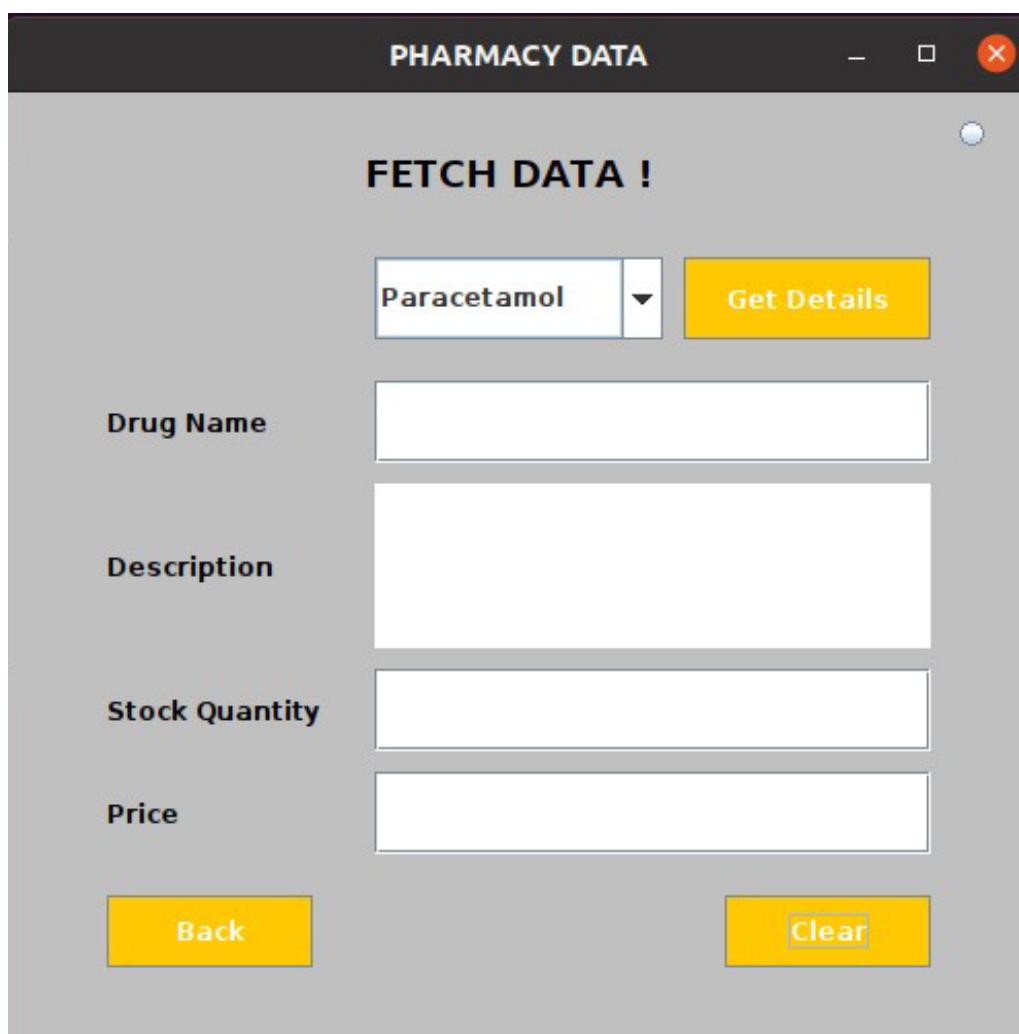
1) Executing the programme

- On compilation and execution the audio specified pharmacystart.wav is played and this start window is opened up



2) Get details

On clicking the **Get details** button this page opens up ...!



selecting an option from the list and pressing the **Get Details** button on this page results in.....

PHARMACY DATA

FETCH DATA !

Drug Name: Paracetamol

Description: Pain killer

Stock Quantity: 82

Price: 1.5

Back **Get Details** **Clear**

PHARMACY DATA

FETCH DATA !

Drug Name: Cetirizine

Description: Allergy reliever

Stock Quantity: 247

Price: 1.46

Back **Get Details** **Clear**

3) Enter data

- clicking button **clear** results in clearing the textfields
- clicking **back** button disposes the current frame and goes back to the previous
- now pressing the **Enter data** button displays a new window
- chooses drugname from dropdown list and enters the stock to be added presses **submit** button a message window popups telling added to database
- table before the change is shown in mysql shell in the first figure and changed one in the second figure

The screenshot shows a MySQL command-line interface and a Java application window.

MySQL Terminal:

```
Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input st
atement.

+-----+
| DRUGNAME | PRICE | DESCRIPTION           | STOCK |
+-----+
| Dolo 650  | 1.9  | Mild Analgesics & Antipyretics | 15   |
| Paracetamol | 1.5  | Pain killer                   | 82   |
| Cetirizine | 1.46 | Allergy reliever             | 247  |
| Azythromycin | 25   | Anti Biotic                  | 200  |
| Panjakakasthuri | 2.5 | Asthma Relief                | 210  |
| Azythromycin | 2.3  | Antibiotic                   | 200  |
| Dextromorph  | 12.2 | Cough relief                 | 120  |
+-----+
7 rows in set (0.01 sec)

mysql>
```

Java Application (ADD TO EXISTING STOCK):

The application has fields for Drug Name (Paracetamol) and Stock Quantity (67). A message box says "Added to Database!".

DRUGNAME	PRICE	DESCRIPTION	STOCK
Dolo 650	1.9	Mild Analgesics & Antipyretics	15
Paracetamol	1.5	Pain killer	82
Cetirizine	1.46	Allergy reliever	247
Azythromycin	25	Anti Biotic	200
Panjakakasthuri	2.5	Asthma Relief	210
Azythromycin	2.3	Antibiotic	200
Dextromorph	12.2	Cough relief	120

PHARMACY DATA

ADD TO EXISTING STOCK

Drug Name: Paracetamol

Stock Quantity: 67

Back New Submit

```
Database changed
mysql> SELECT * FROM MEDICINE;
+-----+-----+-----+
| DRUGNAME | PRICE | DESCRIPTION | STOCK |
+-----+-----+-----+
| Dolo 650 | 1.9 | Mild Analgesics & Antipyretics | 15 |
| Paracetamol | 1.5 | Pain killer | 82 |
| Cetirizine | 1.46 | Allergy reliever | 247 |
| Azythromycin | 25 | Anti Biotic | 200 |
| Panjakakasthuri | 2.5 | Asthma Relief | 210 |
| Azythromycin | 2.3 | Antibiotic | 200 |
| Dextromorph | 12.2 | Cough relief | 120 |
+-----+-----+-----+
7 rows in set (0.01 sec)

mysql> SELECT * FROM MEDICINE;
+-----+-----+-----+
| DRUGNAME | PRICE | DESCRIPTION | STOCK |
+-----+-----+-----+
| Dolo 650 | 1.9 | Mild Analgesics & Antipyretics | 15 |
| Paracetamol | 1.5 | Pain killer | 149 |
| Cetirizine | 1.46 | Allergy reliever | 247 |
| Azythromycin | 25 | Anti Biotic | 200 |
| Panjakakasthuri | 2.5 | Asthma Relief | 210 |
| Azythromycin | 2.3 | Antibiotic | 200 |
| Dextromorph | 12.2 | Cough relief | 120 |
+-----+-----+-----+
7 rows in set (0.00 sec)
```

- clicking the radio button on the top right corner changed the text colors to white and background to dark grey.
- The stock of Paracetamol changed from 82 to 149.
- pressing **New** button from this page makes another window to open up
- Drug Name, Description, Stock Quantity and Price of the new drug is typed and **submit** button is pressed resulting in the popup message box as shown

mysql> use PHARM
Reading table information...
You can turn off this behavior by setting
the InnoDB ignore�row option.
Database changed
mysql> SELECT * FROM MEDICINE;
+-----+-----+-----+-----+
| DRUGNAME | PRICE | DESCRIPTION | STOCK |
+-----+-----+-----+-----+
Dolo 650	1.9	Mild Analgesics & Antipyretics	15
Paracetamol	1.5	Pain killer	149
Cetirizine	1.46	Allergy reliever	247
Azythromycin	25	Anti Biotic	200
Panjakakasthuri	2.5	Asthma Relief	210
Azythromycin	2.3	Antibiotic	200
Dextromorph	12.2	Cough relief	120
+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> SELECT * FROM MEDICINE;
+-----+-----+-----+-----+
| DRUGNAME | PRICE | DESCRIPTION | STOCK |
+-----+-----+-----+-----+
Dolo 650	1.9	Mild Analgesics & Antipyretics	15
Paracetamol	1.5	Pain killer	149
Cetirizine	1.46	Allergy reliever	247
Azythromycin	25	Anti Biotic	200
Panjakakasthuri	2.5	Asthma Relief	210
Azythromycin	2.3	Antibiotic	200
Dextromorph	12.2	Cough relief	120
Aspirin	1.2	relieves minor aches and fever	20
+-----+-----+-----+-----+
8 rows in set (0.00 sec)

PHARMACY DATA

ADD NEW MEDICINE DATA

Drug Name	Aspirin
Description	relieves minor aches and fever
Stock Quantity	20
Price	1.2

Back Clear Submit

Message

New drug added!

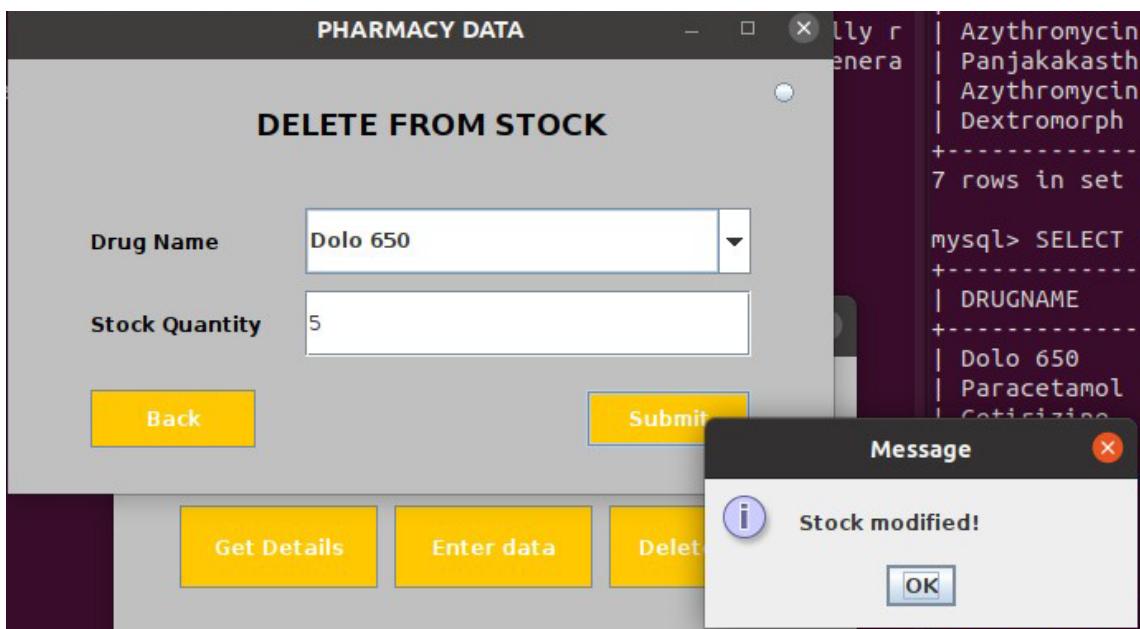
```
mysql> SELECT * FROM MEDICINE;
+-----+-----+-----+-----+
| DRUGNAME | PRICE | DESCRIPTION | STOCK |
+-----+-----+-----+-----+
| Dolo 650 | 1.9 | Mild Analgesics & Antipyretics | 15 |
| Paracetamol | 1.5 | Pain killer | 149 |
| Cetirizine | 1.46 | Allergy reliever | 247 |
| Azythromycin | 25 | Anti Biotic | 200 |
| Panjakakasthuri | 2.5 | Asthma Relief | 210 |
| Azythromycin | 2.3 | Antibiotic | 200 |
| Dextromorph | 12.2 | Cough relief | 120 |
+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> SELECT * FROM MEDICINE;
+-----+-----+-----+-----+
| DRUGNAME | PRICE | DESCRIPTION | STOCK |
+-----+-----+-----+-----+
| Dolo 650 | 1.9 | Mild Analgesics & Antipyretics | 15 |
| Paracetamol | 1.5 | Pain killer | 149 |
| Cetirizine | 1.46 | Allergy reliever | 247 |
| Azythromycin | 25 | Anti Biotic | 200 |
| Panjakakasthuri | 2.5 | Asthma Relief | 210 |
| Azythromycin | 2.3 | Antibiotic | 200 |
| Dextromorph | 12.2 | Cough relief | 120 |
| Aspirin | 1.2 | relieves minor aches and fever | 20 |
+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

- New row is added to the table as the new drug as shown in the above fig

4) Delete data

- Press **back** buttons and from the start page press the button **Delete data**
- Drug name is selected from combobox and the stock quantity to be deleted is specified
- On pressing submit button the following message box is displayed



- change in the database is shown, stock of Dolo 650 changed from 15 to 10 thus modifying the table is done successfully

```
mysql> SELECT * FROM MEDICINE;
+-----+-----+-----+-----+
| DRUGNAME | PRICE | DESCRIPTION | STOCK |
+-----+-----+-----+-----+
| Dolo 650 | 1.9 | Mild Analgesics & Antipyretics | 15 |
| Paracetamol | 1.5 | Pain killer | 149 |
| Cetirizine | 1.46 | Allergy reliever | 247 |
| Azythromycin | 25 | Anti Biotic | 200 |
| Panjakakasthuri | 2.5 | Asthma Relief | 210 |
| Azythromycin | 2.3 | Antibiotic | 200 |
| Dextromorph | 12.2 | Cough relief | 120 |
| Aspirin | 1.2 | relieves minor aches and fever | 20 |
+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM MEDICINE;
+-----+-----+-----+-----+
| DRUGNAME | PRICE | DESCRIPTION | STOCK |
+-----+-----+-----+-----+
| Dolo 650 | 1.9 | Mild Analgesics & Antipyretics | 10 |
| Paracetamol | 1.5 | Pain killer | 149 |
| Cetirizine | 1.46 | Allergy reliever | 247 |
| Azythromycin | 25 | Anti Biotic | 200 |
| Panjakakasthuri | 2.5 | Asthma Relief | 210 |
| Azythromycin | 2.3 | Antibiotic | 200 |
| Dextromorph | 12.2 | Cough relief | 120 |
| Aspirin | 1.2 | relieves minor aches and fever | 20 |
+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

THANK YOU