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**ABSTRACT:**

Disease severity tracker on the crop maize is a console-based project designed with sql and java that helps farmers to know the severity of the disease on the crop by just giving the information that they observe on the leaves, surroundings, etc. It gives the information about the disease that the crop is suffering with and the severity of the disease.

**REQUIREMENT ANALYSIS:**

**LIST OF TABLES:**

Deficiency

Diseases

Factors

Severity

**LIST OF ATTRIBUTES WITH THEIR DOMAIN TYPES:**

**Deficiency:**

lcolor varchar2(20)

elem varchar2(20)

did number(5)

**Diseases:**

scolor varchar2(20)

name varchar2(40)

sid number(5)

**Factors:**

fid number(5)

factor varchar2(20)

**Severity:**

sid number(5)

did number(5)

fid number(5)

severity varchar2(20)

**ER DIAGRAM:**

**Diagram

Description automatically generated**

**RELATIONAL MODEL:**

**DDL OPERATIONS:**

**Deficiency:**

create table deficiency(

lcolor VARCHAR2(20),

elem VARCHAR2(20),

did NUMBER(5) PRIMARY KEY);

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**Graphical user interface

Description automatically generated**

**Diseases:**

create table diseases(

scolor VARCHAR2(20),

name VARCHAR2(20),

sid NUMBER(5) REFERENCES deficiency(did));

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Graphical user interface

Description automatically generated

**Factors:**

create table factors(

fid NUMBER(5) PRIMARY KEY,

factor VARCHAR2(30));

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Graphical user interface

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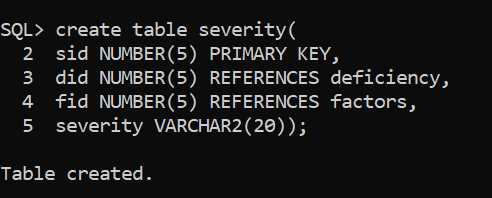
**Severity:**

create table severity(

did NUMBER(5) REFERENCES deficiency,

fid NUMBER(5) REFERENCES factors,

severity VARCHAR2(20));



Graphical user interface

Description automatically generated with medium confidence

**DML OPERATIONS:**

**Deficiency:**

insert into deficiency values(‘lcolor’,’elem’,did);

Text

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Text

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**Diseases:**

insert into diseases values(‘scolor’,’name’,sid);

Text

Description automatically generated

Text

Description automatically generated

**Factors:**

insert into factors values(fid,’factor’);

Text

Description automatically generated

Text

Description automatically generated

**Severity:**

insert into severity values(did,fid,’severe’);

**Text

Description automatically generated**

**Text

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**A picture containing graphical user interface

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**A picture containing text

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**Front End Implementation:**

Java SWING is a GUI widget toolkit for Java. It is part of Oracle's Java Foundation Classes (JFC) - an API for providing a graphical user interface (GUI) for Java programs. Swing was developed to provide a more sophisticated set of GUI components than the earlier AWT. Swing provides a look and feel that emulates the look and feel of several platforms and supports a pluggable look and feel that allows applications to have a look and feel unrelated to the underlying platform. It has more powerful and flexible components than AWT. In addition to familiar components such as buttons, check boxes and labels, Swing provides several advanced components such as tabbed panel, scroll panes, trees, tables, and lists.

**Code:**

//HomePage1.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

public class HomePage1 extends JFrame{

private JFrame frame= new JFrame();

private JMenuBar mBar;

private JMenu mnuHelp,insert,delete,update;

private JMenuItem abt,defins,disins,facins,sevins,defdel,disdel,facdel,sevdel,defup,disup,facup,sevup;

public HomePage1(){

frame.setTitle("Home Page");

frame.setLayout(null);

frame.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

frame.setBounds(100,150,600,350);

Container c=frame.getContentPane();

initializeMenuBar();

frame.setJMenuBar(mBar);

abt.addActionListener(new HelpMenuActionListener());

defins.addActionListener(new HelpMenuActionListener());

disins.addActionListener(new HelpMenuActionListener());

facins.addActionListener(new HelpMenuActionListener());

sevins.addActionListener(new HelpMenuActionListener());

defdel.addActionListener(new HelpMenuActionListener());

disdel.addActionListener(new HelpMenuActionListener());

facdel.addActionListener(new HelpMenuActionListener());

sevdel.addActionListener(new HelpMenuActionListener());

defup.addActionListener(new HelpMenuActionListener());

disup.addActionListener(new HelpMenuActionListener());

facup.addActionListener(new HelpMenuActionListener());

sevup.addActionListener(new HelpMenuActionListener());

JLabel label=new JLabel("DISEASE SEVERITY TRACKER ON MAIZE HOME PAGE");

JLabel label1=new JLabel();

label1.setIcon(new ImageIcon("C:/Users/sasid/Downloads/maize.jpg"));

Dimension size = label1.getPreferredSize();

label.setBounds(50,5,700,50);

label.setFont(new Font("Serif",Font.PLAIN,20));

label.setForeground(Color.BLUE);

label1.setBounds(160,60, size.width,size.height);

c.add(label);

c.add(label1);

frame.getContentPane().setBackground(Color.CYAN);

frame.setVisible(true);

}

public void initializeMenuBar()

{

mBar=new JMenuBar();

mnuHelp=new JMenu("Help");

insert=new JMenu("Insert");

delete=new JMenu("Delete");

update=new JMenu("Update");

abt=new JMenuItem("About");

defins=new JMenuItem("Deficiency");

disins=new JMenuItem("Diseases");

facins=new JMenuItem("Factors");

sevins=new JMenuItem("Severity");

defdel=new JMenuItem("Deficiency");

disdel=new JMenuItem("Diseases");

facdel=new JMenuItem("Factors");

sevdel=new JMenuItem("Severity");

defup=new JMenuItem("Deficiency");

disup=new JMenuItem("Diseases");

facup=new JMenuItem("Factors");

sevup=new JMenuItem("Severity");

mnuHelp.add(abt);

insert.add(defins);

insert.add(disins);

insert.add(facins);

insert.add(sevins);

delete.add(defdel);

delete.add(disdel);

delete.add(facdel);

delete.add(sevdel);

update.add(defup);

update.add(disup);

update.add(facup);

update.add(sevup);

mBar.add(mnuHelp);

mBar.add(insert);

mBar.add(delete);

mBar.add(update);

}

private class HelpMenuActionListener implements ActionListener {

public void actionPerformed(ActionEvent ae) {

if(ae.getSource()==abt)

{

String details;

details = "This project is about tracking the severity of the disease on maize crop"+"\n"+

"It has 4 tables:"+"\n"+

"1.Deficiency table with rows containing deficiency Id as did,deficient element as elem and leaf colour as lcolor"+"\n"+

"2.Diseases table with rows containing disease Id as did,name of the disease as name and colour as scolor"+"\n"+

"3.Factors table with rows containing factor Id as fid and factor as factor"+"\n"+

"4.Severity table with rows containing severity Id as sid, deficiency Id as did,factor Id as fid and severity as severity";

JOptionPane.showMessageDialog(null,details,"INFORMATION", JOptionPane.INFORMATION\_MESSAGE);

}

else if(ae.getSource()==defins){

new insertdeficiency();

}

else if(ae.getSource()==disins){

new insertdiseases();

}

else if(ae.getSource()==facins){

new insertfactors();

}

else if(ae.getSource()==sevins){

new insertseverity();

}

else if(ae.getSource()==defdel){

new deletedeficiency();

}

else if(ae.getSource()==disdel){

new deletediseases();

}

else if(ae.getSource()==facdel){

new deletefactors();

}

else if(ae.getSource()==sevdel){

new deleteseverity();

}

else if(ae.getSource()==defup){

new updatedeficiency();

}

else if(ae.getSource()==disup){

new updatediseases();

}

else if(ae.getSource()==facup){

new updatefactors();

}

else if(ae.getSource()==sevup){

new updateseverity();

}

}

}

public static void main(String args[]){

new HomePage1();

}

}

//insertdeficiency.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

import java.util.\*;

public class insertdeficiency implements ActionListener{

private JFrame f=new JFrame("Insertions");

private JLabel l=new JLabel("");

private JLabel l1=new JLabel("Enter Deficiency ID");

private JLabel l2=new JLabel("Enter Deficient Color");

private JLabel l3=new JLabel("Enter Deficient Element");

private JLabel l4=new JLabel("Result");

private JButton b1=new JButton("Insert");

private JTextField t1=new JTextField();

private JTextField t2=new JTextField();

private JTextField t3=new JTextField();

private JTextField t4=new JTextField();

private JTextArea t=new JTextArea();

private JScrollPane scrollBar=new JScrollPane(t,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS,JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

public insertdeficiency() {

f.setDefaultCloseOperation(JFrame.HIDE\_ON\_CLOSE);

f.setBounds(300,200,720,300);

Container c=f.getContentPane();

f.getContentPane().add(l1);

f.getContentPane().add(l2);

f.getContentPane().add(l3);

f.getContentPane().add(l4);

f.getContentPane().add(scrollBar);

scrollBar.setBounds(420,20,250,150);

f.getContentPane().add(b1);

f.getContentPane().add(t1);

f.getContentPane().add(t2);

f.getContentPane().add(t3);

f.getContentPane().add(t4);

l.setBounds(20,30,50,50);

l1.setBounds(20,20,150,30);

l1.setOpaque(true);

l1.setBackground(Color.PINK);

l2.setBounds(20,60,150,30);

l2.setOpaque(true);

l2.setBackground(Color.PINK);

l3.setBounds(20,100,150,30);

l3.setOpaque(true);

l3.setBackground(Color.PINK);

l4.setBounds(20,140,150,30);

l4.setOpaque(true);

l4.setBackground(Color.PINK);

b1.setBounds(160,200,100,30);

b1.setFont(new Font("Times New Roman",Font.BOLD,17));

t1.setBounds(170,20,220,30);

t2.setBounds(170,60,220,30);

t3.setBounds(170,100,220,30);

t4.setBounds(170,140,220,30);

b1.addActionListener(this);

c.add(l);

f.getContentPane().setBackground(Color.PINK);

t.setEditable(false);

f.setVisible(true);

}

public void actionPerformed(ActionEvent ae){

String s=new String(ae.getActionCommand());

if((s).equals("Insert")){

try{

t4.setText("Row Inserted");

Class.forName("oracle.jdbc.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","lalitha","vasavi");

Statement stmt=con.createStatement();

int did=Integer.parseInt(t1.getText());

String lcolor=t2.getText();

String elem=t3.getText();

stmt.executeUpdate("insert into deficiency values('"+lcolor+"','"+elem+"',"+did+")");

ResultSet rs=stmt.executeQuery("select \* from deficiency");

String str=new String();

while(rs.next())

str=str+(rs.getString(1)+" "+rs.getString(2)+" "+rs.getInt(3)+"\n");

t.setText(str);

con.commit();

con.close();

}

catch (Exception e) {

t4.setText("Error Occured!!");

}

}

}

public static void main(String[] args){

new insertdeficiency();

}

}

//insertdiseases.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

import java.util.\*;

public class insertdiseases implements ActionListener{

private JFrame f=new JFrame("Insertions");

private JLabel l=new JLabel("");

private JLabel l1=new JLabel("Enter leaf Color");

private JLabel l2=new JLabel("Enter disease name");

private JLabel l3=new JLabel("Result");

private JButton b1=new JButton("Insert");

private JTextField t1=new JTextField();

private JTextField t2=new JTextField();

private JTextField t3=new JTextField();

private JTextArea t=new JTextArea();

private JScrollPane scrollBar=new JScrollPane(t,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS,JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

public insertdiseases() {

f.setDefaultCloseOperation(JFrame.HIDE\_ON\_CLOSE);

f.setBounds(300,200,720,300);

Container c=f.getContentPane();

f.getContentPane().add(l1);

f.getContentPane().add(l2);

f.getContentPane().add(l3);

f.getContentPane().add(scrollBar);

scrollBar.setBounds(420,20,250,150);

f.getContentPane().add(b1);

f.getContentPane().add(t1);

f.getContentPane().add(t2);

f.getContentPane().add(t3);

l.setBounds(20,30,50,50);

l1.setBounds(20,20,150,30);

l1.setOpaque(true);

l1.setBackground(Color.PINK);

l2.setBounds(20,60,150,30);

l2.setOpaque(true);

l2.setBackground(Color.PINK);

l3.setBounds(20,100,150,30);

l3.setOpaque(true);

l3.setBackground(Color.PINK);

b1.setBounds(160,180,100,30);

b1.setFont(new Font("Times New Roman",Font.BOLD,17));

t1.setBounds(170,20,220,30);

t2.setBounds(170,60,220,30);

t3.setBounds(170,100,220,30);

b1.addActionListener(this);

c.add(l);

f.getContentPane().setBackground(Color.PINK);

t.setEditable(false);

f.setVisible(true);

}

public void actionPerformed(ActionEvent ae){

String s=new String(ae.getActionCommand());

if((s).equals("Insert")){

try{

t3.setText("Row Inserted");

Class.forName("oracle.jdbc.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","lalitha","vasavi");

Statement stmt=con.createStatement();

String scolor=t1.getText();

String name=t2.getText();

stmt.executeUpdate("insert into diseases values('"+scolor+"','"+name+"',"+1+")");

ResultSet rs=stmt.executeQuery("select \* from diseases");

String str=new String();

while(rs.next())

str=str+(rs.getString(1)+" "+rs.getString(2)+" "+rs.getInt(3)+"\n");

t.setText(str);

stmt.executeUpdate("insert into diseases values('"+scolor+"','"+name+"',"+1+")");

con.commit();

con.close();

}

catch (Exception e) {

t3.setText("Error Occured!!");

}

}

}

public static void main(String[] args){

new insertdiseases();

}

}

//insertfactors.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

import java.util.\*;

public class insertfactors implements ActionListener{

private JFrame f=new JFrame("Insertions");

private JLabel l=new JLabel("");

private JLabel l1=new JLabel("Enter Factor ID");

private JLabel l2=new JLabel("Enter Factor");

private JLabel l3=new JLabel("Result");

private JButton b1=new JButton("Insert");

private JTextField t1=new JTextField();

private JTextField t2=new JTextField();

private JTextField t3=new JTextField();

private JTextArea t=new JTextArea();

private JScrollPane scrollBar=new JScrollPane(t,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS,JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

public insertfactors() {

f.setDefaultCloseOperation(JFrame.HIDE\_ON\_CLOSE);

f.setBounds(300,200,720,300);

Container c=f.getContentPane();

f.getContentPane().add(l1);

f.getContentPane().add(l2);

f.getContentPane().add(l3);

f.getContentPane().add(scrollBar);

scrollBar.setBounds(420,20,250,150);

f.getContentPane().add(b1);

f.getContentPane().add(t1);

f.getContentPane().add(t2);

f.getContentPane().add(t3);

l.setBounds(20,30,50,50);

l1.setBounds(20,20,150,30);

l1.setOpaque(true);

l1.setBackground(Color.PINK);

l2.setBounds(20,60,150,30);

l2.setOpaque(true);

l2.setBackground(Color.PINK);

l3.setBounds(20,100,150,30);

l3.setOpaque(true);

l3.setBackground(Color.PINK);

b1.setBounds(160,180,100,30);

b1.setFont(new Font("Times New Roman",Font.BOLD,17));

t1.setBounds(170,20,220,30);

t2.setBounds(170,60,220,30);

t3.setBounds(170,100,220,30);

b1.addActionListener(this);

c.add(l);

f.getContentPane().setBackground(Color.PINK);

t.setEditable(false);

f.setVisible(true);

}

public void actionPerformed(ActionEvent ae){

String s=new String(ae.getActionCommand());

if((s).equals("Insert")){

try{

t3.setText("Row Inserted");

Class.forName("oracle.jdbc.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","lalitha","vasavi");

Statement stmt=con.createStatement();

int fid=Integer.parseInt(t1.getText());

String factor=t2.getText();

stmt.executeUpdate("insert into factors values("+fid+",'"+factor+"')");

ResultSet rs=stmt.executeQuery("select \* from factors");

String str=new String();

while(rs.next())

str=str+(rs.getInt(1)+" "+rs.getString(2)+"\n");

t.setText(str);

con.commit();

con.close();

}

catch (Exception e) {

t3.setText("Error Occured!!");

}

}

}

public static void main(String[] args){

new insertfactors();

}

}

//insertseverity.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

import java.util.\*;

public class insertseverity implements ActionListener{

private JFrame f=new JFrame("Insertions");

private JLabel l=new JLabel("");

private JLabel l1=new JLabel("Enter Severity ID");

private JLabel l2=new JLabel("Enter Did");

private JLabel l3=new JLabel("Enter Fid");

private JLabel l4=new JLabel("Enter Severity");

private JLabel l5=new JLabel("Result");

private JButton b1=new JButton("Insert");

private JTextField t1=new JTextField();

private JTextField t2=new JTextField();

private JTextField t3=new JTextField();

private JTextField t4=new JTextField();

private JTextField t5=new JTextField();

private JTextArea t=new JTextArea();

private JScrollPane scrollBar=new JScrollPane(t,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS,JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

public insertseverity() {

f.setDefaultCloseOperation(JFrame.HIDE\_ON\_CLOSE);

f.setBounds(300,200,720,300);

Container c=f.getContentPane();

f.getContentPane().add(l1);

f.getContentPane().add(l2);

f.getContentPane().add(l3);

f.getContentPane().add(l4);

f.getContentPane().add(l5);

f.getContentPane().add(scrollBar);

scrollBar.setBounds(420,20,250,150);

f.getContentPane().add(b1);

f.getContentPane().add(t1);

f.getContentPane().add(t2);

f.getContentPane().add(t3);

f.getContentPane().add(t4);

f.getContentPane().add(t5);

l.setBounds(20,30,50,50);

l1.setBounds(20,20,150,30);

l1.setOpaque(true);

l1.setBackground(Color.PINK);

l2.setBounds(20,60,150,30);

l2.setOpaque(true);

l2.setBackground(Color.PINK);

l3.setBounds(20,100,150,30);

l3.setOpaque(true);

l3.setBackground(Color.PINK);

l4.setBounds(20,140,150,30);

l4.setOpaque(true);

l4.setBackground(Color.PINK);

l5.setBounds(20,180,150,30);

l5.setOpaque(true);

l5.setBackground(Color.PINK);

b1.setBounds(480,180,100,30);

b1.setFont(new Font("Times New Roman",Font.BOLD,17));

t1.setBounds(170,20,220,30);

t2.setBounds(170,60,220,30);

t3.setBounds(170,100,220,30);

t4.setBounds(170,140,220,30);

t5.setBounds(170,180,220,30);

b1.addActionListener(this);

c.add(l);

f.getContentPane().setBackground(Color.PINK);

t.setEditable(false);

f.setVisible(true);

}

public void actionPerformed(ActionEvent ae){

String s=new String(ae.getActionCommand());

if((s).equals("Insert")){

try{

t5.setText("Row Inserted");

Class.forName("oracle.jdbc.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","lalitha","vasavi");

Statement stmt=con.createStatement();

int sid=Integer.parseInt(t1.getText());

int did=Integer.parseInt(t2.getText());

int fid=Integer.parseInt(t3.getText());

String severity=t4.getText();

stmt.executeUpdate("insert into severity values("+sid+","+did+","+fid+",'"+severity+"')");

ResultSet rs=stmt.executeQuery("select \* from severity");

String str=new String();

while(rs.next())

str=str+(rs.getInt(1)+" "+rs.getInt(2)+" "+rs.getInt(3)+" "+rs.getString(4)+"\n");

t.setText(str);

con.commit();

con.close();

}

catch (Exception e) {

t5.setText("Error Occured!!");

}

}

}

public static void main(String[] args){

new insertseverity();

}

}

//deletedeficiency.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

import java.util.\*;

public class deletedeficiency implements ActionListener{

private JFrame f=new JFrame("Deletions");

private JLabel l=new JLabel("");

private JLabel l1=new JLabel("Enter Deficiency ID");

private JLabel l2=new JLabel("Result");

private JButton b1=new JButton("Delete");

private JTextField t1=new JTextField();

private JTextField t2=new JTextField();

private JTextArea t=new JTextArea();

private JScrollPane scrollBar=new JScrollPane(t,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS,JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

public deletedeficiency() {

f.setDefaultCloseOperation(JFrame.HIDE\_ON\_CLOSE);

f.setBounds(300,200,720,250);

Container c=f.getContentPane();

f.getContentPane().add(l1);

f.getContentPane().add(l2);

f.getContentPane().add(scrollBar);

scrollBar.setBounds(420,20,250,150);

f.getContentPane().add(b1);

f.getContentPane().add(t1);

f.getContentPane().add(t2);

l.setBounds(20,30,50,50);

l1.setBounds(20,20,150,30);

l1.setOpaque(true);

l1.setBackground(Color.PINK);

l2.setBounds(20,60,150,30);

l2.setOpaque(true);

l2.setBackground(Color.PINK);

b1.setBounds(160,120,100,30);

b1.setFont(new Font("Times New Roman",Font.BOLD,17));

t1.setBounds(170,20,220,30);

t2.setBounds(170,60,220,30);

b1.addActionListener(this);

c.add(l);

f.getContentPane().setBackground(Color.PINK);

t.setEditable(false);

f.setVisible(true);

}

public void actionPerformed(ActionEvent ae){

String s=new String(ae.getActionCommand());

if((s).equals("Delete")){

try{

t2.setText("Row Deleted");

Class.forName("oracle.jdbc.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","lalitha","vasavi");

Statement stmt=con.createStatement();

int did=Integer.parseInt(t1.getText());

stmt.executeUpdate("delete from deficiency where did="+did+"");

ResultSet rs=stmt.executeQuery("select \* from deficiency");

String str=new String();

while(rs.next())

str=str+(rs.getString(1)+" "+rs.getString(2)+" "+rs.getInt(3)+"\n");

t.setText(str);

con.commit();

con.close();

}

catch (Exception e) {

t2.setText("Error Occured!!");

}

}

}

public static void main(String[] args){

new deletedeficiency();

}

}

//deletediseases.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

import java.util.\*;

public class deletediseases implements ActionListener{

private JFrame f=new JFrame("Deletions");

private JLabel l=new JLabel("");

private JLabel l1=new JLabel("Enter Disease name");

private JLabel l2=new JLabel("Result");

private JButton b1=new JButton("Delete");

private JTextField t1=new JTextField();

private JTextField t2=new JTextField();

private JTextArea t=new JTextArea();

private JScrollPane scrollBar=new JScrollPane(t,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS,JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

public deletediseases() {

f.setDefaultCloseOperation(JFrame.HIDE\_ON\_CLOSE);

f.setBounds(300,200,720,250);

Container c=f.getContentPane();

f.getContentPane().add(l1);

f.getContentPane().add(l2);

f.getContentPane().add(scrollBar);

scrollBar.setBounds(420,20,250,150);

f.getContentPane().add(b1);

f.getContentPane().add(t1);

f.getContentPane().add(t2);

l.setBounds(20,30,50,50);

l1.setBounds(20,20,150,30);

l1.setOpaque(true);

l1.setBackground(Color.PINK);

l2.setBounds(20,60,150,30);

l2.setOpaque(true);

l2.setBackground(Color.PINK);

b1.setBounds(160,120,100,30);

b1.setFont(new Font("Times New Roman",Font.BOLD,17));

t1.setBounds(170,20,220,30);

t2.setBounds(170,60,220,30);

b1.addActionListener(this);

c.add(l);

f.getContentPane().setBackground(Color.PINK);

t.setEditable(false);

f.setVisible(true);

}

public void actionPerformed(ActionEvent ae){

String s=new String(ae.getActionCommand());

if((s).equals("Delete")){

try{

t2.setText("Row Deleted");

Class.forName("oracle.jdbc.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","lalitha","vasavi");

Statement stmt=con.createStatement();

String name=t1.getText();

stmt.executeUpdate("delete from diseases where name='"+name+"'");

ResultSet rs=stmt.executeQuery("select \* from diseases");

String str=new String();

while(rs.next())

str=str+(rs.getString(1)+" "+rs.getString(2)+" "+rs.getInt(3)+"\n");

t.setText(str);

con.commit();

con.close();

}

catch (Exception e) {

t2.setText("Error Occured!!");

}

}

}

public static void main(String[] args){

new deletediseases();

}

}

//deletefactors.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

import java.util.\*;

public class deletefactors implements ActionListener{

private JFrame f=new JFrame("Deletions");

private JLabel l=new JLabel("");

private JLabel l1=new JLabel("Enter Factor ID");

private JLabel l2=new JLabel("Result");

private JButton b1=new JButton("Delete");

private JTextField t1=new JTextField();

private JTextField t2=new JTextField();

private JTextArea t=new JTextArea();

private JScrollPane scrollBar=new JScrollPane(t,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS,JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

public deletefactors() {

f.setDefaultCloseOperation(JFrame.HIDE\_ON\_CLOSE);

f.setBounds(300,200,720,250);

Container c=f.getContentPane();

f.getContentPane().add(l1);

f.getContentPane().add(l2);

f.getContentPane().add(scrollBar);

scrollBar.setBounds(420,20,250,150);

f.getContentPane().add(b1);

f.getContentPane().add(t1);

f.getContentPane().add(t2);

l.setBounds(20,30,50,50);

l1.setBounds(20,20,150,30);

l1.setOpaque(true);

l1.setBackground(Color.PINK);

l2.setBounds(20,60,150,30);

l2.setOpaque(true);

l2.setBackground(Color.PINK);

b1.setBounds(160,120,100,30);

b1.setFont(new Font("Times New Roman",Font.BOLD,17));

t1.setBounds(170,20,220,30);

t2.setBounds(170,60,220,30);

b1.addActionListener(this);

c.add(l);

f.getContentPane().setBackground(Color.PINK);

t.setEditable(false);

f.setVisible(true);

}

public void actionPerformed(ActionEvent ae){

String s=new String(ae.getActionCommand());

if((s).equals("Delete")){

try{

t2.setText("Row Deleted");

Class.forName("oracle.jdbc.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","lalitha","vasavi");

Statement stmt=con.createStatement();

int fid=Integer.parseInt(t1.getText());

stmt.executeUpdate("delete from factors where fid="+fid+"");

ResultSet rs=stmt.executeQuery("select \* from factors");

String str=new String();

while(rs.next())

str=str+(rs.getInt(1)+" "+rs.getString(2)+"\n");

t.setText(str);

con.commit();

con.close();

}

catch (Exception e) {

t2.setText("Error Occured!!");

}

}

}

public static void main(String[] args){

new deletefactors();

}

}

//deleteseverity.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

import java.util.\*;

public class deleteseverity implements ActionListener{

private JFrame f=new JFrame("Deletions");

private JLabel l=new JLabel("");

private JLabel l1=new JLabel("Enter Severity");

private JLabel l2=new JLabel("Result");

private JButton b1=new JButton("Delete");

private JTextField t1=new JTextField();

private JTextField t2=new JTextField();

private JTextArea t=new JTextArea();

private JScrollPane scrollBar=new JScrollPane(t,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS,JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

public deleteseverity() {

f.setDefaultCloseOperation(JFrame.HIDE\_ON\_CLOSE);

f.setBounds(300,200,720,250);

Container c=f.getContentPane();

f.getContentPane().add(l1);

f.getContentPane().add(l2);

f.getContentPane().add(scrollBar);

scrollBar.setBounds(420,20,250,150);

f.getContentPane().add(b1);

f.getContentPane().add(t1);

f.getContentPane().add(t2);

l.setBounds(20,30,50,50);

l1.setBounds(20,20,150,30);

l1.setOpaque(true);

l1.setBackground(Color.PINK);

l2.setBounds(20,60,150,30);

l2.setOpaque(true);

l2.setBackground(Color.PINK);

b1.setBounds(160,120,100,30);

b1.setFont(new Font("Times New Roman",Font.BOLD,17));

t1.setBounds(170,20,220,30);

t2.setBounds(170,60,220,30);

b1.addActionListener(this);

c.add(l);

f.getContentPane().setBackground(Color.PINK);

t.setEditable(false);

f.setVisible(true);

}

public void actionPerformed(ActionEvent ae){

String s=new String(ae.getActionCommand());

if((s).equals("Delete")){

try{

t2.setText("Row Deleted");

Class.forName("oracle.jdbc.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","lalitha","vasavi");

Statement stmt=con.createStatement();

int sid=Integer.parseInt(t1.getText());

stmt.executeUpdate("delete from severity where sid="+sid+"");

ResultSet rs=stmt.executeQuery("select \* from severity");

String str=new String();

while(rs.next())

str=str+(rs.getInt(1)+" "+rs.getInt(2)+" "+rs.getInt(3)+" "+rs.getString(4)+"\n");

t.setText(str);

con.commit();

con.close();

}

catch (Exception e) {

t2.setText("Error Occured!!");

}

}

}

public static void main(String[] args){

new deleteseverity();

}

}

//updatedeficiency.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

import java.util.\*;

public class updatedeficiency implements ActionListener{

private JFrame f=new JFrame("Updations");

private JLabel l=new JLabel("");

private JLabel l1=new JLabel("Enter Deficiency ID");

private JLabel l2=new JLabel("Enter Deficient Element");

private JLabel l3=new JLabel("Result");

private JButton b1=new JButton("Update");

private JTextField t1=new JTextField();

private JTextField t2=new JTextField();

private JTextField t3=new JTextField();

private JTextArea t=new JTextArea();

private JScrollPane scrollBar=new JScrollPane(t,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS,JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

public updatedeficiency() {

f.setDefaultCloseOperation(JFrame.HIDE\_ON\_CLOSE);

f.setBounds(300,200,720,300);

Container c=f.getContentPane();

f.getContentPane().add(l1);

f.getContentPane().add(l2);

f.getContentPane().add(l3);

f.getContentPane().add(scrollBar);

scrollBar.setBounds(420,20,250,150);

f.getContentPane().add(b1);

f.getContentPane().add(t1);

f.getContentPane().add(t2);

f.getContentPane().add(t3);

l.setBounds(20,30,50,50);

l1.setBounds(20,20,150,30);

l1.setOpaque(true);

l1.setBackground(Color.PINK);

l2.setBounds(20,60,150,30);

l2.setOpaque(true);

l2.setBackground(Color.PINK);

l3.setBounds(20,100,150,30);

l3.setOpaque(true);

l3.setBackground(Color.PINK);

b1.setBounds(160,180,100,30);

b1.setFont(new Font("Times New Roman",Font.BOLD,17));

t1.setBounds(170,20,220,30);

t2.setBounds(170,60,220,30);

t3.setBounds(170,100,220,30);

b1.addActionListener(this);

c.add(l);

f.getContentPane().setBackground(Color.PINK);

t.setEditable(false);

f.setVisible(true);

}

public void actionPerformed(ActionEvent ae){

String s=new String(ae.getActionCommand());

if((s).equals("Update")){

try{

t3.setText("Row Updated");

Class.forName("oracle.jdbc.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","lalitha","vasavi");

Statement stmt=con.createStatement();

int did=Integer.parseInt(t1.getText());

String elem=t2.getText();

stmt.executeUpdate("Update deficiency set elem='"+elem+"' where did="+did+"");

ResultSet rs=stmt.executeQuery("select \* from deficiency");

String str=new String();

while(rs.next())

str=str+(rs.getString(1)+" "+rs.getString(2)+" "+rs.getInt(3)+"\n");

t.setText(str);

con.commit();

con.close();

}

catch (Exception e) {

t3.setText("Error Occured!!");

}

}

}

public static void main(String[] args){

new updatedeficiency();

}

}

//updatediseases.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

import java.util.\*;

public class updatediseases implements ActionListener{

private JFrame f=new JFrame("Updations");

private JLabel l=new JLabel("");

private JLabel l1=new JLabel("Enter leaf Color");

private JLabel l2=new JLabel("Enter disease name");

private JLabel l3=new JLabel("Result");

private JButton b1=new JButton("Update");

private JTextField t1=new JTextField();

private JTextField t2=new JTextField();

private JTextField t3=new JTextField();

private JTextArea t=new JTextArea();

private JScrollPane scrollBar=new JScrollPane(t,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS,JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

public updatediseases() {

f.setDefaultCloseOperation(JFrame.HIDE\_ON\_CLOSE);

f.setBounds(300,200,720,300);

Container c=f.getContentPane();

f.getContentPane().add(l1);

f.getContentPane().add(l2);

f.getContentPane().add(l3);

f.getContentPane().add(scrollBar);

scrollBar.setBounds(420,20,250,150);

f.getContentPane().add(b1);

f.getContentPane().add(t1);

f.getContentPane().add(t2);

f.getContentPane().add(t3);

l.setBounds(20,30,50,50);

l1.setBounds(20,20,150,30);

l1.setOpaque(true);

l1.setBackground(Color.PINK);

l2.setBounds(20,60,150,30);

l2.setOpaque(true);

l2.setBackground(Color.PINK);

l3.setBounds(20,100,150,30);

l3.setOpaque(true);

l3.setBackground(Color.PINK);

b1.setBounds(160,180,100,30);

b1.setFont(new Font("Times New Roman",Font.BOLD,17));

t1.setBounds(170,20,220,30);

t2.setBounds(170,60,220,30);

t3.setBounds(170,100,220,30);

b1.addActionListener(this);

c.add(l);

f.getContentPane().setBackground(Color.PINK);

t.setEditable(false);

f.setVisible(true);

}

public void actionPerformed(ActionEvent ae){

String s=new String(ae.getActionCommand());

if((s).equals("Update")){

try{

t3.setText("Row Updated");

Class.forName("oracle.jdbc.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","lalitha","vasavi");

Statement stmt=con.createStatement();

String scolor=t1.getText();

String name=t2.getText();

stmt.executeUpdate("Update diseases set name='"+name+"' where scolor='"+scolor+"'");

ResultSet rs=stmt.executeQuery("select \* from diseases");

String str=new String();

while(rs.next())

str=str+(rs.getString(1)+" "+rs.getString(2)+" "+rs.getInt(3)+"\n");

t.setText(str);

stmt.executeUpdate("insert into diseases values('"+scolor+"','"+name+"',"+1+")");

con.commit();

con.close();

}

catch (Exception e) {

t3.setText("Error Occured!!");

}

}

}

public static void main(String[] args){

new updatediseases();

}

}

//updatefactors.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

import java.util.\*;

public class updatefactors implements ActionListener{

private JFrame f=new JFrame("Updations");

private JLabel l=new JLabel("");

private JLabel l1=new JLabel("Enter Factor ID");

private JLabel l2=new JLabel("Enter Factor");

private JLabel l3=new JLabel("Result");

private JButton b1=new JButton("Update");

private JTextField t1=new JTextField();

private JTextField t2=new JTextField();

private JTextField t3=new JTextField();

private JTextArea t=new JTextArea();

private JScrollPane scrollBar=new JScrollPane(t,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS,JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

public updatefactors() {

f.setDefaultCloseOperation(JFrame.HIDE\_ON\_CLOSE);

f.setBounds(300,200,720,300);

Container c=f.getContentPane();

f.getContentPane().add(l1);

f.getContentPane().add(l2);

f.getContentPane().add(l3);

f.getContentPane().add(scrollBar);

scrollBar.setBounds(420,20,250,150);

f.getContentPane().add(b1);

f.getContentPane().add(t1);

f.getContentPane().add(t2);

f.getContentPane().add(t3);

l.setBounds(20,30,50,50);

l1.setBounds(20,20,150,30);

l1.setOpaque(true);

l1.setBackground(Color.PINK);

l2.setBounds(20,60,150,30);

l2.setOpaque(true);

l2.setBackground(Color.PINK);

l3.setBounds(20,100,150,30);

l3.setOpaque(true);

l3.setBackground(Color.PINK);

b1.setBounds(160,180,100,30);

b1.setFont(new Font("Times New Roman",Font.BOLD,17));

t1.setBounds(170,20,220,30);

t2.setBounds(170,60,220,30);

t3.setBounds(170,100,220,30);

b1.addActionListener(this);

c.add(l);

f.getContentPane().setBackground(Color.PINK);

t.setEditable(false);

f.setVisible(true);

}

public void actionPerformed(ActionEvent ae){

String s=new String(ae.getActionCommand());

if((s).equals("Update")){

try{

t3.setText("Row Updated");

Class.forName("oracle.jdbc.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","lalitha","vasavi");

Statement stmt=con.createStatement();

int fid=Integer.parseInt(t1.getText());

String factor=t2.getText();

stmt.executeUpdate("Update factors set factor='"+factor+"' where fid="+fid+"");

ResultSet rs=stmt.executeQuery("select \* from factors");

String str=new String();

while(rs.next())

str=str+(rs.getInt(1)+" "+rs.getString(2)+"\n");

t.setText(str);

con.commit();

con.close();

}

catch (Exception e) {

t3.setText("Error Occured!!");

}

}

}

public static void main(String[] args){

new updatefactors();

}

}

//updateseverity.java

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.\*;

import java.sql.\*;

import java.util.\*;

public class updateseverity implements ActionListener{

private JFrame f=new JFrame("Updations");

private JLabel l=new JLabel("");

private JLabel l1=new JLabel("Enter Severity ID");

private JLabel l2=new JLabel("Enter Severity");

private JLabel l3=new JLabel("Result");

private JButton b1=new JButton("Update");

private JTextField t1=new JTextField();

private JTextField t2=new JTextField();

private JTextField t3=new JTextField();

private JTextArea t=new JTextArea();

private JScrollPane scrollBar=new JScrollPane(t,JScrollPane.VERTICAL\_SCROLLBAR\_ALWAYS,JScrollPane.HORIZONTAL\_SCROLLBAR\_ALWAYS);

public updateseverity() {

f.setDefaultCloseOperation(JFrame.HIDE\_ON\_CLOSE);

f.setBounds(300,200,720,300);

Container c=f.getContentPane();

f.getContentPane().add(l1);

f.getContentPane().add(l2);

f.getContentPane().add(l3);

f.getContentPane().add(scrollBar);

scrollBar.setBounds(420,20,250,150);

f.getContentPane().add(b1);

f.getContentPane().add(t1);

f.getContentPane().add(t2);

f.getContentPane().add(t3);

l.setBounds(20,30,50,50);

l1.setBounds(20,20,150,30);

l1.setOpaque(true);

l1.setBackground(Color.PINK);

l2.setBounds(20,60,150,30);

l2.setOpaque(true);

l2.setBackground(Color.PINK);

l3.setBounds(20,100,150,30);

l3.setOpaque(true);

l3.setBackground(Color.PINK);

b1.setBounds(480,180,100,30);

b1.setFont(new Font("Times New Roman",Font.BOLD,17));

t1.setBounds(170,20,220,30);

t2.setBounds(170,60,220,30);

t3.setBounds(170,100,220,30);

b1.addActionListener(this);

c.add(l);

f.getContentPane().setBackground(Color.PINK);

t.setEditable(false);

f.setVisible(true);

}

public void actionPerformed(ActionEvent ae){

String s=new String(ae.getActionCommand());

if((s).equals("Update")){

try{

t3.setText("Row Updated");

Class.forName("oracle.jdbc.OracleDriver");

Connection con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","lalitha","vasavi");

Statement stmt=con.createStatement();

int sid=Integer.parseInt(t1.getText());

String severity=t2.getText();

stmt.executeUpdate("Update severity set severity='"+severity+"' where sid="+sid+"");

ResultSet rs=stmt.executeQuery("select \* from severity");

String str=new String();

while(rs.next())

str=str+(rs.getInt(1)+" "+rs.getInt(2)+" "+rs.getInt(3)+" "+rs.getString(4)+"\n");

t.setText(str);

con.commit();

con.close();

}

catch (Exception e) {

t3.setText("Error Occured!!");

}

}

}

public static void main(String[] args){

new updateseverity();

}

}

**GitHubLink:** [**https://github.com/Lalitha-Sowjanya/Disease-Severity-Tracker-on-Maize.git**](https://github.com/Lalitha-Sowjanya/Disease-Severity-Tracker-on-Maize.git)

**FOLDER STRUCTURE:**

**A screenshot of a computer

Description automatically generated with medium confidence**

**Graphical user interface

Description automatically generated**

**Testing:**

**Graphical user interface

Description automatically generated**

**Graphical user interface, website

Description automatically generated**

**Graphical user interface, text, application

Description automatically generated**

**Graphical user interface

Description automatically generated**

**Graphical user interface

Description automatically generated**

**Graphical user interface, application

Description automatically generated**

**Graphical user interface

Description automatically generated**

**Graphical user interface

Description automatically generated**

**Results:**  I have successfully completed my mini project “***Disease severity tracker on maize”.***

## DISCUSSION AND FUTURE WORK

This project is useful to check the severity of disease on maize crop. Future scope would be to make the UI more appealing by using graphics. One more feature would be to add login page for administrator.

**REFERENCES**

[**https://plantvillage.psu.edu/topics/corn-maize/infos**](https://plantvillage.psu.edu/topics/corn-maize/infos)

[**https://en.wikipedia.org/wiki/List\_of\_maize\_diseases**](https://en.wikipedia.org/wiki/List_of_maize_diseases)