

# **Informatics Practices**

**Practical File**

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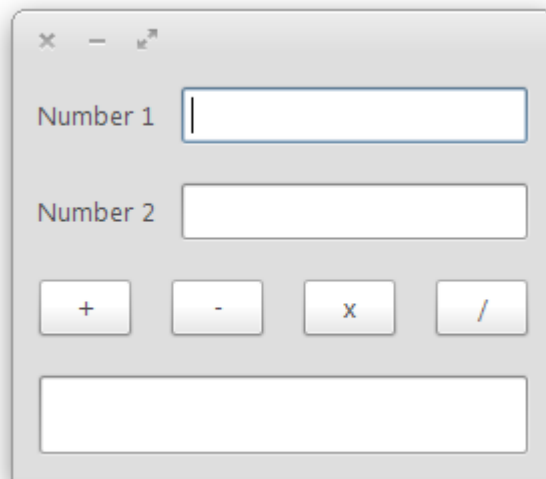
## Calculates The Age from Date of birth



A Java Swing window titled "Calculates The Age from Date of birth". It contains three dropdown menus for selecting birth date components: the first dropdown shows "1", the second shows "1", and the third shows "1900". Below these is a "Submit" button.

```
//This is the code written in the(ActionEvent) of "Submit" Button
Calendar today = Calendar.getInstance();
int year=today.get(Calendar.YEAR);
int month=today.get(Calendar.MONTH)+1;
int date=today.get(Calendar.DATE);
int year1=Integer.parseInt(jComboBox3.getSelectedItem().toString());
int month1=Integer.parseInt(jComboBox1.getSelectedItem().toString());
int date1=Integer.parseInt(jComboBox2.getSelectedItem().toString());
int age=year-year1;
if( (month==month1&&date<date1) || (month<month1) ) {age--;}
if(year==year1) age=0;
String message="";
if(age<18)
    message="Since you are "+age+" years old, you are not an adult by law!";
if(age>=18)
    message="Since you are "+age+" years old, you are officially an adult!";
JOptionPane.showMessageDialog(null, message);
```

# A Simple Calculator for Binary Operations



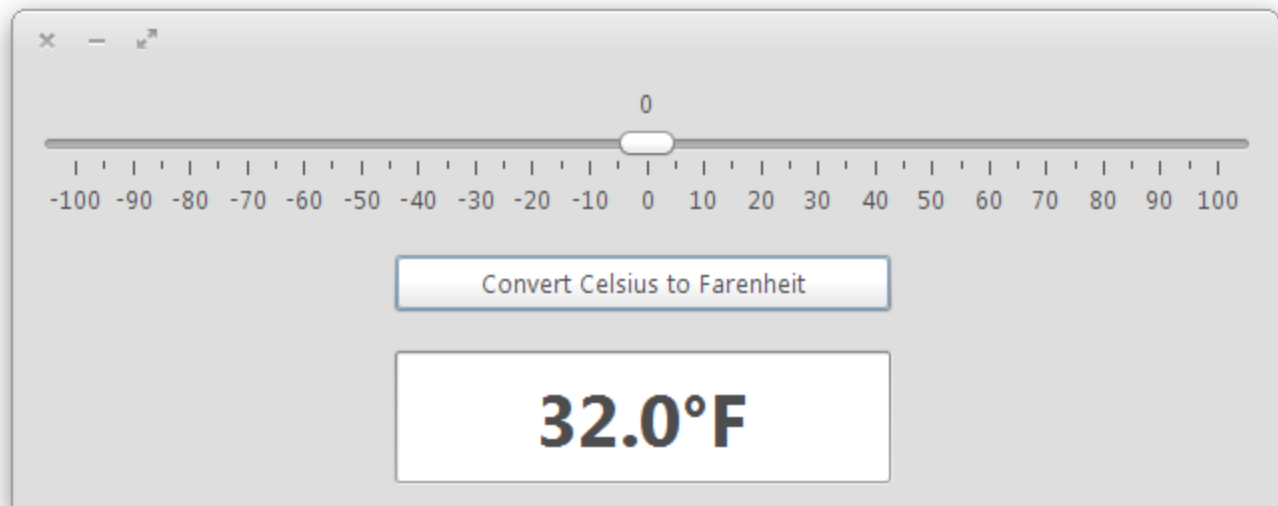
```
//This is the code written in the ActionEvent of "+" Button
jTextField3.setText(Double.parseDouble(jTextField1.getText()) +
    Double.parseDouble(jTextField2.getText())+"");

//This is the code written in the ActionEvent of "-" Button
jTextField3.setText(Double.parseDouble(jTextField1.getText()) -
    Double.parseDouble(jTextField2.getText())+"");

//This is the code written in the ActionEvent of "X" Button
jTextField3.setText(Double.parseDouble(jTextField1.getText()) *
    Double.parseDouble(jTextField2.getText())+"");

//This is the code written in the ActionEvent of "/" Button
jTextField3.setText(Double.parseDouble(jTextField1.getText()) /
    Double.parseDouble(jTextField2.getText())+"");
```

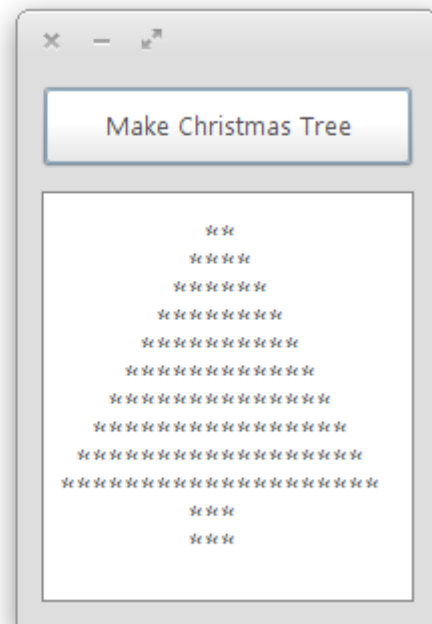
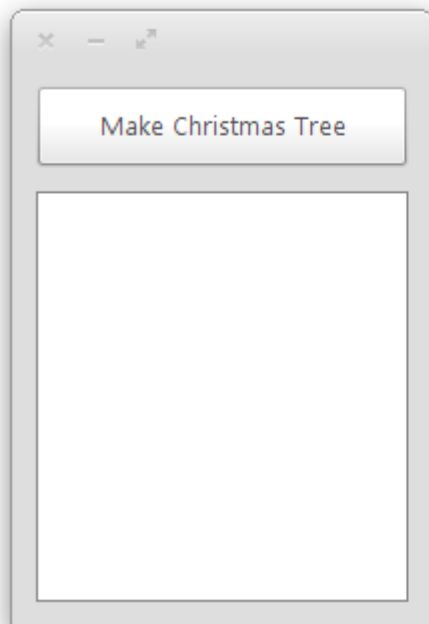
## Convert Celsius scale to Farenheit



A Java Swing window titled "Convert Celsius scale to Farenheit". The window contains a horizontal slider with a range from -100 to 100. The slider's value is currently set to 0. Below the slider is a button labeled "Convert Celsius to Farenheit". Below the button is a text field displaying "32.0°F".

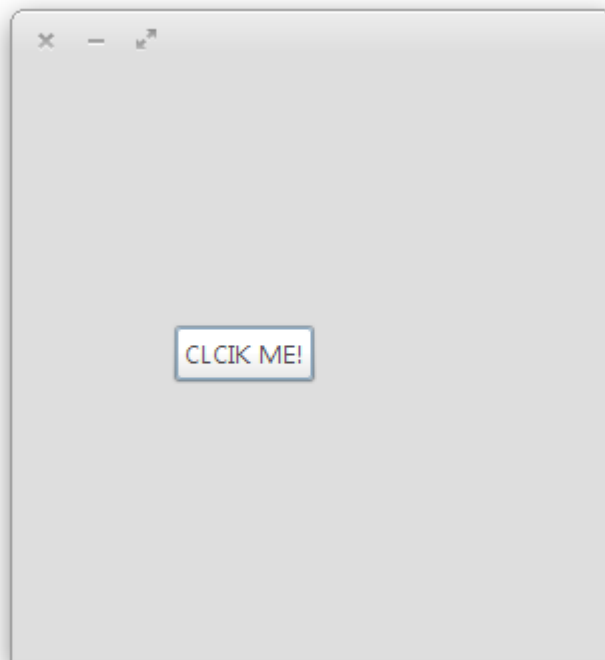
```
//This is the code written in the(ActionEvent) of "Convert" Button  
int c=jSlider1.getValue();  
double f=(9*c/5)+32;  
System.out.println();  
jTextField1.setText(f+"°F");
```

## Make Christmas Tree shape with the help of loops



```
//This is the code written in the ActionEvent of "Make" Button
jTextArea1.append("\n");
for(int i=0;i<10;i++)
{
    for(int j=9;j>=i;j--)
    {
        jTextArea1.append(" ");
    }
    for(int j=0;j<=i;j++)
    {
        jTextArea1.append("**");
    }
    jTextArea1.append("\n");
}
for(int i=1;i<3;i++)
{
    for(int j=9;j>=1;j--)
    {
        jTextArea1.append(" ");
    }
    for(int j=0;j<3;j++)
    {
        jTextArea1.append("**");
    }
    jTextArea1.append("\n");
}
```

## Button changes position on mouseover



```
//This is the code written in the MouseEntered of the "CLICK ME!" Button
int exp=0;int n=0;int exp2=0;int n2=0;

for (int i=0;i<=0;i++) {
exp=(int) (Math.random()*10);
if (exp<1&&exp>3) i--;else break;}

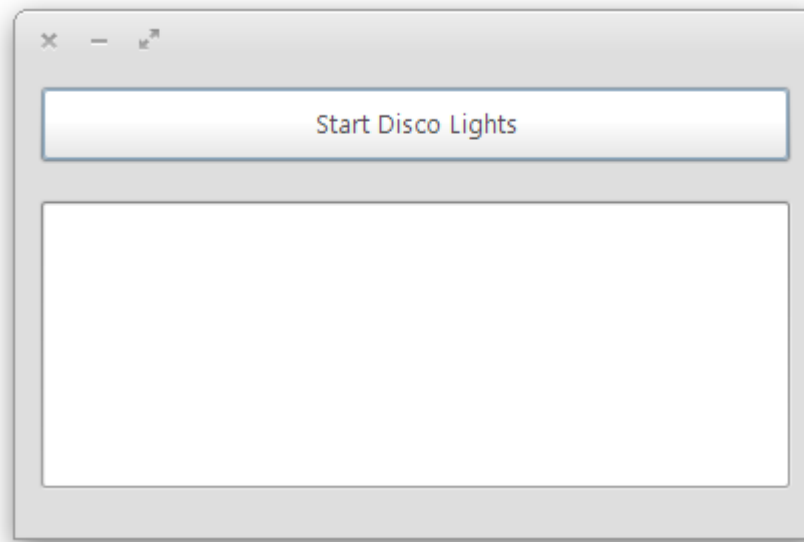
for (int i=0;i<=0;i++) {
n=(int) (Math.random()*(Math.pow(10, exp)));
if (n>250) i--;else break;}

for (int i=0;i<=0;i++) {
exp2=(int) (Math.random()*10);
if (exp2<1&&exp2>3) i--;else break;}

for (int i=0;i<=0;i++) {
n2=(int) (Math.random()*(Math.pow(10, exp2)));
if (n2>250) i--;else break;}

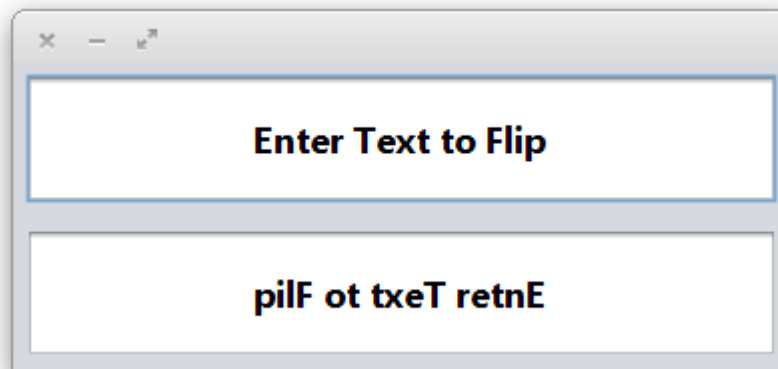
jButton1.setLocation(n, n2);
```

## Text Field changes color rapidly



```
//This is the code written in the ActionEvent of "Start Disco Lights" Button
for(int i=0;i<=5;){
jTextField1.setBackground(Color.red);
jTextField1.update(jTextField1.getGraphics());
try {Thread.sleep(50);} catch (Exception ex) {}
jTextField1.setBackground(Color.blue);
jTextField1.update(jTextField1.getGraphics());
try {Thread.sleep(50);} catch (Exception ex) {}
jTextField1.setBackground(Color.green);
jTextField1.update(jTextField1.getGraphics());
try {Thread.sleep(50);} catch (Exception ex) {}
jTextField1.setBackground(Color.yellow);
jTextField1.update(jTextField1.getGraphics());
try {Thread.sleep(50);} catch (Exception ex) {}
jTextField1.setBackground(Color.MAGENTA);
jTextField1.update(jTextField1.getGraphics());
try {Thread.sleep(50);} catch (Exception ex) {}
jTextField1.setBackground(Color.ORANGE);
jTextField1.update(jTextField1.getGraphics());
try {Thread.sleep(50);} catch (Exception ex) {}
jTextField1.setBackground(Color.PINK);
jTextField1.update(jTextField1.getGraphics());
try {Thread.sleep(50);} catch (Exception ex) {}
jTextField1.setBackground(Color.gray);
jTextField1.update(jTextField1.getGraphics());
try {Thread.sleep(50);} catch (Exception ex) {}
jTextField1.update(jTextField1.getGraphics());
}
```

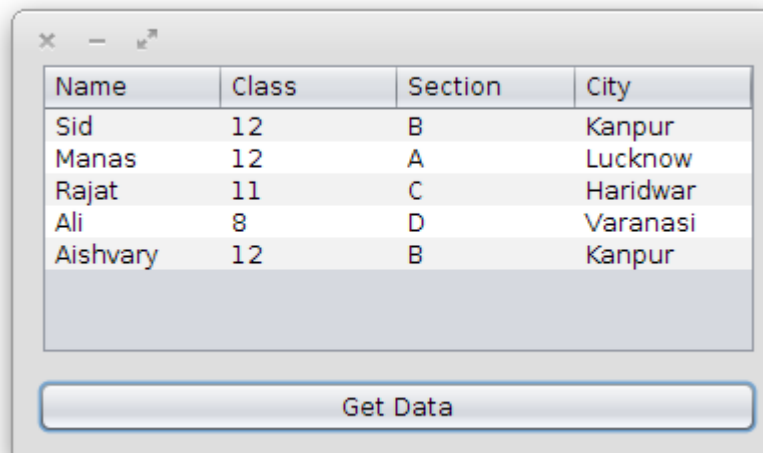
## Flip Text in the text Field



```
//This is the code written in the CaretUpdate Event of First Text Feild
String s=jTextField1.getText();
String s2="";
for(int i=0;i<s.length();i++)
    s2=s.charAt(i)+s2;
jTextField2.setText(s2);
```



## Obtain Data from a SQL Table

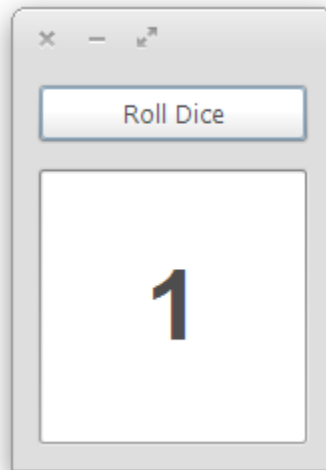


Name	Class	Section	City
Sid	12	B	Kanpur
Manas	12	A	Lucknow
Rajat	11	C	Haridwar
Ali	8	D	Varanasi
Aishvary	12	B	Kanpur

Get Data

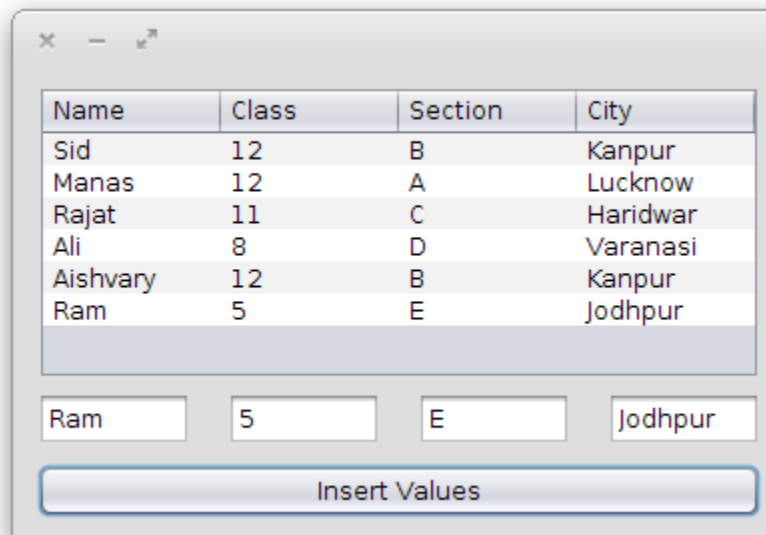
```
//This is the code written in the(ActionEvent) of the "Get Data" Button
try{Class.forName("com.mysql.jdbc.Driver");
DefaultTableModel model=(DefaultTableModel) jTable1.getModel();
Connection con=DriverManager.getConnection("
    + "jdbc:mysql://localhost:3306/practical","root","5462");
Statement stm=con.createStatement();
ResultSet rs=stm.executeQuery("select * from program1;");
String Name, Section, City;int Class;
while(rs.next())
{
    Name=rs.getString("Name");
    Section=rs.getString("Section");
    City=rs.getString("City");
    Class=rs.getInt("Class");
    model.addRow(new Object[]{Name, Class, Section, City});
}
rs.close();
stm.close();
con.close();
}catch(Exception e){System.out.print(e);
};
```

**Shows lots of random numbers before stabilizing on any**



```
//This is the code written in the(ActionEvent) of "Roll Dice" Button
for(int i=0;i<20;i++)
{
    int j=(int) (10*Math.random());
    if(j<=6&& j>=1)
        jTextField1.setText(j+"");
    else
        i--;
    try {Thread.sleep(25);} catch (Exception ex) {}
    jTextField1.update(jTextField1.getGraphics());
}
```

## Insert Values into a SQL Table



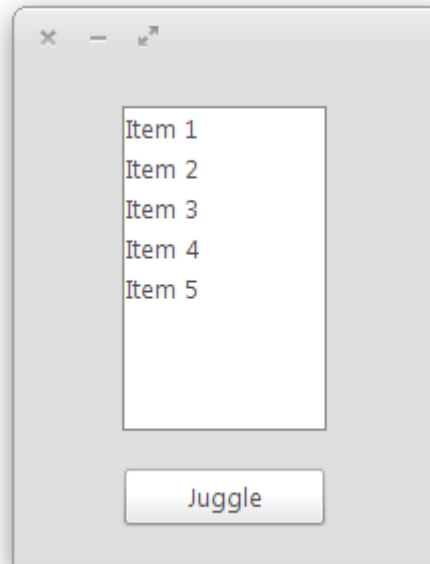
Name	Class	Section	City
Sid	12	B	Kanpur
Manas	12	A	Lucknow
Rajat	11	C	Haridwar
Ali	8	D	Varanasi
Aishvary	12	B	Kanpur
Ram	5	E	Jodhpur

Ram    5    E    Jodhpur

Insert Values

```
//This is the code written in the ActionEvent of the "Insert Values" Button
try{Class.forName("com.mysql.jdbc.Driver");
DefaultTableModel model=(DefaultTableModel) jTable1.getModel();
Connection con=DriverManager.getConnection("
    + "jdbc:mysql://localhost:3306/practical","root","5462");
Statement stm=con.createStatement();
String NAME=jTextField1.getText();
String CLASS=jTextField2.getText();
String SECTION=jTextField3.getText();
String CITY=jTextField4.getText();
stm.executeUpdate("insert into program1 values('"+NAME+"', '"+CLASS+"', '"+
    +SECTION+"', '"+CITY+"')");
ResultSet rs=stm.executeQuery("select * from program1;");
String Name, Section, City;int Class;
while(rs.next())
{
    Name=rs.getString("Name");
    Section=rs.getString("Section");
    City=rs.getString("City");
    Class=rs.getInt("Class");
    model.addRow(new Object[]{Name, Class, Section, City});
}
rs.close();
stm.close();
con.close();
}catch(Exception e){System.out.print(e);
};
```

## Rearrange Items in a List randomly

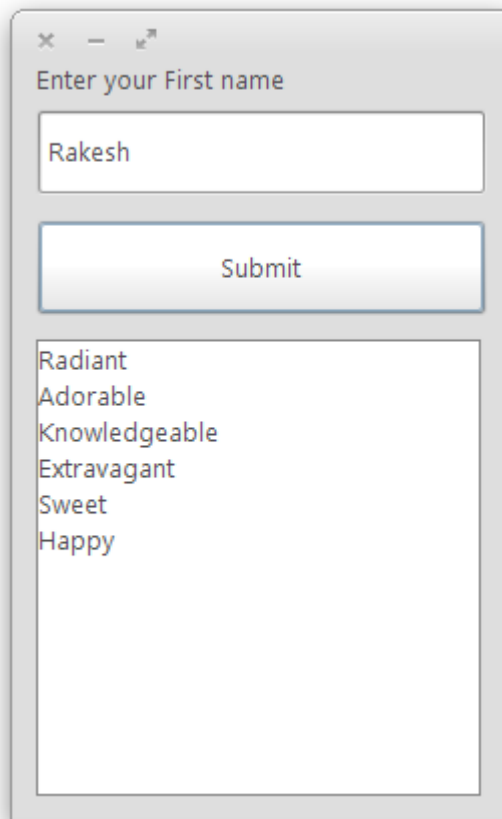


```
//This is the code written in the(ActionEvent) of "Juggle" Button
ListModel dlm = new DefaultListModel();
dlm=(ListModel)jList1.getModel();
int l=dlm.getSize();
String arr[]=new String[l];
int arr2[]=new int[l];
String arr3[]=new String[l];
int f=0;
for(int i=0;i<l;i++)
{
    int r=(int) (Math.random()*10);
    int j=0;
    do
    {
        if(arr2[j]==r||r>=1){f=1;break;}
        else {f=0;}
        j++;
    }while(j<i);
    if(f==0) arr2[i]=r;
    if(f==1) --i;
}
for(int i=0;i<l;i++)
    arr[i]=(String) dlm.getElementAt(i);

for(int i=0;i<l;i++)
    arr3[arr2[i]]=arr[i];

System.out.println();f=0;
final String fin[]=arr3;
jList1.setModel(new javax.swing.AbstractListModel() {
    public int getSize() { return fin.length; }
    public Object getElementAt(int i) { return fin[i]; }
});
```

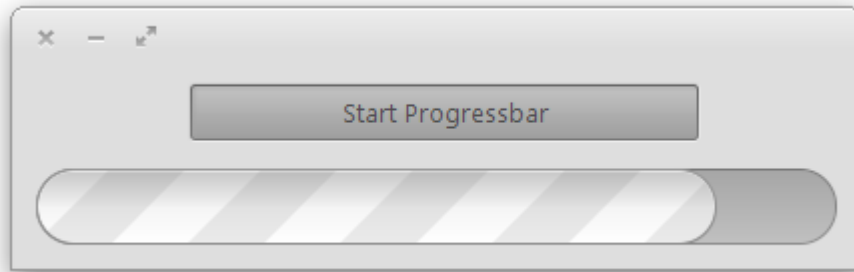
## Displays Full-forms of names



A Java Swing window titled "Enter your First name". It contains a text field with the text "Rakesh", a "Submit" button, and a text area displaying a list of adjectives: Radiant, Adorable, Knowledgeable, Extravagant, Sweet, and Happy.

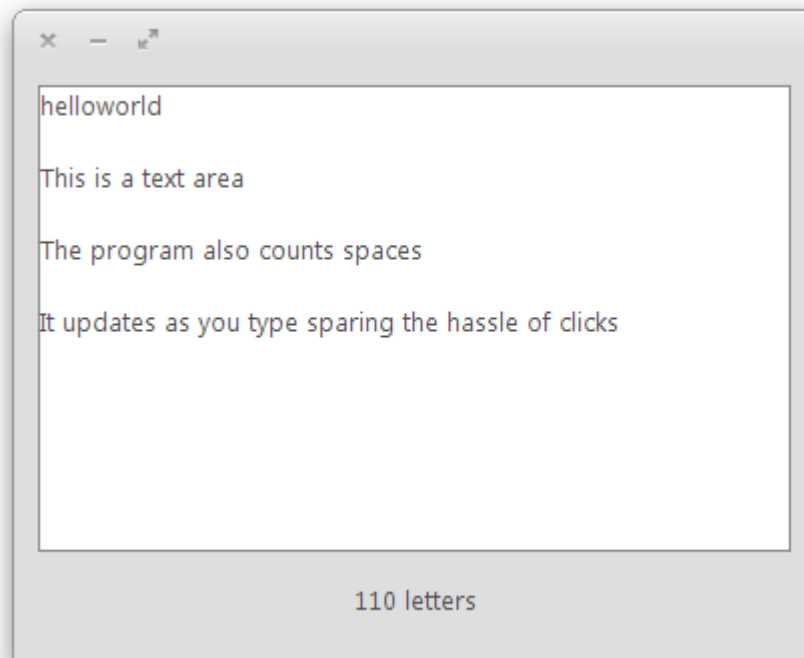
```
//This is the code written in the ActionEvent of "Submit" Button
String a[]={"Adorable","Beautiful","Caring","Dreamy","Extravagant",
"Friendly","Gorgeous","Happy","Indigenous","Jolly","Knowledgeable","Loving",
"Merry","Nice","Original","Placid","Quiet","Radiant","Sweet","True","Unique",
"Vivacious","Wondrous","X-factor","Young","Zesty"};
String name=jTextField1.getText().toUpperCase();
for(int i=0;i<name.length();i++)
{
    int j=(int) name.charAt(i)-65;
    jTextArea1.append(a[j]+"\\n");
}
}
```

## Displays a Progress Bar Animation



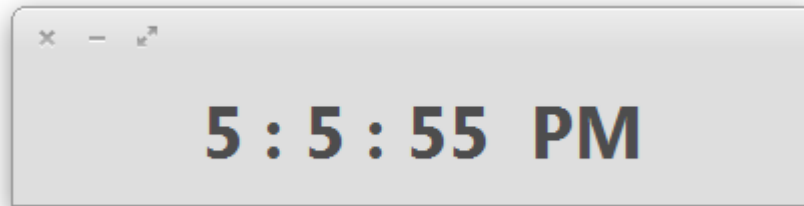
```
//This is the code written in the(ActionEvent) of the "Start" Button
for(int i=0;i<=100;i++)
{
    jProgressBar1.setValue(i);
    try {Thread.sleep(25);} catch (Exception ex) {}
    jProgressBar1.update(jProgressBar1.getGraphics());
}
```

## Shows the Characater Count in a Text Area



```
//This is the code written in the CaretUpdateEvent of the Text Area
//n has been initialized as a global variable
String s=jTextArea1.getText();n=0;
int l=s.length();
for(int i=0;i<l;i++)
    if(s.charAt(i)!='\n')n++;
jLabel1.setText(n+" letters");
```

## Displays the current time updating live



```
//This is the code written in the WindowOpened Event of the Frame
for(int i=0;i>=0;)
{
    Calendar today = Calendar.getInstance();
    int h=today.get(Calendar.HOUR);
    int m=today.get(Calendar.MINUTE);
    int s=today.get(Calendar.SECOND);
    if(h==0)h=12;
    int t=today.get(Calendar.AM_PM);
    String a="";
    if(t==0)a=" AM";
    if(t==1)a=" PM";
    JLabel1.setText(h+" : "+m+" : "+s+" "+a);
    try {Thread.sleep(100);} catch (Exception ex) {}
    JLabel1.update(JLabel1.getGraphics());
}
```

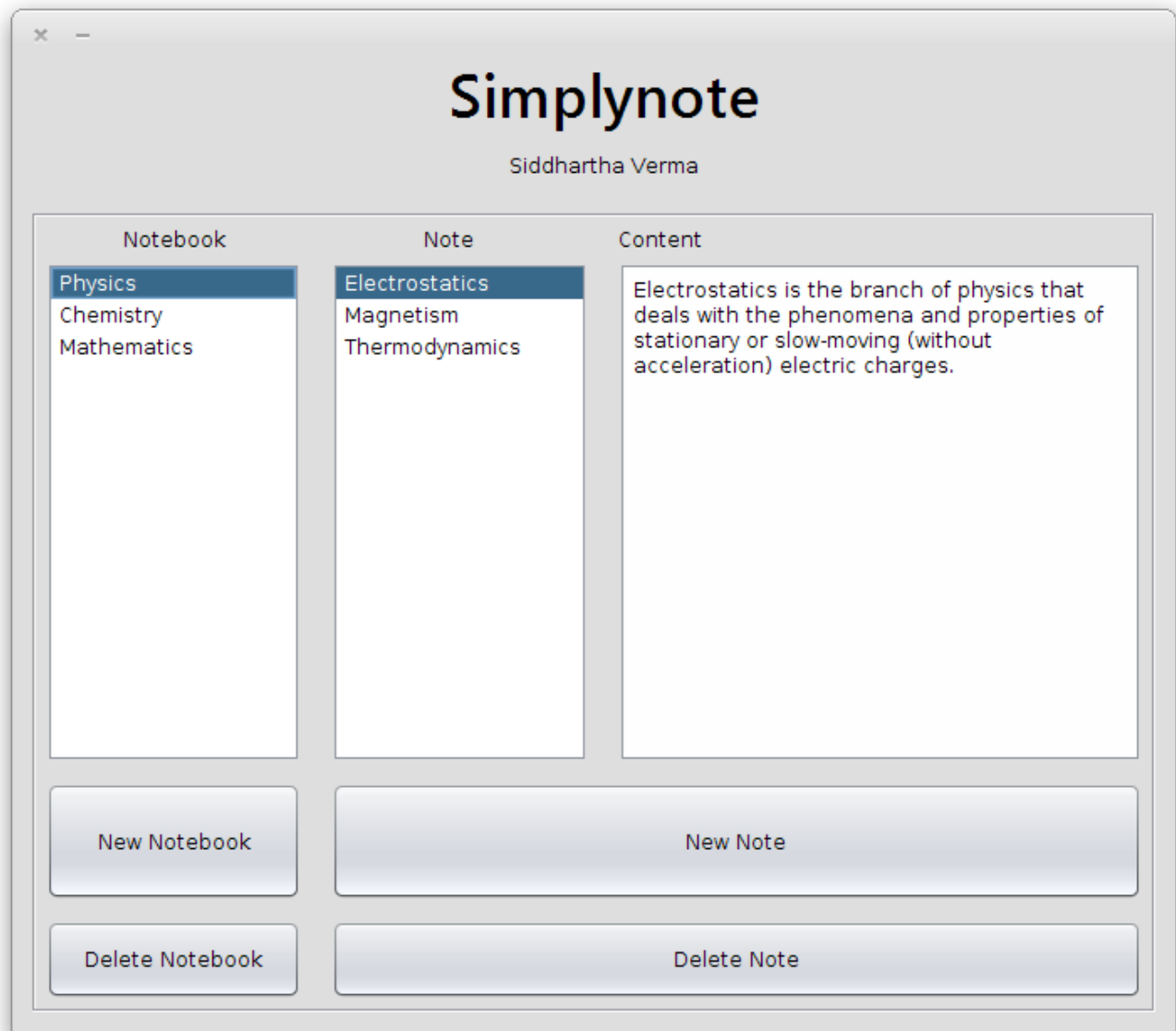


# Simplynote

Create notes with ease

Siddhartha Verma

## Frame1



```

private void NewNotebookActionPerformed(java.awt.event.ActionEvent evt) {
String nbname=JOptionPane.showInputDialog(null, "Enter the the name of your new"
    + " Notebook(Max 14 Characters)");
try{Class.forName("com.mysql.jdbc.Driver");
Connection con=DriverManager.getConnection("
    + "jdbc:mysql://localhost:3306/simplynote","root","5462");
Statement stm=con.createStatement();
ResultSet m=stm.executeQuery("select max(id) from notebook;");
m.next();
int max=m.getInt(1);
max++;
stm.executeUpdate("insert into notebook values ('"+max+"','"+nbname+"'");");
ResultSet cc=stm.executeQuery("select count(id) from notebook;");
cc.next();
int ll=cc.getInt(1);String arr2[]=new String[ll];
ResultSet rs=stm.executeQuery("select Name from notebook order by id;");
String nb;int i=0;
while(rs.next())
{
    nb=rs.getString("Name");
    arr2[i]=nb;i++;
}
final String fin[]=arr2;
notebook1.setModel(new javax.swing.AbstractListModel() {
    public int getSize() { return fin.length; }
    public Object getElementAt(int i) { return fin[i]; }
});
rs.close();
stm.close();
con.close();
}catch(Exception e){System.out.print(e);
};
}

```

```

private void NewNoteActionPerformed(java.awt.event.ActionEvent evt) {
Frame2 a=new Frame2(namdel);
namdel=notebook1.getSelectedValue().toString();
new Frame2(namdel).setVisible(true);
}

```

```

private void DeleteNoteActionPerformed(java.awt.event.ActionEvent evt) {
try{Class.forName("com.mysql.jdbc.Driver");
Connection con=DriverManager.getConnection("
    + "jdbc:mysql://localhost:3306/simplynote","root","5462");
Statement stm=con.createStatement();
String aaa=note1.getSelectedValue().toString();
stm.executeUpdate("delete from noote where title='"+aaa+"'");
namdel=notebook1.getSelectedValue().toString();
ResultSet cc=stm.executeQuery("select id from notebook "
    + "where Name='"+namdel+"'");
cc.next();
int s=cc.getInt(1);
String nb;int i=0;
ResultSet ccc=stm.executeQuery("select count(id) from noote where id="+s+");
ccc.next();
int ll=ccc.getInt(1);
String arr2[]=new String[ll];
ResultSet notes=stm.executeQuery("select title from noote where id="+s+");
while(notes.next())
{
    nb=notes.getString("title");
    arr2[i]=nb;i++;
}
final String fin[]=arr2;
note1.setModel(new javax.swing.AbstractListModel() {
    public int getSize() { return fin.length; }
    public Object getElementAt(int i) { return fin[i]; }
    });
cc.close();
stm.close();
con.close();
jTextArea1.setText("");
}catch(Exception e){};
}

```

```

private void DeleteNotebookActionPerformed(java.awt.event.ActionEvent evt) {
try{Class.forName("com.mysql.jdbc.Driver");
Connection con=DriverManager.getConnection("
    + "jdbc:mysql://localhost:3306/simplynote","root","5462");
Statement stm=con.createStatement();
ResultSet m=stm.executeQuery("select max(id) from notebook;");
m.next();int max=m.getInt(1);max++;
namdel=notebook1.getSelectedValue().toString();
ResultSet ccc=stm.executeQuery("select id from notebook where"
    + " Name='"+namdel+"'");
ccc.next();int s=ccc.getInt(1);
stm.executeUpdate("delete from noote where id="+s+");
stm.executeUpdate("delete from notebook where Name='"+namdel+"'");
ResultSet cc=stm.executeQuery("select count(id) from notebook;");
cc.next();int ll=cc.getInt(1);String arr2[]=new String[ll];
ResultSet rs=stm.executeQuery("select Name from notebook order by id;");
String nb;int i=0;
while(rs.next()){
    nb=rs.getString("Name");
    arr2[i]=nb;i++;}
final String fin[]=arr2;
notebook1.setModel(new javax.swing.AbstractListModel() {
    public int getSize() { return fin.length; }
    public Object getElementAt(int i) { return fin[i]; }
});
rs.close();stm.close();con.close();cc.close();m.close();
}catch(Exception e){}
final String fin[]={};
notel.setModel(new javax.swing.AbstractListModel() {
    public int getSize() { return fin.length; }
    public Object getElementAt(int i) { return fin[i]; }
});
jTextArea1.setText("");
}

```

```

private void notebook1MouseClicked(java.awt.event.MouseEvent evt) {
    try{Class.forName("com.mysql.jdbc.Driver");
    Connection con=DriverManager.getConnection("
        + "jdbc:mysql://localhost:3306/simplynote","root","5462");
    Statement stm=con.createStatement();
    namdel=notebook1.getSelectedValue().toString();
    ResultSet cc=stm.executeQuery("select id from notebook where Name='"+namdel+"'");
    cc.next();
    int s=cc.getInt(1);
    String nb;int i=0;
    ResultSet ccc=stm.executeQuery("select count(id) from noote where id="+s+");
    ccc.next();
    int ll=ccc.getInt(1);
    String arr2[]=new String[ll];
    ResultSet notes=stm.executeQuery("select title from noote where id="+s+");
    while(notes.next())
    {
        nb=notes.getString("title");
        arr2[i]=nb;i++;
    }
    final String fin[]=arr2;
    notel.setModel(new javax.swing.AbstractListModel() {
        public int getSize() { return fin.length; }
        public Object getElementAt(int i) { return fin[i]; }
    });
    ccc.close();
    cc.close();
    stm.close();
    con.close();
}catch(Exception e){System.out.print("Error="+e);}

    JTextArea1.setText("");
}

```

```

private void notelMouseClicked(java.awt.event.MouseEvent evt) {
    try{Class.forName("com.mysql.jdbc.Driver");
    Connection con=DriverManager.getConnection("
        + "jdbc:mysql://localhost:3306/simplynote","root","5462");
    Statement stm=con.createStatement();
    namdel=notel.getSelectedValue().toString();
    ResultSet cc=stm.executeQuery("select content from noote where|
        + " title='"+namdel+"'");
    cc.next();
    String s=cc.getString(1);
    JTextArea1.setText(s);
    cc.close();
    stm.close();
    con.close();
}catch(Exception e){System.out.print("Error="+e);}
}

```

```

private void formWindowOpened(java.awt.event.WindowEvent evt) {
ListModel dlm = new DefaultListModel();
dlm=(ListModel)notebook1.getModel();
try(Class.forName("com.mysql.jdbc.Driver");
Connection con=DriverManager.getConnection("
    + "jdbc:mysql://localhost:3306/simplynote","root","5462");
Statement stm=con.createStatement();
ResultSet m=stm.executeQuery("select count(id) from notebook;");
m.next();int l=m.getInt(1);String arr[]=new String[l];
ResultSet rs=stm.executeQuery("select Name from notebook order by id;");
String nb;int i=0;
while(rs.next()){
    nb=rs.getString("Name");
    arr[i]=nb;i++;}
final String fin[]=arr;
notebook1.setModel(new javax.swing.AbstractListModel() {
    public int getSize() { return fin.length; }
    public Object getElementAt(int i) { return fin[i]; }
});
rs.close();stm.close();con.close();m.close();
}catch(Exception e){System.out.print(e);
}
notebook1.setSelectedIndex(0);DefineNoteList();notel.setSelectedIndex(0);
try(Class.forName("com.mysql.jdbc.Driver");
Connection con=DriverManager.getConnection("
    + "jdbc:mysql://localhost:3306/simplynote","root","5462");
Statement stm=con.createStatement();
namdel=notel.getSelectedValue().toString();
ResultSet cc=stm.executeQuery("select content from noote where "
    + "title='"+namdel+"'");
cc.next();String s=cc.getString(1);jTextArea1.setText(s);
cc.close();
stm.close();
con.close();
}catch(Exception e){System.out.print("Error="+e);}
}

```

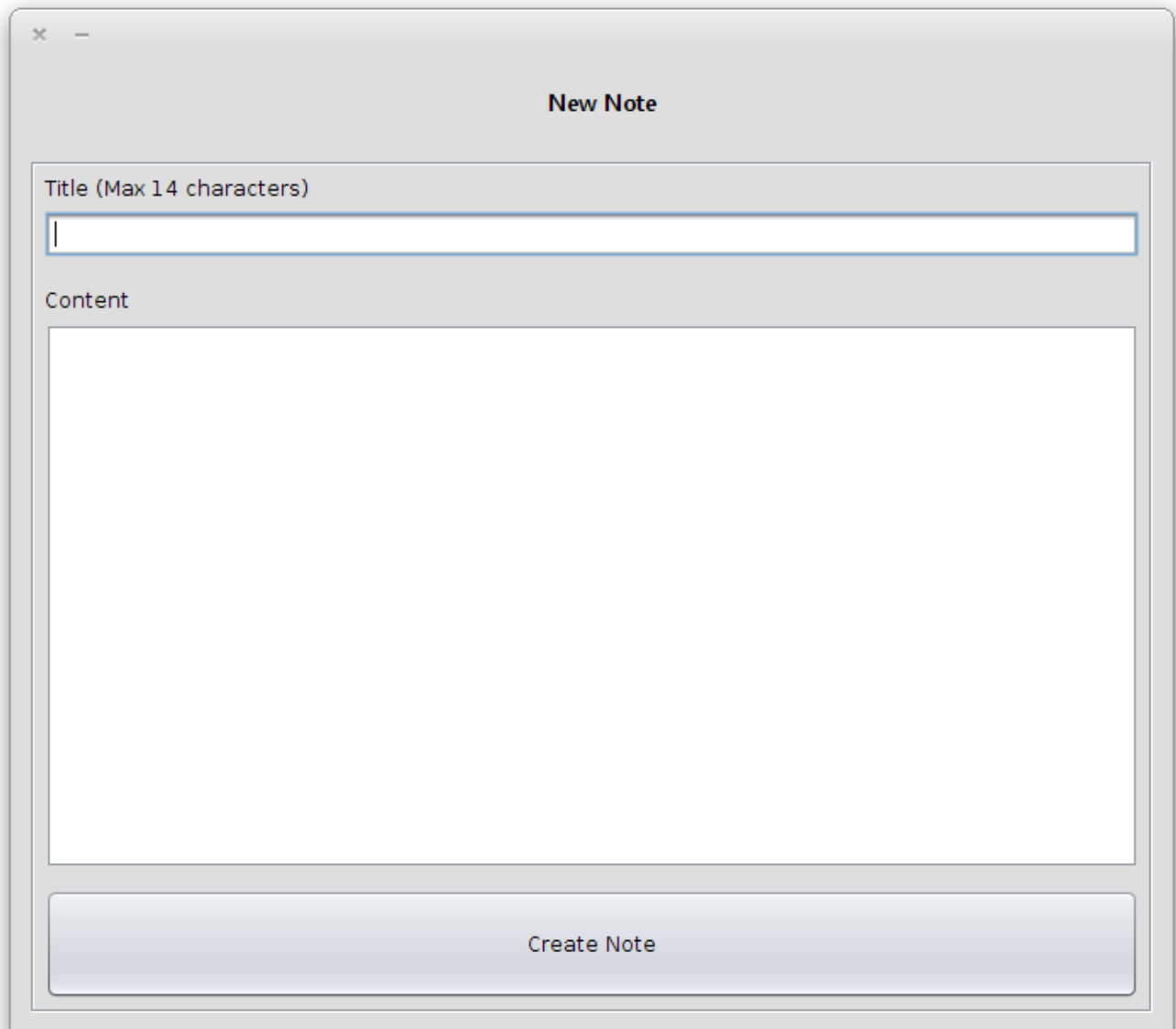
```

    public void DefinellNoteList()
    {
        try{Class.forName("com.mysql.jdbc.Driver");
Connection con=DriverManager.getConnection("
        + "jdbc:mysql://localhost:3306/simplynote","root","5462");
Statement stm=con.createStatement();
namdel=notebook1.getSelectedValue().toString();
ResultSet cc=stm.executeQuery("select id from notebook where"
        + " Name='"+namdel+"'");
cc.next();
int s=cc.getInt(1);
String nb;int i=0;
ResultSet ccc=stm.executeQuery("select count(id) from noote where id="+s+");
ccc.next();
int ll=ccc.getInt(1);
String arr2[]=new String[ll];
ResultSet notes=stm.executeQuery("select title from noote where id="+s+");
while(notes.next())
{
    nb=notes.getString("title");
    arr2[i]=nb;i++;
}
final String fin[]=arr2;
notel.setModel(new javax.swing.AbstractListModel() {
    public int getSize() { return fin.length; }
    public Object getElementAt(int i) { return fin[i]; }
});
cc.close();
stm.close();
con.close();
}catch(Exception e){System.out.println(e);
};
}

```



## Frame2



A dialog box titled "New Note" with a standard window header (close, maximize, and minimize buttons). The dialog contains a title input field labeled "Title (Max 14 characters)" and a large text area labeled "Content". At the bottom is a "Create Note" button.

× —

**New Note**

Title (Max 14 characters)

|

Content

Create Note

```

private void CreateNoteActionPerformed(java.awt.event.ActionEvent evt) {
String sub=jTextField1.getText();
String not=JTextArea2.getText();
    try{Class.forName("com.mysql.jdbc.Driver");
Connection con=DriverManager.getConnection(""
    + "jdbc:mysql://localhost:3306/simplynote","root","5462");
Statement stm=con.createStatement();
ResultSet m=stm.executeQuery("select id from notebook where Name=\""+dee+"\"");
while(m.next())
{int id=m.getInt(1);
stm.executeUpdate("insert into noote values("+id+", '"+sub+"', '"+not+"')");}
m.close();
stm.close();
con.close();
}catch(Exception e){System.out.print("Error="+e);}
    try {
        new Frame1().DefineNoteList();
    } catch (Exception ex) {
        System.out.println(ex);
    }
dispose();
}

```

## Description of Tables

Notebook

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	
Name	varchar(14)	NO	UNI	NULL	

Noote

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	
title	varchar(14)	NO	PRI	NULL	
content	varchar(5000)	YES		NULL	