**Programa Triangulo de Pascal**

**Alumno:** Torres Martínez Iván

**Código**

package pe.unmsm;

public class TrianguloPascal extends javax.swing.JFrame {

public TrianguloPascal() {

initComponents();

this.setLocationRelativeTo(null);//aparece la ventana en el centro

}

@SuppressWarnings("unchecked")

// <editor-fold defaultstate="collapsed" desc="Generated Code">

private void initComponents() {

jPanel1 = new javax.swing.JPanel();

jLabel1 = new javax.swing.JLabel();

jLabel2 = new javax.swing.JLabel();

jTextField1 = new javax.swing.JTextField();

Btn\_Calcular = new javax.swing.JButton();

jScrollPane1 = new javax.swing.JScrollPane();

jTable1 = new javax.swing.JTable();

jLabel3 = new javax.swing.JLabel();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT\_ON\_CLOSE);

setTitle("Triangulo de Pascal");

setResizable(false);

jLabel1.setFont(new java.awt.Font("Times New Roman", 1, 18)); // NOI18N

jLabel1.setText("TRIANGULO DE PASCAL");

jLabel2.setText("Ingrese el nivel del triangulo:");

Btn\_Calcular.setFont(new java.awt.Font("Times New Roman", 0, 14)); // NOI18N

Btn\_Calcular.setText("Calcular");

Btn\_Calcular.addMouseListener(new java.awt.event.MouseAdapter() {

public void mouseClicked(java.awt.event.MouseEvent evt) {

Btn\_CalcularMouseClicked(evt);

}

});

javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);

jPanel1.setLayout(jPanel1Layout);

jPanel1Layout.setHorizontalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(jPanel1Layout.createSequentialGroup()

.addContainerGap()

.addComponent(jLabel2)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, 29, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addGap(30, 30, 30)

.addComponent(Btn\_Calcular)

.addContainerGap(javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE))

.addGroup(javax.swing.GroupLayout.Alignment.TRAILING, jPanel1Layout.createSequentialGroup()

.addContainerGap(javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addComponent(jLabel1)

.addGap(173, 173, 173))

);

jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(jPanel1Layout.createSequentialGroup()

.addContainerGap()

.addComponent(jLabel1)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

.addComponent(jLabel2)

.addComponent(jTextField1, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addComponent(Btn\_Calcular))

.addContainerGap(javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE))

);

jTable1.setModel(new javax.swing.table.DefaultTableModel(

new Object [][] {

{null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null},

{null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null},

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{null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null, null}

},

new String [] {

"", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", "", ""

}

));

jScrollPane1.setViewportView(jTable1);

jLabel3.setText("Torres Martínez Iván");

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());

getContentPane().setLayout(layout);

layout.setHorizontalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(layout.createSequentialGroup()

.addGroup(layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addComponent(jScrollPane1, javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.DEFAULT\_SIZE, 627, Short.MAX\_VALUE)

.addComponent(jPanel1, javax.swing.GroupLayout.Alignment.TRAILING, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE)

.addGroup(layout.createSequentialGroup()

.addComponent(jLabel3)

.addGap(0, 0, Short.MAX\_VALUE)))

.addContainerGap())

);

layout.setVerticalGroup(

layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(layout.createSequentialGroup()

.addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED\_SIZE, javax.swing.GroupLayout.DEFAULT\_SIZE, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addComponent(jScrollPane1, javax.swing.GroupLayout.PREFERRED\_SIZE, 259, javax.swing.GroupLayout.PREFERRED\_SIZE)

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)

.addComponent(jLabel3)

.addContainerGap(javax.swing.GroupLayout.DEFAULT\_SIZE, Short.MAX\_VALUE))

);

pack();

}// </editor-fold>

private void Btn\_CalcularMouseClicked(java.awt.event.MouseEvent evt) {

String cadena;

int n;

cadena=jTextField1.getText();

//System.out.println(cadena);

n=Integer.parseInt(cadena);

llenado(n);

}

public void llenado(int n){

int m;

for(int i=0;i<n;i++){

jTable1.setValueAt(1,0+i,14-i-1);

jTable1.setValueAt(1,0+i,14+i-1);

}

for(int i=1;i<=n;i++){

int acum=13,acum2=13;

if(i%2==0){

m=i/2;

for(int j=m-1;j>=1;j--){

jTable1.setValueAt((int)combi(i-1,j),i-1,acum-1);//para el lado izquierdo

jTable1.setValueAt((int)combi(i-1,j),i-1,acum2+1);//lado derecho

acum=acum-2;

acum2=acum2+2;

}

}else{

m=(i+1)/2;

jTable1.setValueAt((int)combi(i-1,m-1),i-1,13);//para los valores del medio

for(int j=m-1;j>=1;j--){

jTable1.setValueAt((int)combi(i-1,j),i-1,acum);//para el lado izquierdo

jTable1.setValueAt((int)combi(i-1,j),i-1,acum2);//lado derecho

acum=acum-2;

acum2=acum2+2;

}

}

}

}

public double fact(int n){

int aux=1;

for(int i=2;i<=n;i++){

aux=aux\*i;

}

return aux;

}

public double combi(int x, int y){

double res=1;

res=fact(x)/(fact(y)\*fact(x-y));

return res;

}

public static void main(String args[]) {

java.awt.EventQueue.invokeLater(new Runnable() {

public void run() {

new TrianguloPascal().setVisible(true);

}

});

}

// Variables declaration - do not modify

private javax.swing.JButton Btn\_Calcular;

private javax.swing.JLabel jLabel1;

private javax.swing.JLabel jLabel2;

private javax.swing.JLabel jLabel3;

private javax.swing.JPanel jPanel1;

private javax.swing.JScrollPane jScrollPane1;

private javax.swing.JTable jTable1;

private javax.swing.JTextField jTextField1;

// End of variables declaration

}

Pantallazo



