

## Código Fuente

```
1 package Controller;
2 /**
3  * @author Victor Lavalle
4  * This project was made base in:
5  * http://lineadecodigo.com/java/graficos-de-torta-y-barras-con-jfreechart/
6  * http://panamahitek.com/graficando-en-java-con-jfreechart/
7  */
8 import Model.*;
9 import View.MainVotingFRM;
10 import javax.swing.JFrame;
11
12 public class Controller {
13     private MainVotingFRM view;
14     private Nominees Opt1;
15     private Nominees Opt2;
16     private Nominees Opt3;
17     private BarGraph bars;
18     private CircleGraph circle;
19     private JFrame windowBars;
20     private JFrame windowCircle;
21
22     //Methods Get
23     public JFrame getWindowBars() {return windowBars;}
24     public JFrame getWindowCircle() { return windowCircle; }
25     public BarGraph getBars() { return bars; }
26     public CircleGraph getCircle() {return circle; }
27     public MainVotingFRM getView() { return view; }
28     public Nominees getOpt1() { return Opt1; }
29     public Nominees getOpt2() { return Opt2; }
30     public Nominees getOpt3() {return Opt3; }
31
32     //Methods Set
33     public void setWindowBars(JFrame windowBars) { this.windowBars = windowBars; }
34     public void setWindowCircle(JFrame windowCircle) {this.windowCircle
=windowCircle; }
35     public void setBars(BarGraph bars) { this.bars = bars;}
36     public void setCircle(CircleGraph circle) { this.circle = circle; }
37     public void setView(MainVotingFRM view) { this.view = view; }
38     public void setOpt1(Nominees Opt1) { this.Opt1 = Opt1;}
39     public void setOpt2(Nominees Opt2) { this.Opt2 = Opt2; }
40     public void setOpt3(Nominees Opt3) { this.Opt3 = Opt3; }
41
42     //Constructor of good luck for the graphs :)
43     public void GenerateGraph1(){ }
44     public void GenerateGraph2(){ }
45
46     /*
47     *Functions that work with the 3 buttons of the mainframe
48     *to pass parameters to create the graphs
49     */
50     public void Vote1(){
51         this.Opt1.vote();
52         this.bars.setWindow(windowBars);
53         this.circle.setWindow(windowCircle);
54         this.bars.data(Opt1, Opt2, Opt3);
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55         this.circle.data(Opt1, Opt2, Opt3);
56     }
57
58     public void Vote2(){
59         this.Opt2.vote();
60         this.bars.setWindow(windowBars);
61         this.circle.setWindow(windowCircle);
62         this.bars.data(Opt1, Opt2, Opt3);
63         this.circle.data(Opt1, Opt2, Opt3);
64     }
65
66     public void Vote3(){
67         this.Opt3.vote();
68         this.bars.setWindow(windowBars);
69         this.circle.setWindow(windowCircle);
70         this.bars.data(Opt1, Opt2, Opt3);
71         this.circle.data(Opt1, Opt2, Opt3);
72     }
73 }

```

```

1  package Model;
2  /**
3   * @author Victor Lavalle
4   */
5  import java.awt.Color;
6  import javax.swing.JFrame;
7  import org.jfree.chart.ChartFactory;
8  import org.jfree.chart.ChartPanel;
9  import org.jfree.chart.JFreeChart;
10 import org.jfree.chart.plot.PlotOrientation;
11 import org.jfree.data.category.DefaultCategoryDataset;
12
13 public class BarGraph {
14
15     JFrame Window;
16     JFreeChart Graph;
17     public static final Color Lime = new Color(0x80,0xFF,0x00);
18
19     //Methods Get & Set
20     public JFrame getWindow() { return Window;}
21     public JFreeChart getGraph() {return Graph; }
22
23     public void setWindow(JFrame Window) {this.Window = Window;}
24     public void setGraph(JFreeChart Graph) {this.Graph = Graph;}
25
26     //Function that conatins the data fot the graph
27     public void data(Nominees Opt1,Nominees Opt2,Nominees Opt3){
28
29         DefaultCategoryDataset Data = new DefaultCategoryDataset();
30         Data.addValue(Opt1.getVotes(), Opt1.getName(), Opt1.getName());
31         Data.addValue(Opt2.getVotes(), Opt2.getName(), Opt2.getName());
32         Data.addValue(Opt3.getVotes(), Opt3.getName(), Opt3.getName());
33
34         Graph = ChartFactory.createBarChart3D("Results", "Nominees", "Votes",
Data,PlotOrientation.VERTICAL, true, true, false);
35         Graph.setBackgroundPaint(Lime);
36         ChartPanel Panel = new ChartPanel(Graph);
37         Window.getContentPane().add(Panel);
38         Window.pack();
39         Window.setVisible(true);

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40         Window.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
41     }
42 }

```

```

1  package Model;
2  /**
3   * @author Victor Lavalle
4   */
5  import java.awt.Color;
6  import javax.swing.JFrame;
7  import org.jfree.chart.ChartFactory;
8  import org.jfree.chart.ChartPanel;
9  import org.jfree.chart.JFreeChart;
10 import org.jfree.data.general.DefaultPieDataset;
11
12 public class CircleGraph {
13     JFrame Window;
14     JFreeChart Graph;
15     public static final Color Lime = new Color(0x80,0xFF,0x00);
16     //Methods Get & Set
17     public JFrame getWindow() { return Window;}
18     public JFreeChart getGraph() {return Graph;}
19
20     public void setWindow(JFrame Window) { this.Window = Window;}
21     public void setGraph(JFreeChart Graph) { this.Graph = Graph;}
22
23     //Function that contains the data for the graph
24     public void data(Nominees Opt1,Nominees Opt2,Nominees Opt3){
25
26         DefaultPieDataset Data = new DefaultPieDataset();
27         Data.setValue(Opt1.getName(), Opt1.getVotes());
28         Data.setValue(Opt2.getName(), Opt2.getVotes());
29         Data.setValue(Opt3.getName(), Opt3.getVotes());
30
31         Graph = ChartFactory.createPieChart3D("Results", Data);
32         Graph.setBackgroundPaint(Lime);
33         ChartPanel Panel = new ChartPanel(Graph);
34         Window.getContentPane().add(Panel);
35         Window.pack();
36         Window.setVisible(true);
37         Window.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
38     }
39 }

```

```

1  package Model;
2  /**
3   * @author Victor Lavalle
4   */
5  public class Nominees {
6
7     private String Name;
8     private long Votes;
9
10     //Constructor
11     public Nominees(String Name) {
12         this.Name = Name;
13         this.Votes = 0;
14     }
15 }

```

```

16 //Methods Get & Set
17 public String getName() { return Name;}
18 public long getVotes() { return Votes;}
19
20 public void setName(String Name) {this.Name = Name;}
21 public void setVotes(long Votes) {this.Votes = Votes;}
22
23 //Function to add votes account
24 public void vote(){
25     this.Votes= this.Votes+1;
26 }
27 }

```

```

1 package View;
2 /**
3  * @author Victor Lavalle
4  */
5 import Controller.Controller;
6 import javax.swing.JButton;
7 import javax.swing.JLabel;
8
9 public final class MainVotingFRM extends javax.swing.JFrame {
10
11     private Controller ctrl;
12
13     //Methods Get & Set
14     public Controller getCtrl() {return ctrl; }
15     public JButton getVote() { return Vote;}
16     public JButton getVote2() { return Vote2; }
17     public JButton getVote3() { return Vote3; }
18     public JLabel getName1() { return Name1;}
19     public JLabel getName2() { return Name2;}
20     public JLabel getName3() { return Name3;}
21
22     public void setCtrl(Controller ctrl) { this.ctrl = ctrl;}
23     public void setVote(JButton Vote) { this.Vote = Vote;}
24     public void setVote2(JButton Vote2) { this.Vote2 = Vote2; }
25     public void setVote3(JButton Vote3) { this.Vote3 = Vote3; }
26     public void setName1(JLabel Name1) { this.Name1 = Name1; }
27     public void setName2(JLabel Name2) { this.Name2 = Name2;}
28     public void setName3(JLabel Name3) {this.Name3 = Name3; }
29
30     public MainVotingFRM() {
31         initComponents();
32         this.setResizable(false);
33         this.setLocation(480,460);
34         this.setTitle("Voting System");
35     }
36
37     @SuppressWarnings("unchecked")
38     // <editor-fold defaultstate="collapsed" desc="Generated Code">
39
40     private void initComponents() {
41
42         jPanel1 = new javax.swing.JPanel();
43         Name1 = new javax.swing.JLabel();
44         Name2 = new javax.swing.JLabel();
45         Name3 = new javax.swing.JLabel();
46         Title = new javax.swing.JLabel();
47         Credits = new javax.swing.JLabel();

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47     ZoomIMG = new javax.swing.JLabel();
48     DiscordIMG = new javax.swing.JLabel();
49     TeamsIMG = new javax.swing.JLabel();
50     Vote = new javax.swing.JButton();
51     Vote2 = new javax.swing.JButton();
52     Vote3 = new javax.swing.JButton();
53
54     setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
55     setCursor(new java.awt.Cursor(java.awt.Cursor.DEFAULT_CURSOR));
56     getContentPane().setLayout(new
org.netbeans.lib.awtextra.AbsoluteLayout());
57
58     jPanel1.setBackground(new java.awt.Color(32, 33, 36));
59     jPanel1.setForeground(new java.awt.Color(255, 255, 255));
60     jPanel1.setCursor(new java.awt.Cursor(java.awt.Cursor.DEFAULT_CURSOR));
61     jPanel1.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());
62
63     Name1.setForeground(new java.awt.Color(255, 255, 255));
64     Name1.setText("a) Discord");
65     jPanel1.add(Name1, new org.netbeans.lib.awtextra.AbsoluteConstraints(40,
50, -1, -1));
66
67     Name2.setForeground(new java.awt.Color(255, 255, 255));
68     Name2.setText("b) Microsoft Teams");
69     jPanel1.add(Name2, new org.netbeans.lib.awtextra.AbsoluteConstraints(40,
100, -1, -1));
70
71     Name3.setForeground(new java.awt.Color(255, 255, 255));
72     Name3.setText("c) Zoom");
73     jPanel1.add(Name3, new org.netbeans.lib.awtextra.AbsoluteConstraints(40,
150, -1, -1));
74
75     Title.setFont(new java.awt.Font("Tahoma", 1, 12)); // NOI18N
76     Title.setForeground(new java.awt.Color(255, 255, 255));
77     Title.setText("WICH ONE DO YOU PREFER?");
78     jPanel1.add(Title, new org.netbeans.lib.awtextra.AbsoluteConstraints(90,
10, 180, 20));
79
80     Credits.setFont(new java.awt.Font("Dialog", 2, 12)); // NOI18N
81     Credits.setForeground(new java.awt.Color(51, 51, 51));
82     Credits.setText("By Victor Lavalle");
83     jPanel1.add(Credits, new
org.netbeans.lib.awtextra.AbsoluteConstraints(120, 180, -1, -1));
84
85     ZoomIMG.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Resources/Zoom1.png"))); // NOI18N
86     jPanel1.add(ZoomIMG, new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 150, 20, 20));
87
88     DiscordIMG.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Resources/Discord.png"))); //
NOI18N
89     jPanel1.add(DiscordIMG, new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 50, 20, 20));
90
91     TeamsIMG.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/Resources/Teams.png"))); // NOI18N
92     jPanel1.add(TeamsIMG, new
org.netbeans.lib.awtextra.AbsoluteConstraints(10, 100, 20, 20));
93
94     Vote.setBackground(new java.awt.Color(187, 134, 252));

```

```

95     Vote.setFont(new java.awt.Font("Consolas", 1, 14)); // NOI18N
96     Vote.setText("VOTE");
97     Vote.setCursor(new java.awt.Cursor(java.awt.Cursor.HAND_CURSOR));
98     Vote.addActionListener(new java.awt.event.ActionListener() {
99         public void actionPerformed(java.awt.event.ActionEvent evt) {
100             VoteActionPerformed(evt);
101         }
102     });
103     jPanel1.add(Vote, new org.netbeans.lib.awtextra.AbsoluteConstraints(260,
40, -1, 30));
104
105     Vote2.setBackground(new java.awt.Color(187, 134, 252));
106     Vote2.setFont(new java.awt.Font("Consolas", 1, 14)); // NOI18N
107     Vote2.setText("VOTE");
108     Vote2.setCursor(new java.awt.Cursor(java.awt.Cursor.HAND_CURSOR));
109     Vote2.addActionListener(new java.awt.event.ActionListener() {
110         public void actionPerformed(java.awt.event.ActionEvent evt) {
111             Vote2ActionPerformed(evt);
112         }
113     });
114     jPanel1.add(Vote2, new org.netbeans.lib.awtextra.AbsoluteConstraints(260,
90, -1, 30));
115
116     Vote3.setBackground(new java.awt.Color(187, 134, 252));
117     Vote3.setFont(new java.awt.Font("Consolas", 1, 14)); // NOI18N
118     Vote3.setText("VOTE");
119     Vote3.setCursor(new java.awt.Cursor(java.awt.Cursor.HAND_CURSOR));
120     Vote3.addActionListener(new java.awt.event.ActionListener() {
121         public void actionPerformed(java.awt.event.ActionEvent evt) {
122             Vote3ActionPerformed(evt);
123         }
124     });
125     jPanel1.add(Vote3, new org.netbeans.lib.awtextra.AbsoluteConstraints(260,
140, -1, 30));
126
127     getContentPane().add(jPanel1, new
org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 340, 200));
128
129     pack();
130 } // </editor-fold>
131
132 private void VoteActionPerformed(java.awt.event.ActionEvent evt) {
133
134     // TODO add your handling code here:
135     this.ctrl.Vote1();
136 }
137
138 private void Vote2ActionPerformed(java.awt.event.ActionEvent evt) {
139
140     // TODO add your handling code here:
141     this.ctrl.Vote2();
142 }
143
144 private void Vote3ActionPerformed(java.awt.event.ActionEvent evt) {
145
146     // TODO add your handling code here:
147     this.ctrl.Vote3();
148 }
149
150 /**
151  * @param args the command line arguments

```

```

149     */
150     public static void main(String args[]) {
151         /* Create and display the form */
152         java.awt.EventQueue.invokeLater(new Runnable() {
153             public void run() {
154                 new MainVotingFRM().setVisible(true);
155             }
156         });
157     }
158
159     // Variables declaration - do not modify
160     private javax.swing.JLabel Credits;
161     private javax.swing.JLabel DiscordIMG;
162     private javax.swing.JLabel Name1;
163     private javax.swing.JLabel Name2;
164     private javax.swing.JLabel Name3;
165     private javax.swing.JLabel TeamsIMG;
166     private javax.swing.JLabel Title;
167     private javax.swing.JButton Vote;
168     private javax.swing.JButton Vote2;
169     private javax.swing.JButton Vote3;
170     private javax.swing.JLabel ZoomIMG;
171     private javax.swing.JPanel jPanel1;
172     // End of variables declaration
173 }
174

```

```

1 package Launcher;
2 /**
3  * @author Victor Lavalle
4  */
5 import Controller.Controller;
6 import Model.*;
7 import View.*;
8 import javax.swing.JFrame;
9
10 public class Launcher {
11
12     public static MainVotingFRM view;
13     public static JFrame windowBars;
14     public static JFrame windowCircle;
15     public static Nominees opt1;
16     public static Nominees opt2;
17     public static Nominees opt3;
18     public static Controller ctrl;
19     public static BarGraph bars;
20     public static CircleGraph circle;
21
22     public static void main(String[] args) {
23
24         opt1 = new Nominees("Discord");
25         opt2 = new Nominees("Teams");
26         opt3 = new Nominees("Zoom");
27
28         bars= new BarGraph();
29         circle= new CircleGraph();
30         windowBars = new JFrame();
31         windowCircle = new JFrame();
32         ctrl= new Controller();
33         view = new MainVotingFRM();

```

```

34
35         //Controller
36         ctrl.setOpt1(opt1);
37         ctrl.setOpt2(opt2);
38         ctrl.setOpt3(opt3);
39         ctrl.setView(view);
40         ctrl.setBars(bars);
41         ctrl.setCircle(circle);
42         ctrl.setWindowBars(windowBars);
43         ctrl.setWindowCircle(windowCircle);
44         view.setCtrl(ctrl);
45
46         //Set the size of the windows that contains each graphs
47         windowCircle.setSize(300,300);
48         windowBars.setSize(300,300);
49
50         //Set the location of the windows once a vote is made
51         windowCircle.setLocation(-2,0);
52         windowBars.setLocation(681,0);
53         windowCircle.setVisible(true);
54         windowBars.setVisible(true);
55         view.setVisible(true);
56     }
57 }

```

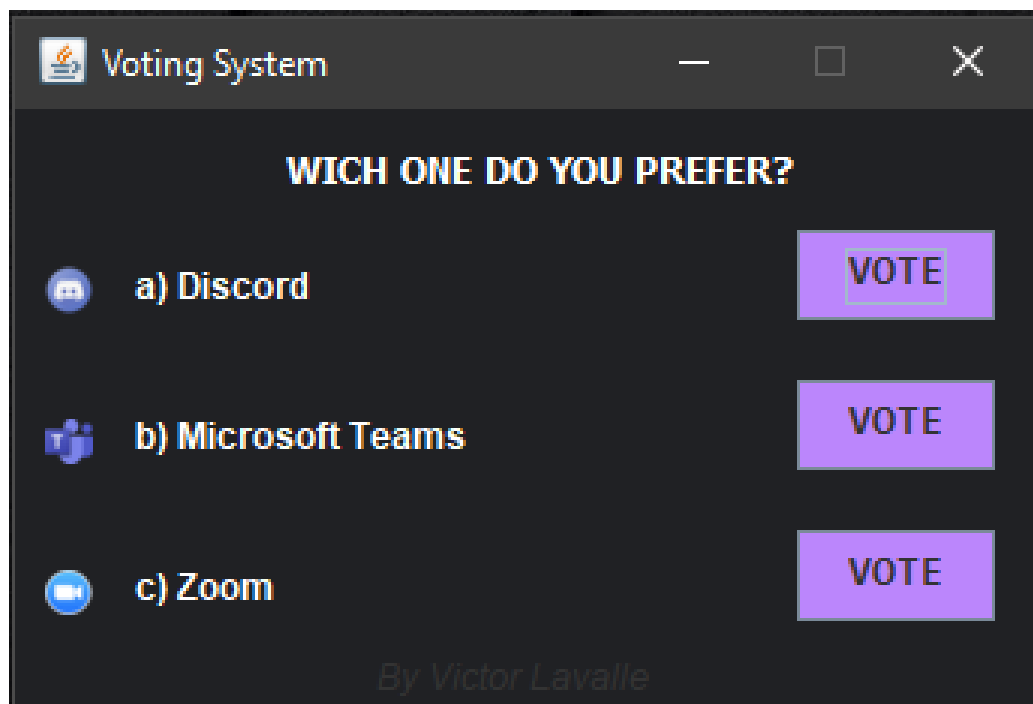
*Librerías Externas Utilizadas:*

- Jcommon-1.0.23
- JfreeChart-1.0.19

<https://sourceforge.net/projects/jfreechart/files/1.0/JFreeChart/>

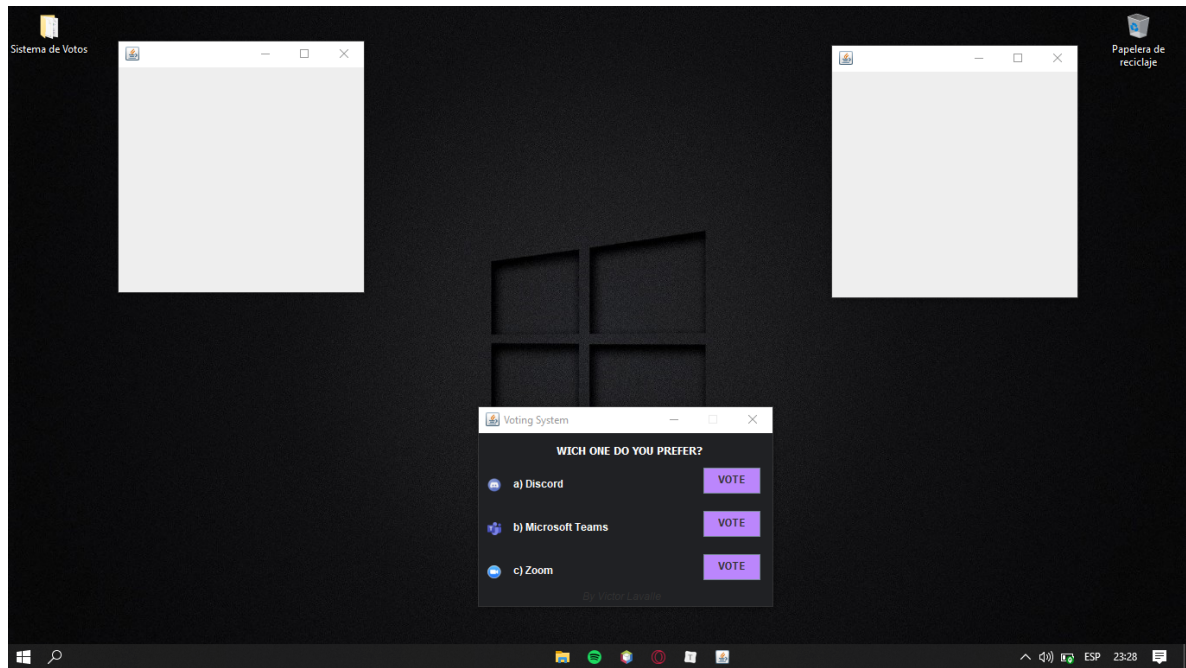
## Ejecución

Frame Principal

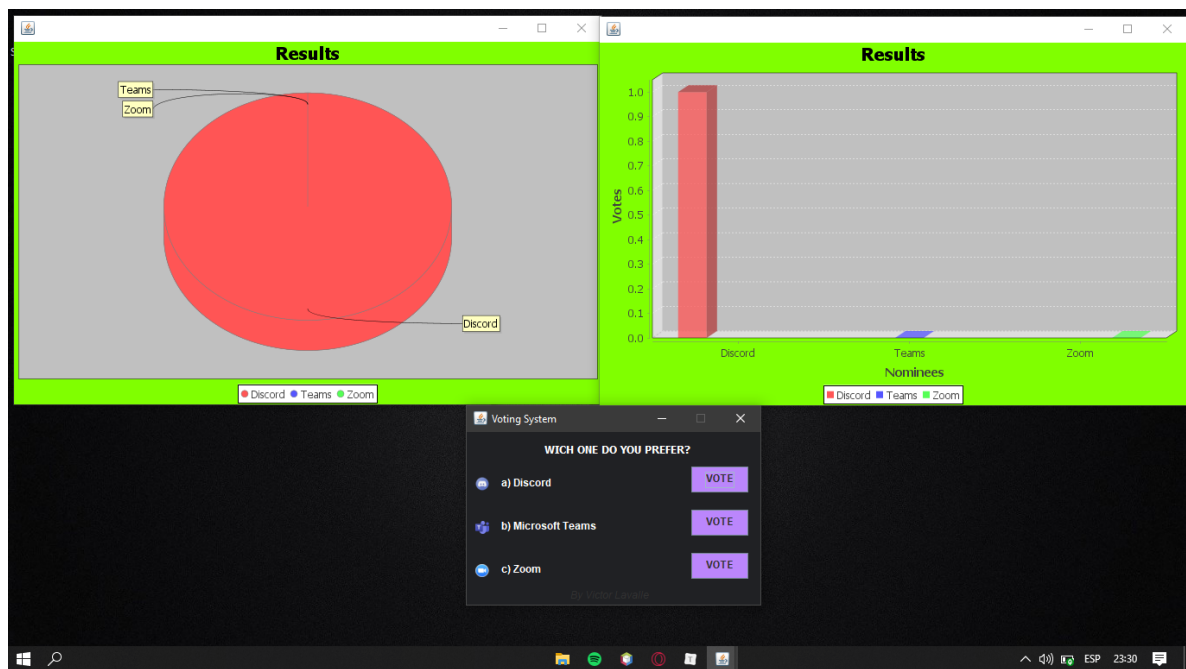




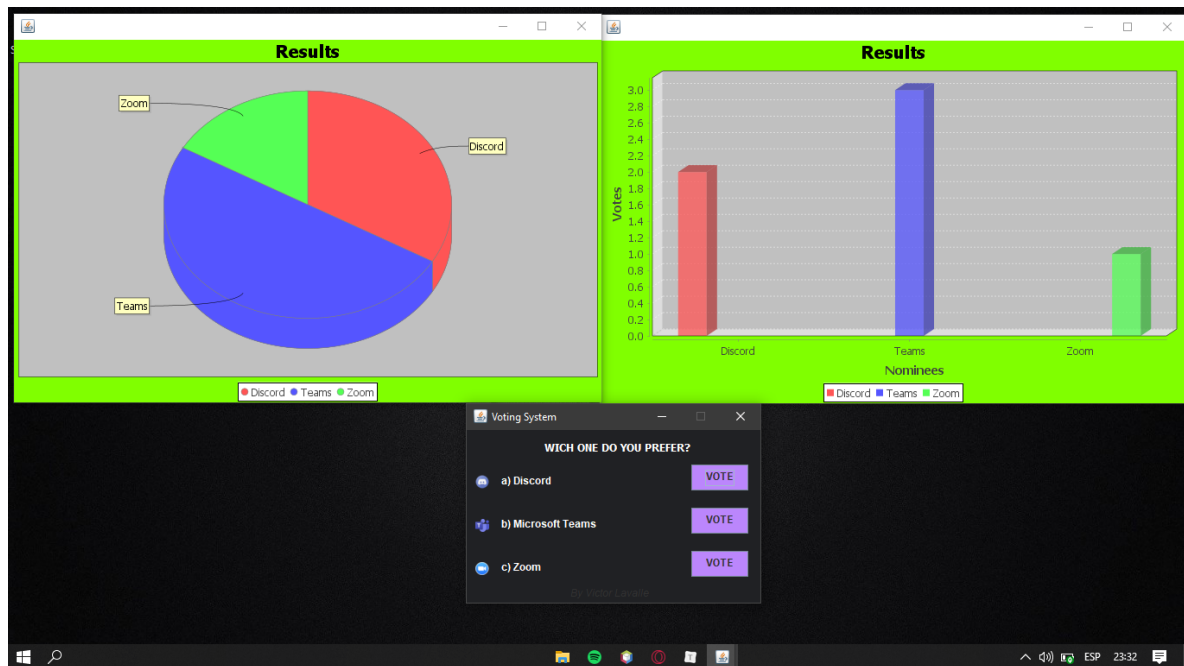
Al ejecutarse por primera vez se muestra así:



Una vez que se ha votado se generan las ventanas secundarias:



Podemos seguir interactuando con los votos y las gráficas se irán actualizando en tiempo real



**Link de video de demostración:**

*(Recomendado: Verlo en FullScreen)*

<https://drive.google.com/open?id=17My7s0tnyO68KntyU9IWxfou67Mtoyhq>