



# UNIVERSIDAD MARIANO GALVEZ

Facultad de Ingeniería en Sistemas

**Curso:**

**Calculo II**

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**Proyecto Final**

**Fecha de Entrega:**

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## INTRODUCCION

El proyecto presentado a continuación contiene derivas e integrales vistos en clase por lo tanto el mismo está programado con el lenguaje de JAVA y esta misma contiene 6 paneles con las que pueden calcular los teoremas sin necesidad de calcularlo manualmente porque el mismo las resuelve al llenar las casillas con las cantidades a resoluciones

Se mostrará también el código que hace posible el funcionamiento de este y capturas de cada uno de los campos de dicho proyecto.

## CODIGO DEL PROGRAMA

The screenshot shows the Apache NetBeans IDE 12.4 interface. The title bar reads "AnyDesk 308263931 - Calcu\_derivadas - Apache NetBeans IDE 12.4". The main window displays the source code for the "CalcuDeri" class. The code implements a JFrame with three text fields (Expol, Exp2, nl) and a button (resultado). It handles the "ResultActionPerfomed" event to calculate the result based on the values in the text fields. The code uses integer parsing and string concatenation to build the result string.

```
1 package derivadas;
2
3 import java.awt.Color;
4
5 /**
6 * 
7 * @author Werner
8 */
9
10 public class CalcuDeri extends javax.swing.JFrame {
11     String sign="";
12
13     int XOUSE, YOUSE;
14
15     public CalcuDeri() {
16         initComponents();
17     }
18
19     @SuppressWarnings("unchecked")
20     // Generated Code
21     private void ResultActionPerformed(java.awt.event.ActionEvent evt) {
22         int n0=0, n2=0, n3, resul=0;
23
24         n = Integer.parseInt(Expol.getText());
25         n2 = Integer.parseInt(Exp2.getText()) - 1;
26         n3 = Integer.parseInt(nl.getText());
27
28         resul=n+n3;
29
30         if(n2==1){
31             Resultado.setText("f'(x)= " + String.valueOf(resul) + "X");
32         }
33         else if(n2==0){
34             Resultado.setText("f'(x)= " + String.valueOf(resul));
35         }
36     }
37
38     // Variables declaration - do not modify//GEN-BEGIN:variables
39     private javax.swing.JTextField Exp1;
40     private javax.swing.JTextField Exp2;
41     private javax.swing.JTextField nl;
42     private javax.swing.JButton resultado;
43     // End of variables declaration//GEN-END:variables
44
45     private void FormasActionPerformed(java.awt.event.ActionEvent evt) {
46         switch (Formas.getSelectedIndex()){
47             case 0:
48                 Formas.setLocation(90, 200);
49
50                 uno.setVisible(false);
51                 Dos.setVisible(false);
52                 Tres.setVisible(false);
53                 Cuatro.setVisible(false);
54                 Cinco.setVisible(false);
55
56                 break;
57             case 1:
58                 Formas.setLocation(90, 30);
59
60                 uno.setVisible(true);
61                 Dos.setVisible(true);
62                 Tres.setVisible(true);
63                 Cuatro.setVisible(true);
64                 Cinco.setVisible(true);
65
66         }
67     }
68
69 }
```

The screenshot shows the continuation of the source code for the "CalcuDeri" class. The code handles the "FormasActionPerformed" event, which changes the location of the "Formas" component based on the selected index. It also manages the visibility of five buttons (uno, Dos, Tres, Cuatro, Cinco) depending on the selected form. The code uses standard Java Swing components and logic to achieve this functionality.

```
64
65
66     private void FormasActionPerformed(java.awt.event.ActionEvent evt) {
67         switch (Formas.getSelectedIndex()){
68             case 0:
69                 Formas.setLocation(90, 200);
70
71                 uno.setVisible(false);
72                 Dos.setVisible(false);
73                 Tres.setVisible(false);
74                 Cuatro.setVisible(false);
75                 Cinco.setVisible(false);
76
77                 break;
78             case 1:
79                 Formas.setLocation(90, 30);
80
81                 uno.setVisible(true);
82                 Dos.setVisible(true);
83                 Tres.setVisible(true);
84                 Cuatro.setVisible(true);
85                 Cinco.setVisible(true);
86
87         }
88     }
89
90 }
```

The screenshot shows the NetBeans IDE interface with the following details:

- Title Bar:** AnyDesk 30826931
- Toolbar:** Standard NetBeans toolbar with icons for file operations, search, and help.
- Project Explorer:** Shows the project structure for "Calcu\_derivadas - Apache NetBeans IDE 12.4".
- Code Editor:** Displays Java code for the "ResultActionPerfomed" method in the "Calcu\_derivadas.java" file. The code handles button presses for digits 0-9 and operators +, -, \*, /, and =. It uses a switch statement to determine the digit value and then updates UI components like "uno", "Dos", "Inte", "Cuatro", and "Cinco" based on the digit value.
- Toolbars:** Standard Java development toolbars for navigation and code editing.
- Status Bar:** Shows system information including "Checking for external changes", "Suspended", "(1 more...)", "69:32", "11°C Despejado", "03:29 PM", and "7/11/2021".

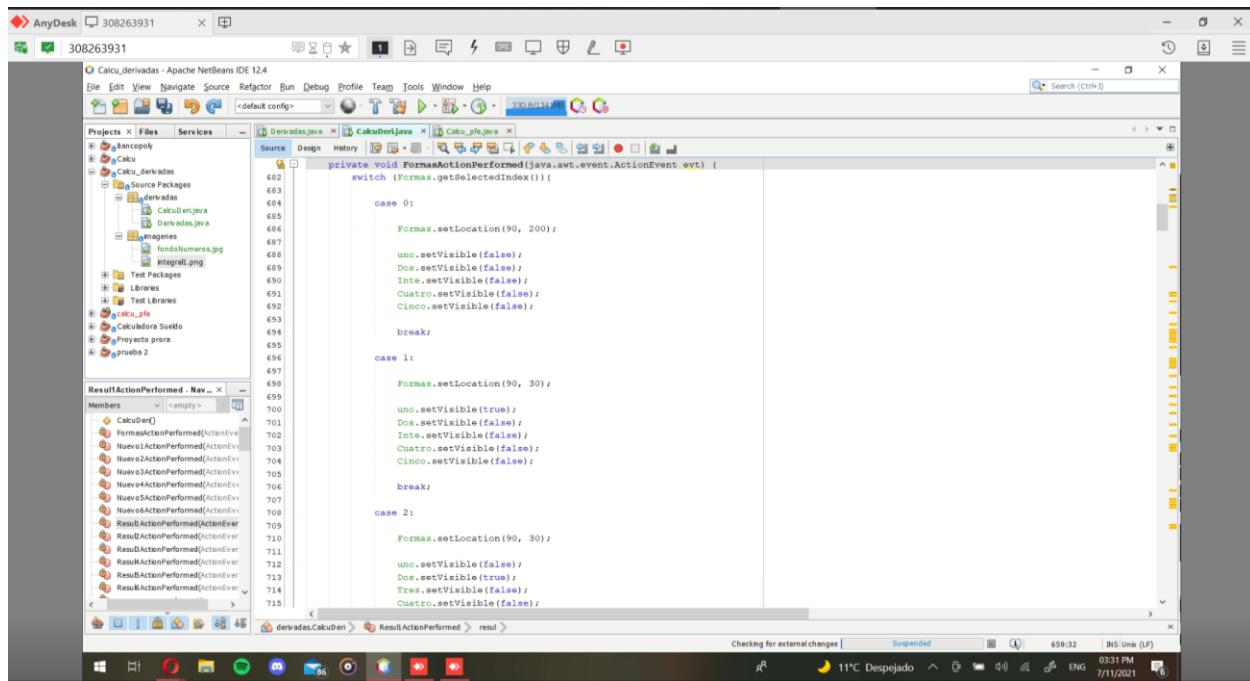
This screenshot is nearly identical to the first one, showing the same Java code for the "ResultActionPerfomed" method. The main difference is that the line of code "uno.setVisible(true);" at line 700 is highlighted with a red rectangle, indicating it is the current line of interest.

The screenshot shows the NetBeans IDE interface with the following details:

- Title Bar:** AnyDesk 308263931
- Toolbar:** Standard NetBeans toolbar with icons for file operations, search, and run.
- Project Explorer:** Shows the project structure under "Calcu\_derivadas".
- Code Editor:** Displays Java code for the `ResultActionPerformed` method in the `CalcuDeriva` class. The code handles five cases based on the selected index in a dropdown menu. It uses `PanelResult.setVisible(false)` and `uno.setVisible(true)` to switch between different panels: Uno, Dos, Cuatro, Cinco, and Inte.
- Status Bar:** Shows system information: Checking for external changes, Suspended, 659:32, INS: Unix (LF), 11°C Despejado, 03:30 PM, 7/11/2021.

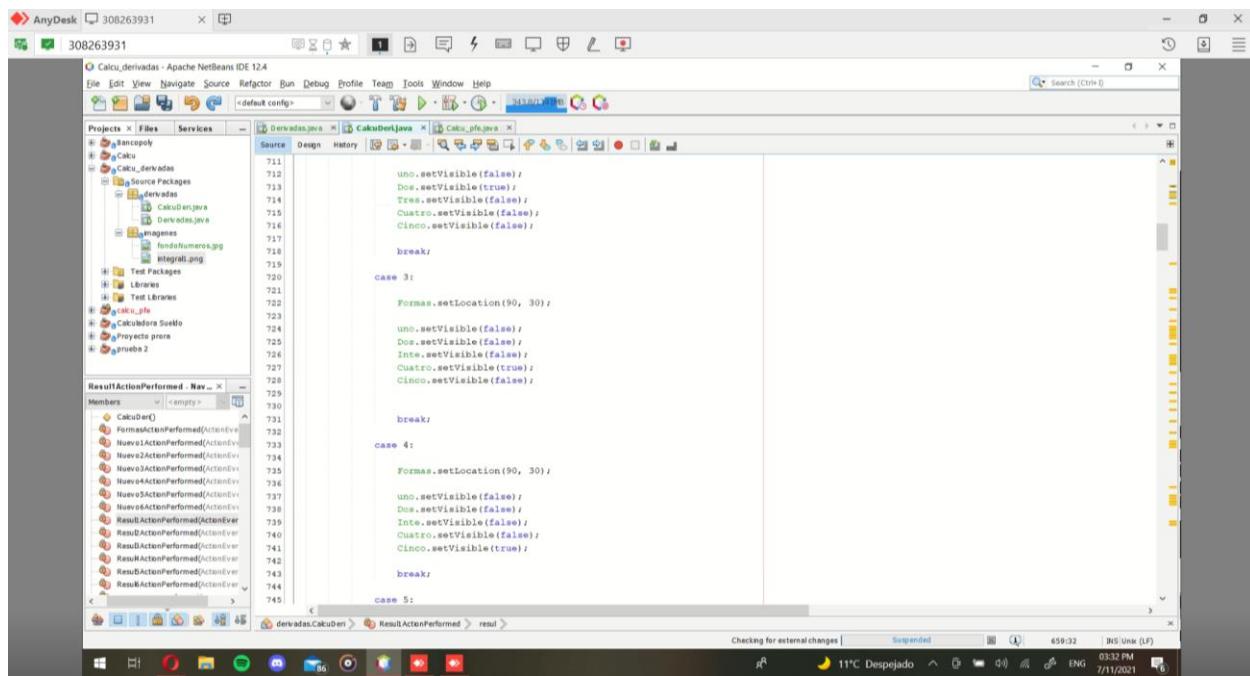
The screenshot shows the NetBeans IDE interface with the following details:

- Title Bar:** AnyDesk 308263931
- Toolbar:** Standard NetBeans toolbar with icons for file operations, search, and run.
- Project Explorer:** Shows the project structure under "Calcu\_derivadas".
- Code Editor:** Displays Java code for the `ResultActionPerformed` and `FormasActionPerformed` methods. The `ResultActionPerformed` method calculates the result of the expression based on the operators and numbers entered. The `FormasActionPerformed` method handles the selection of a form and updates the location of the `Formas` window.
- Status Bar:** Shows system information: Checking for external changes, Suspended, 659:32, INS: Unix (LF), 11°C Despejado, 03:31 PM, 7/11/2021.



The screenshot shows the Apache NetBeans IDE 12.4 interface. The title bar reads "Calcu\_derivadas - Apache NetBeans IDE 12.4". The main window displays the Java code for the `Devadas.java` file. The code is a switch statement handling `FormActionEvent` events. It includes logic to set the location of a `Formas` object and toggle the visibility of several components (`uno`, `Dos`, `Inte`, `Cuatro`, `Cinco`) based on the selected index.

```
private void FormasActionperformed(java.awt.event.ActionEvent evt) {  
    switch (Formas.getSelectedIndex()) {  
        case 0:  
            Formas.setLocation(90, 200);  
            uno.setVisible(false);  
            Dos.setVisible(false);  
            Inte.setVisible(false);  
            Cuatro.setVisible(false);  
            Cinco.setVisible(false);  
            break;  
        case 1:  
            Formas.setLocation(90, 30);  
            uno.setVisible(true);  
            Dos.setVisible(false);  
            Inte.setVisible(false);  
            Cuatro.setVisible(false);  
            Cinco.setVisible(false);  
            break;  
        case 2:  
            Formas.setLocation(90, 30);  
            uno.setVisible(false);  
            Dos.setVisible(true);  
            Tres.setVisible(false);  
            Cuatro.setVisible(false);  
            Cinco.setVisible(false);  
            break;  
        case 3:  
            Formas.setLocation(90, 30);  
            uno.setVisible(false);  
            Dos.setVisible(false);  
            Inte.setVisible(false);  
            Cuatro.setVisible(true);  
            Cinco.setVisible(false);  
            break;  
        case 4:  
            Formas.setLocation(90, 30);  
            uno.setVisible(false);  
            Dos.setVisible(false);  
            Inte.setVisible(false);  
            Cuatro.setVisible(false);  
            Cinco.setVisible(true);  
            break;  
        case 5:  
            Formas.setLocation(90, 30);  
            uno.setVisible(false);  
            Dos.setVisible(false);  
            Inte.setVisible(false);  
            Cuatro.setVisible(false);  
            Cinco.setVisible(true);  
            break;  
    }  
}
```



This screenshot is identical to the one above, showing the same Java code in the `Devadas.java` file of the Apache NetBeans IDE 12.4 interface. The code handles `FormActionEvent` events and controls the visibility of components based on the selected index of a `Formas` object.

```
private void FormasActionperformed(java.awt.event.ActionEvent evt) {  
    switch (Formas.getSelectedIndex()) {  
        case 0:  
            Formas.setLocation(90, 200);  
            uno.setVisible(false);  
            Dos.setVisible(false);  
            Inte.setVisible(false);  
            Cuatro.setVisible(false);  
            Cinco.setVisible(false);  
            break;  
        case 1:  
            Formas.setLocation(90, 30);  
            uno.setVisible(true);  
            Dos.setVisible(false);  
            Inte.setVisible(false);  
            Cuatro.setVisible(false);  
            Cinco.setVisible(false);  
            break;  
        case 2:  
            Formas.setLocation(90, 30);  
            uno.setVisible(false);  
            Dos.setVisible(true);  
            Tres.setVisible(false);  
            Cuatro.setVisible(false);  
            Cinco.setVisible(false);  
            break;  
        case 3:  
            Formas.setLocation(90, 30);  
            uno.setVisible(false);  
            Dos.setVisible(false);  
            Inte.setVisible(false);  
            Cuatro.setVisible(true);  
            Cinco.setVisible(false);  
            break;  
        case 4:  
            Formas.setLocation(90, 30);  
            uno.setVisible(false);  
            Dos.setVisible(false);  
            Inte.setVisible(false);  
            Cuatro.setVisible(false);  
            Cinco.setVisible(true);  
            break;  
        case 5:  
            Formas.setLocation(90, 30);  
            uno.setVisible(false);  
            Dos.setVisible(false);  
            Inte.setVisible(false);  
            Cuatro.setVisible(false);  
            Cinco.setVisible(true);  
            break;  
    }  
}
```

```
    case 5:
        Formas.setLocation(50, 30);

        uno.setVisible(false);
        Dos.setVisible(false);
        Inte.setVisible(true);
        Cuatro.setVisible(false);
        Cinco.setVisible(false);

        break;
    }

    private void VolverActionPerformed(java.awt.event.ActionEvent evt) {
        Resultado.setText("Resultado");

        switch (Formas.getSelectedIndex()) {
            case 1:
                PanelResul.setVisible(false);
                uno.setVisible(true);
                break;

            case 2:
                PanelResul.setVisible(false);
                Dos.setVisible(true);
                break;

            case 3:
                PanelResul.setVisible(false);
                Cuatro.setVisible(true);
                break;
        }
    }
}
```

```
    Cuatro.setVisible(true);
    break;

    case 4:
        PanelResul.setVisible(false);
        Cinco.setVisible(true);
        break;

    case 5:
        PanelResul.setVisible(false);
        Inte.setVisible(true);
        break;

    case 6:
        PanelResul.setVisible(false);
        break;
    }

    private void Result2ActionPerformed(java.awt.event.ActionEvent evt) {
        int n, n2, n3, result=0;

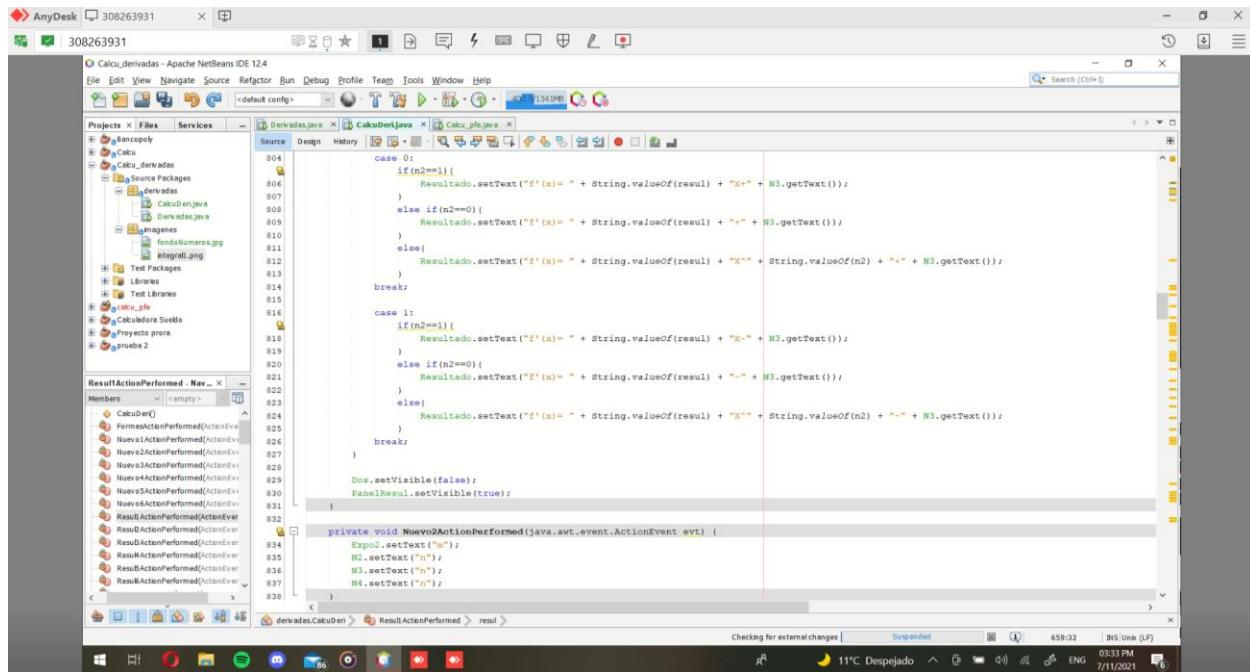
        n = Integer.parseInt(Expresion2.getText());
        n2 = Integer.parseInt(Expresion1.getText()) - 1;
        n3 = Integer.parseInt(N2.getText());

        result=n*n3;

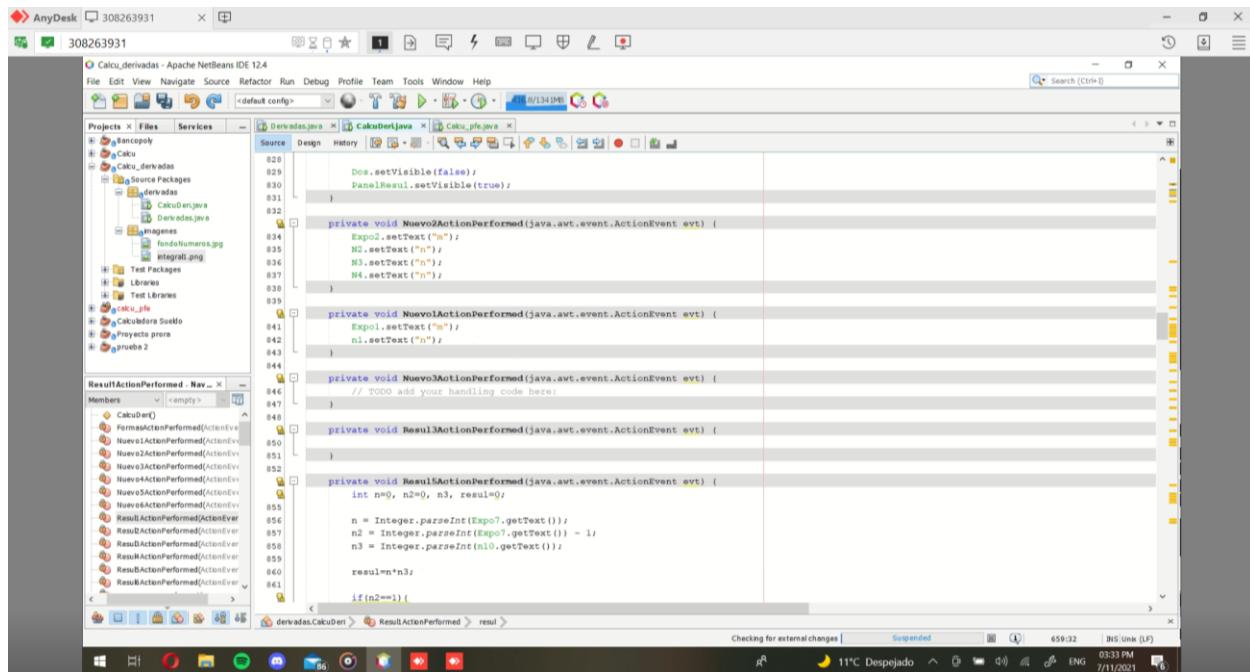
        switch (Signo1.getSelectedIndex()) {

            case 0:
                if(n2==1){
                    Resultado.setText("f'(x)= " + String.valueOf(result) + "X" + N3.getText());
                }
                else if(n2==0){
                    Resultado.setText("f'(x)= " + String.valueOf(result) + "+ " + N3.getText());
                }
                else{

```



```
804         case 0:
805             if(n2==1){
806                 Resultado.setText("f'(x) = " + String.valueOf(result) + "x" + N3.getText());
807             }
808             else if(n2==0){
809                 Resultado.setText("f'(x) = " + String.valueOf(result) + "+x" + N3.getText());
810             }
811             else{
812                 Resultado.setText("f'(x) = " + String.valueOf(result) + "x" + String.valueOf(n2) + "+x" + N3.getText());
813             }
814         break;
815
816         case 1:
817             if(n2==1){
818                 Resultado.setText("f'(x) = " + String.valueOf(result) + "x" + N3.getText());
819             }
820             else if(n2==0){
821                 Resultado.setText("f'(x) = " + String.valueOf(result) + "-x" + N3.getText());
822             }
823             else{
824                 Resultado.setText("f'(x) = " + String.valueOf(result) + "x" + String.valueOf(n2) + "-x" + N3.getText());
825             }
826         break;
827
828     Dos.setVisible(false);
829     PanelResul.setVisible(true);
830 }
831 }
832
833 private void Nuevo2ActionPerformed(java.awt.event.ActionEvent evt) {
834     Exp07.setText("");
835     N2.setText("n");
836     N3.setText("n");
837     N4.setText("n");
838 }
```



```
829     Dos.setVisible(false);
830     PanelResul.setVisible(true);
831 }
832
833 private void Nuevo2ActionPerformed(java.awt.event.ActionEvent evt) {
834     Exp07.setText("");
835     N2.setText("n");
836     N3.setText("n");
837     N4.setText("n");
838 }
839
840 private void Nuevo3ActionPerformed(java.awt.event.ActionEvent evt) {
841     Exp07.setText("m");
842     n1.setText("n");
843 }
844
845 private void Nuevo4ActionPerformed(java.awt.event.ActionEvent evt) {
846     // TODO add your handling code here:
847 }
848
849 private void Result3ActionPerformed(java.awt.event.ActionEvent evt) {
850 }
851 }
852
853 private void Result4ActionPerformed(java.awt.event.ActionEvent evt) {
854     int n0, n2=0, n3, result=0;
855
856     n = Integer.parseInt(Exp07.getText());
857     n2 = Integer.parseInt(Exp07.getText()) - 1;
858     n3 = Integer.parseInt(n10.getText());
859
860     result=n*n3;
861
862     if(n2==1){
863 }
```

The screenshot shows the Apache NetBeans IDE 12.4 interface. The main window displays a Java file named `Derivadas.java` with the following code:

```
n = Integer.parseInt(Expo7.getText());
n2 = Integer.parseInt(Expo7.getText()) - 1;
n3 = Integer.parseInt(n10.getText());

resultado=n3;

if(n2==1){
    resultado.setText("f'(x) = " + String.valueOf(resultado) + "X");
}
else if(n2==0){
    resultado.setText("f'(x) = " + String.valueOf(resultado));
}
else{
    resultado.setText("f'(x)= " + String.valueOf(resultado) + "X^" + String.valueOf(n2));
}

Cuatro.setVisible(false);
PanelResul.setVisible(true);
}

private void NuevoActionPerformed(java.awt.event.ActionEvent evt) {
    Expo7.setText("");
    n10.setText("");
    n11.setText("");
}

private void Nuevo5ActionPerformed(java.awt.event.ActionEvent evt) {
    Xeen.setText("");
    Expo5.setText("");
}

private void ResultActionPerformed(java.awt.event.ActionEvent evt) {
    int n=0, e=0, el=0;
```

The screenshot shows the Apache NetBeans IDE 12.4 interface. The main window displays a Java file named `Derivadas.java` with the following code:

```
n11.setText("n");

private void NuevoActionPerformed(java.awt.event.ActionEvent evt) {
    Xeen.setText("");
    Expo5.setText("");
}

private void ResultActionPerformed(java.awt.event.ActionEvent evt) {
    int n0, e=0, el=0;
    String em="";

n=Integer.parseInt(Xeen.getText());
e=Integer.parseInt(Expo5.getText());
em=Xeen.getText();
el=Expo5.getText();

n = n*el;

switch (SelSen.getSelectedIndex()){

    case 0:
        if(em=="x"){
            resultado.setText("f'(x)= " + Xeen.getText() + "+-sen" + Xeen.getText() + "X");
        }
        else if(em==2){
            resultado.setText("f'(x)= " + String.valueOf(n) + "X+-sen" + Xeen.getText() + "X^" + Expo5.getText());
        }
        else if(em>2){
            resultado.setText("f'(x)= " + String.valueOf(n) + "X" + String.valueOf(el) + "+-sen" + Xeen.getText() + "X" + Expo5.getText());
        }
        break;
    case 1:
```

```
903     Resultado.setText("f'(x)=" + Xsen.getText() + "x" + e + "sen" + Xsen.getText() + "x");
904
905     else if(e==2){
906         Resultado.setText("f'(x)=" + String.valueOf(n) + "x" + e - 1 + "sen" + Xsen.getText() + "x" + Expo9.getText());
907     }
908
909     else if(e>2){
910         Resultado.setText("f'(x)=" + String.valueOf(n) + "x" + e - 1 + "sen" + Xsen.getText() + "x" + Expo9.getText());
911     }
912
913     break;
914
915     case 1:
916         if(e==1 | e==0){
917             Resultado.setText("f'(x)=" + Xsen.getText() + "x" + e + "cos" + Xsen.getText() + "x");
918         }
919         else if(e==2){
920             Resultado.setText("f'(x)=" + String.valueOf(n) + "x" + e - 1 + "cos" + Xsen.getText() + "x" + Expo9.getText());
921         }
922         else if(e>2){
923             Resultado.setText("f'(x)=" + String.valueOf(n) + "x" + e - 1 + "cos" + Xsen.getText() + "x" + Expo9.getText());
924         }
925         break;
926
927     case 2:
928         if(e==1 | e==0){
929             Resultado.setText("f'(x)=" + Xsen.getText() + "x" + e + "sec2(x) + Xsen.getText() + "x");
930         }
931         else if(e==2){
932             Resultado.setText("f'(x)=" + String.valueOf(n) + "x" + e - 1 + "sec2(x) + Xsen.getText() + "x" + Expo9.getText() + ")");
933         }
934         else if(e>2){
935             Resultado.setText("f'(x)=" + String.valueOf(n) + "x" + e - 1 + "sec2(x) + Xsen.getText() + "x" + Expo9.getText());
936         }
937         break;
938
939     case 3:
940
941
942
943
944
945
946
947
948
949
950
951
952
953
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975
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979
980
981
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```

```
940     case 4:
941         if(e==1 | e==0){
942             Resultado.setText("f'(x)=" + Xsen.getText() + "x" + e + "sec" + Xsen.getText() + "x + " + "tan" + Xsen.getText() + "x");
943         }
944         else if(e==2){
945             Resultado.setText("f'(x)=" + String.valueOf(n) + "x" + e - 1 + "sec" + Xsen.getText() + "x" + "X" + "Expo9.getText() + "x" + "tan" + Xsen.getText() + "x");
946         }
947         else if(e>2){
948             Resultado.setText("f'(x)=" + String.valueOf(n) + "x" + e - 1 + "sec" + Xsen.getText() + "x" + "X" + "Expo9.getText() + "x" + "tan" + Xsen.getText() + "x");
949         }
950         break;
951
952     case 5:
953         if(e==1 | e==0){
954             Resultado.setText("f'(x)=" + Xsen.getText() + "x" + e + "-csc2(x) + Xsen.getText() + "x");
955         }
956         else if(e==2){
957             Resultado.setText("f'(x)=" + String.valueOf(n) + "x" + e - 1 + "-csc2(x) + Xsen.getText() + "x" + "X" + "Expo9.getText() + ")");
958         }
959         else if(e>2){
960             Resultado.setText("f'(x)=" + String.valueOf(n) + "x" + e - 1 + "-csc2(x) + Xsen.getText() + "x" + "X" + "Expo9.getText());
961         }
962         break;
963
964     Cinco.setVisible(false);
965     PanelResul.setVisible(true);
966 }
967
968 private void signoActionPerformed(java.awt.event.ActionEvent evt) {
969     switch (Signo1.getSelectedIndex()){
970         case 0:
971             signo="+";
972             break;
```

The screenshot shows the Apache NetBeans IDE 12.4 interface. The title bar displays "AnyDesk 308263931". The menu bar includes File, Edit, View, Navigate, Source, Refactor, Run, Debug, Profile, Team, Tools, Window, Help. The toolbar contains icons for file operations like Open, Save, Print, and Run. The main window has tabs for "Derivadas.java", "CakuDeriva.java", and "Caku\_pfe.java". The "Derivadas.java" tab is active, showing Java code for a calculator application. The code handles button actions for calculating derivatives and results. The code uses variables like LimB, LimA, LimBT, LimAT, LimB2=0, LimA2=0, E1, E2, E1T, E2T, n1, n2, n1T, n2T, Tib, T2b, Tia, T2a, TT=0, TB=0, TA=0, and various double values for calculations. The code also includes imports for java.awt.event.ActionEvent and java.awt.event.ActionListener.

```
private void Signo4ActionPerformed(java.awt.event.ActionEvent evt) {
    switch (Signo4.getSelectedIndex()) {
        case 0:
            signo="+";
            break;
        case 1:
            signo="-";
            break;
        case 2:
            signo="*";
            break;
        case 3:
            signo="/";
            break;
    }
}

private void Signo3ActionPerformed(java.awt.event.ActionEvent evt) {
}

private void ResultActionPerformed(java.awt.event.ActionEvent evt) {
    double LimB, LimA, LimBT, LimAT, LimB2=0, LimA2=0, E1, E2, E1T, E2T, n1, n2, n1T, n2T, Tib, T2b, Tia, T2a, TT=0, TB=0, TA=0;

    LimB=Double.parseDouble(LimB.getText());
    LimA=Double.parseDouble(LimA.getText());
    E1=Double.parseDouble(Expresion1.getText());
    E2=Double.parseDouble(Expresion2.getText());
    n1=Double.parseDouble(n13.getText());
    n2=Double.parseDouble(n12.getText());

    E1T=E1+1;
    E2T=E2+1;
    n1T=n1/E1T;
    n2T=n2/E2T;

    LimB2=Math.pow(LimB, E1T);
    LimA2=Math.pow(LimA, E2T);
    LimAT=Math.pow(LimA, E1T);
```

```
switch (Signo6.getSelectedIndex()) {
    case 0:
        if (T2b<0) {
            TT=(T1b-T2b)-(T1a-T2a);
        }
        else if (T2b>0) {
            TT=(T1b+T2b)-(T1a+T2a);
        }
        break;
    case 1:
        if (T2b>0) {
            TT=(T1b-T2b)-(T1a-T2a);
        }
        else if (T2b<0) {
            TT=(T1b+T2b)-(T1a+T2a);
        }
        break;
}
Resultado.setText(String.valueOf(String.format("%.2f", TT)));
Inte.setVisible(false);
PanelResul.setVisible(true);
```

```
private void NuevoActionPerformed(java.awt.event.ActionEvent evt) {
    Limb.setText("n");
    Lima.setText("n");
    Expol0.setText("n");
    Expol3.setText("n");
}
```

```
Resultado.setText(String.valueOf(String.format("%.2f", TT)));
Inte.setVisible(false);
PanelResul.setVisible(true);
```

```
private void NuevoActionPerformed(java.awt.event.ActionEvent evt) {
    Limb.setText("n");
    Lima.setText("n");
    Expol0.setText("n");
    Expol3.setText("n");
    n13.setText("n");
    n12.setText("n");
}
```

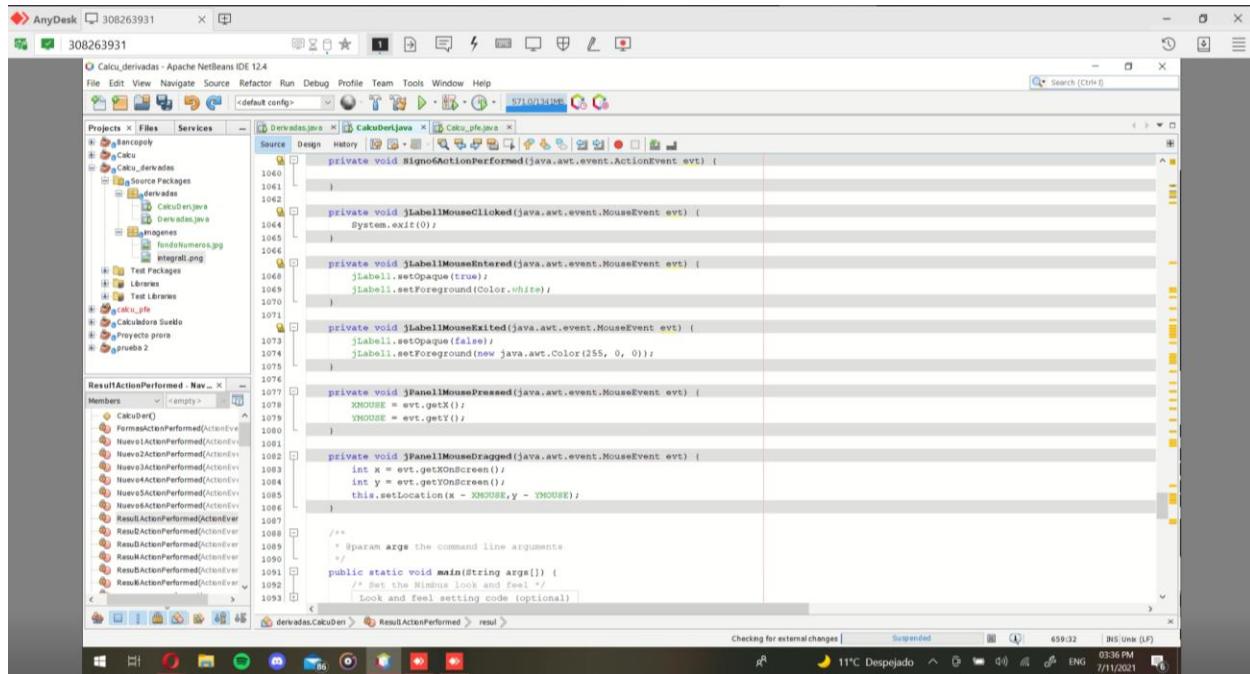
```
private void Signo6ActionPerformed(java.awt.event.ActionEvent evt) {
}
```

```
private void jLabel1MouseClicked(java.awt.event.MouseEvent evt) {
    System.exit(0);
}
```

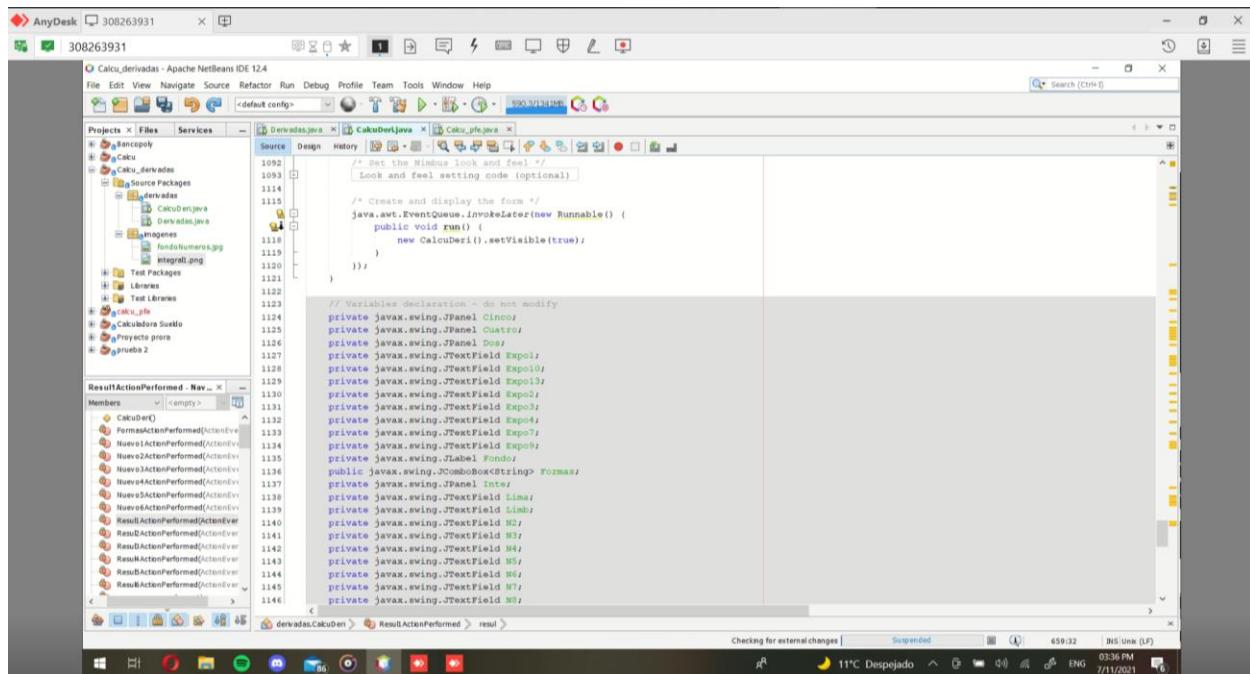
```
private void jLabel1MouseEntered(java.awt.event.MouseEvent evt) {
    jLabel1.setOpaque(true);
    jLabel1.setForeground(Color.white);
}
```

```
private void jLabel1MouseExited(java.awt.event.MouseEvent evt) {
    jLabel1.setOpaque(false);
    jLabel1.setForeground(new java.awt.Color(255, 0, 0));
}
```

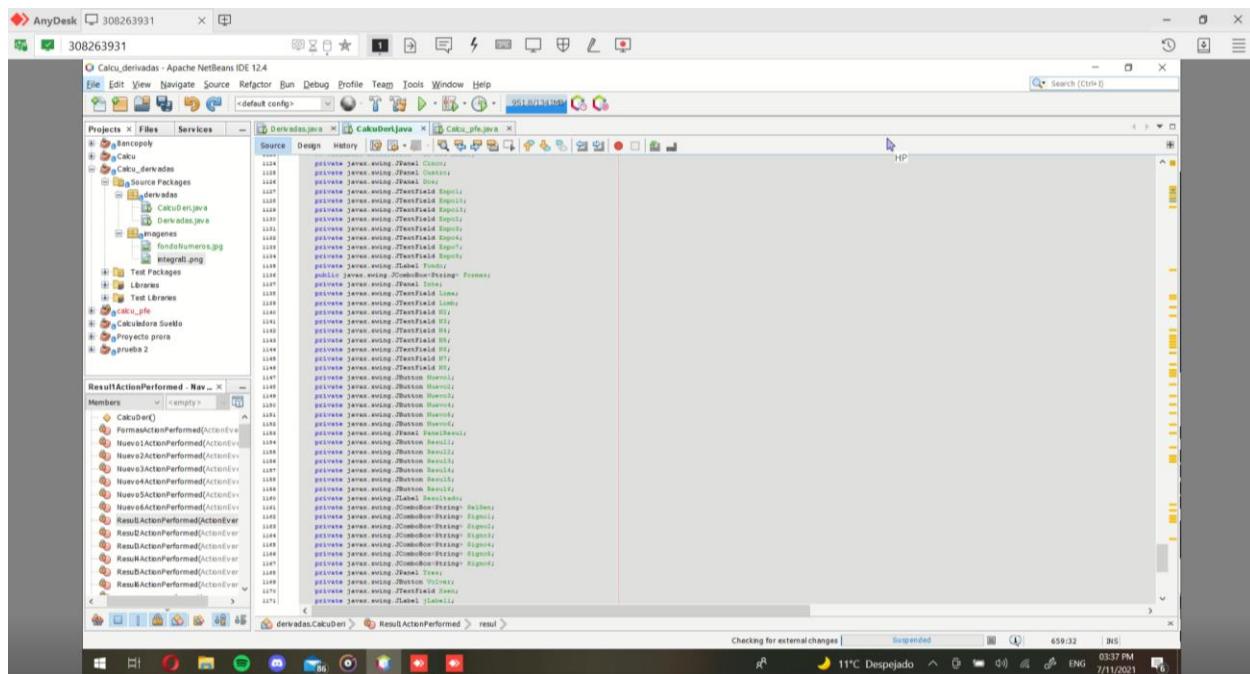
```
private void jPanel1MousePressed(java.awt.event.MouseEvent evt) {
    XOUSE = evt.getX();
}
```



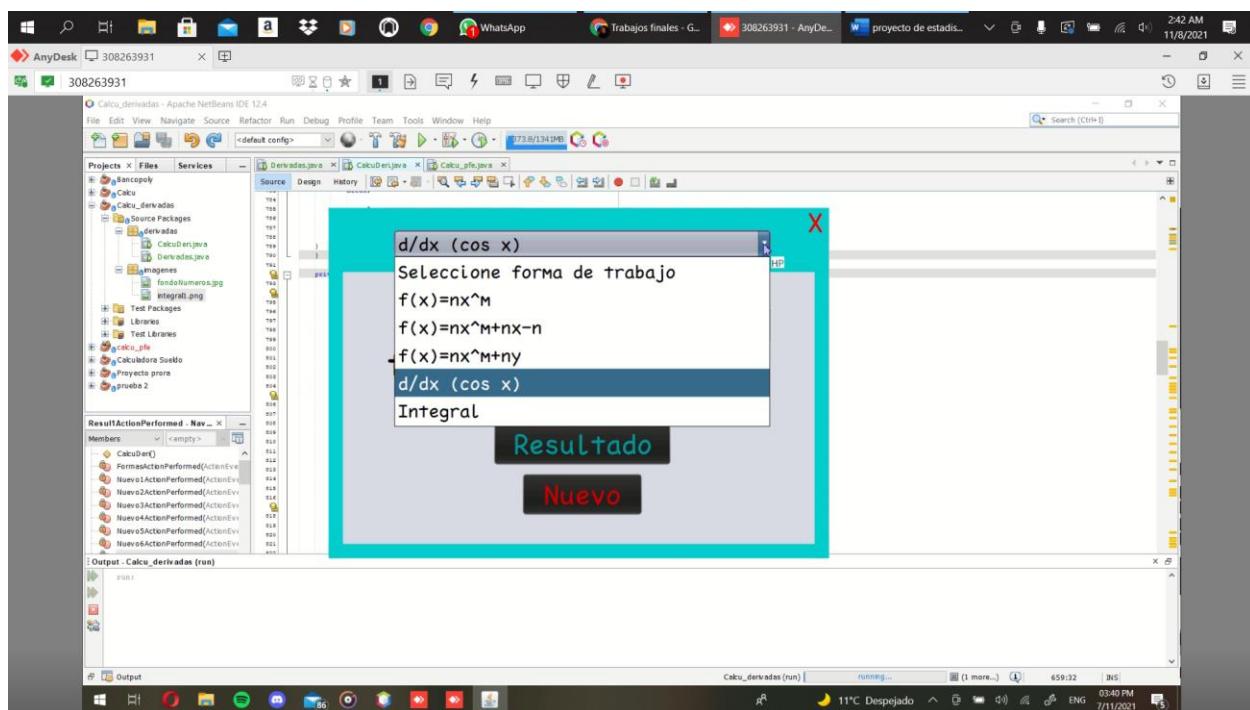
```
private void actionPerformed(java.awt.event.ActionEvent evt) {  
    int x = evt.getX();  
    int y = evt.getY();  
    this.setLocation(x - XMOUSE, y - YMOUSE);  
}  
  
private void jPanel1MousePressed(java.awt.event.MouseEvent evt) {  
    XMOUSE = evt.getX();  
    YMOUSE = evt.getY();  
}  
  
private void jPanel1MouseDragged(java.awt.event.MouseEvent evt) {  
    int x = evt.getXOnScreen();  
    int y = evt.getYOnScreen();  
    this.setLocation(x - XMOUSE, y - YMOUSE);  
}  
  
/**  
 * Sparam args the command line arguments  
 */  
public static void main(String args[]) {  
    /* Set the Nimbus look and feel */  
    /* Look and feel setting code (optional) */  
}  
  
// Variables declaration - do not modify//  
private javax.swing.JFrame frame;  
private javax.swing.JPanel cadro;  
private javax.swing.JPanel Desp;  
private javax.swing.JPanel Esp01;  
private javax.swing.JTextField Esp010;  
private javax.swing.JTextField Esp013;  
private javax.swing.JTextField Esp02;  
private javax.swing.JTextField Esp03;  
private javax.swing.JTextField Esp04;  
private javax.swing.JTextField Esp07;  
private javax.swing.JTextField Esp09;  
private javax.swing.JTextField Esp10;  
private javax.swing.JComboBox<String> FORMAS;  
private javax.swing.JButton Ints;  
private javax.swing.JTextField Lima;  
private javax.swing.JTextField Limb;  
private javax.swing.JTextField M2;  
private javax.swing.JTextField M3;  
private javax.swing.JTextField M4;  
private javax.swing.JTextField M5;  
private javax.swing.JTextField M6;  
private javax.swing.JTextField M7;  
private javax.swing.JTextField M8;
```

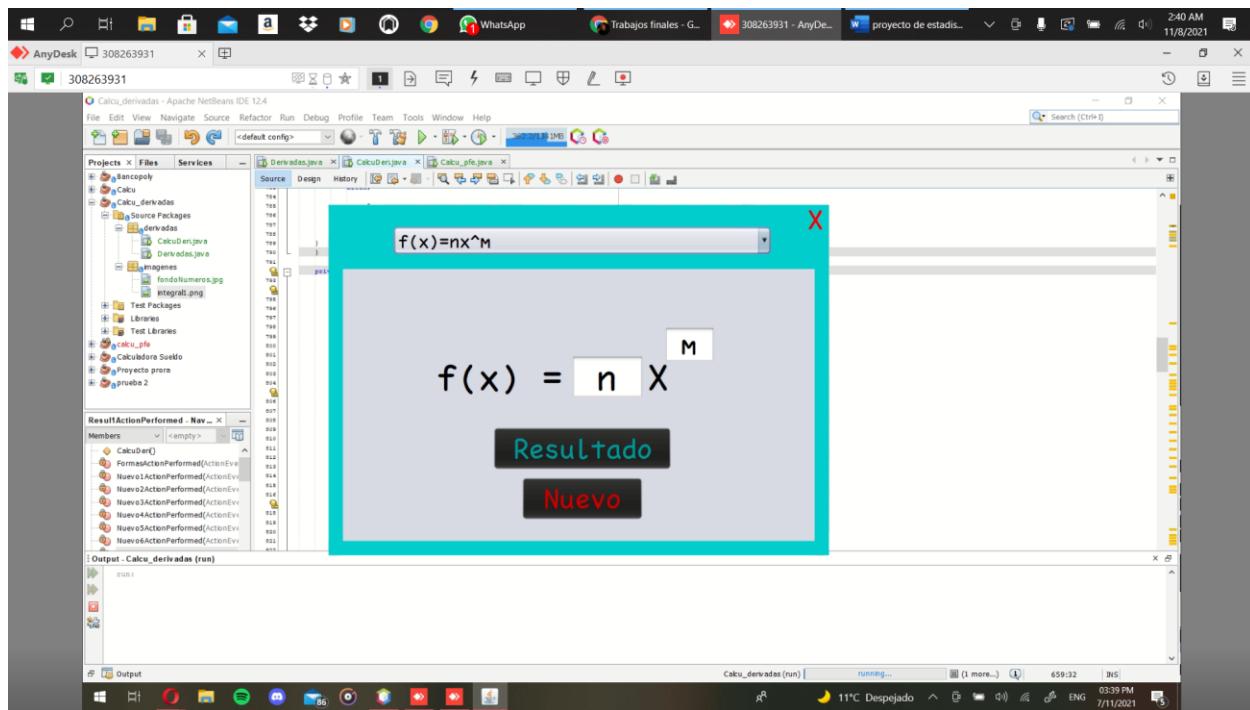
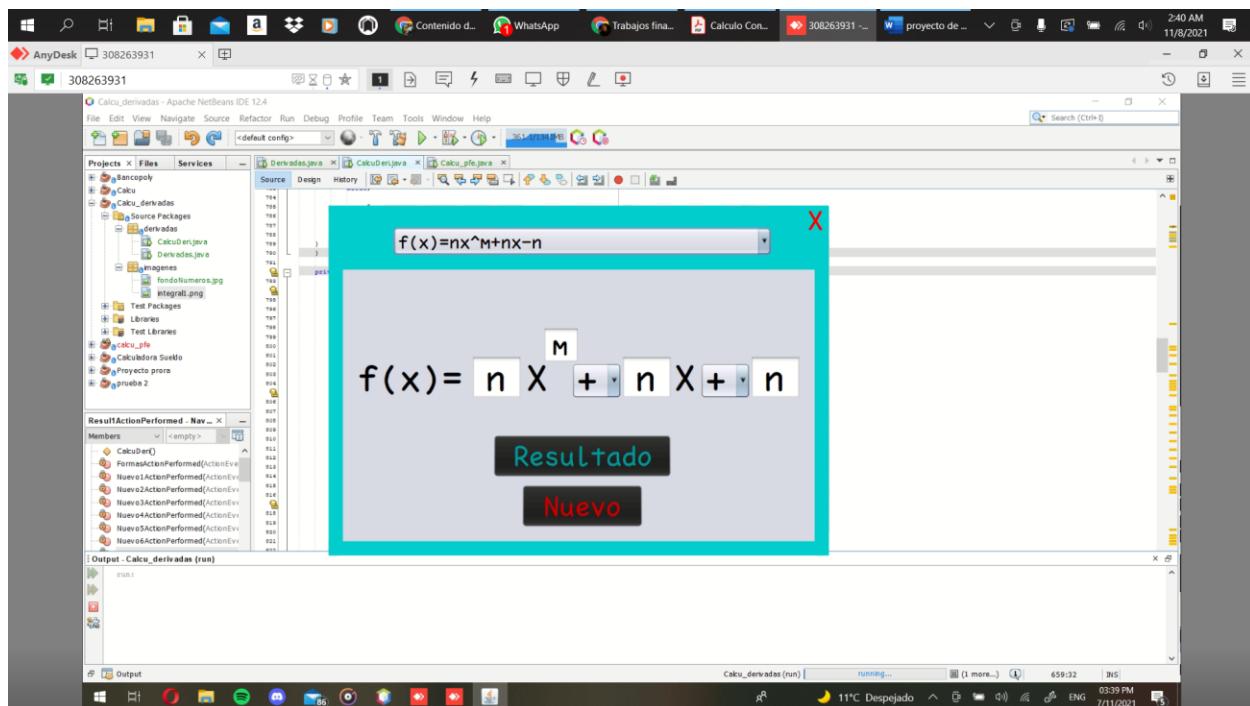


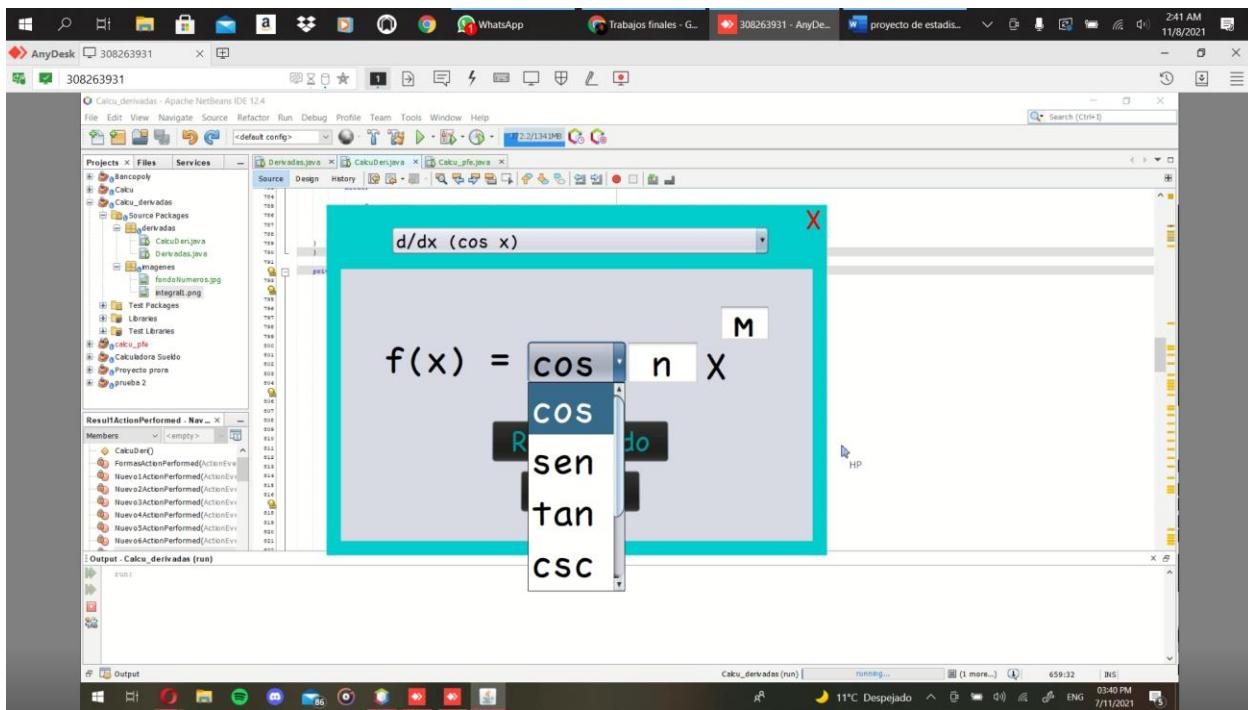
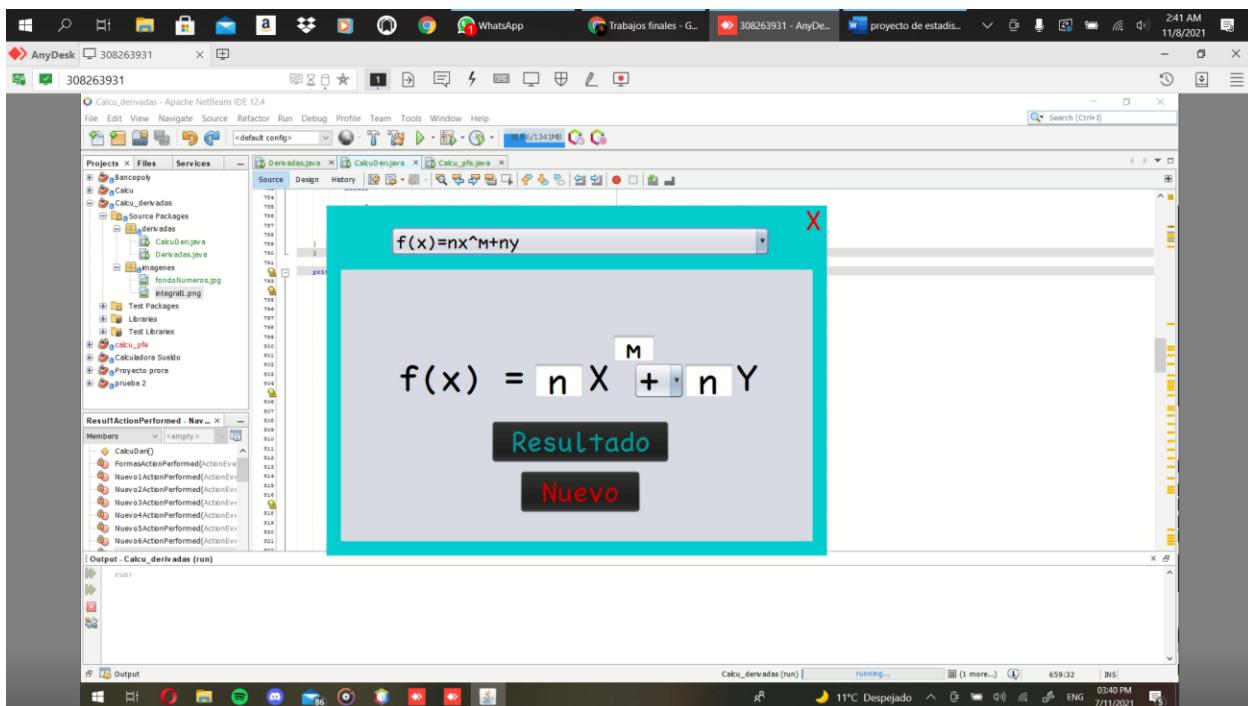
```
/* Set the Nimbus look and feel */  
/* Look and feel setting code (optional) */  
  
/* Create and display the form */  
java.awt.EventQueue.invokeLater(new Runnable() {  
    public void run() {  
        new CalcuDeri().setVisible(true);  
    }  
});  
  
// Variables declaration - do not modify//  
private javax.swing.JFrame frame;  
private javax.swing.JPanel cadro;  
private javax.swing.JPanel Desp;  
private javax.swing.JPanel Esp01;  
private javax.swing.JTextField Esp010;  
private javax.swing.JTextField Esp013;  
private javax.swing.JTextField Esp02;  
private javax.swing.JTextField Esp03;  
private javax.swing.JTextField Esp04;  
private javax.swing.JTextField Esp07;  
private javax.swing.JTextField Esp09;  
private javax.swing.JTextField Esp10;  
private javax.swing.JComboBox<String> FORMAS;  
private javax.swing.JButton Ints;  
private javax.swing.JTextField Lima;  
private javax.swing.JTextField Limb;  
private javax.swing.JTextField M2;  
private javax.swing.JTextField M3;  
private javax.swing.JTextField M4;  
private javax.swing.JTextField M5;  
private javax.swing.JTextField M6;  
private javax.swing.JTextField M7;  
private javax.swing.JTextField M8;
```

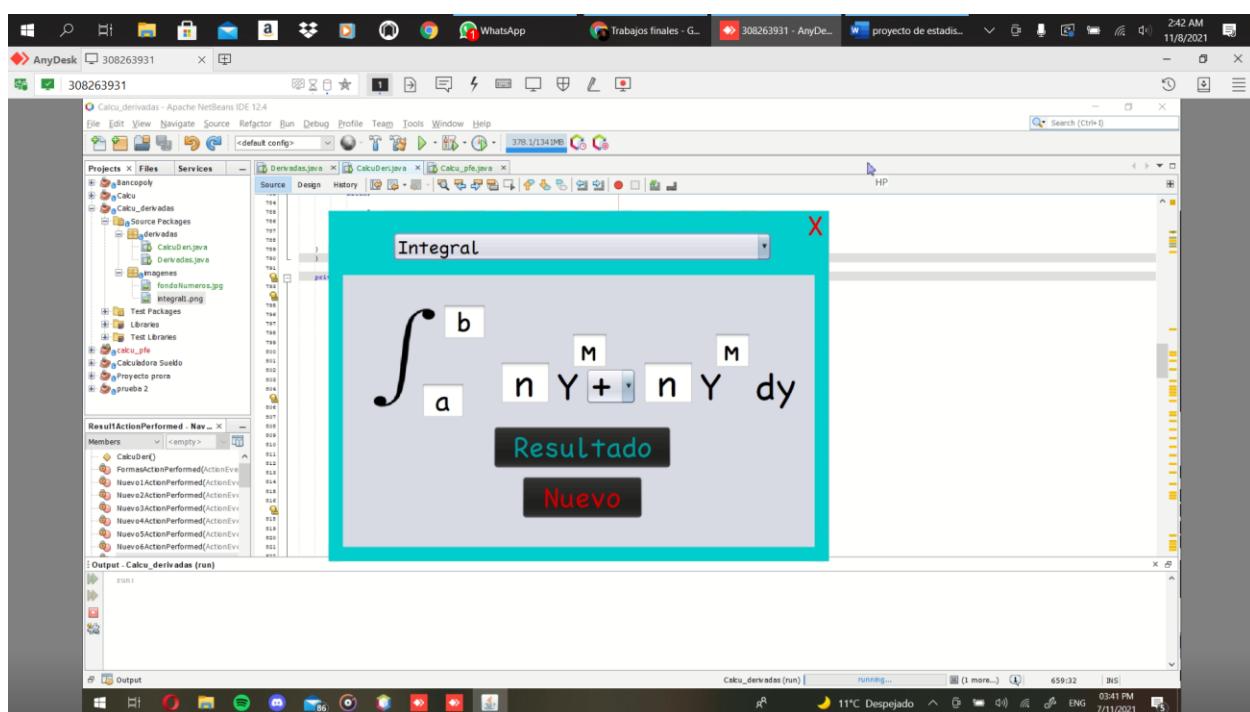
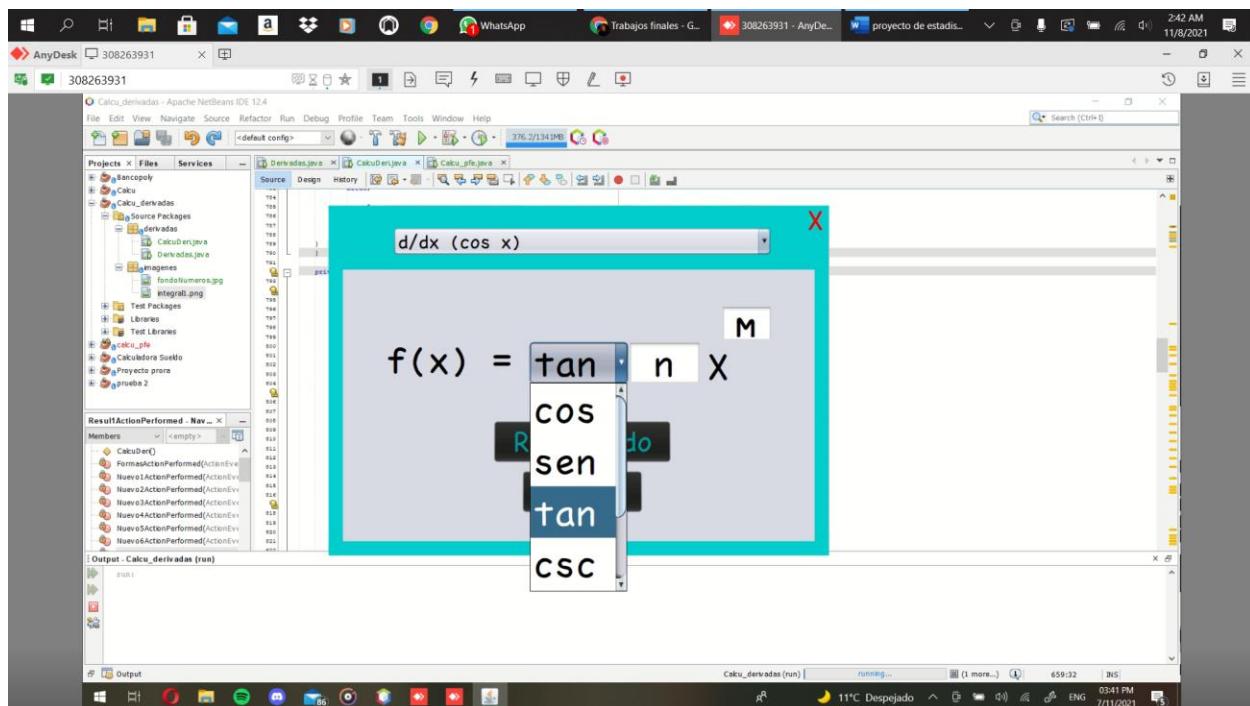


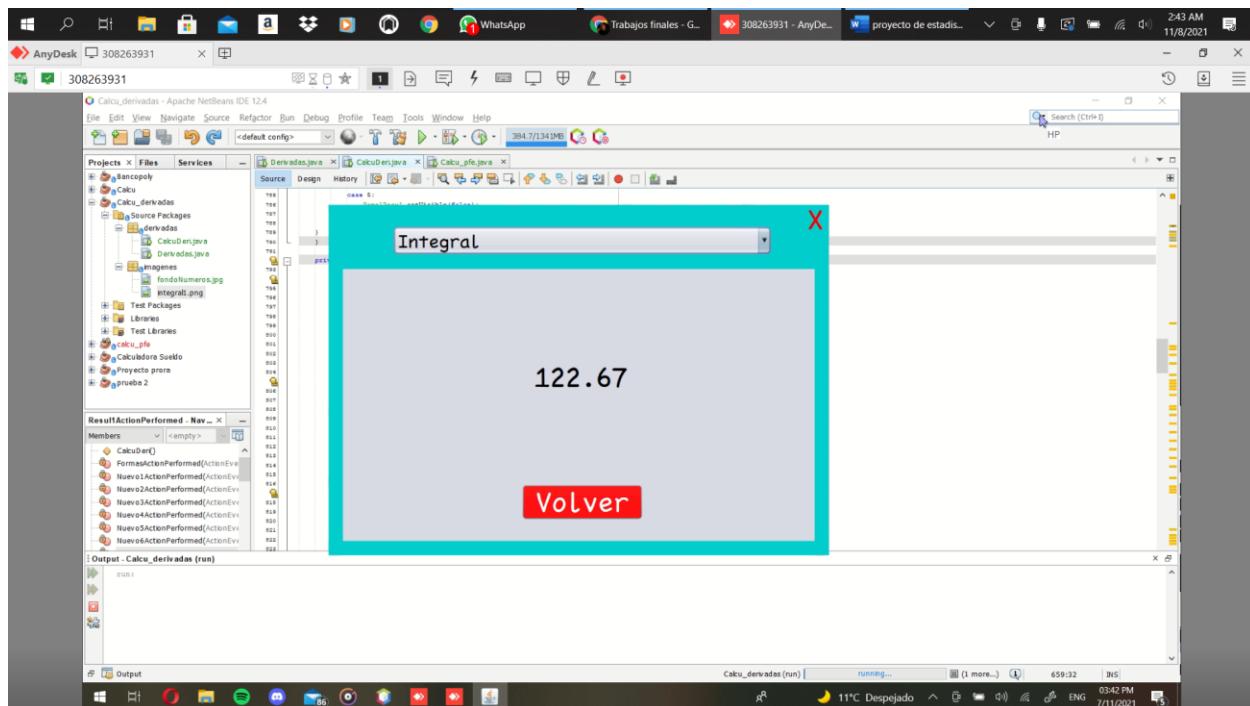
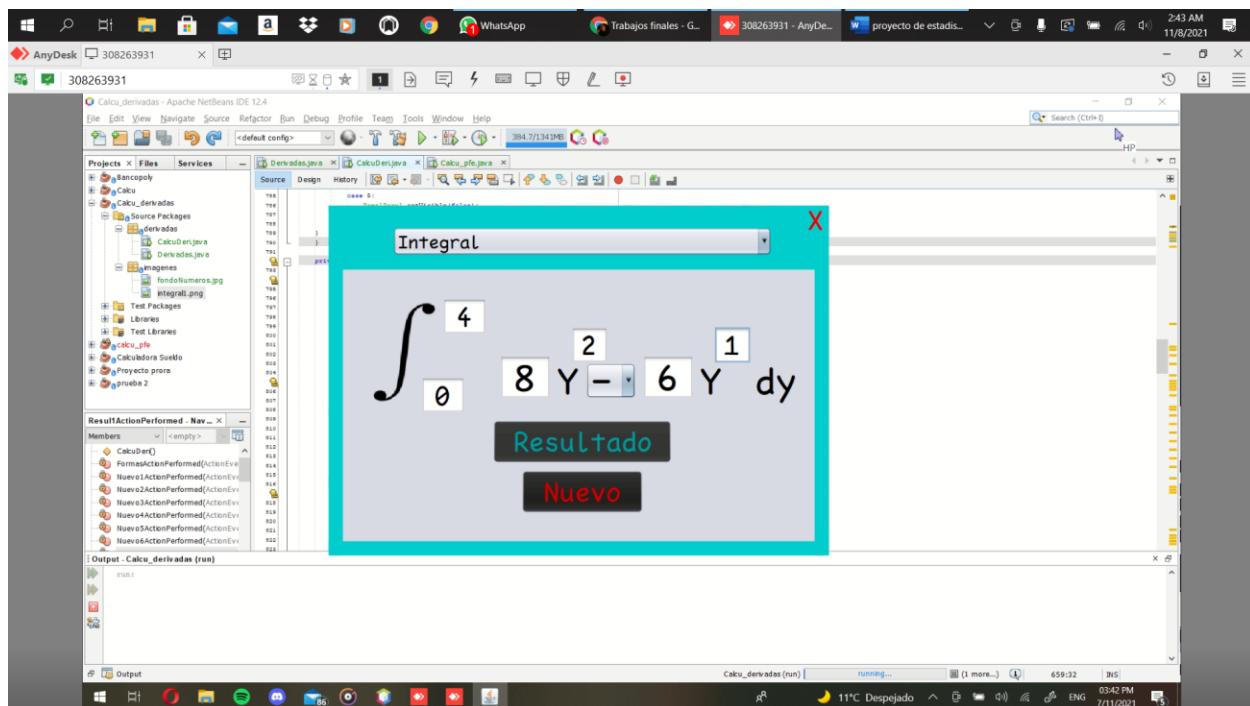
## CORRIDA DEL PROGRAMA











## CONCLUSION

Los miembros del equipo del presente proyecto podemos concluir que en la realización del proyecto pudimos tener ideas Mas claras de cada teorema y de igual manera aprender y ampliar los conocimientos informáticos que hemos adquirido a lo largo del ciclo y como de igual manera como se puede llevar a cabo la unión de ambos campos a nivel informático