

Universidad Mariano Gálvez De Guatemala
Sede De Boca Del Monte
Ingeniería en Sistemas de Información
Ing. Mélvín Cali
Programación III



Proyecto I
Enlace Al Repositorio En GitHub
<https://github.com/rramirezg18/Proyecto-1-Programacion-3>

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Enlace Del Repositorio En GitHub

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The image displays two screenshots of the Apache NetBeans IDE, showing the execution of a Java program for expression tree generation.

Top Screenshot: The IDE window shows the "Run (Proyecto1Programacion3)" output. The program prompts the user to "Ingresar expresión matemática" (Enter mathematical expression). The user input is $5*6-4+8*3^{(4-2)}*\sqrt{3}$. The program outputs a message: "¡¡¡La expresión matemática ingresada contiene caracteres no validos!!! Ingrese una expresión matemática valida 5*6-4+8*3^(4-2)*3". The program then generates an expression tree (ARBOL DE EXPRESION) and displays it.

Bottom Screenshot: The IDE window shows the "Run (Proyecto1Programacion3)" output. The program prompts the user to "Ingresar expresión matemática" (Enter mathematical expression). The user input is $5*6-4+8*3^{(4-2)}*\sqrt{3}$. The program outputs a message: "La expresion matemática con valores constantes es: 5*6-4+8*3^(4-2)*3". The program then generates an expression tree (ARBOL DE EXPRESION) and displays it. The tree structure is shown as a diagram with nodes containing mathematical operators and constants.

The expression tree diagram shows the following structure:

- Root node: $+$
- Left child of root: $*$
- Right child of root: $*$
- Left child of $*$ (left): $*$
- Right child of $*$ (left): 4
- Left child of $*$ (right): $*$
- Right child of $*$ (right): 3
- Left child of $*$ (left-left): 5
- Right child of $*$ (left-left): 6
- Left child of $*$ (right-left): 8
- Right child of $*$ (right-left): 8
- Left child of $*$ (right-right): 3
- Right child of $*$ (right-right): $-$
- Left child of $-$: 4
- Right child of $-$: 2

