Gnuplot Data Visualization

This C program generates data for the functions and visualizes them using Gnuplot. The development environment used is CodeBlocks.

<u>Prerequisites</u>

Make sure you have Gnuplot installed on your system.

The provided instructions guide you through setting the system environment variable PATH for Gnuplot on Windows:

1.   Press Win + X.

2.   Select "System."

3.   Click on "Advanced system settings."

4.   Under the "Advanced" tab, click on "Environment Variables."

5.   In the "System variables" section, scroll down to find "PATH" and double-click on it.

6.   Click on "New" to add a new path.

7.   Paste the path where Gnuplot is installed (e.g., C:\Program Files\gnuplot\bin).

8.   Click "OK" to close each window.

This process allows your system to recognize the Gnuplot executable, making it accessible from any command prompt or terminal window.

<u>Compilation</u>

Open the project in CodeBlocks.

Click on "Build and Run" (F9) or use the Build button to compile the program.

<u>Execution</u>

After compilation, run the program.

Check the console output for any error messages.

<u>Description</u>

The program creates data files (data_X.tmp) containing values for the functions.

It opens a Gnuplot pipe to visualize the data.

Gnuplot commands are sent through the pipe to set the title and plot the data.

After plotting, the Gnuplot pipe is closed.

Notes

If there are issues with opening files or the Gnuplot pipe, the program will display an error message.

Adjust the Gnuplot commands in the gnuCommands array to customize the plot appearance.

Ensure that you include the math library during compilation for the functions.