

Python Task

Function Plotter

1. Requirements

1. Write a Python GUI program that plots an arbitrary user-entered function.
2. Take a function of x from the user, e.g., $5x^3 + 2x$.
3. Take min and max values of x from the user.
4. The following operators must be supported: $+$ $-$ $*$ $^$.
5. The GUI should be simple and beautiful (well organized).
6. Apply appropriate input validation to the user input.
7. Display messages to the user to explain any wrong input.
8. You must use Pyside2 and Matplotlib.
9. The Matplotlib figure must be embedded in the Pyside2 application.
10. Create automated tests for your program using pytest and pytest-qt. Perform end-to-end testing for some of the program main features. Include the testing codes in your repository.
11. Your code should be well organized and well documented.

2. Deliverables

1. Deliver a link of your program on GitHub.
2. In your repository, include a readme file and snapshots of working and wrong examples.