

For this assignment you will write a short Python program that generates a free standing window through which the user interacts. The window should have the following properties. It should:

1. Appear somewhere close to the middle of the screen.
2. Include a menu that gives the user the opportunity to open a text file.
3. Have a total of 4 buttons in a 2 x 2 array.
4. When Button 1 is pressed a message should appear in a message box.
5. When Button 2 is pressed the contents of the file should be printed to the console.
6. When Button 3 is pressed the text of the button should change.
7. For Button 4 change the background color of the main window to blue.

Submit your file before class time March 6 as an attachment to an email to my email address.

I have put a set of data up on Canvas. For this assignment you will need to write a Python program that does the following:

1. Prompts the user to open the file.
2. Reads the file such that the file title, data collected and both the blank data and calibration data can be used.
3. If I were to add extra blank or calibration data points the program should still work.
4. Find the best fit line to the calibration data.
5. Plot all data points and fit line on a matplotlib plot.
6. Calculate the LOD.
7. Display LOD as well as line slope and intercept on the plot.

Advice: First start with the data already in the program and get the plot portion to work. After that works, get the file input part to function.

Submit your file before class time March 20 as an attachment to an email to my email address.