Problem 1: Suppose you have a set of 2-d input vectors. Write a program that loops over the input vectors and finds the pair with the minimum magnitude. Print it to the screen. The list of vectors should be input from the command line as.

Hyperlink to Problem 1:

https://github.com/chrisdelotto95/PHY410/commit/14631d9fc837bb68658cf06721852046d02ffd5b

Write up:

The idea of this program is to input a set of (X1,Y1) values with a a starting point (0,0). The program then calculates the magnitude of these sets of values, and then outputs them. When you are displayed the magnitudes, the program finds the smallest value and displays it.

Problem 2: Create a program that calculates the factorial of an unsigned integer, if the integer is less than 20. This should use a function called "factorial" that computes the factorial

Hyperlink to Problem 2:

https://github.com/chrisdelotto95/PHY410/commit/35834f561b92e5c6e6d85b775386855c42692005

Write up:

In math, the factorial of a positive integer *n,* denoted by *n!* Is the product of all positive integers less than or equal to *n.*

Example:

3!= 3 * 2 * 1 = 9

This would have to done by an incremental function. This would have to exclude the value *zero* due to the fact that this would make the product .