

TCSS141A - SPRING 2021 - HW #4 (FOR WEEK 5); max 15 points

DUE: Sun 05/02 @ 11:30pm, the assignment has to be submitted to the CANVAS

The name of the file: (your) lastname_hw.py

Please start the program with: # your name

In the program you can use only methods and tools already introduced in the class!

PROBLEM: FACTORIAL

Introduction:

In mathematics, the notation $n!$ represents a factorial of a **nonnegative** integer n . The factorial of n is the product of all integers from 1 to n .

Examples:

$$7! = 1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 = 5,040$$

$$3! = 3 \times 2 \times 1 = 6$$

Important:

$$0! = 1$$

Write a program that prompts a user to enter a non-negative integer and then displays the factorial of the integer. If the user enters a negative integer, the program displays "Factorial of a negative integer doesn't exist!"

A user can enter an integer multiple times.

To end the program - you can decide whether you want to use a question form or to use a sentinel.

The provided example is using a question.

At the end the program displays the number of calculated factorials.

Suggestion: First make a program to calculate factorial of one entered integer, then, use this program in a while loop for the multiple inputs.

See a possible outputs of the program:

```
This program displays factorial of an entered number.  
  
Enter an integer: 14  
14 != 87,178,291,200  
  
Do you want to calculate more factorials? (yes/no) yes  
Enter an integer: 5  
5 != 120  
  
Do you want to calculate more factorials? (yes/no) yes  
Enter an integer: -3  
Factorial of a negative integer doesn't exist!  
  
Do you want to calculate more factorials? (yes/no) yes  
Enter an integer: 0  
0 != 1  
  
Do you want to calculate more factorials? (yes/no) yes  
Enter an integer: -8  
Factorial of a negative integer doesn't exist!  
  
Do you want to calculate more factorials? (yes/no) no  
The program displayed 3 factorials.  
Thank you for using my program!  
>>> |
```