

CS 150
HOMEWORK 3: RECURSION

Create a new Python script file that you will name *yourname_homework3.py* Save this file in a folder on your computer where you will keep all your homework assignments. Write some Python code inside this file that I will be able to run on my computer without errors.

When finished, upload your file in Google Classroom using the Homework 4 assignment link. Don't forget to add comments at the beginning of each task and throughout your code for clarity.

TASKS

1. Write a program that calculates recursively the factorial of a number.
2. Write a program to calculate recursively the sum of the positive integers of $n + (n - 2) + (n - 4) \dots$ (until $n - x \leq 0$)
3. Write a program using recursion to calculate the value of integer 'a' to the power of integer 'b'.
4. * Write a program using recursion to find the sum of the digits of an integer. (Hint: the last digit of a number can be found by taking modulo 10 ($n \% 10$))