

CS 101
HOMEWORK 7: FUNCTIONS

- Create a new Python script file that you will name *CS101_Homework7.py*. Save this file in a folder on your computer where you will keep all your homework assignments.
- When finished, upload your file in Google Classroom using the Homework 7 assignment link. Don't forget to add comments at the beginning of each task and throughout your code for clarity.

TASKS

1. Write a function that calculates the factorial of a number(given as an input).
2. Write a function that given an integer list and a number will output a new list with only the elements in the list divisible by the given number.
- *3. Write a function that given a string list and a string, will output a new list with only the elements in the string list that contain the input string. Example: `func(["aa", "bb", "ab"], "a")` → `["aa", "ab"]`
- *4. Write a function that given two integer lists outputs the dot product. Hint: dot product for two arrays is defined as the addition of the multiplication of pairwise elements. Example: `[1,2] * [4,5] = 1*4 + 2*5 = 14`