

# Functions

1. Have a look at following tutorials:
  - a. <https://www.programiz.com/python-programming/function>
  - b. <https://www.programiz.com/python-programming/function-argument>
  - c. <https://www.programiz.com/python-programming/global-local-nonlocal-variables>
  - d. <https://www.programiz.com/python-programming/global-keyword>
2. Write a Python function to multiply all the numbers in a list and returns the result.
3. Write a Python function that accepts a string and calculate the number of uppercase letters and lowercase letters. It should return calculated numbers.
4. Write a Python function that takes a number as a parameter and check the number is prime or not.
5. Write a Python function to create and print a list where the values are square of numbers between 1 and 30 (both included).
6. Write a Python function to which changes a global variable by adding 289 to it.
7. Write a Python function, which contains a nested function. Your function should receive a number and return square of it if it is an even number and triple of it if it is an odd number. The nested function should decide that the given number is even or odd.
8. Write a Python function to check whether a string is a pangram or not.  
Note : Pangrams are words or sentences containing every letter of the alphabet at least once.  
Hint: use “**string**” built in module (***string.ascii\_lowercase***).
9. Write a Python function for calculating determinant of arbitrary NxN square matrix. You should use determinant calculation [Laplace's formula](#). Please test you function with real examples.  
Hint: Actually you should create 2 functions: one for finding minors of matrix and second for calculating the determinant. The second function should be recursive and use the first function.

You should send me the file with examples, file should be named: “name\_surname\_hw\_7.py”.