

# Python Programming

## Exercise 3: Functions

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### Abstract

This exercise will focus on working with functions in Python.

### Task 1: Working with functions

- Explain the difference between regular parameters, `*args`, and `**kwargs` in functions.
- Write a function that converts a currency a to another currency b with a currency rate c. How many parameters are required? The target currency should be returned and printed.
- Write a function that takes numerical values of unspecified length and calculates the average. Decide which data structure fits best.
- Write another function that takes any number of strings (keywords) as an input and returns a concatenated string.
- Write a function that takes a dictionary where the keys correspond to the index and the value as a letter and return the indices needed to create a given word a. Example: 1:h, 2:l, 3:e, 4:o (for the word hello).
- Explain how the asterisk `*` and `**` behave with lists and dictionaries. Indices for “hello” -> 1,3,2,2,4

Write all functions in a way that the result can be called and stored in another variable and then be printed.