

CS Homework #15
User-defined functions, lambda functions, map() function.

Deadline: 2/2/2020, 9:00 pm. Save your code as lastname_homework15.py and submit on Edmodo. Please, run your code before submitting. If you get an error, try to fix it before submitting your homework. If you get help from anyone, please, make sure that you actually understand the solution.

See the posted class notes for the examples of using lambda and map() functions.

Task 1

Create a function that returns a square root of a variable (reminder: square root is the same as power of 0.5). Use `round(x, 2)` to round your result to two decimal points. Test your function.

Task 2

Create a function that accepts a list of values and returns a list of square values. For example for `[4, 9, 25]`, it should return `[2, 3, 5]`. Round each value to two decimal points (a square root of 2 should look like 1.41). Test your function using `mylist = list(range(1, 10))`.

Task 3

Similar to Task 2, create a list of square values using the function that you created in Task 1 and the ***map()*** function. Test using `mylist` from Task 2 and verify that the result is the same.

Task 4

Similar to Tasks 2 and 3, create a list of square values using a ***lambda*** function that calculates a square root of a variable (similar to your function in Task 1) and the ***map()*** function. Test using `mylist` from Task 2 and verify that the results is still the same.

Task 5

Create a function that accepts a list of names and returns a list in which all the names start with a capital. For example, `["alex smith", "jane brown"]` will be returned as `["Alex Smith", "Jane Brown"]`. Use `string.title()` method for this task. Test your function.

Task 6

Complete the same objective as in Task 5 using a lambda function and the `map()` function. Verify that tasks 5 and 6 provide the same result.