

List

1. Have a look at following tutorials:
 - a. <https://jakevdp.github.io/WhirlwindTourOfPython/06-built-in-data-structures.html>
 - b. <https://realpython.com/python-lists-tuples/>
 - c. https://www.w3schools.com/python/python_lists.asp
 - d. <https://realpython.com/python-sets/>
 - e. https://www.w3schools.com/python/python_sets.asp
2. Suppose you have a list: `a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]`.
 - a. Write a program that prints out all the elements of the list that are less than 5.
 - b. Write a program that prints out the sum of all elements in the list.
 - c. Write a program that creates a new list, which items are natural logarithms of given list (hint: you can use built in package “**math**” for calculating logarithm).
3. Suppose you have a list: `a = ["1", 1, "abc", 123, 124.6, ['123', 1, 45], [1, 2], 3456.5, 567]`.
 - a. Write a program that counts integer elements in the given list (you have to count integer elements also in nested lists).
 - b. Write a program that deletes all string elements.
 - c. Write a program that inserts `['a', 'b', 'c']` list at the index 2.
4. Suppose you have 2 lists:
`a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]`
`b = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]`
Write a program that returns a list that contains only the elements that are common between the lists (without duplicates). Make sure your program works on two lists of different sizes.
5. Write a program to remove duplicates from a list.
6. Write a program to print a specified list after removing the 0th, 4th and 5th elements.

You should send me the file with examples, file should be named: “name_surname_hw_3.py”.