List, Tuple, Set

1. Have a look at following tutorials:
    a. https://realpython.com/python-lists-tuples/
    b. https://www.programiz.com/python-programming/tuple
    c. https://www.w3schools.com/python/python_tuples.asp
    d. https://realpython.com/python-sets/
    e. https://www.w3schools.com/python/python_sets.asp
    f. https://www.programiz.com/python-programming/set

2. Suppose you have a random text: txt **=** "*Black holes were long considered a mathematical curiosity; it was during the 1960s that theoretical work showed they were a generic prediction of general relativity. The discovery of neutron stars by Jocelyn Bell Burnell in 1967 sparked interest in gravitationally collapsed compact objects as a possible astrophysical reality.*".
    a. Write a program that collects all the words from given text, which length is bigger than 5. It should collect words in list.
    b. Write a program that collects all the words from given text, which length is equal to 4 and sort them in the decreasing order. It should collect words in list.
    c. Write a program that collects all the words from given text, which contain at least one digit. It should collect words in list.

    (Hint: you should use **str** and **list** methods and **for loop.**)
3. Write a Python program to generate a **3*4*6 3D** array whose each element is "*".
    (Hint: you should use **range** and **list** methods and 3 **for loop.**)
4. Write a Python program to unpack a tuple in several variables.
5. Write a Python program to add an item in a tuple.
    (Hint: actually you have to create a new tuple. Please note that you can use **"+"** for 2 tuples and it will create a new tuple.)
6. Write a Python program to remove an item from a tuple.
    (Hint: actually you have to convert tuple into a list using "**list**" constructor, remove an item and convert back to tuple using "**tuple"** constructor.)
7. Suppose you have 2 random lists.
    a. Write a program that prints out a set of all unique elements in 2 lists.
    b. Write a program that prints out a set of elements, which are in first list and not in second list.
    c. Write a program that prints out a set of elements, which are in both lists.
    d. Write a program that prints out a set of in symmetric difference of 2 lists.
    e. Write a program that checks if a first list is subset of second one.

You should send me the file with examples, file should be named: "name_surname_hw_4.py".