

1. Write a function to generate Fibonacci series
2. Implement Bubble sort in an optimised way to sort a million of items
3. Time\_sample[123] and time\_sample -: write a regex for this to get both these from a file. Steps to follow will be read from a file and find the two patterns mentioned in that file
4. Increment 10.10.10.1 (IP address increment). Output should be [10.10.10.1, 10.10.10.2.....10.10.10.255, 10.10.11.255, 10.10.12.255, 10.10.13.255.....10.10.255.255, 10.11.255.255.....].
5. Assert a test case true if the input falls under the range [-5,5]
6. Check if a string is composed of all unique characters. eg func\_unique("ajdkw") -- True  
func\_unique("hi how are you") -- False
7. Write a program to find the number of 'a' followed by 0 in a string (eg a0kkka0hdhda0 should return the count 3)
8. Write a program to remove duplicates and return the length of the unique list (eg a = [1,1,3,4] will return a = [1,3,4] and the length will be 3)
9. Write a program illustrating overriding method in program
10. Write a program that accepts a sentence and calculate the number of upper case letters and lower case letters.

Suppose the following input is supplied to the program:

Hello world!

Then, the output should be:

UPPER CASE 1

LOWER CASE 9