Indian Institute of Information Technology Sricity, Chittoor

ITWS-2 (Python Programming)

Practice Assignment-1

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1. Write a Python program to accept a filename from the user and print the extension of that.

   Sample filename : abc.java Output : java
2. Write a python program to convert decimal to hexadecimal.
3. Write a Python program to format a specified string to limit the number of characters to 6.
4. Write a Python program to prove that two string variables of same value point same memory location.
5. Write a Python program to compute the product of a list of integers (without using for loop).
6. Write a Python program to input a number, if it is not a number generate an error message.
7. Write a Python program to determine if variable is defined or not.
8. Write a Python program to extract the filename from a given path.
9. Write a Python program to clear the screen or terminal.
10. Write a Python program to create a copy of its own source code.
11. Write a Python program to count the number occurrence of a specific character in a string.
12. Write a Python program to remove newline characters from a file.
13. Write a Python program to combine each line from 1st file with the corresponding line in 2nd file.
14. Write a Python program to count the frequency of words in a file.
15. Write a Python program to find the first appearance of the substring 'not' and 'poor' from a given string, if 'bad' follows the 'poor', replace the whole 'not'...'poor' substring with 'good'. Return the resulting string.

    Sample String : 'The lyrics is not that poor!'

    Expected Result : 'The lyrics is good!'
16. Write a Python function that takes a list of words and returns the length of the longest one.
17. Write a Python program to create a Caesar encryption.

    Note : In cryptography, a Caesar cipher, also known as Caesar's cipher, the shift cipher, Caesar's code or Caesar shift, is one of the simplest and most widely known encryption techniques. It is a type of substitution cipher in which each letter in the plaintext is replaced by a letter some fixed number of positions down the alphabet. For example, with a left shift of 3, D would be replaced by A, E would become B, and so on. The method is named after Julius Caesar, who used it in his private correspondence.
18. Write a python program to count repeated characters in a string.

    Sample string: 'thequickbrownfoxjumpsoverthelazydog'

    Expected output :

    e 3
    u 2
    h 2
    r 2
    t 2

19. Write a Python program to print “The area of the rectangle is 1256.66cm^2”.
20. Write a Python program to reverse a string.

    Sample String : "1234abcd"

    Expected Output : "dcba4321"
21. Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters.
22. Write a Python function to check whether a number is perfect or not.

    Example : The first perfect number is 6, because 1, 2, and 3 are its proper positive divisors, and 1 + 2 + 3 = 6. Equivalently, the number 6 is equal to half the sum of all its positive divisors: (1 + 2 + 3 + 6) / 2 = 6. The next perfect number is 28 = 1 + 2 + 4 + 7 + 14. This is followed by the perfect numbers 496 and 8128.
23. Write a Python function that that prints out the first n rows of Pascal's triangle.
24. Write a Python function to check whether a string is a pangram or not.

    Note : Pangrams are words or sentences containing every letter of the alphabet at least once.

    For example : "The quick brown fox jumps over the lazy dog"
25. Write a Python program that accepts a hyphen-separated sequence of words as input and prints the words in a hyphen-separated sequence after sorting them alphabetically.

    Sample Items : green-red-yellow-black-white

    Expected Result : black-green-red-white-yellow