

RCC Institute of Information Technology

MCAN-191

Python Programming LAB

Assignment-III

Date of assigned:08/01/2024

Date of submission:15/01/2024

1. Write a Python program to count the number of strings from a given list of strings. The string length is 2 or more and the first and last characters are the same.

Sample List : ['abc', 'xyz', 'aba', '1221']

Expected Result : 2

2. Write a Python program to get a list, sorted in increasing order by the last element in each tuple from a given list of non-empty tuples.

Sample List : [(2, 5), (1, 2), (4, 4), (2, 3), (2, 1)]

Expected Result : [(2, 1), (1, 2), (2, 3), (4, 4), (2, 5)]

3. Write a Python program to get the frequency of elements in a list.

4. Write a Python program to create and display all combinations of letters, selecting each letter from a different key in a dictionary.

Sample data : {'1':['a','b'], '2':['c','d']}

Expected Output:

ac
ad
bc
bd

5. Write a Python program to find the highest 3 values of corresponding keys in a dictionary

6. Write a Python program to split a given dictionary of lists into lists of dictionaries.

Original dictionary of lists:

{'Science': [88, 89, 62, 95], 'Language': [77, 78, 84, 80]}

Split said dictionary of lists into list of dictionaries:

[{'Science': 88, 'Language': 77}, {'Science': 89, 'Language': 78}, {'Science': 62, 'Language': 84}, {'Science': 95, 'Language': 80}]

7. Write a Python program to get a string from a given string where all occurrences of its first char have been changed to '\$', except the first char itself.

Sample String : 'restart'

Expected Result : 'resta\$t'

8. Write a Python function that takes a list of words and return the longest word and the length of the longest one.

9. Write a Python program to count repeated characters in a string.

Sample string: 'thequickbrownfoxjumpsoverthelazydog'

Expected output :

o 4
e 3
u 2
h 2
r 2
t 2

10. Write a Python program to generate two strings from a given string. For the first string, use the characters that occur only once, and for the second, use the characters that occur multiple times in the said string.
11. Write a Python program to count the number of substrings with the same first and last characters in a given string.
12. Write a Python program to extract and display the name from a given Email address.

Sample Data:

("john@example.com") -> ("john")

("john.smith@example.com") -> ("johnsmith")

("fully-qualified-domain@example.com") -> ("fullyqualifieddomain")