LAB ASSIGNMENTS

PYTHON PROGRAMMING LAB

MCA 1st Year 1st Semester, 2022

Subject Code: MCAP1112

Day 2

Write Python scripts to:

1. Generate a string by rotating a given string by 'n' elements.

   Sample Input: mca students n=2

   Output: Left Rotation: a studentsmc

   Right Rotation: tsmca studen

2. Accept a sequence of colon separated numbers from user and generate a list which contains every number.

   Sample Input: 55:66:77:99:88:11

   Output: [55,66,77,99,88,11]

3. Generate a string by removing the i^{th} character from a given string.
4. Check if a string is palindrome or not.

   Sample

Input	**Output**
Was it a car or a cat I saw	Palindrome
Never odd or even	Palindrome
Students of MCA	Not Palindrome

5. Reverse a string word by word.

   Sample Input: We are in Python Programming Lab

   Output: Lab Programming Python in are We

6. Find all duplicate characters in string.
7. Find the frequency of each word in a string.
8. Find words which are greater than some given length k.
9. Print the words with even length from a string.
10. Convert Snake case identifier to Pascal case and Camel case.

    Snake case: for a multiword identifier, each word is separated by an underscore character. E.g. students_of_mca

    Pascal case: Each word starts with a capital letter. E.g. StudentsOfMca

    Camel case: First word starts with small case and subsequent words with a capital letter. E.g. studentsOfMca

11. Interchange the first and the last element in a list.

12. Extract words starting with ‘M’ in a list of strings.
13. Find N largest elements from a list.
14. Format input names as follows

Input	**Output**
Maximus	Maximus
John Clauser	J. Clauser
Peter Ware Higgs	P. W. Higgs

15. Check if the items in a list are sorted in ascending order, or descending order, or not sorted.
16. Accept a string of comma separated words as input and print the words in a comma separated string after sorting them alphabetically.

    Sample Input: mba, bca, btech, mca

    Output: bca, btech, mba, mca
17. Accept a sequence of comma separated 4-digit binary numbers as input and print a comma separated sequence containing the numbers that are divisible by 3.

    Sample Input: 0100,0011,1010,1001

    Output: 0011,1001
18. Find all numbers between 300 and 350 (both inclusive) such that each digit of the number is an even number and print the numbers obtained as a comma-separated string.
19. Sum digits of individual elements in a list of numbers.

    Sample Input: [21, 77, 76, 23]

    Output: [3, 14, 13, 5]
20. Break a list into chunks of size N.
21. Pair up consecutive elements of a given list.

    Sample Input: [1, 3, 2, 5, 4]

    Output: [[1, 3], [3, 2], [2, 5], [5, 4]]
22. Create a list containing every possible sublist of a list.

    Sample Input: [1, 2, 3]

    Output: [[], [1], [2], [3], [1, 2], [2, 3], [1, 2, 3]]
23. Accept a single word, and then convert the word to Pig Latin.

    [Pig Latin: When a word begins with a consonant (such as dog) or a consonant cluster (such as brush), take the consonant/consonant cluster and move it to the end of the word, adding the suffix ‘ay’ to the end of the word. E.g ‘dog’ in Pig Latin becomes ‘ogday’ ; ‘brush’, becomes ‘ushbray’]

    But if the first letter is a vowel, it is kept as it is and “hay” is appended to the end. Example, ‘ ‘apple’ becomes ‘applehay’]