MIT-WPU | Faculty of Engineering and Technology

School of Computer Engineering and Technology (Cybersecurity and Forensics)

Python Programming Lab Assignment No:04

Problem Statement:

Different Operations on List Data Structure.

Aim:

Write a python program to create, append and remove etc. operation on list.

Objectives:

To learn and implement List data structure.

Theory:

1. Write about Different data structures in python.
2. Write down about different operations performed on List

Platform: Windows/Ubuntu-Python Editor(jupyter notebook)

Input: Different list and operations

Output: Display Different operations performed on list.

Exercises on list

Perform following exercises and upload a single file of jupyter notebook containing all exercise's code and respective outputs.

1) Define a list called **list_1** with four integer members, and find the output of the following
    1) Access the **first three** elements from list_1 using forward indices: list_1[0:3]
    2) Access the **last element** from list_1 using the len function: list_1[len(list_1) - 1]
    3) Access the **last two** elements from list_1 by slicing: list_1[-2:]
    4) Access the **first two** elements using backward indices list_1[:-2]

5) **Reverse** the elements in the string: list_1[::-1]

2) Accept 20 values from user and save it in list. Perform following operations on it

a) **count** similar elements of list.

b) count **even** and **odd** values of list .

c) count **positive** and **negative** values of list.

3) Accept 10 values from user and save it in list. Perform following operations on it

a) Sort list in ascending order using **sorted()** function and display sorted list

b) sort list in descending order using **sort()** function

c) display length of list

4) Accept two lists from user and merge them using + in a single list

Conclusion:

Studied python List Data Structure.

FAQs:

1. Is a list mutable? Explain with Example.
2. What is the difference between **append** and **extend**?
3. What is the difference between **remove** and **pop**?