**Python Programming (IT2121)**

**Session: 2024-2025**

**Objective: Use of List in Python for the following operations:**

1. Creation of a List
2. Accessing List Elements
3. Looping through the List
4. Adding List Elements (append (), insert())
5. Updating List Elements
6. Deleting List Elements
7. List Methods
8. Write a program to find sum all the items in a list.
9. Write a program to find minimum/maximum all the items in a list.
10. Write a program to find that a given element is present in the list.
11. Write a program to find if there are any duplicate elements in the list.
12. Write a program to find is there any duplicate element in the list.
13. 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
14. Write a program to check if a list is empty or not.
15. Write a program to remove duplicates from a list.
16. Write a program to find the list of words that are longer than ***n*** from a given list of words.
17. Write a program to print a specified list after removing the 0th, 4th and 5th elements.  
    Sample List : ['Red', 'Green', 'White', 'Black', 'Pink', 'Yellow']
18. Write a program to print a specified list after updating every occurrence of “White” with “Black” and “Black” with “White”.  
    Sample List : [Black, 'Green', 'White', 'Black', 'Pink', 'Yellow', “White”]
19. Write a program to check if each number is prime in a given list of numbers. Return True if all numbers are prime otherwise False.
20. Write a program to find the second smallest number in a list.
21. Write a program to get the frequency of elements in a list.
22. Write a program to check that two Lists are exactly same or not.
23. Write a program to change the position of every n-th value to the (n+1)th in a list.  
    Sample list: [0,1,2,3,4,5]  
    Expected Output: [1, 0, 3, 2, 5, 4]
24. Write a program to find common items in two lists.
25. Write a program to arrange elements of a List in descending order.
26. Write a program to merge two sorted Lists of strings into a single List of strings in reverse order.
27. Write a Python program to remove consecutive (following each other continuously) duplicates (elements) from a given list.  
    Original list:  
    [0, 0, 1, 2, 3, 4, 4, 5, 6, 6, 6, 7, 8, 9, 4, 4]  
    After removing consecutive duplicates:  
    [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 4]
28. Write a Python program to count the number of lists in a given list of lists.  
    Original list:  
    [[1, 3], [5, 7], [9, 11], [13, 15, 17]]  
    Number of lists in said list of lists:  
    4  
    Original list:  
    [[2, 4], [[6, 8], [4, 5, 8]], [10, 12, 14]]  
    Number of lists in said list of lists:  
    3

