**Programs to Practice List**

**1.** Write a Python program to sum all the items in a list. 

**2.** Write a Python program to multiplies all the items in a list. 

**3.** Write a Python program to get the largest number from a list. 

**4.** Write a Python program to get the smallest number from a list. 

**5.** Write a Python program to count the number of strings where the string length is 2 or more and the first and last character are same from a given list of strings.    
Sample List : ['abc', 'xyz', 'aba', '1221']  
Expected Result : 2

**6.** 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)]

**7.**Write a Python program to remove duplicates from a list. 

**8.**Write a Python program to check a list is empty or not. 

**9.**Write a Python program to clone or copy a list. 

**10.**Write a Python program to find the list of words that are longer than n from a given list of words. 

**11.**Write a Python function that takes two lists and returns True if they have at least one common member. 

**12.**Write a Python program to print a specified list after removing the 0th, 4th and 5th elements.   
Sample List : ['Red', 'Green', 'White', 'Black', 'Pink', 'Yellow']  
Expected Output : ['Green', 'White', 'Black']

**13.**Write a Python program to generate a 3\*4\*6 3D array whose each element is \*. 

**14.**Write a Python program to print the numbers of a specified list after removing even numbers from it. 

**15.**Write a Python program to shuffle and print a specified list. 

**16.**Write a Python program to generate and print a list of first and last 5 elements where the values are square of numbers between 1 and 30 (both included). 

**17.**Write a Python program to generate and print a list except for the first 5 elements, where the values are square of numbers between 1 and 30 (both included). 

**18.**Write a Python program to generate all permutations of a list in Python. 

**19.**Write a Python program to get the difference between the two lists. 

**20.**Write a Python program access the index of a list. 

**21.**Write a Python program to convert a list of characters into a string. 

**22.**Write a Python program to find the index of an item in a specified list. 

**23.**Write a Python program to flatten a shallow list. 

**24.**Write a Python program to append a list to the second list. 

**25.**Write a Python program to select an item randomly from a list. 

**26.**Write a python program to check whether two lists are circularly identical. 

**27.**Write a Python program to find the second smallest number in a list. 

**28.**Write a Python program to find the second largest number in a list. 

**29.**Write a Python program to get unique values from a list. 

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

**31.**Write a Python program to count the number of elements in a list within a specified range. 

**32.**Write a Python program to check whether a list contains a sublist. 

**33.**Write a Python program to generate all sublists of a list. 

**34.**Write a Python program using Sieve of Eratosthenes method for computing primes upto a specified number.   
Note: In mathematics, the sieve of Eratosthenes, (Ancient Greek: κόσκινον Ἐρατοσθένους, kóskinon Eratosthénous) one of a number of prime number sieves, is a simple, ancient algorithm for finding all prime numbers up to any given limit.

**35.**Write a Python program to create a list by concatenating a given list which range goes from 1 to n.   
Sample list : ['p', 'q']  
n =5  
Sample Output : ['p1', 'q1', 'p2', 'q2', 'p3', 'q3', 'p4', 'q4', 'p5', 'q5']

**36.**Write a Python program to get variable unique identification number or string. 

**37.**Write a Python program to find common items from two lists. 

**38.**Write a Python program to change the position of every n-th value with the (n+1)th in a list.   
Sample list: [0,1,2,3,4,5]  
Expected Output: [1, 0, 3, 2, 5, 4]

**39.**Write a Python program to convert a list of multiple integers into a single integer.   
Sample list: [11, 33, 50]  
Expected Output: 113350

**40.**Write a Python program to split a list based on first character of word. 

**41.**Write a Python program to create multiple lists. 

**42.**Write a Python program to find missing and additional values in two lists.   
Sample data : Missing values in second list: b,a,c  
Additional values in second list: g,h

**43.**Write a Python program to split a list into different variables. 

**44.**Write a Python program to generate groups of five consecutive numbers in a list. 

**45.**Write a Python program to convert a pair of values into a sorted unique array. 

**46.**Write a Python program to select the odd items of a list. 

**47.**Write a Python program to insert an element before each element of a list. 

**48.**Write a Python program to print a nested lists (each list on a new line) using the print() function. 

**49.**Write a Python program to convert list to list of dictionaries.   
Sample lists: ["Black", "Red", "Maroon", "Yellow"], ["#000000", "#FF0000", "#800000", "#FFFF00"]  
Expected Output: [{'color\_name': 'Black', 'color\_code': '#000000'}, {'color\_name': 'Red', 'color\_code': '#FF0000'}, {'color\_name': 'Maroon', 'color\_code': '#800000'}, {'color\_name': 'Yellow', 'color\_code': '#FFFF00'}]

**50.**Write a Python program to sort a list of nested dictionaries. 

**51.**Write a Python program to split a list every Nth element.   
Sample list: ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j', 'k', 'l', 'm', 'n']  
Expected Output: [['a', 'd', 'g', 'j', 'm'], ['b', 'e', 'h', 'k', 'n'], ['c', 'f', 'i', 'l']]

**52.**Write a Python program to compute the similarity between two lists.   
Sample data: ["red", "orange", "green", "blue", "white"], ["black", "yellow", "green", "blue"]  
Expected Output:   
Color1-Color2: ['white', 'orange', 'red']  
Color2-Color1: ['black', 'yellow']

**53.**Write a Python program to create a list with infinite elements. 

**54.**Write a Python program to concatenate elements of a list. 

**55.**Write a Python program to remove key values pairs from a list of dictionaries. 

**56.**Write a Python program to convert a string to a list. 

**57.**Write a Python program to check if all items of a list is equal to a given string. 

**58.**Write a Python program to replace the last element in a list with another list.   
Sample data : [1, 3, 5, 7, 9, 10], [2, 4, 6, 8]  
Expected Output: [1, 3, 5, 7, 9, 2, 4, 6, 8]

**59.**Write a Python program to check if the n-th element exists in a given list. 

**60.**Write a Python program to find a tuple, the smallest second index value from a list of tuples. 

**61.**Write a Python program to create a list of empty dictionaries. 

**62.**Write a Python program to print a list of space-separated elements. 

**63.**Write a Python program to insert a given string at the beginning of all items in a list.   
Sample list : [1,2,3,4], string : emp  
Expected output : ['emp1', 'emp2', 'emp3', 'emp4']

**64.**Write a Python program to iterate over two lists simultaneously. 

**65.**Write a Python program to access dictionary keys element by index. 

**66.**Write a Python program to find the list in a list of lists whose sum of elements is the highest.   
Sample lists: [1,2,3], [4,5,6], [10,11,12], [7,8,9]  
Expected Output: [10, 11, 12]

**67.**Write a Python program to find all the values in a list are greater than a specified number. 

**68.**Write a Python program to extend a list without append.   
Sample data: [10, 20, 30]  
[40, 50, 60]  
Expected output : [40, 50, 60, 10, 20, 30]

**69.**Write a Python program to remove duplicates from a list of lists.   
Sample list : [[10, 20], [40], [30, 56, 25], [10, 20], [33], [40]]  
New List : [[10, 20], [30, 56, 25], [33], [40]]

**70.**Write a Python program to get the depth of a dictionary. 

**71.**Write a Python program to check if all dictionaries in a list are empty or not.   
Sample list : [{},{},{}]  
Return value : True  
Sample list : [{1,2},{},{}]  
Return value : False