

List Exercise



1. Write a Python program to sum all the items

Sample Output

[1,7,-10,34,2,-8]

Sum all the items = 26

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

Sample Output

[3,4,5,4,7]

Multiply all the items in a list : 1680

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

Sample Output

[1,7,10,34,2,8]

Largest Number : 34

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

Sample Output

[51,7,10,34,2,8]

Smallest Number : 2

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 Output

```
['abc', 'xyz', 'aba', '1221']
```

First and Last Character are same : 2

6. Write a Python program to remove duplicates from a list

Sample Output

```
[1,2,3,7,2,1,5,6,4,8,5,4]
```

```
{1,2,3,4,5,6,7,8}
```

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

Sample Output

```
[34,45,6,5,4,56,7]
```

List is Not Empty

8. Write a Python program to clone or copy a list

Sample Output

```
[10, 22, 44, 23, 4]
```

Clone or Copy a List : [10, 22, 44, 23, 4]

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

Sample Output

Find the List of Words that are Longer than n from a given List of Words

Given value of n = 4

```
['Words', 'Longer', 'given', 'Words']
```

10. Write a Program that get two lists as input and check if they have at least one common member

Sample Output

```
[1,2,3,4,5]
```

```
[5,6,7,8,9]
```

Lists have at least one common member

11. Write a Python program to print a specified list after removing the 0th, 4th and 5th elements. (enumerate)

Sample Output

```
["Cat", "Dog", "Elephant", "Fox", "Tiger", "Lion", "Ponda"]
```

```
['Dog', 'Elephant', 'Fox', 'Ponda']
```

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

Sample Output

```
[7,32,81,20,25,14,23,27]
```

```
[7, 81, 25, 23, 27]
```

13. Write a Python program to shuffle and print a specified list (shuffle)

Sample Output

```
["Cat", "Dog", "Elephant", "Fox", "Tiger", "Lion", "Ponda"]
```

```
['Fox', 'Cat', 'Tiger', 'Lion', 'Dog', 'Ponda', 'Elephant']
```

14. 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

Sample Output

First 5 elements : [1, 4, 9, 16, 25]

Last 5 elements : [625, 676, 729, 784, 841]

15. Write a Python program to generate all permutations of a list in Python. (itertools)

Sample Output

[1,2,3]

[(1, 2, 3), (1, 3, 2), (2, 1, 3), (2, 3, 1), (3, 1, 2), (3, 2, 1)]

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

Sample Output

['T','u','t','o','r',' ',' ','J','o','e','s']

Tutor Joes

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

Sample Output

[20, 70, 30, 90, 10, 30, 90, 10, 80]

Item to find the index of 30

Index Number of Item = 2

18. Write a Python program to flatten a shallow list***Sample Output***

```
[[20,30,70],[30,90,10], [30,20], [70,90,10,80]]
```

```
[20, 30, 70, 30, 90, 10, 30, 20, 70, 90, 10, 80]
```

19. Write a Python program to add a list to the second list***Sample Output***

```
[10, 20, 30, 40]
```

```
["Cat", "Dog", "Lion", "Ponda"]
```

```
[10, 20, 30, 40, 'Cat', 'Dog', 'Lion', 'Ponda']
```

20. Write a Python program to select an item randomly from a list Using random.choice()***Sample Output***

```
["Cat", "Dog", "Elephant", "Fox", "Tiger", "Lion", "Ponda"]
```

```
Item randomly from a list : Fox
```

21. Write a python program to check whether two lists are circularly identical***Sample Output***

```
[8, 8, 12, 12, 8]
```

```
[8, 8, 8, 12, 12]
```

```
[1, 8, 8, 12, 12]
```

```
Compare List1 and List2 : True
```

```
Compare List1 and List3 : False
```

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

Sample Output

```
[2,4,56,78,4,34,5,8,9]
```

Second Smallest Number : 4

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

Sample Output

```
[82,4,56,78,4,34,5,100,9]
```

Second Largest Number : 82

24. Write a Python program to get unique values from a list

Sample Output

```
[82, 4, 10, 56, 78, 4, 34, 5, 10, 9]
```

```
[34, 4, 5, 9, 10, 78, 82, 56]
```

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

Sample Output

```
[10, 30, 50, 10, 20, 60, 20, 60, 40, 40, 50, 50, 30]
```

```
Counter({50: 3, 10: 2, 30: 2, 20: 2, 60: 2, 40: 2})
```

26. Create a list by concatenating a given list which range goes from 1 to n

Sample Output

```
['T', 'J']
```

N = 10

```
['T1', 'J1', 'T2', 'J2', 'T3', 'J3', 'T4', 'J4', 'T5', 'J5', 'T6', 'J6', 'T7', 'J7', 'T8', 'J8', 'T9', 'J9', 'T10', 'J10']
```

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

Sample Output

```
x = 30
```

```
s = "Tutor Joes"
```

```
Unique Identification Number : 7005f980
```

```
Unique Identification String : c24bb0
```

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

Sample Output

```
[23,45,67,78,89,34]
```

```
[34,89,55,56,39,67]
```

```
Common items from two lists : {89, 34, 67}
```

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

Sample Output

```
["cat", "dog", "cow", "tiger", "lion", "Fox", "Shark", "Snake", "turtle", "mouse", "monkey",  
"bear"]
```

```
F
```

```
    Fox
```

```
S
```

```
    Shark
```

```
    Snake
```

```
b
```

```
    bear
```

```
c
```

```
    cat
```

cow
d
dog
l
lion
m
monkey
mouse
t
tiger
turtle

30. Write a Python program to select the odd number of a list

Sample Output

[1,2,4,3,6,7,5,8,9,7,8,9,10]

[1, 3, 7, 5, 9, 7, 9]

31. Write a Python Program to count unique values inside a list

Sample Output

[10, 20, 30, 50, 80, 70, 70, 80, 10]

No of Unique Items in List : 6

32. Write a Python Program to List product excluding duplicates

Sample Output

[2, 1, 2, 4, 6, 4, 3, 2, 1]

Duplication removal list product : 144

33. Write a Python Program to Extract elements with Frequency greater than K

Sample Output

[4, 6, 4, 3, 3, 4, 3, 7, 8, 8]

34. Write a Python Program to Test if List contains elements in Range

Sample Output

[4, 5, 6, 7, 3, 9]

Does list contain all elements in range : True

35. Write a Python program to check if the list contains three consecutive common numbers in Python

Sample Output

[18, 18, 18, 6, 3, 4, 9, 9, 9]

Three Consecutive common numbers = 18, 9

36. Write a Python program to find the Strongest Neighbour

Sample Output

[10,20,30,20,30,400]

20 30 30 30 400

37. Write a Python Program to print all Possible Combinations from the three Digits

Sample Output

[1, 2, 3]

1 2 3

1 3 2

2 1 3

2 3 1

3 1 2

3 2 1

38. Write a Python program to find all the Combinations in the list with the given condition

Sample Output

```
['Tutor Joes', ['Software', 'Computer'], ['Solution', 'Education']]
```

```
[ ['Tutor Joes', 'Software', 'Solution'], ['Tutor Joes', 'Computer', 'Education'] ]
```

39. Write a Python program to get all unique combinations of two Lists

Sample Output

```
['A','B','C']
```

```
[1,2,3]
```

```
[ ('A', 1), ('B', 2), ('C', 3)], [('A', 1), ('C', 2), ('B', 3)], [('B', 1), ('A', 2), ('C', 3)], [('B', 1), ('C', 2), ('A', 3)],  
[('C', 1), ('A', 2), ('B', 3)], [('C', 1), ('B', 2), ('A', 3)] ]
```

40. Write a Python program to remove all the occurrences of an element from a list

Sample Output

```
[1, 3, 4, 6, 5, 1]
```

```
[3, 4, 6, 5]
```

41. Write a Python Program to Remove Consecutive K element records

Sample Output

```
[('A', 'B', 'C', 'D'), ('B', 'C', 'C', 'I'), ('H', 'D', 'B', 'C'), ('C', 'C', 'G', 'F')]
```

```
[('A', 'B', 'C', 'D'), ('H', 'D', 'B', 'C')]
```

42. Write a Python Program to Replace index elements with elements in Other List**Sample Output**

```
['Tutor Joes', 'Computer', 'Education']
```

```
[2, 1, 0, 1, 0, 2, 2, 0, 1, 0, 1, 2]
```

```
['Education', 'Computer', 'Tutor Joes', 'Computer', 'Tutor Joes', 'Education', 'Education', 'Tutor Joes', 'Computer', 'Tutor Joes', 'Computer', 'Education']
```

43. Write a Python Program to Retain records with N occurrences of K**Sample Output**

```
[(4, 5, 6, 5, 4), (4, 5, 3), (5, 5, 2), (3, 4, 9)]
```

```
K = 5
```

```
N = 2
```

```
[(4, 5, 6, 5, 4), (5, 5, 2)]
```

44. Write a Python Program to Swap elements in String list**Sample Output**

```
['Tutor', 'joes', 'Computer', 'Education']
```

```
['Tutor', "Joe's", 'Software', 'Solutions']
```

45. Write a Python program to reverse All Strings in String List

Sample Output

Original list = ['Tutor', 'joes', 'Computer', 'Education']

Reversed list = ['rotuT', 'seoj', 'retupmoC', 'noitacudE']

Reversed list = ['Education', 'Computer', 'joes', 'Tutor']

46. Write a Python program to find the character position of Kth word from a list of strings**Sample Output**

['Tutor', 'joes', 'Computer', 'Education']

K = 20

Index of character at Kth position word: 3

47. Write a Python Program to Prefix frequency in string List**Sample Output**

['TjC', 'TjCpp', 'TjPython', 'Java']

Prefix = 'Tj'

Strings count with matching frequency : 3

48. Write a Python Program to Split Strings on Prefix Occurrence**Sample Output**

['TjC', 'TjCpp', 'TjPython', 'Java', 'tj']

Prefix = 'Tj'

[['TjC'], ['TjCpp'], ['TjPython', 'Java', 'tj']]

49. Write a Python program to Replace all Characters of a List Except the given character

Sample Output

```
['P', 'Y', 'T', 'H', 'O', 'N']
```

```
['@', '@', 'T', '@', '@', '@']
```

50. Write a Python Program to Add Space between Potential Words***Sample Output***

```
['TutorJoes', 'ComputerEducations']
```

```
[' Tutor Joes', ' Computer Educations']
```