Programare I
Probleme suplimentare pentru Testul 1 de laborator

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Cuprins

1 Exerciții suplimentare din Cursul 1

Exercise 1: Given two integer numbers return their product. If the product is greater than 1000, then return their sum.

Given 1:
number1 = 20
number2 = 30
Expected Output:
The result is 600
Given 2:
number1 = 40
number2 = 30
Expected Output:
The result is 70

Exercise 2: Given a range of the first 10 numbers, Iterate from the start number to the end number, and In each iteration print the sum of the current number and previous number

Expected Output:
Printing current and previous number sum in a range(10)
Current Number 0 Previous Number 0 Sum: 0
Current Number 1 Previous Number 0 Sum: 1
Current Number 2 Previous Number 1 Sum: 3
Current Number 3 Previous Number 2 Sum: 5
Current Number 4 Previous Number 3 Sum: 7
Current Number 5 Previous Number 4 Sum: 9
Current Number 6 Previous Number 5 Sum: 11
Current Number 7 Previous Number 6 Sum: 13
Current Number 8 Previous Number 7 Sum: 15
Current Number 9 Previous Number 8 Sum: 17

Exercise 3: Given a string, display only those characters which are present at an even index number.

For example, str = ”pynative” so you should display ‘p’, ‘n’, ‘t’, ‘v’.
Reference article for help: Python Input and Output
Expected Output:
Orginal String is pynative
Printing only even index chars
p
n
t
v

Exercise 4: Given a string and an integer number n, remove characters from a string starting from zero up to n and return a new string

For example, removeChars(”pynative”, 4) so output must be tive.
Note: n must be less than the length of the string.
Also try to solve Python String Exercise

Exercise 5: Given a list of numbers, return True if first and last number of a list is same

Expected Output:

Given list is [10, 20, 30, 40, 10] result is True

Given list is [10, 20, 30, 40, 50] result is False

Exercise 6: Given a list of numbers, Iterate it and print only those numbers which are divisible of 5

Expected Output:

Given list is [10, 20, 33, 46, 55]

Divisible of 5 in a list

10

20

55

Also try to solve Python list Exercise

Exercise 7: Return the count of sub-string "Emma" appears in the given string

Given:

str = "Emma is good developer. Emma is a writer"

Expected Output:

Emma appeared 2 times

Exercise 8: Print the following pattern

1

2 2

3 3 3

4 4 4 4

5 5 5 5 5

Reference article for help: Print Pattern using for loop

Exercise 9: Reverse a given number and return true if it is the same as the original number

Expected Output:

original number 121 The original and reverse number is the same

original number 125 The original and reverse number is not same

Exercise 10: Given a two list of numbers create a new list such that new list should contain only odd numbers from the first list and even numbers from the second list

Expected Output:

list1 = [10, 20, 23, 11, 17] list 2 = [13, 43, 24, 36, 12]

result List is [23, 11, 17, 24, 36, 12]

Note: Try to solve Python list Exercise

Also, Test you basic concepts using Basic Python Quiz for Beginners.

Exercise 11: Write a code to extract each digit from an integer, in the reverse order

Expected Output:

If the given int is 7536, the output shall be "6 3 5 7", with a space separating the digits.

Exercise 12: Calculate income tax for the given income by adhering to the below rules

Taxable Income Rate (in First $10,0000 Next 10{,}000$ 10 The remaining 20 Expected Output:

For example, suppose that the taxable income is $45000 the income tax payable is$ $10000 * 0$

Exercise 13: Print multiplication table form 1 to 10

Expected Output:

1 2 3 4 5 6 7 8 9 10
2 4 6 8 10 12 14 16 18 20
3 6 9 12 15 18 21 24 27 30
4 8 12 16 20 24 28 32 36 40
5 10 15 20 25 30 35 40 45 50
6 12 18 24 30 36 42 48 54 60
7 14 21 28 35 42 49 56 63 70
8 16 24 32 40 48 56 64 72 80
9 18 27 36 45 54 63 72 81 90
10 20 30 40 50 60 70 80 90 100

Exercise 14: Print downward Half-Pyramid Pattern with Star (asterisk)

* * * * *

* * * *

* * *

* *

* Reference article for help: Print Pattern using for loop

Exercise 15: Write a function called exponent(base, exp) that returns an int value of base raises to the power of exp.

Note here exp is a non-negative integer, and the base is an integer.

Expected output

Case 1:

base = 2

exponent = 5

2 raises to the power of 5: 32 i.e. (2 *2 * 2 *2 *2 = 32)

Case 2:

base = 5

exponent = 4

5 raises to the power of 4 is: 625

i.e. (5 *5 * 5 *5 = 625)

2 Exerciții suplimentare din Cursul 2

2.1 Instrucțiunea decizională (if)

1. Să se scrie un program care citeşte de la tastatură un număr natural şi verifică dacă numărul este par sau impar.

2. Să se scrie un program care determină maximul a două numere întregi citite de la tastatură.

3. Fiind dată nota unui elev să se afișeze dacă acesta este corigent (nota $<$ 5) sau promovat (nota $\in [5, 10]$).

4. Se dau trei numere naturale a, b, x. Să se verifice dacă numărul x aparține intervalului $[a, b]$.

5. La un concurs pot participa copii cu vârste între a și b inclusiv. Gigel are n ani. Stabiliți dacă poate participa la concurs.

6. Se citește de la tastatură un număr natural de 3 cifre. Să se determine câte cifre impare conține.

7. Se citește de la tastatură un număr natural de 3 cifre. Să se determine câte cifre pare conține.

8. Se citește de la tastatură un număr natural de 3 cifre. Să se determine suma cifrelor.

9. Se citește de la tastatură un număr natural de 3 cifre. Să se determine produsul cifrelor.

10. Să se scrie un program care citeşte de la tastatură două numere întregi şi verifică dacă cele doua numere au acelaşi semn.

2.2 Instructiunea repetitiva

1. Se dă un număr natural n. Afișați în ordine crescătoare primele n numere naturale nenule.

2. Se dă un număr natural n. Afișați în ordine descrescătoare primele n numere naturale nenule.

3. Se dă un număr natural n. Afișați în ordine descrescătoare primele n numere naturale nenule, din 2 in 2.

4. Se dă un număr natural n. Afișați în ordine crescătoare primele n numere naturale nenule, din 3 in 3.

5. Se dă un număr natural n. Afișați în ordine crescătoare primele n numere naturale pare nenule.

6. Se dă un număr natural n. Afișați în ordine descrescătoare numerele naturale impare mai mici sau egale cu n.

7. Determinati divizorii pari ai unui numar natural nenul n, citit de la tastatura.

8. Determinati divizorii impari si divizibili cu 3 si cu 5, dar nu si cu 15, ai unui numar natural nenul n, citit de la tastatura.

9. Verificati daca un numar natural citit contine DOAR divizori pari (in afara de cei improprii).

10. Verificati daca un numar natural citit (de 6 cifre) are suma cifrelor un numar prim.

3 Exerciții cu string-uri

1. Write a Python program to calculate the length of a string.

2. Write a Python program to count the number of characters (character frequency) in a string.

Sample String : google.com'

Expected Result : {'g': 2, 'o': 3, 'l': 1, 'e': 1, '.': 1, 'c': 1, 'm': 1}

3. Write a Python program to get a string made of the first 2 and the last 2 chars from a given a string. If the string length is less than 2, return instead of the empty string.

Sample String : 'w3resource'

Expected Result : 'w3ce'

Sample String : 'w3'

Expected Result : 'w3w3'

Sample String : ' w'

Expected Result : Empty String

4. Write a Python program to get a string from a given string where all occurrences of its first char have been changed to $', except the first char itself.$

Sample String : 'restart'

Expected Result : 'restat'

5. Write a Python program to get a single string from two given strings, separated by a space and swap the first two characters of each string.

Sample String : 'abc', 'xyz'

Expected Result : 'xyc abz'

6. Write a Python program to add 'ing' at the end of a given string (length should be at least 3). If the given string already ends with 'ing' then add 'ly' instead. If the string length of the given string is less than 3, leave it unchanged.

Sample String : 'abc'

Expected Result : 'abcing'

Sample String : 'string'

Expected Result : 'stringly'

7. Write a Python program to find the first appearance of the substring 'not' and 'poor' from a given string, if 'not' follows the 'poor', replace the whole 'not'...'poor' substring with 'good'. Return the resulting string.

Sample String : 'The lyrics is not that poor!'

'The lyrics is poor!'

Expected Result : 'The lyrics is good!'

'The lyrics is poor!'

8. Write a Python function that takes a list of words and returns the longest word and the length of the longest one.

Sample Output:

Longest word: Exercises

Length of the longest word: 9

9. Write a Python program to remove the nth index character from a non-empty string.

10. Write a Python program to change a given string to a new string where the first and last chars have been exchanged.

11. Write a Python program to remove the characters which have odd index values of a given string.

12. Write a Python program to count the occurrences of each word in a given sentence.

13. Write a Python script that takes input from the user and displays that input back in upper and lower cases.

14. Write a Python program that accepts a comma separated sequence of words as input and prints the unique words in sorted form (alphanumerically).

Sample Words : red, white, black, red, green, black

Expected Result : black, green, red, white,red

15. Write a Python function to create the HTML string with tags around the word(s).

Sample function and result :

$\text{add}_t ags('i',' Python') - >' < i > Python < /i >'$

$\text{add}_t ags('b',' PythonTutorial') - >' < b > PythonTutorial < /b >'$

16. Write a Python function to insert a string in the middle of a string.

Sample function and result :

$\text{insert}_s ting_m iddle('[[]] <<>>',' Python') - > [[Python]]$

$\text{insert}_s ting_m iddle('',' PHP') - > PHP$

17. Write a Python function to get a string made of 4 copies of the last two characters of a specified string (length must be at least 2).

Sample function and result :

$\text{insert}_e nd('Python') - > ononon on$

$\text{insert}_e nd('Exercises') - > eseseses$

18. Write a Python function to get a string made of its first three characters of a specified string. If the length of the string is less than 3 then return the original string.

Sample function and result :

$\text{first}_t hree('ipy') - > ipy$

$\text{first}_t hree('python') - > pyt$

19. Write a Python program to get the last part of a string before a specified character.

https://www.w3resource.com/python-exercises

https://www.w3resource.com/python

20. Write a Python function to reverses a string if it's length is a multiple of 4.

21. Write a Python function to convert a given string to all uppercase if it contains at least 2 uppercase characters in the first 4 characters.

22.Write a Python program to sort a string lexicographically.

23. Write a Python program to remove a newline in Python.

24. Write a Python program to check whether a string starts with specified characters.

25. Write a Python program to create a Caesar encryption.

Note : In cryptography, a Caesar cipher, also known as Caesar's cipher, the shift cipher, Caesar's code or Caesar shift, is one of the simplest and most widely known encryption techniques. It is a type of substitution cipher in which each letter in the plaintext is replaced by a letter some fixed number of positions down the alphabet. For example, with a left shift of 3, D would be replaced by A, E would become B, and so on. The method is named after Julius Caesar, who used it in his private correspondence.

26. Write a Python program to display formatted text (width=50) as output.

27. Write a Python program to remove existing indentation from all of the lines in a given text.

28. Write a Python program to add a prefix text to all of the lines in a string.

29. Write a Python program to set the indentation of the first line.

30. Write a Python program to print the following floating numbers upto 2 decimal places.

31. Write a Python program to print the following floating numbers upto 2 decimal places with a sign.

32. Write a Python program to print the following floating numbers with no decimal places.

33. Write a Python program to print the following integers with zeros on the left of specified width.

34. Write a Python program to print the following integers with '*' on the right of specified width.

35. Write a Python program to display a number with a comma separator.

36. Write a Python program to format a number with a percentage.

37. Write a Python program to display a number in left, right and center aligned of width 10.

38. Write a Python program to count occurrences of a substring in a string.

39. Write a Python program to reverse a string.

40. Write a Python program to reverse words in a string.

41. Write a Python program to strip a set of characters from a string.

42. Write a Python program to count repeated characters in a string.

Sample string: 'thequickbrownfoxjumpsoverthelazydog'

Expected output :

o 4
e 3
u 2
h 2
r 2
t 2

43. Write a Python program to print the square and cube symbol in the area of a rectangle and volume of a cylinder.

Sample output:

The area of the rectangle is 1256.66cm2

The volume of the cylinder is 1254.725cm3

44. Write a Python program to print the index of the character in a string.

Sample string: w3resource

Expected output:

Current character w position at 0

Current character 3 position at 1

Current character r position at 2

- -

Current character c position at 8

Current character e position at 9

45. Write a Python program to check if a string contains all letters of the alphabet.

46. Write a Python program to convert a string in a list.

47. Write a Python program to lowercase first n characters in a string.

48. Write a Python program to swap comma and dot in a string.

Sample string: "32.054,23"

Expected Output: "32,054.23"

49. Write a Python program to count and display the vowels of a given text.

50. Write a Python program to split a string on the last occurrence of the delimiter.

51. Write a Python program to find the first non-repeating character in given string.

52. Write a Python program to print all permutations with given repetition number of characters of a given string.

53. Write a Python program to find the first repeated character in a given string.

54. Write a Python program to find the first repeated character of a given string where the index of first occurrence is smallest.

55.Write a Python program to find the first repeated word in a given string.

56. Write a Python program to find the second most repeated word in a given string.

57.Write a Python program to remove spaces from a given string.

58. Write a Python program to move spaces to the front of a given string.

59. Write a Python program to find the maximum occurring character in a given string.

60. Write a Python program to capitalize first and last letters of each word of a given string.

61. Write a Python program to remove duplicate characters of a given string.

62. Write a Python program to compute sum of digits of a given string.

63. Write a Python program to remove leading zeros from an IP address.

64. Write a Python program to find maximum length of consecutive 0's in a given binary string.

65. Write a Python program to find all the common characters in lexicographical order from two given lower case strings. If there are no common letters print "No common characters".

66. Write a Python program to make two given strings (lower case, may or may not be of the same length) anagrams removing any characters from any of the strings.

67. Write a Python program to remove all consecutive duplicates of a given string.

68. Write a Python program to create two strings from a given string. Create the first string using those character which occurs only once and create the second string which consists of multi-time occurring characters in the said string.

69. Write a Python program to find the longest common sub-string from two given strings.

70. Write a Python program to create a string from two given strings concatenating uncommon characters of the said strings.

71. Write a Python program to move all spaces to the front of a given string in single traversal.

72. Write a Python code to remove all characters except a specified character in a given string.

Original string

Python Exercises

Remove all characters except P in the said string:

P

Original string

google

Remove all characters except g in the said string:

gg

Original string

exercises

Remove all characters except e in the said string:

eee

73. Write a Python program to count Uppercase, Lowercase, special character and numeric values in a given string.

74. Write a Python program to find the minimum window in a given string which will contain all the characters of another given string.

Example 1

Input : str1 = " PRWSOERIUSFK "

str2 = " OSU "

Output: Minimum window is "OERIUS"

75. Write a Python program to find smallest window that contains all characters of a given string.

76. Write a Python program to count number of substrings from a given string of lowercase alphabets with exactly k distinct (given) characters.

77. Write a Python program to count number of non-empty substrings of a given string.

78. Write a Python program to count characters at same position in a given string (lower and uppercase characters) as in English alphabet.

79. Write a Python program to find smallest and largest word in a given string.

80. Write a Python program to count number of substrings with same first and last characters of a given string.

81. Write a Python program to find the index of a given string at which a given substring starts. If the substring is not found in the given string return 'Not found'.

82. Write a Python program to wrap a given string into a paragraph of given width.

Sample Output:

Input a string: The quick brown fox.

Input the width of the paragraph: 10

Result:

The quick

brown fox.

83. Write a Python program to print four values decimal, octal, hexadecimal (capitalized), binary in a single line of a given integer.

Sample Output:

Input an integer: 25

Decimal Octal Hexadecimal (capitalized), Binary

25 31 19 11001

84. Write a Python program to swap cases of a given string.

Sample Output:

pYTHON eXERCISES

jAVA

nUMpY

85. Write a Python program to convert a given Bytearray to Hexadecimal string.

Sample Output:

Original Bytearray :

[111, 12, 45, 67, 109]

Hexadecimal string:

6f0c2d436d

86. Write a Python program to delete all occurrences of a specified character in a given string.

Sample Output:

Original string:

Delete all occurrences of a specified character in a given string

Modified string:

Delete ll occurrences of specified chrcter in given string

87. Write a Python program find the common values that appear in two given strings.

Sample Output:

Original strings:

Python3

Python2.7

Intersection of two said String:
Python

88. Write a Python program to check whether a given string contains a capital letter, a lower case letter, a number and a minimum length.

Sample Output:
Input the string: W3resource
['Valid string.']

89. Write a Python program to remove unwanted characters from a given string.

Sample Output:
Original String : Pyth*^{o}n$Exercis^{e}$s
After removing unwanted characters:
Python Exercises
Original String : A
After removing unwanted characters:
ABCD

90. Write a Python program to remove duplicate words from a given string.

Sample Output:
Original String:
Python Exercises Practice Solution Exercises
After removing duplicate words from the said string:
Python Exercises Practice Solution

91. Write a Python program to convert a given heterogeneous list of scalars into a string.

Sample Output:
Original list:
['Red', 100, -50, 'green', 'w,3,r', 12.12, False]
Convert the heterogeneous list of scalars into a string:
Red,100,-50,green,w,3,r,12.12,False

92. Write a Python program to find the string similarity between two given strings.

Sample Output:
Original string:
Python Exercises
Python Exercises
Similarity between two said strings:
1.0
Original string:
Python Exercises
Python Exercise
Similarity between two said strings:
0.967741935483871
Original string:
Python Exercises
Python Ex.
Similarity between two said strings:

0.6923076923076923
Original string:
Python Exercises
Python
Similarity between two said strings:
0.5454545454545454
Original string:
Java Exercises
Python
Similarity between two said strings:
0.0

4 Exerciții cu liste

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: , 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',' $color_code'$:' $FF0000'$,'

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 difference 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 whether 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 whether 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 move all zero digits to end of a given list of numbers.

Expected output:

Original list:

[3, 4, 0, 0, 0, 6, 2, 0, 6, 7, 6, 0, 0, 0, 9, 10, 7, 4, 4, 5, 3, 0, 0, 2, 9, 7, 1]

Move all zero digits to end of the said list of numbers:

[3, 4, 6, 2, 6, 7, 6, 9, 10, 7, 4, 4, 5, 3, 2, 9, 7, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0]

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 find the items starts with specific character from a given list.

Expected Output:

Original list:

['abcd', 'abc', 'bcd', 'bkie', 'cder', 'cdsw', 'sdfsd', 'dagfa', 'acjd']

Items start with a from the said list:

['abcd', 'abc', 'acjd']

Items start with d from the said list:

['dagfa']

Items start with w from the said list:

[]

71. Write a Python program to check whether all dictionaries in a list are empty or not.

Sample list : [,,]

Return value : True

Sample list : [1,2,,]

Return value : False

72. Write a Python program to flatten a given nested list structure.

Original list: [0, 10, [20, 30], 40, 50, [60, 70, 80], [90, 100, 110, 120]]

Flatten list:

[0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120]

73. Write a Python program to remove consecutive duplicates of 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]

74. Write a Python program to pack consecutive duplicates of a given list elements into sublists.

Original list:

[0, 0, 1, 2, 3, 4, 4, 5, 6, 6, 6, 7, 8, 9, 4, 4]

After packing consecutive duplicates of the said list elements into sublists:

[[0, 0], [1], [2], [3], [4, 4], [5], [6, 6, 6], [7], [8], [9], [4, 4]]

75. Write a Python program to create a list reflecting the run-length encoding from a given list of integers or a given list of characters.

Original list:

[1, 1, 2, 3, 4, 4.3, 5, 1]

List reflecting the run-length encoding from the said list:

[[2, 1], [1, 2], [1, 3], [1, 4], [1, 4.3], [1, 5], [1, 1]]

Original String:

automatically

List reflecting the run-length encoding from the said string:

[[1, 'a'], [1, 'u'], [1, 't'], [1, 'o'], [1, 'm'], [1, 'a'], [1, 't'], [1, 'i'], [1, 'c'], [1, 'a'], [2, 'l'], [1, 'y']]

76. Write a Python program to create a list reflecting the modified run-length encoding from a given list of integers or a given list of characters.

Original list:

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

List reflecting the modified run-length encoding from the said list:

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

Original String:

aabcddddadnss

List reflecting the modified run-length encoding from the said string:

[[2, 'a'], 'b', 'c', [4, 'd'], 'a', 'd', 'n', [2, 's']]

77. Write a Python program to decode a run-length encoded given list.

Original encoded list:

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

Decode a run-length encoded said list:

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

78. Write a Python program to split a given list into two parts where the length of the first part of the list is given.

Original list:

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

Length of the first part of the list: 3

Splited the said list into two parts:

([1, 1, 2], [3, 4, 4, 5, 1])

79. Write a Python program to remove the K'th element from a given list, print the new list.

Original list:

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

After removing an element at the kth position of the said list:

[1, 1, 3, 4, 4, 5, 1]

80. Write a Python program to insert an element at a specified position into a given list.

Original list:

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

After inserting an element at kth position in the said list:

[1, 1, 12, 2, 3, 4, 4, 5, 1]

81. Write a Python program to extract a given number of randomly selected elements from a given list.

Original list:

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

Selected 3 random numbers of the above list:

[4, 4, 1]

82. Write a Python program to generate the combinations of n distinct objects taken from the elements of a given list.

Original list: [1, 2, 3, 4, 5, 6, 7, 8, 9] Combinations of 2 distinct objects: [1, 2] [1, 3] [1, 4] [1, 5] .... [7, 8] [7, 9] [8, 9]

83. Write a Python program to round every number of a given list of numbers and print the total sum multiplied by the length of the list.

Original list: [22.4, 4.0, -16.22, -9.1, 11.0, -12.22, 14.2, -5.2, 17.5]

Result:

243

84. Write a Python program to round the numbers of a given list, print the minimum and maximum numbers and multiply the numbers by 5. Print the unique numbers in ascending order separated by space.

Original list: [22.4, 4.0, 16.22, 9.1, 11.0, 12.22, 14.2, 5.2, 17.5]

Minimum value: 4

Maximum value: 22

Result:

20 25 45 55 60 70 80 90 110

85. Write a Python program to create a multidimensional list (lists of lists) with zeros.

Multidimensional list: [[0, 0], [0, 0], [0, 0]]

86. Write a Python program to create a 3X3 grid with numbers.

3X3 grid with numbers:

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

87. Write a Python program to read a matrix from console and print the sum for each column. Accept matrix rows, columns and elements for each column separated with a space(for every row) as input from the user.

Input rows: 2

Input columns: 2

Input number of elements in a row (1, 2, 3):

1 2

3 4

sum for each column:

4 6

88. Write a Python program to read a square matrix from console and print the sum of matrix primary diagonal. Accept the size of the square matrix and elements for each column separated with a space (for every row) as input from the user.

Input the size of the matrix: 3

2 3 4

4 5 6

3 4 7
Sum of matrix primary diagonal:
14
89. Write a Python program to Zip two given lists of lists.
Original lists:
[[1, 3], [5, 7], [9, 11]]
[[2, 4], [6, 8], [10, 12, 14]]
Zipped list:
[[1, 3, 2, 4], [5, 7, 6, 8], [9, 11, 10, 12, 14]]
90. Write a Python program to count 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
91. Write a Python program to find the list with maximum and minimum length.
Original list:
[[0], [1, 3], [5, 7], [9, 11], [13, 15, 17]]
List with maximum length of lists:
(3, [13, 15, 17])
List with minimum length of lists:
(1, [0])
Original list:
[[0], [1, 3], [5, 7], [9, 11], [3, 5, 7]]
List with maximum length of lists:
(3, [3, 5, 7])
List with minimum length of lists:
(1, [0])
Original list:
[[12], [1, 3], [1, 34, 5, 7], [9, 11], [3, 5, 7]]
List with maximum length of lists:
(4, [1, 34, 5, 7])
List with minimum length of lists:
(1, [12])
92. Write a Python program to check if a nested list is a subset of another nested list.
Original list:
[[1, 3], [5, 7], [9, 11], [13, 15, 17]]
[[1, 3], [13, 15, 17]]
If the one of the said list is a subset of another.:
True
Original list:

[[[1, 2], [2, 3]], [[3, 4], [5, 6]]]
[[[3, 4], [5, 6]]]
If the one of the said list is a subset of another.:
True
Original list:
[[[1, 2], [2, 3]], [[3, 4], [5, 7]]]
[[[3, 4], [5, 6]]]
If the one of the said list is a subset of another.:
False

93. Write a Python program to count the number of sublists contain a particular element.

Original list:
[[1, 3], [5, 7], [1, 11], [1, 15, 7]]
Count 1 in the said list:
3
Count 7 in the said list:
2
Original list:
[['A', 'B'], ['A', 'C'], ['A', 'D', 'E'], ['B', 'C', 'D']]
Count 'A' in the said list:
3
Count 'E' in the said list:
1

94. Write a Python program to count number of unique sublists within a given list.

Original list:
[[1, 3], [5, 7], [1, 3], [13, 15, 17], [5, 7], [9, 11]]
Number of unique lists of the said list:
(1, 3): 2, (5, 7): 2, (13, 15, 17): 1, (9, 11): 1
Original list:
[['green', 'orange'], ['black'], ['green', 'orange'], ['white']]
Number of unique lists of the said list:
('green', 'orange'): 2, ('black',): 1, ('white',): 1

95. Write a Python program to sort each sublist of strings in a given list of lists.

Original list:
[[2], [0], [1, 3], [0, 7], [9, 11], [13, 15, 17]]
Sort the list of lists by length and value:
[[0], [2], [0, 7], [1, 3], [9, 11], [13, 15, 17]]

96. Write a Python program to sort a given list of lists by length and value.

Original list:
[[2], [0], [1, 3], [0, 7], [9, 11], [13, 15, 17]]
Sort the list of lists by length and value:
[[0], [2], [0, 7], [1, 3], [9, 11], [13, 15, 17]]

97. Write a Python program to remove sublists from a given list of lists, which contains an element outside a given range.

Original list:

[[2], [0], [1, 2, 3], [0, 1, 2, 3, 6, 7], [9, 11], [13, 14, 15, 17]]

After removing sublists from a given list of lists, which contains an element outside the given range:

[[13, 14, 15, 17]]

98. Write a Python program to scramble the letters of string in a given list.

Original list:

['Python', 'list', 'exercises', 'practice', 'solution']

After scrambling the letters of the strings of the said list:

['tnPhyo', 'tlis', 'ecrsseiex', 'ccpitear', 'noiltuos']

99. Write a Python program to find the maximum and minimum values in a given heterogeneous list.

Original list:

['Python', 3, 2, 4, 5, 'version']

Maximum and Minimum values in the said list:

(5, 2)

100. Write a Python program to extract common index elements from more than one given list.

101. Write a Python program to sort a given matrix in ascending order according to the sum of its rows.

102. Write a Python program to extract specified size of strings from a give list of string values.

8

103. Write a Python program to extract specified number of elements from a given list, which follows each other continuously.

104. Write a Python program to find the difference between consecutive numbers in a given list.

105. Write a Python program to compute average of two given lists.

3.823529411764706

106. Write a Python program to count integer in a given mixed list.

6

107. Write a Python program to remove a specified column from a given nested list.

108. Write a Python program to extract a specified column from a given nested list.

109. Write a Python program to rotate a given list by specified number of items to the right or left direction.

110. Write a Python program to find the item with maximum occurrences in a given list.

2

111. Write a Python program to access multiple elements of specified index from a given list.

112. Write a Python program to check whether a specified list is sorted or not.

113. Write a Python program to remove duplicate dictionary from a given list.

114. Write a Python program to extract the nth element from a given list of tuples.

115. Write a Python program to check if the elements of a given list are unique or not.

116. Write a Python program to sort a list of lists by a given index of the inner list.

117. Write a Python program to remove all elements from a given list present in another list.

118. Write a Python program to find the difference between elements (n+1th - nth) of a given list of numeric values.

119. Write a Python program to check if a substring presents in a given list of string values.

120. Write a Python program to create a list taking alternate elements from a given list.

121. Write a Python program to find the nested lists elements which are present in another list.

122. Write a Python program to find common element(s) in a given nested lists.

123. Write a Python program to reverse strings in a given list of string values.

124. Write a Python program to find the maximum and minimum product from the pairs of tuple within a given list.

(36, 8)

125. Write a Python program to calculate the product of the unique numbers of a given list.

126. Write a Python program to interleave multiple lists of the same length.

127. Write a Python program to remove words from a given list of strings containing a character or string.

128. Write a Python program to calculate the sum of the numbers in a list between the indices of a specified range.

29

129. Write a Python program to reverse each list in a given list of lists.

130. Write a Python program to count the same pair in three given lists.

3

131. Write a Python program to count the frequency of consecutive duplicate elements in a given list of numbers.

([1, 2, 4, 5], [1, 3, 3, 4])

132. Write a Python program to find all index positions of the maximum and minimum values in a given list of numbers.

133. Write a Python program to check common elements between two given list are in same order or not.

134. Write a Python program to find the difference between two list including duplicate elements.

135. Write a Python program to iterate over all pairs of consecutive items in a given list.

136. Write a Python program to remove duplicate words from a given list of strings.

137. Write a Python program to find a first even and odd number in a given list of numbers.

(4, 1)

138. Write a Python program to sort a given mixed list of integers and strings. Numbers must be sorted before strings.

139. Write a Python program to sort a given list of strings(numbers) numerically.

140. Write a Python program to remove the specific item from a given list of lists.

141. Write a Python program to remove empty lists from a given list of lists.

142. Write a Python program to sum a specific column of a list in a given list of lists.

12

15

9

143. Write a Python program to get the frequency of the elements in a given list of lists.

144. Write a Python program to extract every first or specified element from a given two-dimensional list.

145. Write a Python program to generate a number in a specified range except some specific numbers.

7

-4

146. Write a Python program to compute the sum of digits of each number of a given list.

14

19

19

147. Write a Python program to interleave two given list into another list randomly.

148. Write a Python program to remove specific words from a given list.

149. Write a Python program to get all possible combinations of the elements of a given list.

150. Write a Python program to reverse a given list of lists.

151. Write a Python program to find the maximum and minimum values in a given list within specified index range.

3 to 8

(5, 0)

152. Write a Python program to combine two given sorted lists using heapq module.

153. Write a Python program to check if a given element occurs at least n times in a list.

154. Write a Python program to join two given list of lists of same length, element wise.

155. Write a Python program to add two given lists of different lengths, start from left.

156. Write a Python program to add two given lists of different lengths, start from right.

157. Write a Python program to interleave multiple given lists of different lengths.

158. Write a Python program to find the maximum and minimum values in a given list of tuples.

(78, 60)

159. Write a Python program to append the same value /a list multiple times to a list/list-of-lists.

160. Write a Python program to remove first specified number of elements from a given list satisfying a condition.

161. Write a Python program to check if a given list is strictly increasing or not. Moreover, If removing only one element from the list results in a strictly increasing list, we still consider the list true.

162. Write a Python program to find the last occurrence of a specified item in a given list.

7

15

14

12

163. Write a Python program to get the index of the first element which is greater than a specified element.

4

1

5

3

164. Write a Python program to get the items from a given list with specific condition.

5

165. Write a Python program to split a given list into specified sized chunks.

166. Write a Python program to remove None value from a given list.

167. Write a Python program to convert a given list of strings into list of lists.

168. Write a Python program to display vertically each element of a given list, list of lists.

1 4 7

2 5 3

5 8 6

169. Write a Python program to convert a given list of strings and characters to a single list of characters.

170. Write a Python program to insert an element in a given list after every nth position.

171. Write a Python program to concatenate element-wise three given lists.

172. Write a Python program to remove the last N number of elements from a given list.

173. Write a Python program to merge some list items in given list using index value.

174. Write a Python program to add a number to each element in a given list of numbers.

175. Write a Python program to find the minimum, maximum value for each tuple position in a given list of tuples.

176. Write a Python program to create a new list dividing two given lists of numbers.

177. Write a Python program to find common elements in a given list of lists.

178. Write a Python program to insert a specified element in a given list after every nth element.

179. Write a Python program to create the largest possible number using the elements of a given list of positive integers.

Original list:

[3, 40, 41, 43, 74, 9]

Largest possible number using the elements of the said list of positive integers:

9744341403

Original list:

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

Largest possible number using the elements of the said list of positive integers:

605040302010

Original list:

[8, 4, 2, 9, 5, 6, 1, 0]

Largest possible number using the elements of the said list of positive integers:

98654210

180. Write a Python program to create the smallest possible number using the elements of a given list of positive integers.

Original list:

[3, 40, 41, 43, 74, 9]

Smallest possible number using the elements of the said list of positive integers:

3404143749

Original list:

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

Smallest possible number using the elements of the said list of positive integers:

102030405060

Original list:

[8, 4, 2, 9, 5, 6, 1, 0]

Smallest possible number using the elements of the said list of positive integers:

01245689

181. Write a Python program to iterate a given list cyclically on specific index position.

Original list:

['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h']

Iterate the said list cyclically on specific index position 3 :

['d', 'e', 'f', 'g', 'h', 'a', 'b', 'c']

Iterate the said list cyclically on specific index position 5 :

['f', 'g', 'h', 'a', 'b', 'c', 'd', 'e']

182. Write a Python program to calculate the maximum and minimum sum of a sublist in a given list of lists.

Original list:

[[1, 2, 3, 5], [2, 3, 5, 4], [0, 5, 4, 1], [3, 7, 2, 1], [1, 2, 1, 2]]

Maximum sum of sub list of the said list of lists:

[2, 3, 5, 4]

Minimum sum of sub list of the said list of lists:

[1, 2, 1, 2]

183. Write a Python program to get the unique values in a given list of lists.

Original list:

[[1, 2, 3, 5], [2, 3, 5, 4], [0, 5, 4, 1], [3, 7, 2, 1], [1, 2, 1, 2]]

Unique values of the said list of lists:

[0, 1, 2, 3, 4, 5, 7]

Original list:

[['h', 'g', 'l', 'k'], ['a', 'b', 'd', 'e', 'c'], ['j', 'i', 'y'], ['n', 'b', 'v', 'c'], ['x', 'z']]

Unique values of the said list of lists:

['e', 'd', 'c', 'b', 'x', 'k', 'n', 'h', 'g', 'j', 'i', 'a', 'l', 'y', 'v', 'z']

184. Write a Python program to form Bigrams of words in a given list of strings.

From Wikipedia:

A bigram or digram is a sequence of two adjacent elements from a string of tokens, which are typically letters, syllables, or words. A bigram is an n-gram for n=2. The frequency distribution of every bigram in a string is commonly used for simple statistical analysis of text in many applications, including in computational linguistics, cryptography, speech recognition, and so on.

Original list:

['Sum all the items in a list', 'Find the second smallest number in a list']

Bigram sequence of the said list:

[('Sum', 'all'), ('all', 'the'), ('the', 'items'), ('items', 'in'), ('in', 'a'), ('a', 'list'), ('Find', 'the'), ('the', 'second'), ('second', 'smallest'), ('smallest', 'number'), ('number', 'in'), ('in', 'a'), ('a', 'list')]

185. Write a Python program to convert a given decimal number to binary list.

Original Number: 8

Decimal number (8) to binary list:

[1, 0, 0, 0]
Original Number: 45
Decimal number (45) to binary list:
[1, 0, 1, 1, 0, 1]
Original Number: 100
Decimal number (100) to binary list:
[1, 1, 0, 0, 1, 0, 0]

186. Write a Python program to swap two sublists in a given list.

Original list:
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
Swap two sublists of the said list:
[0, 6, 7, 8, 9, 3, 4, 5, 1, 2, 10, 11, 12, 13, 14, 15]
Swap two sublists of the said list:
[0, 9, 3, 8, 6, 7, 4, 5, 1, 2, 10, 11, 12, 13, 14, 15]

187. Write a Python program to convert a given list of tuples to a list of strings.

Original list of tuples:
[('red', 'green'), ('black', 'white'), ('orange', 'pink')]
Convert the said list of tuples to a list of strings:
['red green', 'black white', 'orange pink']
Original list of tuples:
[('Laiba', 'Delacruz'), ('Mali', 'Stacey', 'Drummond'), ('Raja', 'Welch'), ('Saarah', 'Stone')]
Convert the said list of tuples to a list of strings:
['Laiba Delacruz', 'Mali Stacey Drummond', 'Raja Welch', 'Saarah Stone']

188. Write a Python program to sort a given list of tuples on specified element.

Original list of tuples:
[('item2', 10, 10.12), ('item3', 15, 25.1), ('item1', 11, 24.5), ('item4', 12, 22.5)]
Sort on 1st element of the tuple of the said list:
[('item1', 11, 24.5), ('item2', 10, 10.12), ('item3', 15, 25.1), ('item4', 12, 22.5)]
Sort on 2nd element of the tuple of the said list:
[('item2', 10, 10.12), ('item1', 11, 24.5), ('item4', 12, 22.5), ('item3', 15, 25.1)]
Sort on 3rd element of the tuple of the said list:
[('item2', 10, 10.12), ('item4', 12, 22.5), ('item1', 11, 24.5), ('item3', 15, 25.1)]

189. Write a Python program to shift last element to first position and first element to last position in a given list.

Original list:
[1, 2, 3, 4, 5, 6, 7]
Shift last element to first position and first element to last position of the said list:
[7, 2, 3, 4, 5, 6, 1]

Original list:
['s', 'd', 'f', 'd', 's', 's', 'd', 'f']
Shift last element to first position and first element to last position of the said list:
['f', 'd', 'f', 'd', 's', 's', 'd', 's']

190. Write a Python program to find the specified number of largest products from two given list, multiplying an element from each list.

Original lists:
[1, 2, 3, 4, 5, 6]
[3, 6, 8, 9, 10, 6]
3 Number of largest products from the said two lists:
[60, 54, 50]
4 Number of largest products from the said two lists:
[60, 54, 50, 48]

191. Write a Python program to find the maximum and minimum value of the three given lists.

Original lists:
[2, 3, 5, 8, 7, 2, 3]
[4, 3, 9, 0, 4, 3, 9]
[2, 1, 5, 6, 5, 5, 4]
Maximum value of the said three lists:
9
Minimum value of the said three lists:
0

192. Write a Python program to remove all strings from a given list of tuples.

Original list:
[(100, 'Math'), (80, 'Math'), (90, 'Math'), (88, 'Science', 89), (90, 'Science', 92)]
Remove all strings from the said list of tuples:
[(100,), (80,), (90,), (88, 89), (90, 92)]

193. Write a Python program to find the dimension of a given matrix.

Original list:
[[1, 2], [2, 4]]
Dimension of the said matrix:
(2, 2)
Original list:
[[0, 1, 2], [2, 4, 5]]
Dimension of the said matrix:
(2, 3)
Original list:
[[0, 1, 2], [2, 4, 5], [2, 3, 4]]
Dimension of the said matrix:
(3, 3)

194. Write a Python program to sum two or more lists, the lengths of the lists may be different.

Original list:

[[1, 2, 4], [2, 4, 4], [1, 2]]
Sum said lists with different lengths:
[4, 8, 8]
Original list:
[[1], [2, 4, 4], [1, 2], [4]]
Sum said lists with different lengths:
[8, 6, 4]

195. Write a Python program to traverse a given list in reverse order, also print the elements with original index.

Original list:
['red', 'green', 'white', 'black']
Traverse the said list in reverse order:
black
white
green
red
Traverse the said list in reverse order with original index:
3 black
2 white
1 green
0 red

196. Write a Python program to move a specified element in a given list.

Original list:
['red', 'green', 'white', 'black', 'orange']
Move white at the end of the said list:
['red', 'green', 'black', 'orange', 'white']
Original list:
['red', 'green', 'white', 'black', 'orange']
Move red at the end of the said list:
['green', 'white', 'black', 'orange', 'red']
Original list:
['red', 'green', 'white', 'black', 'orange']
Move black at the end of the said list:
['red', 'green', 'white', 'orange', 'black']

197. Write a Python program to compute the average of nth elements in a given list of lists with different lengths.

Original list:
[[0, 1, 2], [2, 3, 4], [3, 4, 5, 6], [7, 8, 9, 10, 11], [12, 13, 14]]
Average of n-th elements in the said list of lists with different lengths:
[4.8, 5.8, 6.8, 8.0, 11.0]

198. Write a Python program to compare two given lists and find the indices of the values present in both lists.

Original lists:
[1, 2, 3, 4, 5, 6]
[7, 8, 5, 2, 10, 12]
Compare said two lists and get the indices of the values present in both lists:

[1, 4]
Original lists:
[1, 2, 3, 4, 5, 6]
[7, 8, 5, 7, 10, 12]
Compare said two lists and get the indices of the values present in both lists:
[4]
Original lists:
[1, 2, 3, 4, 15, 6]
[7, 8, 5, 7, 10, 12]
Compare said two lists and get the indices of the values present in both lists:
[]

199. Write a Python program to convert a given unicode list to a list contains strings.

Original lists:
['S001', 'S002', 'S003', 'S004']
Convert the said unicode list to a list contains strings:
['S001', 'S002', 'S003', 'S004']

200. Write a Python program to pair up the consecutive elements of a given list.

Original lists:
[1, 2, 3, 4, 5, 6]
Pair up the consecutive elements of the said list:
[[1, 2], [2, 3], [3, 4], [4, 5], [5, 6]]
Original lists:
[1, 2, 3, 4, 5]
Pair up the consecutive elements of the said list:
[[1, 2], [2, 3], [3, 4], [4, 5]]

201. Write a Python program to check if a given string contains an element, which is present in a list.

The original string and list:
https://www.w3resource.com/python-exercises/list/
['.com', '.edu', '.tv']
Check if https://www.w3resource.com/python-exercises/list/ contains an element, which is present in the list ['.com', '.edu', '.tv']
True
The original string and list: https://www.w3resource.net
https://www.w3resource.net
['.com', '.edu', '.tv']
Check if https://www.w3resource.net contains an element, which is present in the list ['.com', '.edu', '.tv']
False

202. Write a Python program to find the indexes of all None items in a given list.

Original list:
[1, None, 5, 4, None, 0, None, None]
Indexes of all None items of the list:

[1, 4, 6, 7]

203. Write a Python program to join adjacent members of a given list.

Original list:

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

Join adjacent members of a given list:

['12', '34', '56', '78']

Original list:

['1', '2', '3']

Join adjacent members of a given list:

['12']

204. Write a Python program to check if first digit/character of each element in a given list is same or not.

Original list:

[1234, 122, 1984, 19372, 100]

Check if first digit in each element of the said given list is same or not!

True

Original list:

[1234, 922, 1984, 19372, 100]

Check if first digit in each element of the said given list is same or not!

False

Original list:

['aabc', 'abc', 'ab', 'a']

Check if first character in each element of the said given list is same or not!

True

Original list:

['aabc', 'abc', 'ab', 'ha']

Check if first character in each element of the said given list is same or not!

False

205. Write a Python program to find the indices of elements of a given list, greater than a specified value.

Original list:

[1234, 1522, 1984, 19372, 1000, 2342, 7626]

Indices of elements of the said list, greater than 3000

[3, 6]

Original list:

[1234, 1522, 1984, 19372, 1000, 2342, 7626]

Indices of elements of the said list, greater than 20000

[]

206. Write a Python program to remove additional spaces in a given list.

Original list:

['abc ', ' ', ' ', 'sdfds ', ' ', ' ', 'sdfds ', 'huy']

Remove additional spaces from the said list:

['abc', '', '', 'sdfds', '', '', 'sdfds', 'huy']

207. Write a Python program to find the common tuples between two given lists.

Original lists:

[('red', 'green'), ('black', 'white'), ('orange', 'pink')]
[('red', 'green'), ('orange', 'pink')]
Common tuples between two said lists
[('orange', 'pink'), ('red', 'green')]
Original lists:
[('red', 'green'), ('orange', 'pink')]
[('red', 'green'), ('black', 'white'), ('orange', 'pink')]
Common tuples between two said lists
[('orange', 'pink'), ('red', 'green')]

208. Sum a list of numbers. Write a Python program to sum the first number with the second and divide it by 2, then sum the second with the third and divide by 2, and so on.

Original list:
[1, 2, 3, 4, 5, 6, 7]
Sum the said list of numbers:
[1.5, 2.5, 3.5, 4.5, 5.5, 6.5]
Original list:
[0, 1, -3, 3, 7, -5, 6, 7, 11]
Sum the said list of numbers:
[0.5, -1.0, 0.0, 5.0, 1.0, 0.5, 6.5, 9.0]

5 Exerciții cu dicționare

1. Write a Python script to sort (ascending and descending) a dictionary by value.

2. Write a Python script to add a key to a dictionary.

Sample Dictionary : 0: 10, 1: 20

Expected Result : 0: 10, 1: 20, 2: 30

3. Write a Python script to concatenate following dictionaries to create a new one.

Sample Dictionary :

dic1=1:10, 2:20

dic2=3:30, 4:40

dic3=5:50,6:60

Expected Result : 1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60

4. Write a Python script to check whether a given key already exists in a dictionary.

5. Write a Python program to iterate over dictionaries using for loops.

6. Write a Python script to generate and print a dictionary that contains a number (between 1 and n) in the form (x, x*x).

Sample Dictionary (n = 5) :

Expected Output : 1: 1, 2: 4, 3: 9, 4: 16, 5: 25

7. Write a Python script to print a dictionary where the keys are numbers between 1 and 15 (both included) and the values are square of keys.

Sample Dictionary

1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100, 11: 121, 12: 144, 13: 169, 14: 196, 15: 225

8. Write a Python script to merge two Python dictionaries.

9. Write a Python program to iterate over dictionaries using for loops.

10. Write a Python program to sum all the items in a dictionary.

11. Write a Python program to multiply all the items in a dictionary.

12. Write a Python program to remove a key from a dictionary.

13. Write a Python program to map two lists into a dictionary.

14. Write a Python program to sort a dictionary by key.

15. Write a Python program to get the maximum and minimum value in a dictionary.

16. Write a Python program to get a dictionary from an object's fields.

17. Write a Python program to remove duplicates from Dictionary.

18. Write a Python program to check a dictionary is empty or not.

19. Write a Python program to combine two dictionary adding values for common keys.

d1 = 'a': 100, 'b': 200, 'c':300

d2 = 'a': 300, 'b': 200, 'd':400

Sample output: Counter('a': 400, 'b': 400, 'd': 400, 'c': 300)

20. Write a Python program to print all unique values in a dictionary.

Sample Data : ["V":"S001", "V": "S002", "VI": "S001", "VI": "S005", "VII":"S005", "V":"S009","VIII":"S007"]

Expected Output : Unique Values: 'S005', 'S002', 'S007', 'S001', 'S009'

21. Write a Python program to create and display all combinations of letters, selecting each letter from a different key in a dictionary.

Sample data : '1':['a','b'], '2':['c','d']

Expected Output:

ac

ad

bc

bd

22. Write a Python program to find the highest 3 values of corresponding keys in a dictionary.

23. Write a Python program to combine values in python list of dictionaries.

Sample data: ['item': 'item1', 'amount': 400, 'item': 'item2', 'amount': 300, 'item': 'item1', 'amount': 750]

Expected Output: Counter('item1': 1150, 'item2': 300)

24. Write a Python program to create a dictionary from a string.

Note: Track the count of the letters from the string.

Sample string : 'w3resource'

Expected output: 'w': 1, '3': 1, 'r': 2, 'e': 2, 's': 1, 'o': 1, 'u': 1, 'c': 1

25. Write a Python program to print a dictionary in table format.

26. Write a Python program to count the values associated with key in a dictionary.

Expected Output:

6

2

27. Write a Python program to convert a list into a nested dictionary of keys.

28. Write a Python program to sort a list alphabetically in a dictionary.

29. Write a Python program to remove spaces from dictionary keys.

30. Write a Python program to get the top three items in a shop.

Sample data: 'item1': 45.50, 'item2':35, 'item3': 41.30, 'item4':55, 'item5': 24

Expected Output:

item4 55

item1 45.5

item3 41.3

31. Write a Python program to get the key, value and item in a dictionary.

32. Write a Python program to print a dictionary line by line.

33. Write a Python program to check multiple keys exists in a dictionary.

34. Write a Python program to count number of items in a dictionary value that is a list.

35. Write a Python program to sort Counter by value.

Sample data : 'Math':81, 'Physics':83, 'Chemistry':87

Expected data: [('Chemistry', 87), ('Physics', 83), ('Math', 81)]

36. Write a Python program to create a dictionary from two lists without losing duplicate values.

Sample lists: ['Class-V', 'Class-VI', 'Class-VII', 'Class-VIII'], [1, 2, 2, 3]

Expected Output: defaultdict(¡class 'set'¿, 'Class-V': 1, 'Class-VI': 2, 'Class-VII': 2, 'Class-VIII': 3)

37. Write a Python program to replace dictionary values with their average.

38. Write a Python program to match key values in two dictionaries.

Sample dictionary: 'key1': 1, 'key2': 3, 'key3': 2, 'key1': 1, 'key2': 2

Expected output: key1: 1 is present in both x and y

39. Write a Python program to store a given dictionary in a json file.

Original dictionary:

{'students': [{'firstName': 'Nikki', 'lastName': 'Roysden', 'firstName': 'Mervin', 'lastName': 'Friedland', 'firstName': 'Aron ', 'lastName': 'Wilkins'], 'teachers': ['firstName': 'Amberly', 'lastName': 'Calico', 'firstName': 'Regine', 'lastName': 'Agtarap'}]}

¡class 'dict'¿

Json file to dictionary:

'students': ['firstName': 'Nikki', 'lastName': 'Roysden', 'firstName': 'Mervin', 'lastName': 'Friedland', 'firstName': 'Aron ', 'lastName': 'Wilkins'], 'teachers': ['firstName': 'Amberly', 'lastName': 'Calico', 'firstName': 'Regine', 'lastName': 'Agtarap']

40. Write a Python program to create a dictionary of keys x, y, and z where each key has as value a list from 11-20, 21-30, and 31-40 respectively. Access the fifth value of each key from the dictionary.

'x': [11, 12, 13, 14, 15, 16, 17, 18, 19],

'y': [21, 22, 23, 24, 25, 26, 27, 28, 29],

'z': [31, 32, 33, 34, 35, 36, 37, 38, 39]

15

25

35

x has value [11, 12, 13, 14, 15, 16, 17, 18, 19]

y has value [21, 22, 23, 24, 25, 26, 27, 28, 29]

z has value [31, 32, 33, 34, 35, 36, 37, 38, 39]

41. Write a Python program to drop empty Items from a given Dictionary.

Original Dictionary:

'c1': 'Red', 'c2': 'Green', 'c3': None

New Dictionary after dropping empty items:

'c1': 'Red', 'c2': 'Green'

42. Write a Python program to filter a dictionary based on values.

Original Dictionary:

'Cierra Vega': 175, 'Alden Cantrell': 180, 'Kierra Gentry': 165, 'Pierre Cox': 190

Marks greater than 170:

'Cierra Vega': 175, 'Alden Cantrell': 180, 'Pierre Cox': 190

43. Write a Python program to convert more than one list to nested dictionary.

Original strings:

['S001', 'S002', 'S003', 'S004']

['Adina Park', 'Leyton Marsh', 'Duncan Boyle', 'Saim Richards']

[85, 98, 89, 92]

Nested dictionary:

['S001': 'Adina Park': 85, 'S002': 'Leyton Marsh': 98, 'S003': 'Duncan Boyle': 89, 'S004': 'Saim Richards': 92]

44. Write a Python program to filter the height and width of students, which are stored in a dictionary.

Original Dictionary:

'Cierra Vega': (6.2, 70), 'Alden Cantrell': (5.9, 65), 'Kierra Gentry': (6.0, 68), 'Pierre Cox': (5.8, 66)

Height ¿ 6ft and Weight¿ 70kg:

'Cierra Vega': (6.2, 70)

45. Write a Python program to check all values are same in a dictionary.

Original Dictionary:

'Cierra Vega': 12, 'Alden Cantrell': 12, 'Kierra Gentry': 12, 'Pierre Cox': 12

Check all are 12 in the dictionary.

True

Check all are 10 in the dictionary.

False

46. Write a Python program to create a dictionary grouping a sequence of key-value pairs into a dictionary of lists.

Original list:

[('yellow', 1), ('blue', 2), ('yellow', 3), ('blue', 4), ('red', 1)]

Grouping a sequence of key-value pairs into a dictionary of lists:

'yellow': [1, 3], 'blue': [2, 4], 'red': [1]

47. Write a Python program to split a given dictionary of lists into list of dictionaries.

Original dictionary of lists:

'Science': [88, 89, 62, 95], 'Language': [77, 78, 84, 80]

Split said dictionary of lists into list of dictionaries:

['Science': 88, 'Language': 77, 'Science': 89, 'Language': 78, 'Science': 62, 'Language': 84, 'Science': 95, 'Language': 80]

48. Write a Python program to remove a specified dictionary from a given list.

Original list of dictionary:

['id': 'FF0000', 'color': 'Red', 'id': '800000', 'color': 'Maroon', 'id': 'FFFF00', 'color': 'Yellow', 'id': '808000', 'color': 'Olive']

Remove id FF0000 from the said list of dictionary:

['id': '800000', 'color': 'Maroon', 'id': 'FFFF00', 'color': 'Yellow', 'id': '808000', 'color': 'Olive']

49. Write a Python program to convert string values of a given dictionary, into integer/float datatypes.

Original list:

['x': '10', 'y': '20', 'z': '30', 'p': '40', 'q': '50', 'r': '60']

String values of a given dictionary, into integer types:

['x': 10, 'y': 20, 'z': 30, 'p': 40, 'q': 50, 'r': 60]

Original list:
['x': '10.12', 'y': '20.23', 'z': '30', 'p': '40.00', 'q': '50.19', 'r': '60.99']
String values of a given dictionary, into float types:
['x': 10.12, 'y': 20.23, 'z': 30.0, 'p': 40.0, 'q': 50.19, 'r': 60.99]

50. A Python Dictionary contains List as value. Write a Python program to clear the list values in the said dictionary.

Original Dictionary:
'C1': [10, 20, 30], 'C2': [20, 30, 40], 'C3': [12, 34]
Clear the list values in the said dictionary:
'C1': [], 'C2': [], 'C3': []

51. A Python Dictionary contains List as value. Write a Python program to update the list values in the said dictionary.

Original Dictionary:
'Math': [88, 89, 90], 'Physics': [92, 94, 89], 'Chemistry': [90, 87, 93]
Update the list values of the said dictionary:
'Math': [89, 90, 91], 'Physics': [90, 92, 87], 'Chemistry': [90, 87, 93]

52. Write a Python program to extract a list of values from a given list of dictionaries.

Original Dictionary:
['Math': 90, 'Science': 92, 'Math': 89, 'Science': 94, 'Math': 92, 'Science': 88]
Extract a list of values from said list of dictionaries where subject = Science
[92, 94, 88]
Original Dictionary:
['Math': 90, 'Science': 92, 'Math': 89, 'Science': 94, 'Math': 92, 'Science': 88]
Extract a list of values from said list of dictionaries where subject = Math
[90, 89, 92]

53. Write a Python program to find the length of a given dictionary values.

Original Dictionary:
1: 'red', 2: 'green', 3: 'black', 4: 'white', 5: 'black'
Length of dictionary values:
'red': 3, 'green': 5, 'black': 5, 'white': 5
Original Dictionary:
'1': 'Austin Little', '2': 'Natasha Howard', '3': 'Alfred Mullins', '4': 'Jamie Rowe'
Length of dictionary values:
'Austin Little': 13, 'Natasha Howard': 14, 'Alfred Mullins': 14, 'Jamie Rowe': 10

54. Write a Python program to get the depth of a dictionary.

Expected Output:
4

55. Write a Python program to access dictionary key's element by index.

Expected Output:
physics
math

chemistry

56. Write a Python program to convert a given dictionary into a list of lists.

Original Dictionary:

1: 'red', 2: 'green', 3: 'black', 4: 'white', 5: 'black'

Convert the said dictionary into a list of lists:

[[1, 'red'], [2, 'green'], [3, 'black'], [4, 'white'], [5, 'black']]

Original Dictionary:

'1': 'Austin Little', '2': 'Natasha Howard', '3': 'Alfred Mullins', '4': 'Jamie Rowe'

Convert the said dictionary into a list of lists:

[['1', 'Austin Little'], ['2', 'Natasha Howard'], ['3', 'Alfred Mullins'], ['4', 'Jamie Rowe']]

57. Write a Python program to filter even numbers from a given dictionary values.

Original Dictionary:

'V': [1, 4, 6, 10], 'VI': [1, 4, 12], 'VII': [1, 3, 8]

Filter even numbers from said dictionary values:

'V': [4, 6, 10], 'VI': [4, 12], 'VII': [8]

Original Dictionary:

'V': [1, 3, 5], 'VI': [1, 5], 'VII': [2, 7, 9]

Filter even numbers from said dictionary values:

'V': [], 'VI': [], 'VII': [2]

58. Write a Python program to get all combinations of key-value pairs in a given dictionary.

Original Dictionary:

'V': [1, 4, 6, 10], 'VI': [1, 4, 12], 'VII': [1, 3, 8]

Combinations of key-value pairs of the said dictionary:

['V': [1, 4, 6, 10], 'VI': [1, 4, 12], 'V': [1, 4, 6, 10], 'VII': [1, 3, 8], 'VI': [1, 4, 12], 'VII': [1, 3, 8]]

Original Dictionary:

'V': [1, 3, 5], 'VI': [1, 5]

Combinations of key-value pairs of the said dictionary:

['V': [1, 3, 5], 'VI': [1, 5]]

59. Write a Python program to find the specified number of maximum values in a given dictionary.

Original Dictionary:

'a': 5, 'b': 14, 'c': 32, 'd': 35, 'e': 24, 'f': 100, 'g': 57, 'h': 8, 'i': 100

1 maximum value(s) in the said dictionary:

['f']

2 maximum value(s) in the said dictionary:

['f', 'i']

5 maximum value(s) in the said dictionary:

['f', 'i', 'g', 'd', 'c']

60. Write a Python program to find shortest list of values with the keys in a given dictionary.

Original Dictionary: 'V': [10, 12], 'VI': [10], 'VII': [10, 20, 30, 40], 'VIII': [20], 'IX': [10, 30, 50, 70], 'X': [80] Shortest list of values with the keys of the said dictionary: ['VI', 'VIII', 'X']

61. Write a Python program to count the frequency in a given dictionary.

Original Dictionary:

'V': 10, 'VI': 10, 'VII': 40, 'VIII': 20, 'IX': 70, 'X': 80, 'XI': 40, 'XII': 20

Count the frequency of the said dictionary:

Counter(10: 2, 40: 2, 20: 2, 70: 1, 80: 1)

62. Write a Python program to extract values from a given dictionaries and create a list of lists from those values.

Original Dictionary:

['student$_i$d' : 1,' $name$' :' $JeanCastro$',' $class$' :' V',' $student_i$d' : 2,' $name$' :' $LulaPowell$',' $class$' :' V',' $stud$

Extract values from the said dictionarie and create a list of lists using those values:

[[1, 'Jean Castro', 'V'], [2, 'Lula Powell', 'V'], [3, 'Brian Howell', 'VI'], [4, 'Lynne Foster', 'VI'], [5, 'Zachary Simon', 'VII']]

[[1, 'Jean Castro'], [2, 'Lula Powell'], [3, 'Brian Howell'], [4, 'Lynne Foster'], [5, 'Zachary Simon']]

[['Jean Castro', 'V'], ['Lula Powell', 'V'], ['Brian Howell', 'VI'], ['Lynne Foster', 'VI'], ['Zachary Simon', 'VII']]

63. Write a Python program to convert a given list of lists to a dictionary.

Original list of lists:

[[1, 'Jean Castro', 'V'], [2, 'Lula Powell', 'V'], [3, 'Brian Howell', 'VI'], [4, 'Lynne Foster', 'VI'], [5, 'Zachary Simon', 'VII']]

Convert the said list of lists to a dictionary:

1: ['Jean Castro', 'V'], 2: ['Lula Powell', 'V'], 3: ['Brian Howell', 'VI'], 4: ['Lynne Foster', 'VI'], 5: ['Zachary Simon', 'VII']

64. Write a Python program to create a key-value list pairings in a given dictionary.

Original dictionary:

1: ['Jean Castro'], 2: ['Lula Powell'], 3: ['Brian Howell'], 4: ['Lynne Foster'], 5: ['Zachary Simon']

A key-value list pairings of the said dictionary:

[1: 'Jean Castro', 2: 'Lula Powell', 3: 'Brian Howell', 4: 'Lynne Foster', 5: 'Zachary Simon']

65. Write a Python program to get the total length of all values of a given dictionary with string values.

Original dictionary:

'FF0000': 'Red', '800000': 'Maroon', 'FFFF00': 'Yellow', '808000': 'Olive'

Total length of all values of the said dictionary with string values:

20

66. Write a Python program to check if a specific Key and a value exist in a dictionary.

Original dictionary:

['student$_i$d' : 1,' $name$' :' $JeanCastro$',' $class$' :' V',' $student_i$d' : 2,' $name$' :' $LulaPowell$',' $class$' :' V',' $stud$

Check if a specific Key and a value exist in the said dictionary:

True
True
True
False
False
False

6 Exerciții cu tupluri

1. Write a Python program to create a tuple.

2. Write a Python program to create a tuple with different data types.

3. Write a Python program to create a tuple with numbers and print one item.

4. Write a Python program to unpack a tuple in several variables.

5. Write a Python program to add an item in a tuple.

6. Write a Python program to convert a tuple to a string.

7. Write a Python program to get the 4th element and 4th element from last of a tuple.

8. Write a Python program to create the colon of a tuple.

9. Write a Python program to find the repeated items of a tuple.

10. Write a Python program to check whether an element exists within a tuple.

11. Write a Python program to convert a list to a tuple.

12. Write a Python program to remove an item from a tuple.

13. Write a Python program to slice a tuple.

14. Write a Python program to find the index of an item of a tuple.

15. Write a Python program to find the length of a tuple.

16. Write a Python program to convert a tuple to a dictionary.

17. Write a Python program to unzip a list of tuples into individual lists.

18. Write a Python program to reverse a tuple.

19. Write a Python program to convert a list of tuples into a dictionary.

20. Write a Python program to print a tuple with string formatting.
Sample tuple : (100, 200, 300)
Output : This is a tuple (100, 200, 300)

21. Write a Python program to replace last value of tuples in a list.
Sample list: [(10, 20, 40), (40, 50, 60), (70, 80, 90)]
Expected Output: [(10, 20, 100), (40, 50, 100), (70, 80, 100)]

22. Write a Python program to remove an empty tuple(s) from a list of tuples.
Sample data: [(), (), (”,), (’a’, ’b’), (’a’, ’b’, ’c’), (’d’)]
Expected output: [(”,), (’a’, ’b’), (’a’, ’b’, ’c’), ’d’]

23. Write a Python program to sort a tuple by its float element.
Sample data: [(’item1’, ’12.20’), (’item2’, ’15.10’), (’item3’, ’24.5’)]
Expected Output: [(’item3’, ’24.5’), (’item2’, ’15.10’), (’item1’, ’12.20’)]

24. Write a Python program to count the elements in a list until an element is a tuple.

25. Write a Python program convert a given string list to a tuple.

Original string: python 3.0

¡class 'str'¿

Convert the said string to a tuple:

('p', 'y', 't', 'h', 'o', 'n', '3', '.', '0')

¡class 'tuple'¿

26. Write a Python program calculate the product, multiplying all the numbers of a given tuple.

Original Tuple:

(4, 3, 2, 2, -1, 18)

Product - multiplying all the numbers of the said tuple: -864

Original Tuple:

(2, 4, 8, 8, 3, 2, 9)

Product - multiplying all the numbers of the said tuple: 27648

27. Write a Python program to calculate the average value of the numbers in a given tuple of tuples.

Original Tuple:

((10, 10, 10, 12), (30, 45, 56, 45), (81, 80, 39, 32), (1, 2, 3, 4))

Average value of the numbers of the said tuple of tuples:

[30.5, 34.25, 27.0, 23.25]

Original Tuple:

((1, 1, -5), (30, -15, 56), (81, -60, -39), (-10, 2, 3))

Average value of the numbers of the said tuple of tuples:

[25.5, -18.0, 3.75]

28. Write a Python program to convert a tuple of string values to a tuple of integer values.

Original tuple values:

(('333', '33'), ('1416', '55'))

New tuple values:

((333, 33), (1416, 55))

29. Write a Python program to convert a given tuple of positive integers into an integer.

Original tuple:

(1, 2, 3)

Convert the said tuple of positive integers into an integer:

123

Original tuple:

(10, 20, 40, 5, 70)

Convert the said tuple of positive integers into an integer:

102040570

30. Write a Python program to check if a specified element presents in a tuple of tuples.

Original list:

(('Red', 'White', 'Blue'), ('Green', 'Pink', 'Purple'), ('Orange', 'Yellow', 'Lime'))

Check if White presenet in said tuple of tuples!

True

Check if White presenet in said tuple of tuples!

True

Check if Olive presenet in said tuple of tuples!

False

31. Write a Python program to compute element-wise sum of given tuples.

Original lists:

(1, 2, 3, 4)

(3, 5, 2, 1)

(2, 2, 3, 1)

Element-wise sum of the said tuples:

(6, 9, 8, 6)

32. Write a Python program to compute the sum of all the elements of each tuple stored inside a list of tuples.

Original list of tuples:

[(1, 2), (2, 3), (3, 4)]

Sum of all the elements of each tuple stored inside the said list of tuples:

[3, 5, 7]

Original list of tuples:

[(1, 2, 6), (2, 3, -6), (3, 4), (2, 2, 2, 2)]

Sum of all the elements of each tuple stored inside the said list of tuples:

[9, -1, 7, 8]

7 Exerciții cu seturi

1. Write a Python program to create a set.

2. Write a Python program to iterate over sets.

3. Write a Python program to add member(s) in a set.

4. Write a Python program to remove item(s) from set

5. Write a Python program to remove an item from a set if it is present in the set.

6. Write a Python program to create an intersection of sets.

7. Write a Python program to create a union of sets.

8. Write a Python program to create set difference.

9. Write a Python program to create a symmetric difference.

10. Write a Python program to check if a set is a subset of another set.

11. Write a Python program to create a shallow copy of sets.

Note : Shallow copy is a bit-wise copy of an object. A new object is created that has an exact copy of the values in the original object.

12. Write a Python program to clear a set.

13. Write a Python program to use of frozensets. Note: Frozensets behave just like sets except they are immutable.

14. Write a Python program to find maximum and the minimum value in a set.

15. Write a Python program to find the length of a set.

16. Write a Python program to check if a given value is present in a set or not.

17. Write a Python program to check if two given sets have no elements in common.

18. Write a Python program to check if a given set is superset of itself and superset of another given set.

19. Write a Python program to find the elements in a given set that are not in another set.

20. Write a Python program to check a given set has no elements in common with other given set.

21. Write a Python program to remove the intersection of a 2nd set from the 1st set.