

SETS

Practice Questions

1. Write a Python program to remove an item from a set if it is present in the set. Here Both Item and Set is enter by the User.

2. A. Python Program that Display which Letters are in the First String but not in the Second.

B. Python Program that Displays which Letters are in the Two Strings but not in Both

3. Program to get all subset of given size of a set

Input: {1,2,3}, n=2

Output: [{1,2}, {1,3}, {2,3}]

4. Program to find all elements of a set 2 which are not present in set 1 using Set Comprehension.

Input: s1={1,2,3} s2={2,1,5,6,} Output: {1,2}

5. Write program to find maximum product of two integers in a given set.

I/p: s={10,3,5,7}

O/p: The maximum product is formed by the pair is: {10,7}

6. Program to find minimum no of moves to swap the elements.

Here N is no of elements in a set.

Input: N=4, S={3,2,1,4}

Output: 2

7. Program to get all the strings which contain all vowels

I/p => s = {'have', 'a', 'good', 'day', 'xyz', 'pqr'} O/p => {'have', 'a', 'good', 'day'}

8. Python Program to find common elements in three lists using sets.

9. Program to print the sum of maximum and minimum in a given Set.

10. Program to check if a subset is present in a given set or not.

I/p: s = {2, 5, 1} s2 = {3, 4, 2, 6, 0, 1, 5}

O/p: YES

11. Python program to find the decimal of all the items in a given set after flipping the bits (firstly convert decimal to binary).

I/p: s = {1, 2, 3}

O/p: {6, 5, 4}

12. Program to create a set whose elements are the multiple of x and present in set1 and set2 but not in both sets. Here x is any positive integer entered by user. I/P: x = 2

set1 = {4, 7, 10, 5, 1} set2 = {4, 10, 2, 6, 1, 9} o/p: {2, 6}

13. Program to check if the elements of an entered string are present in the items of the entered set. Also print the elements.

I/p: X = 'ab' S = {'ab', 'bc', 'pqr', 'bcad'}

O/p: YES
{'ab', 'bcad'}

14. Program to count the words consisting of duplicate letters in a given set. Also remove or discard those elements from a given set which consist of duplicate letters.

I/p: S = {'Have', 'a', 'good', 'day'}

O/p: 3
S = {'Have', 'a', 'day'}

15. Enter a set S of list. Where list consist integers numbers.

Write a program to print a set S having those items (list of integers) whose sum of integers

is always less than sum of integers of the next item in a set.

I/p: $S = \{[1,2,3], [3,8,5], [5,7,10], [6,2,0], [5,12,13]\}$

O/p: $S = \{[1,2,3], [3,8,5], [5,7,10]\}$

16. Suppose u and v both have values of type set and are disjoint. Which of the following expressions evaluates to True?

$u == v \mid (u \cap v)$

$u == (v \cap u)$

$u == v \cap (u \mid v)$

$u == u \cap (v \mid u)$

17. Suppose u and v both denote sets in Python. What is the most general condition that guarantees that $u \mid v == u \cap v$?

The sets u and v should be disjoint.

The set u should be a subset of the set v .

The set v should be a subset of the set u .

This is true for any u and v .