Dictionaries/Maps

1. **Predict The Output**

**Send Feedback**

What will be the output of following code?

d = {1:2, “abc”:5, “def”:7}

print(d[0])

1. 1:2
2. 1
3. 2
4. Error answer
5. **Predict The Output**

**Send Feedback**

What will be the output of following code?

d = {1:2, “abc”:5, “def”:7}

print(d.get(0,5))

1. Error
2. 1
3. 2
4. 5 answer
5. **Predict The Output**

**Send Feedback**

What will be the output of following code?

d = {1:2, “abc”:5, “def”:7}

if 2 in d:

print(‘Present’)

else:

print(‘Not Present’)

1. Present
2. Not Present answer
3. Error
4. **Predict The Output**

**Send Feedback**

What will be the output of following code?

a = {1:2,’list’:[1,2],3:5}

b = {4:5,3:7}

a.update(b)

print(a[3])

1. 5
2. 7 Answer
3. Error
4. None of the Above
5. **Predict The Output**

**Send Feedback**

What will be the output of following code?

a = {1:2,’list’:[1,2],3:5}

a.pop(‘list’)

a[‘list’] = [3,5]

print(a[‘list’])

1. None
2. [3,5] Answer
3. [1,2]
4. Error
5. **Maximum Frequency**

**Send Feedback**

#### You are given an array of integers that contain numbers in random order. Write a program to find and return the number which occurs the maximum times in the given input.

#### If two or more elements contend for the maximum frequency, return the element which occurs in the array first.

##### Input Format :

Line 1 : An Integer N i.e. size of array

Line 2 : N integers which are elements of the array, separated by spaces

##### Output Format :

Most frequent element

##### Constraints :

0 <= N <= 10^8

##### Sample Input 1 :

13

2 12 2 11 12 2 1 2 2 11 12 2 6

##### Sample Output 1 :

2

##### Sample Input 2 :

3

1 4 5

##### Sample Output 2 :

1

1. **Pair Sum To 0**

**Send Feedback**

#### Given a random integer array A of size N. Find and print the pair of elements in the array which sum to 0.

#### Array A can contain duplicate elements.

#### While printing a pair, print the smaller element first.

#### That is, if a valid pair is (6, -6) print "-6 6". There is no constraint that out of 5 pairs which have to be printed in 1st line. You can print pairs in any order, just be careful about the order of elements in a pair.

##### Input format :

Line 1 : Integer N (Array size)

Line 2 : Array elements (separated by space)

##### Output format :

Line 1 : Pair 1 elements (separated by space)

Line 2 : Pair 2 elements (separated by space)

Line 3 : and so on

##### Constraints :

0 <= N <= 10^4

##### Sample Input:

5

2 1 -2 2 3

##### Sample Output :

-2 2

-2 2

1. **Complexity Hashmap**

**Send Feedback**

Average Case Time Complexity of Hashmap in insertion, deletion & searching

1. O(1) answer
2. O(n)
3. O(logn)
4. O(nlogn)
5. **Load Factor**

**Send Feedback**

Given: n = no of entries in Hashmap b= size of bucket array What is load factor mathematically ?

B2

1. b/n
2. n/b answer
3. **Time Complexity**

**Send Feedback**

Time Complexity for retrieving all keyset from Hashmap.

1. O(log n)
2. O(n) answer
3. O(1)

**Solution Description**  
Will iterate through all the values

**Assignment**

1. **Extract Unique characters**

**Send Feedback**

#### Given a string, you need to remove all the duplicates. That means, the output string should contain each character only once. The respective order of characters should remain same.

#### Input format :

String S

##### Output format :

Output String

##### Constraints :

0 <= Length of S <= 10^8

##### Sample Input 1 :

ababacd

##### Sample Output 1 :

abcd

##### Sample Input 2 :

abcde

##### Sample Output 2 :

abcde

1. **Longest Consecutive Sequence**

**Send Feedback**

#### You are given an array of unique integers that contain numbers in random order. Write a program to find the longest possible sequence of consecutive numbers using the numbers from given array.

#### You need to return the output array which contains consecutive elements. Order of elements in the output is not important.

#### Best solution takes O(n) time.

#### If two sequences are of equal length then return the sequence starting with the number whose occurrence is earlier in the array.

##### Input Format :

Line 1 : Integer n, Size of array

Line 2 : Array elements (separated by space)

##### Constraints :

0 <= n <= 10^6

##### Sample Input 1 :

13

2 12 9 16 10 5 3 20 25 11 1 8 6

##### Sample Output 1 :

8

9

10

11

12

##### Sample Input 2 :

7

3 7 2 1 9 8 41

##### Sample Output 2 :

7

8

9

Explanation: Sequence should be of consecutive numbers. Here we have 2 sequences with same length i.e. [1, 2, 3] and [7, 8, 9], but output should be [7, 8, 9] because the starting point of [7, 8, 9] comes first in input array.

##### Sample Input 3 :

7

15 24 23 12 19 11 16

##### Sample Output 3 :

15

16

1. **Pairs with difference K**

**Send Feedback**

#### You are given with an array of integers and an integer K. Write a program to find and print all pairs which have difference K.

#### Take difference as absolute.

##### Input Format :

Line 1 : Integer n, Size of array

Line 2 : Array elements (separated by space)

Line 3 : K

##### Output format :

Print pairs in different lines (pair elements separated by space). In a pair, smaller element should be printed first.

(Order of different pairs is not important)

##### Constraints :

0 <= n <= 10^4

##### Sample Input 1 :

4

5 1 2 4

3

##### Sample Output 1 :

2 5

1 4

##### Sample Input 2 :

4

4 4 4 4

0

##### Sample Output 2 :

4 4

4 4

4 4

4 4

4 4

4 4

1. **Longest subset zero sum**

**Send Feedback**

#### Given an array consisting of positive and negative integers, find the length of the longest subarray whose sum is zero.

##### NOTE: You have to return the length of longest subarray .

##### Input Format :

Line 1 : Contains an integer N i.e. size of array

Line 2 : Contains N elements of the array, separated by spaces

##### Output Format

Line 1 : Length of longest subarray

##### Constraints:

0 <= N <= 10^8

##### Sample Input :

10

95 -97 -387 -435 -5 -70 897 127 23 284

##### Sample Output :

5