30/5/2025

DICTONARY:

# Enter your code here

my\_dictionary={'a':1}

value = my\_dictionary.get('a')

print("value for key 'a':", value)

keys={'a':2}

keys=my\_dictionary.get('a')

print("keys for value 'a:",keys)

Q)count the frequency for array

def count\_frequencies(arr):

freq = {}

for num in arr:

freq[num] = freq.get(num, 0) + 1

return freq

arr = [1,2,3,4,4,3,2,1,1,1,2,2,3,3,4,4]

print(count\_frequencies(arr))

output

{1: 4, 2: 4, 3: 4, 4: 4}

q) return maximum and minimum frequency

input=[1,2,2,2,4,3,3,1]

arr = [1, 2, 2, 2, 4, 3, 3, 1]

freq = {}

for num in arr:

freq[num] = freq.get(num, 0) + 1

max\_element = max(freq, key=freq.get)

min\_element = min(freq, key=freq.get)

print(max\_element)

print(min\_element)

output:

2

4

Q) Given an array arr[]. Rotate the array to the left (counter-clockwise direction) by d steps, where d is a positive integer. Do the mentioned change in the array in place.

Note: Consider the array as circular.

Input: arr[] = [1, 2, 3, 4, 5], d = 2

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

Explanation: when rotated by 2 elements, it becomes 3 4 5 1 2.

Input: arr[] = [2, 4, 6, 8, 10, 12, 14, 16, 18, 20], d = 3

Output: [8, 10, 12, 14, 16, 18, 20, 2, 4, 6]

Explanation: when rotated by 3 elements, it becomes 8 10 12 14 16 18 20 2 4 6.

left rotation

class Solution:

def rotateArr(self, arr, d):

n=len(arr)

temp=[0]\*n

d=d%n

for i in range(len(arr)):

temp[(n-d+i)%n]=arr[i]

for i in range(len(arr)):

arr[i]=temp[i]

return arr

right rotation

class Solution:

def rotateArr(self, arr, d):

n = len(arr)

temp = [0] \* n

d = d % n

for i in range(len(arr)):

temp[(n+d+i) % n] = arr[i]

for i in range(len(arr)):

arr[i] = temp[i]

return arr

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

d = 2

print(Solution().rotateArr(arr, d))

Q)A company maintains a daily shift schedule for its employees, where each employee is assigned a fixed position in an array based on their order of work on Day 1.

To ensure fairness in work distribution, the company follows a policy where the schedule is adjusted every morning: the first d employees are moved to the end of the schedule, preserving their order.

You are given the list of employee IDs for Day 1 and the value d. Write a program to compute the new schedule after applying this policy.

Input:

schedule = [101, 102, 103, 104, 105]

d = 2

Output:

[103, 104, 105, 101, 102]

Explanation:

Employees 101 and 102 are shifted to the end of the schedule.

class Solution:

def rotateArr(self, arr, d):

n = len(arr)

temp = [0] \* n

d = d % n

for i in range(len(arr)):

temp[(n-d+i) % n] = arr[i]

for i in range(len(arr)):

arr[i] = temp[i]

return arr

arr = [101, 102, 103, 104, 105]

d = 2

print(Solution().rotateArr(arr, d))

OUTPUT:

[103, 104, 105, 101, 102]