RAJALAKSHMI ENGINEERING COLLEGE
An AUTONOMOUS Institution
Affiliated to ANNA UNIVERSITY, Chennai

CS23336-Introduction to Python Programming

Started on	Sunday, 17 November 2024, 10:19 AM
State	Finished
Completed on	Sunday, 17 November 2024, 12:32 PM
Time taken	2 hours 12 mins
Marks	10.00/10.00
Grade	**100.00** out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00
Flag question

Question text

Two string values S1, S2 are passed as the input. The program must print first N characters present in S1 which are also present in S2.

Input Format:

The first line contains S1.
The second line contains S2.
The third line contains N.

Output Format:

The first line contains the N characters present in S1 which are also present in S2.

Boundary Conditions:

2 <= N <= 10
2 <= Length of S1, S2 <= 1000

Example Input/Output 1:

Input:

abcbde
cdefghbb
3

Output:

bcd

Note:

b occurs twice in common but must be printed only once.

Answer:(penalty regime: 0 %)

```
def fun(s1,s,n):
    res=[]
    seen=set()
    for char in s1:
        if char in s2 and
char not in seen:

res.append(char)
            seen.add(char)
        if len(res)==n:
            break
    return ''.join(res)
s1=input()
s2=input()
n=int(input())
print(fun(s1,s2,n))
```

Feedback

Input	Expected	Got
abcbde cdefghbb bcd 3	bcd	bcd

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 2

Correct
Mark 1.00 out of 1.00
☐ Flag question

Question text

Given an list, find peak element in it. A peak element is an element that is greater than its neighbors.

An element a[i] is a peak element if

A[i-1] <= A[i] >=a[i+1] for middle elements. [0<i<n-1]

A[i-1] <= A[i] for last element [i=n-1]

A[i]>=A[i+1] for first element [i=0]

Input Format

The first line contains a single integer n , the length of A .
The second line contains n space-separated integers,A[i].

Output Format

Print peak numbers separated by space.

Sample Input

5

8 9 10 2 6

Sample Output

```
10 6
```

For example:

Input	Result
4 12 3 6 8	12 8

Answer:(penalty regime: 0 %)

```
def find(n,arr):
    peaks=[]
    for i in range(n):
        if i==0:
            if n==1 or
arr[i]>=arr[i+1]:

peaks.append(arr[i])
        elif i==n-1:
            if
arr[i]>=arr[i-1]:

peaks.append(arr[i])
        else:
            if
arr[i]>=arr[i-1] and
arr[i]>=arr[i+1]:
```

Feedback

Input	Expected	Got
7 15 7 10 8 9 4 6	15 10 9 6	15 10 9 6
4 12 3 6 8	12 8	12 8

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 3

Correct
Mark 1.00 out of 1.00
☐ Flag question

Question text

An list contains N numbers and you want to determine whether two of the numbers sum to a given number K. For example, if the input is 8, 4, 1, 6 and K is 10, the answer is yes (4 and 6). A number may be used twice.

Input Format

The first line contains a single integer n , the length of list

The second line contains n space-separated integers, list[i].

The third line contains integer k.

Output Format

Print Yes or No.

Sample Input

7

0 1 2 4 6 5 3

1

Sample Output

Yes

For example:

Input	Result
5 8 9 12 15 3 11	Yes
6 2 9 21 32 43 43 4	1 No

Answer:(penalty regime: 0 %)

```
def fun(n,arr,k):
    seen=set()
    for num in arr:
        if (k-num)in seen:
            return "Yes"
        seen.add(num)
    return "No"
n=int(input())
arr=list(map(int,input(
).split()))
k=int(input())
print(fun(n,arr,k))
```

Feedback

Input	Expected	Got
5 8 9 12 15 3 11	Yes	Yes
6 2 9 21 32 43 43 1 4	No	No
6 13 42 31 4 8 9 17	Yes	Yes

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 4

Correct
Mark 1.00 out of 1.00
☐ Flag question

Question text

Write a Python program for binary search.

For example:

Input	Result
1,2,3,5,8 6	False
3,5,9,45,42 42	True

Answer:(penalty regime: 0 %)

```
a=list(map(int,input(
).split(',')))
b=int(input())
c=0
flag=0
d=len(a)
a.sort()
while c<d :
    p=(c+d)//2
    if a[p]==b :
        print("True")
        flag=1
        break
    elif b<a[p] :
        d=p
    else :
        c=p+1
if flag==0 :
```

Feedback

Input	Expected	Got

1,2,3,5,8 6	False	False
3,5,9,45,42 42	True	True
52,45,89,43,11 11	True	True

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 5

Correct
Mark 1.00 out of 1.00
☐ Flag question

Question text

String should contain only the words are not palindrome.

Sample Input 1

```
Malayalam is my mother tongue
```

Sample Output 1

```
is my mother tongue
```

Answer:(penalty regime: 0 %)

```
def isPalindrome(word):
    i=0
    j=len(word)-1
    while i<j:
        if word[i] !=word[j]:
            return False
        i+=1
        j-=1
    return True
words=input().lower().split(" ")
for word in words:
    if not isPalindrome(word):
        print(word,end=" ")
```

Feedback

Input	Expected	Got
Malayalam is my mother tongue	is my mother tongue	is my mother tongue

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 6

Correct
Mark 1.00 out of 1.00
☐ Flag question

Question text

Given an array of integers `nums` which is sorted in ascending order, and an integer `target`, write a function to search `target` in `nums`. If `target` exists, then return its index. Otherwise, return `-1`.

You must write an algorithm with `O(log n)` runtime complexity.

Example 1:

Input: `nums = [-1,0,3,5,9,12], target = 9`

Output: 4
Explanation: 9 exists in nums and its index is 4

Example 2:

Input: nums = [-1,0,3,5,9,12], target = 2
Output: -1
Explanation: 2 does not exist in nums so return -1

Constraints:

- 1 <= nums.length <= 10^4
- -10^4 < nums[i], target < 10^4
- All the integers in nums are **unique**.
- nums is sorted in ascending order.

For example:

Test	Result
print(search([-1,0,3,5,9,12],9))	4

Answer:(penalty regime: 0 %)

```
def search(n: list[int], t: int) -> int:
    count=0
    flag=0
    for i in range(len(n)):
        if n[i]==t :
            count=i
            flag=1
            break
    if flag==1 :
        return count
    else :
        return -1
```

Reset answer

Feedback

Test	Expected	Got
print(search([-1,0,3,5,9,12],9))	4	4
print(search([-1,0,3,5,9,12],2))	-1	-1

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 7

Correct
Mark 1.00 out of 1.00
☐ Flag question

Question text

Given an array nums containing n distinct numbers in the range [0, n], return *the only number in the range that is missing from the array.*

Example 1:

Input: nums = [3,0,1]
Output: 2
Explanation: n = 3 since there are 3 numbers, so all numbers are in the range [0,3]. 2 is the missing number in the range since it does not appear in nums.

Example 2:

Input: nums = [0,1]
Output: 2
Explanation: n = 2 since there are 2 numbers, so all numbers are in the range [0,2]. 2 is the missing number in the range since it does not appear in nums.

Example 3:

Input: nums = [9,6,4,2,3,5,7,0,1]
Output: 8
Explanation: n = 9 since there are 9 numbers, so all numbers are in the range [0,9]. 8 is the missing number in the range since it does not appear in nums.

For example:

Test	Result

```
print(missingNumber([3,0,1])) 2

print(missingNumber([0,1]))  2
```

Answer:(penalty regime: 0 %)

```
def
missingNumber(n):
    count=0
    flag=0
    p=len(n)-1
    for i in range(p):
        count+=1
        if count not in n :
            flag=1
        if flag==1 :
            break
    if flag==1:
        return count
    else:
        return n[p]+1
```

Reset answer

Feedback

Test	Expected	Got
`print(missingNumber([3,0,1]))`	2	2
`print(missingNumber([0,1]))`	2	2
`print(missingNumber([9,6,4,2,3,5,7,0,1]))`	8	8

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 8

Correct
Mark 1.00 out of 1.00
☐ Flag question

Question text

Given two Strings s1 and s2, remove all the characters from s1 which is present in s2.

Constraints

1<= string length <= 200

Sample Input 1

experience

enc

Sample Output 1

xpri
Answer:(penalty regime: 0 %)

```
a=input()
b=input()
c=""
for i in a:
    if i not in b:
        c+=i
print(c)
```

Feedback

Input	Expected	Got
experience enc	xpri	xpri

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 9

Correct
Mark 1.00 out of 1.00
☐ Flag question

Question text

Balanced strings are those that have an equal quantity of 'L' and 'R' characters.

Given a balanced string s, split it in the maximum amount of balanced strings.

Return the maximum amount of split balanced strings.

Example 1:

Input:

RLRRLLRLRL

Output:

4

Explanation: s can be split into "RL", "RRLL", "RL", "RL", each substring contains same number of 'L' and 'R'.

Example 2:

Input:

RLLLLRRRLR

Output:

3

Explanation: s can be split into "RL", "LLLRRR", "LR", each substring contains same number of 'L' and 'R'.

Example 3:

Input:

LLLLRRRR

Output:

1

Explanation: s can be split into "LLLLRRRR".

Constraints:

1 <= s.length <= 1000

s[i] is either 'L' or 'R'.

s is a balanced string.

For example:

Test	Result
`print(BalancedStrings('RLRRLLRLRL'))`	4
`print(BalancedStrings('RLLLLRRRLR'))`	3

Answer:(penalty regime: 0 %)

```
def BalancedStrings(s,l=0,r=0,count=0):
    for i in s :
        if i=='L' :
            l+=1
        elif i=='R' :
            r+=1
        if l==r :
            count+=1
    return count
```

Reset answer

Feedback

Test	Expected	Got
`print(BalancedStrings('RLRRLLRLRL'))`	4	4
`print(BalancedStrings('RLLLLRRRLR'))`	3	3

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 10

Correct
Mark 1.00 out of 1.00
Flag question

Question text

You are given an `m x n` integer matrix `matrix` with the following two properties:

- Each row is sorted in non-decreasing order.
- The first integer of each row is greater than the last integer of the previous row.

Given an integer `target`, return `True` *if* `target` *is in* `matrix` *or* `False` *otherwise*.

You must write a solution in `O(log(m * n))` time complexity.

Example 1:

1	3	5	7
10	11	16	20
23	30	34	60

Input: `matrix = [[1,3,5,7],[10,11,16,20],[23,30,34,60]], target = 3`
Output: `True`

Example 2:

1	3	5	7
10	11	16	20
23	30	34	60

Input: matrix = [[1,3,5,7],[10,11,16,20],[23,30,34,60]], target = 13
Output: False

For example:

Test	Result
print(searchMatrix([[1,3,5,7],[10,11,16,20],[23,30,34,60]], 13))	False
print(searchMatrix([[1,3,5,7],[10,11,16,20],[23,30,34,60]], 3))	True

Answer:(penalty regime: 0 %)

```
def searchMatrix(m: list[list[int]], target: int) -> bool:
    for i in range(len(m)) :
        for j in range(len(m)) :
            if m[i][j]==target :
                return True
    return False
```

Reset answer

Feedback

Test	Expected	Got
print(searchMatrix([[1,3,5,7],[10,11,16,20],[23,30,34,60]], 13))	False	False
print(searchMatrix([[1,3,5,7],[10,11,16,20],[23,30,34,60]], 3))	True	True

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Save the state of the flags

Finish review

Skip Quiz navigation

Quiz navigation

Question 1 This page Question 2 This page Question 3 This page Question 4 This page Question 5 This page Question 6 This page Question 7 This page Question 8 This page Question 9 This page Question 10 This page

Show one page at a time Finish review