InfyTQ SET 001

Solved Challenges 2/5

Back To Challenges List

Integer Equals Previous Two - Combination

ID:9396 Solved By 99 Users

An array of integers **ARR** is passed as the input to the program. The program must find and print the combination of sequence of integers which satisfy the below condition:
- The i^{th} integer must satisfy the condition ARR[i] = ARR[i-1]+ARR[i-2]
- The program must print the sequence containing the maximum count of integers.
- If there are more than one sequence satisfying above conditions then print the sequence that contains smaller integer values.
- In case there is no such sequence print -1 as the output.

Boundary Condition(s):
3 <= Size of the array ARR <= 15

Input Format:
The first line contains a list of integers separated by a space.

Output Format:
The first line contains a list of integers separated by a space or -1.

Example Input/Output 1:
Input:
5 2 3 8 4 19 22 11 44

Output:
2 3 5 8

Explanation:
2 3 5 8 and 3 8 11 19 both have 4 integers in them.
But as 2 3 5 8 has the smaller integer values (sum of integers in 2 3 5 8 is less than the sum of integers in 3 8 11 19), 2 3 5 8 is printed as the output.

Example Input/Output 2:
Input:
1 7 10 19 22 100

Output:
-1

Example Input/Output 3:
Input:
5 2 3 8 4 19 22 11 44 30 88 59 49

Output:
3 8 11 19 30 49

Max Execution Time Limit: 1000 millisecs

Ambiance

Python3 (3.x)

Reset

```
#Your code below
arr=list(map(int,input().strip().split()))
arr.sort()
summ=9999
count=0
res=[]
for index in range(len(arr)):
    # result=[]
    # flag=0
    a=arr[index]
    for i in range(index+1,len(arr)):
        result=[]
        # print("tp check")
        # print(a,arr[i],prev+arr[i])
        if a + arr[i] in arr:
            value=a+arr[i]
            # print(a,arr[i],value)
            prev=a
            curr=arr[i]
            result.append(prev)
            result.append(curr)
            while(value in arr):
                result.append(value)
                prev=curr
                curr=value
                value=prev+curr
            if count<len(result):
                count=len(result)
                res=result
            if count==len(result):
                if sum(result)<summ:
                    summ=sum(result)
                    res=result
if len(res)==0:
    print("-1")
else:
    for i in res:
        print(i,end=" ")
```

Code did not pass the execution

Your Program Output:

```
3 8 11 19 30 49
```

Save Run

Run with a custom test case (Input/Output)

Your input

```
5 2 3 8 4 19 22 11 44 30 88 59 49
```

Your expected output

```
3 8 11 19 30 39
```