

InfyTQ (Finding longest fibonacci sequence)

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0.1 InfyTQ problem for finding longest fibonacci sequence in a given array

Given an array of integers, find the sequence of integers which satisfy below conditions:

The i th integer must satisfy the given equation in the sequence $X[i] = X[i-1] + X[i-2]$

The length of the sequence must be maximum possible. If there is more than one sequence satisfying above two conditions then print that sequence which contains least integers for example, if (2, 3, 5, 8) and (5, 8, 13, 21) are possible sequences then print 2, 3, 5, 8

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In [56]: myarr=list(map(int,input().split(',')))
temp1=[]
temp2=[]
for x in range(2,len(myarr)):
    if myarr[x]==myarr[x-2]+myarr[x-1]:
        if myarr[x-2] not in temp1:
            temp1.append(myarr[x-2])
        if myarr[x-1] not in temp1:
            temp1.append(myarr[x-1])
        if myarr[x] not in temp1:
            temp1.append(myarr[x])
    else:
        if len(temp2)<len(temp1):
            temp2=temp1
            temp1=[]
        elif len(temp2)==len(temp1):
            temp1=''.join(str(x) for x in temp1)
            temp2=''.join(str(x) for x in temp2)
            if len(temp1)<len(temp2):
                temp2=list(map(int,temp2))
            else:
                temp2=list(map(int,temp1))
            temp1=[]

print(','.join(str(x) for x in temp2))
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0,2,5,8,100,2,3,5,8,13,11,5,8,13,21,34
2,3,5,8,13
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