Started on	Saturday, 17 May 2025, 9:29 AM
State	Finished
Completed on	Saturday, 17 May 2025, 2:03 PM
Time taken	4 hours 33 mins
Overdue	2 hours 33 mins
Grade	**80.00** out of 100.00

Question **1**

Correct

Mark 20.00 out of 20.00

Write a Python program to Implement Minimum cost path in a Directed Graph

For example:

Test	Result
`getMinPathSum(graph, visited, necessary, source, dest, 0);`	12

Answer: (penalty regime: 0 %)

Reset answer

```
minSum = 1000000000
def getMinPathSum(graph, visited, necessary,
                  src, dest, currSum):

    ################# Add your Code here ################
    global minSum
    if (src == dest):
        flag = True;
        for i in necessary:
            if (not visited[i]):
                flag = False;
                break;
        if (flag):
            minSum = min(minSum, currSum);
        return;

    else:
        visited[src] = True;
        for node in graph[src]:

            if not visited[node[0]]:
                visited[node[0]] = True;
```

	Test	Expected	Got	
✔	`getMinPathSum(graph, visited, necessary, source, dest, 0);`	12	12	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **2**

Not answered

Mark 0.00 out of 20.00

Write a python program to implement quick sort using last element as pivot on the given list of integers.

For example:

Test	Input	Result
quickSort(arr,0,n-1)	6 21 54 30 12 10 6	Sorted array is: 6 10 12 21 30 54

Answer: (penalty regime: 0 %)

```
1
```

Question **3**

Correct

Mark 20.00 out of 20.00

Given an integer array `nums`, find the contiguous subarray (containing at least one number) which has the largest sum and return *its sum*.

A **subarray** is a **contiguous** part of an array.

Example 1:

```
Input: nums = [-2,1,-3,4,-1,2,1,-5,4]
Output: 6
Explanation: [4,-1,2,1] has the largest sum = 6.
```

For example:

Test	Input	Result
s.maxSubArray(A)	9 -2 1 -3 4 -1 2 1 -5 4	The sum of contiguous sublist with the largest sum is 6

Answer: (penalty regime: 0 %)

Reset answer

```
class Solution:
    def maxSubArray(self,A):
        ############ Add your Code here
        max_sum = A[0]
        current_sum = A[0]
        for i in range(1, len(A)):
            current_sum = max(A[i], current_sum + A[i])
            max_sum = max(max_sum, current_sum)
        return max_sum

A =[]
n=int(input())
for i in range(n):
    A.append(int(input()))
s=Solution()
print("The sum of contiguous sublist with the largest sum is",s.maxSubArray(A))
```

	Test	Input	Expected	Got	
✔	s.maxSubArray(A)	9 -2 1 -3 4 -1 2 1 -5 4	The sum of contiguous sublist with the largest sum is 6	The sum of contiguous sublist with the largest sum is 6	✔

	Test	Input	Expected	Got	
✔	s.maxSubArray(A)	5 5 4 -1 7 8	The sum of contiguous sublist with the largest sum is 23	The sum of contiguous sublist with the largest sum is 23	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **4**

Correct

Mark 20.00 out of 20.00

Print All Paths With Minimum Jumps

```
1. You are given a number N representing number of elements.
2. You are given N space separated numbers (ELE : elements).
3. Your task is to find & print
    3.1) "MINIMUM JUMPS" need from 0th step to (n-1)th step.
    3.2) all configurations of "MINIMUM JUMPS".
NOTE: Checkout sample question/solution video inorder to have more insight.
```

For example:

Test	Input	Result
minJumps(arr)	10 3 3 0 2 1 2 4 2 0 0	0 -> 3 -> 5 -> 6 -> 9 0 -> 3 -> 5 -> 7 -> 9

Answer: (penalty regime: 0 %)

Reset answer

```
from queue import Queue
import sys
class Pair(object):
    idx = 0
    psf = ""
    jmps = 0
    def __init__(self, idx, psf, jmps):

        self.idx = idx
        self.psf = psf
        self.jmps = jmps
def minJumps(arr):
    MAX_VALUE = sys.maxsize
    dp = [MAX_VALUE for i in range(len(arr))]
    n = len(dp)
    dp[n - 1] = 0

    for i in range(n - 2, -1, -1):
        steps = arr[i]
        minimum = MAX_VALUE

        for j in range(1, steps + 1, 1):
```

	Test	Input	Expected	Got	
✔	minJumps(arr)	10 3 3 0 2 1 2 4 2 0 0	0 -> 3 -> 5 -> 6 -> 9 0 -> 3 -> 5 -> 7 -> 9	0 -> 3 -> 5 -> 6 -> 9 0 -> 3 -> 5 -> 7 -> 9	✔

	Test	Input	Expected	Got	
✔	minJumps(arr)	7 5 5 0 3 2 3 6	0 -> 1 -> 6 0 -> 3 -> 6 0 -> 4 -> 6 0 -> 5 -> 6	0 -> 1 -> 6 0 -> 3 -> 6 0 -> 4 -> 6 0 -> 5 -> 6	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **5**

Correct

Mark 20.00 out of 20.00

Create a python function to compute the fewest number of coins that we need to make up the amount given.

For example:

Test	Input	Result
ob1.coinChange(s,amt)	3 11 1 2 5	3

Answer: (penalty regime: 0 %)

Reset answer

```
class Solution(object):
   def coinChange(self, coins, amount):
      ####################      Add your Code Here ###########
       dp = [float('inf')] * (amount + 1)
       dp[0]=0
       for coin in coins:
           for i in range(coin, amount + 1):
               dp[i] = min(dp[i], dp[i - coin] + 1)
       return dp[amount] if dp[amount]!=float('inf') else -1

ob1 = Solution()
n=int(input())
s=[]
amt=int(input())
for i in range(n):
    s.append(int(input()))


print(ob1.coinChange(s,amt))
```

	Test	Input	Expected	Got	
✔	ob1.coinChange(s,amt)	3 11 1 2 5	3	3	✔
✔	ob1.coinChange(s,amt)	3 12 1 2 5	3	3	✔
✔	ob1.coinChange(s,amt)	3 22 1 2 5	5	5	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.