Started on	Tuesday, 13 May 2025, 1:23 PM
State	Finished
Completed on	Tuesday, 13 May 2025, 6:27 PM
Time taken	5 hours 4 mins
Overdue	3 hours 4 mins
Grade	**80.00** out of 100.00

Question **1**

Correct

Mark 20.00 out of 20.00

Create a Dynamic Programming python Implementation of Coin Change Problem.

For example:

Test	Input	Result
count(arr, m, n)	3 4 1 2 3	4

Answer: (penalty regime: 0 %)

Reset answer

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```
def count(S, m, n):
    table = [[0 for x in range(m)] for x in range(n+1)]
    for i in range(m):
        table[0][i] = 1
    for i in range(1, n+1):
        for j in range(m):
            # Count of solutions including S[j]
            #Start here
            x = table[i - S[j]][j] if i-S[j] >= 0 else 0
            # Count of solutions excluding S[j]
            y = table[i][j-1] if j >= 1 else 0
            # total count
            table[i][j] = x + y
    return table[n][m-1]
    #End here
arr = []
m = int(input())
```

	Test	Input	Expected	Got	
✔	count(arr, m, n)	3 4 1 2 3	4	4	✔
✔	count(arr, m, n)	3 16 1 2 5	20	20	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **2**

Correct

Mark 20.00 out of 20.00

Write a python program to find the maximum contiguous subarray.

For example:

Test	Input	Result
maxSubArraySum(a,n)	8 -2 -3 4 -1 -2 1 5 -3	Maximum contiguous sum is 7

Answer: (penalty regime: 0 %)

Reset answer

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```
def maxSubArraySum(a,size):
    ######################  Add your Code here #############
    #Start here
    max_so_far = a[0]
    max_ending_here = 0
    for i in range(0, size):
        max_ending_here = max_ending_here + a[i]
        if max_ending_here < 0:
            max_ending_here = 0
        elif (max_so_far < max_ending_here):
            max_so_far = max_ending_here

    return max_so_far
    #End here
n=int(input())
a =[] #[-2, -3, 4, -1, -2, 1, 5, -3]
```

	Test	Input	Expected	Got	
✔	maxSubArraySum(a,n)	8 -2 -3 4 -1 -2 1 5 -3	Maximum contiguous sum is 7	Maximum contiguous sum is 7	✔

	Test	Input	Expected	Got	
✔	maxSubArraySum(a,n)	5 1 -2 -3 4 5	Maximum contiguous sum is 9	Maximum contiguous sum is 9	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **3**

Correct

Mark 20.00 out of 20.00

Write a Python Program for printing Minimum Cost Simple Path between two given nodes in a directed and weighted graph

For example:

Test	Result
`minimumCostSimplePath(s, t, visited, graph)`	`-3`

Answer: (penalty regime: 0 %)

Reset answer

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```
import sys
V = 5
INF = sys.maxsize
def minimumCostSimplePath(u, destination,
                          visited, graph):
########  Add your code here ###############
    #Start here
    if (u == destination):
        return 0
    visited[u] = 1
    ans = INF
    for i in range(V):
        if (graph[u][i] != INF and not visited[i]):
            curr = minimumCostSimplePath(i, destination,
                                         visited, graph)
            if (curr < INF):
                ans = min(ans, graph[u][i] + curr)
```

	Test	Expected	Got	
✔	`minimumCostSimplePath(s, t, visited, graph)`	`-3`	`-3`	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **4**

Not answered

Mark 0.00 out of 20.00

Write a python program to implement merge sort without using recursive function on the given list of values.

For example:

Input	Result
7 33 42 9 37 8 47 5	left: [33] Right: [42] left: [9] Right: [37] left: [8] Right: [47] left: [5] Right: [] left: [33, 42] Right: [9, 37] left: [8, 47] Right: [5] left: [9, 33, 37, 42] Right: [5, 8, 47] [5, 8, 9, 33, 37, 42, 47]
6 10 3 5 61 74 92	left: [10] Right: [3] left: [5] Right: [61] left: [74] Right: [92] left: [3, 10] Right: [5, 61] left: [74, 92] Right: [] left: [3, 5, 10, 61] Right: [74, 92] [3, 5, 10, 61, 74, 92]

Answer: (penalty regime: 0 %)

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Question **5**

Correct

Mark 20.00 out of 20.00

Create a python program to find the minimum number of jumps needed to reach end of the array using Dynamic Programming.

For example:

Test	Input	Result
minJumps(arr,n)	6 1 3 6 1 0 9	Minimum number of jumps to reach end is 3

Answer: (penalty regime: 0 %)

Reset answer

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```
def minJumps(arr, n):
    ##########  Add your code here ###############
    #Start here
    jumps = [0 for i in range(n)]
    if (n == 0) or (arr[0] == 0):
        return float('inf')
    jumps[0] = 0
    for i in range(1, n):
        jumps[i] = float('inf')
        for j in range(i):
            if (i <= j + arr[j]) and (jumps[j] != float('inf')):
                jumps[i] = min(jumps[i], jumps[j] + 1)
                break
    return jumps[n-1]
    #End here
arr = []
```

	Test	Input	Expected	Got	
✔	minJumps(arr,n)	6 1 3 6 1 0 9	Minimum number of jumps to reach end is 3	Minimum number of jumps to reach end is 3	✔

	Test	Input	Expected	Got	
✔	minJumps(arr,n)	7 2 3 -8 9 5 6 4	Minimum number of jumps to reach end is 3	Minimum number of jumps to reach end is 3	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.