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Rod Cutting Problem(DPP24)

Problem Submissions Leaderboard Discussions

Program to find best way to cut a rod of length n where rod of length i has a cost price[i-1]

max lenght is 8 is fixed.

Submissions: 12

Max Score: 50

Difficulty: Medium

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For example, consider below rod lengths and values

Input:

Rod length: 4

Best: Cut the rod into two pieces of length 2 each to gain revenue of 5 + 5 = 10

Cut	Profit
4	9
1, 3	(1 + 8) = 9
2, 2	(5 + 5) = 10
3, 1	(8 + 1) = 9
1, 1, 2	(1 + 1 + 5) = 7
1, 2, 1	(1 + 5 + 1) = 7
2, 1, 1	(5 + 1 + 1) = 7
1, 1, 1, 1	(1 + 1 + 1 + 1) = 4

Input Format

- 1. Take length of array price
- 2. Take the price from the user
- 3. Take rod length from the user

Constraints

- 1. 0 <= num <= 1000000
- 2. 0 <= price <= 1000000
- 3. 8 > size > 0

Output Format

1. It should find best way to cut a rod.

Sample Input 0

```
8
1 5 8 9 10 17 17 20
4
```

Sample Output 0

10


```
11
            return 0;
12
        int maxValue = INT_MIN;
13
14
15
16
        for (int i = 1; i <= n; i++)
17 ▼
18
            int cost = price[i - 1] + rodCut(price, n - i);
19 ₹
20
            if (cost > maxValue)
21
                 maxValue = cost;
22
23
        }
24
25
        return maxValue;
26
   }
27
28
   int main()
29 ▼{
30
        int s;
        cin>>s;
31
32 ▼
        int price[s];
33
        for(int i=0;i<s;i++)</pre>
34 ▼
            cin>>price[i];
35
        int n;
36
37
        cin>>n;
38
39
        cout <<rodCut(price, n);</pre>
40
41
        return 0;
42 }
```

Line: 1 Col: 1

Testcase 0 🗸					
		ed the sample te			
8 1 5 8 9 10 4	17 17 20				
Your Output (s	stdout)				
10					
Expected Outp	out				
10					
					,

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