## CSES Problem Set

# Elevator Rides



### Submission details

| | |
|---|---|
| Task: | Elevator Rides |
| Sender: | Rodry |
| Submission time: | 2021-11-28 01:11:02 |
| Language: | C++11 |
| Status: | READY |
| Result: | ACCEPTED |

### Test results

| test | verdict | time | |
|---|---|---|---|
| #1 | ACCEPTED | 0.01 s | » |
| #2 | ACCEPTED | 0.01 s | » |
| #3 | ACCEPTED | 0.01 s | » |
| #4 | ACCEPTED | 0.01 s | » |
| #5 | ACCEPTED | 0.01 s | » |
| #6 | ACCEPTED | 0.14 s | » |
| #7 | ACCEPTED | 0.14 s | » |
| #8 | ACCEPTED | 0.15 s | » |
| #9 | ACCEPTED | 0.14 s | » |
| #10 | ACCEPTED | 0.14 s | » |
| #11 | ACCEPTED | 0.15 s | » |
| #12 | ACCEPTED | 0.14 s | » |
| #13 | ACCEPTED | 0.14 s | » |
| #14 | ACCEPTED | 0.14 s | » |


### Dynamic Programming

...
Money Sums –
Removal Game –
Two Sets II –
Increasing Subsequence –
Projects –
Elevator Rides ✓
Counting Tilings –
Counting Numbers –

### Your submissions

2021-11-28 01:11:02 ✓

| test | verdict | time | |
|---|---|---|---|
| #15 | ACCEPTED | 0.14 s | » |
| #16 | ACCEPTED | 0.14 s | » |
| #17 | ACCEPTED | 0.14 s | » |
| #18 | ACCEPTED | 0.14 s | » |
| #19 | ACCEPTED | 0.14 s | » |
| #20 | ACCEPTED | 0.14 s | » |
| #21 | ACCEPTED | 0.01 s | » |
| #22 | ACCEPTED | 0.14 s | » |
| #23 | ACCEPTED | 0.14 s | » |
| #24 | ACCEPTED | 0.13 s | » |
| #25 | ACCEPTED | 0.01 s | » |
| #26 | ACCEPTED | 0.14 s | » |
| #27 | ACCEPTED | 0.14 s | » |
| #28 | ACCEPTED | 0.13 s | » |
| #29 | ACCEPTED | 0.14 s | » |
| #30 | ACCEPTED | 0.01 s | » |
| #31 | ACCEPTED | 0.01 s | » |
| #32 | ACCEPTED | 0.13 s | » |
| #33 | ACCEPTED | 0.13 s | » |
| #34 | ACCEPTED | 0.01 s | » |
| #35 | ACCEPTED | 0.13 s | » |
| #36 | ACCEPTED | 0.13 s | » |
| #37 | ACCEPTED | 0.13 s | » |
| #38 | ACCEPTED | 0.01 s | » |

## Compiler report ▲

```
input/code.cpp: In function 'int main()':
input/code.cpp:52:5: warning: this 'for' clause does not guard... [-Wmisleading-inden
     for(int i=0;i<n;i++)
     ^~~
input/code.cpp:55:2: note: ...this statement, but the latter is misleadingly indented
  cout<<ElevatorRides(n,x,vector)<<endl;
  ^~~~
```

## Code

```cpp
#include<bits/stdc++.h>

#define INF 9999

using namespace std;

int ElevatorRides(int n, int x, vector<int>& v){

        pair<int, int> resp[1<<n];
    resp[0] = {1,0};

    int idx = (1<<n);

    for(int i=1;i<idx;i++){

        resp[i].first = n+1;
        resp[i].second = 0;

                for(int j=0;j<n;j++){

                        int idx2 = (1<<j);

            if(i & idx2){

                                pair<int,int> aux= resp[i^idx2];

                if(aux.second+v[j] <= x)
                    aux.second += v[j];

                else{
                    aux.first++;
                    aux.second=v[j];
                }

                resp[i]=min(resp[i],aux);
            }

        }
    }


    return resp[idx-1].first;
}
```

```
44
45 int main(){
46
47         int n,x;
48
49     cin>>n>>x;
50     vector<int> vector(n);
51
52     for(int i=0;i<n;i++)
53         cin>>vector[i];
54
55         cout<<ElevatorRides(n,x,vector)<<endl;
56 }
```

Share code to others

## Test details

### Test 1

Verdict: ACCEPTED

| input |
| --- |
| 10 100<br>36 16 7 33 2 53 25 48 32 11 |

| correct output |
| --- |
| 3 |

| user output |
| --- |
| 3 |

### Test 2

Verdict: ACCEPTED

| input |
| --- |
| 10 100<br>3 32 26 26 64 34 46 70 35 48 |

| correct output |
| --- |
| 4 |

| user output |
| --- |
| 4 |

### Test 3

Verdict: ACCEPTED

| input |
| --- |
| 10 100<br>41 14 19 71 21 45 27 8 52 73 |

| correct output |
| --- |
| 4 |

| user output |
| --- |
| 4 |

### Test 4

Verdict: ACCEPTED

| input |
| --- |
| 10 100<br>20 19 28 56 20 19 63 52 25 60 |

| correct output |
| --- |
| 4 |

| user output |
| --- |
| 4 |

### Test 5

Verdict: ACCEPTED

| input |
| --- |
| 10 100<br>52 28 14 70 27 11 11 40 16 50 |

| correct output |
| --- |
| 4 |

| user output |
| --- |
| 4 |

### Test 6

Verdict: ACCEPTED

| input |
| --- |
| 20 1000000000<br>609930576 743367699 654625611 ... |

| correct output |
| --- |
| 14 |

| user output |
| --- |
| 14 |

### Test 7

Verdict: ACCEPTED

| input |
| --- |
| 20 1000000000<br>694970558 261292189 582922378 ... |

| correct output |
| --- |
| 9 |

| user output |
| --- |
| 9 |

### Test 8

Verdict: ACCEPTED

| input |
| --- |
| 20 1000000000<br>188194840 463651706 577460550 ... |

| correct output |
| --- |
| 8 |

| user output |
| --- |
| 8 |

### Test 9

Verdict: ACCEPTED

| input |
| --- |
| 20 1000000000<br>643426892 4189142 121707902 43... |

| correct output |
| --- |
| 6 |

| user output |
| --- |
| 6 |

### Test 10

Verdict: ACCEPTED

| input |
| --- |
| 20 1000000000<br>556514452 654521001 282817505 ... |

| correct output |
| --- |
| 8 |

| user output |
| --- |
| 8 |

### Test 11

Verdict: ACCEPTED

| input |
| --- |
| 20 10<br>2 5 10 4 4 5 4 3 9 2 10 2 7 8 ... |

| correct output |
| --- |
| 10 |

| user output |
| --- |
| 10 |

### Test 12

Verdict: ACCEPTED

| input |
| --- |
| 20 10<br>9 2 10 2 6 9 6 5 1 6 2 9 3 3 4... |

| correct output |
| --- |
| 11 |

| user output |
| --- |
| 11 |

### Test 13

Verdict: ACCEPTED

| input |
| --- |
| 20 10<br>4 10 1 8 3 3 9 5 5 3 9 8 3 9 2... |

| correct output |
| --- |
| 11 |

| user output |
| --- |
| 11 |

### Test 14

Verdict: ACCEPTED

| input |
| --- |
| 20 10 |

| |
|---|
| 2 6 5 2 4 3 10 3 1 10 8 6 2 6 ... |

| correct output |
|---|
| 11 |

| user output |
|---|
| 11 |

### Test 15

Verdict: ACCEPTED

| input |
|---|
| 20 10<br>3 2 1 10 3 3 8 3 4 6 10 4 5 2 ... |

| correct output |
|---|
| 10 |

| user output |
|---|
| 10 |

### Test 16

Verdict: ACCEPTED

| input |
|---|
| 20 10<br>7 3 9 9 9 10 2 4 3 2 3 3 4 10 ... |

| correct output |
|---|
| 11 |

| user output |
| --- |
| 11 |

### Test 17

Verdict: ACCEPTED

| input |
| --- |
| 20 10<br>1 3 7 1 1 8 4 3 9 3 3 7 1 4 2 ... |

| correct output |
| --- |
| 9 |

| user output |
| --- |
| 9 |

### Test 18

Verdict: ACCEPTED

| input |
| --- |
| 20 10<br>4 2 7 10 3 7 9 5 5 10 2 5 2 10... |

| correct output |
| --- |
| 11 |

| user output |
| --- |
| 11 |

### Test 19

Verdict: ACCEPTED

| input |
| --- |
| 20 10<br>9 3 2 9 7 9 10 5 9 2 5 8 2 3 1... |

| correct output |
| --- |
| 12 |

| user output |
| --- |
| 12 |

### Test 20

Verdict: ACCEPTED

| input |
| --- |
| 20 10<br>10 6 4 10 9 3 7 9 3 2 2 6 10 2... |

| correct output |
| --- |
| 13 |

| user output |
| --- |
| 13 |

### Test 21

Verdict: ACCEPTED

| input |
| --- |
| 16 1000<br>589 17 199 306 495 559 14 269 ... |

| correct output |
| --- |
| 6 |

| user output |
| --- |
| 6 |

### Test 22

Verdict: ACCEPTED

| input |
| --- |
| 20 1000000000<br>609930576 743367699 654625611 ... |

| correct output |
| --- |
| 13 |

| user output |
| --- |
| 13 |

### Test 23

Verdict: ACCEPTED

| input |
| --- |
| 20 100<br>5 8 10 10 15 16 18 20 25 25 25... |

| correct output |
| --- |
| 7 |

| user output |
| --- |
| 7 |

### Test 24

Verdict: ACCEPTED

| input |
| --- |
| 20 10<br>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ... |

| correct output |
| --- |
| 2 |

| user output |
| --- |
| 2 |

### Test 25

Verdict: ACCEPTED

| input |
| --- |
| 4 10<br>4 8 6 1 |

| correct output |
| --- |
| 2 |

| user output |
| --- |
| 2 |

### Test 26

Verdict: ACCEPTED

| input |
| --- |
| 20 100<br>4 8 10 10 15 16 18 20 25 25 25... |

| correct output |
| --- |
| 7 |

| user output |
| --- |
| 7 |

### Test 27

Verdict: ACCEPTED

| input |
| --- |
| 20 100<br>3 8 10 10 15 16 18 20 25 25 25... |

| correct output |
| --- |
| 7 |

| user output |
| --- |
| 7 |

### Test 28

Verdict: ACCEPTED

| input |
| --- |
| 20 9<br>2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 ... |

| correct output |
| --- |
| 6 |

| user output |
| --- |
| 6 |

### Test 29

Verdict: ACCEPTED

| input |
| --- |
| 20 100<br>41 42 43 44 45 46 47 48 49 59 ... |

| correct output |
| --- |
| 10 |

| user output |
| --- |
| 10 |

### Test 30

Verdict: ACCEPTED

| input |
| --- |
| 1 1<br>1 |

| correct output |
| --- |
| 1 |

| user output |
| --- |
| 1 |

### Test 31

Verdict: ACCEPTED

| input |
| --- |
| 2 2<br>2 2 |

| correct output |
| --- |
| 2 |

| user output |
| --- |
| 2 |

### Test 32

Verdict: ACCEPTED

| input |
| --- |
| 20 108<br>1 3 5 6 8 10 11 13 15 16 18 20... |

| correct output |
| --- |
| 4 |

| user output |
| --- |
| 4 |

### Test 33

Verdict: ACCEPTED

| input |
| --- |
| 20 69 |

| |
|---|
| 10 10 10 10 10 10 10 10 10 10 ... |

| correct output |
|---|
| 4 |

| user output |
|---|
| 4 |

### Test 34

Verdict: ACCEPTED

| input |
|---|
| 14 16<br>7 13 11 1 7 16 5 3 2 1 12 8 16... |

| correct output |
|---|
| 7 |

| user output |
|---|
| 7 |

### Test 35

Verdict: ACCEPTED

| input |
|---|
| 20 900000000<br>207900850 208829300 203125674 ... |

| correct output |
|---|
| 6 |

| user output |
| --- |
| 6 |

### Test 36

Verdict: ACCEPTED

| input |
| --- |
| 20 1000000000<br>1000000000 1000000000 10000000... |

| correct output |
| --- |
| 20 |

| user output |
| --- |
| 20 |

### Test 37

Verdict: ACCEPTED

| input |
| --- |
| 20 280<br>56 56 56 56 56 40 40 40 40 40 ... |

| correct output |
| --- |
| 3 |

| user output |
| --- |
| 3 |

### Test 38

Verdict: ACCEPTED

| input |
| --- |
| 1 5<br>2 |

| correct output |
| --- |
| 1 |

| user output |
| --- |
| 1 |