



IEMCO (IEM Coding Olympiad) Level 2

LIVE

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Flower Picking

Max. Marks: 35

Rachel is a techsavvy florist. She has a huge farm where she grows tulips. The farm is unevenly distributed with both good tulips which have blossomed perfectly and bad ones which have worn out due to heat. She has an automatic flower picker which can pick flowers off a rectangular part of the farm. But the battery on this machine drains out very very quickly hence she can program it to make a single trip to any part of the farm. What is the size of the largest part of the farm, which "Rachel" would harvest.

Input: Input contains multiple test cases. You are given three integers M, N, F which describe the size of the farm (M rows, N columns, F unit area of such a farm). Then follows the actual map which consists of M lines, each line containing N times the letters 'T' or 'W' standing for "Good Tulips" or "Wornout Tulips". Input terminates with M = N = 0.

Output: Print the size of the largest field, which "Rachel" would harvest.

Constraints: $0 < M, N \leq 4000$ $0 \leq F \leq 1000000$

Sample Input ([Plaintext Link](#))

```
9 10 1
WTWTTTWWW
WWTWTWTTT
WWTWTTWWW
WTTTTTWT
WTWTTTWWT
WWWTTTWT
TTTWTTWWW
TWTTTWWT
WTTWWWTW
```

0 0

Sample Output ([Plaintext Link](#))

8

Time Limit: 5.0 sec(s) for each input file.

Memory Limit: 256 MB

Source Limit: 1024 KB

Marking Scheme: Marks are awarded when all the testcases pass.

Allowed languages: C, CPP, CLOJURE, CSHARP, GO, HASKELL, JAVA, JAVASCRIPT, JAVASCRIPT_NODE, LISP, OBJECTIVEC, PASCAL, PERL, PHP, PYTHON, RUBY, R, RUST, SCALA

C++ (g++ 4.8.4) ▼

Upload file: No file chosen

All changes saved

```
9  #define MAXN 4000
10
11  using namespace std;
12
13
14  struct brick
15  {
16      int index, height, left;
17      brick(int _index, int _height, int _left) { index = _index; height =
          _left; }
18      brick() {}
19  };
20
21  int main(){
22      int m,n,f;
23      scanf("%d%d", &m, &n);
24      if (m == n && m == 0) return 0;
25      scanf("%d", &f);
26      int height[MAXN];
27      char farm[MAXN];
28      do{
29          memset(height, 0, sizeof height);
30          stack<brick> stog;
31          brick top;
32          int sol = 0;
33          for (int i = 0; i < m; ++i){
34              scanf("%s", farm);
35              for (int j = 0; j < n; ++j){
36                  if (farm[j] == 'W'){
37                      height[j] = 0;
38                  }
39                  else{
40                      ++height[j];
41                  }

```

```

42     while(!stog.empty() && (top = stog.top()).height > heigh
43         if (sol < top.height * (j-top.left)){
44             sol=top.height*(j-top.left);
45         }
46         stog.pop();
47     }
48     if (stog.empty())
49         stog.push(brick(j, height[j], 0));
50     else
51         stog.push(brick(j, height[j], top.index+1));
52     }
53     while (!stog.empty()){
54         brick last_element = stog.top();
55         stog.pop();
56         if(sol<last_element.height*(n-last_element.left)){
57             sol=last_element.height*(n-last_element.left);
58         }
59     }
60 }
61 printf("%lld\n", (long long)sol*f);
62 scanf("%d%d", &m, &n);
63 if (m==n && m==0)
64     return 0;
65 scanf("%d", &f);
66 }while(m!=0);
67 return 0;
68 }
69

```

 Press ctrl-space for autocomplete suggestions.

Submit

Compile & Test

Provide custom input

 Play Code (C++)

SUBMISSION RESULT

Judge Environment

Submission ID:	Result	Score	Time (sec)	Memory
3812166	35	35	0.100913	(KiB)
now	Accepted			64


Language

C++

	Result	Score	Time (sec)	Memory (KiB)
Input #1	Accepted	0.0	0.100913	64

Compilation Log

No compilation log for this submission.

 **Tip:** You can submit any number of times you want. Your best submission is considered for computing total score.

Your Rating: ★★★★★

COMMENTS (3)



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SHAILESH KUMAR an hour ago

what is f?

▲ 0 votes • Reply • Message • Permalink



Pranoy Mukherjee an hour ago

can anybody explain the sample i/o o/p?

▲ 0 votes • Reply • Message • Permalink



NIKHIL NIHAL ⚡ Moderator 39 minutes ago

f is the unit area

▲ 0 votes • Reply • Message • Permalink

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Sampreet...	0.100913	C++
Subham R...	0.100804	C++
Somesh K...	0.100942	C++
Rishabh	0.361663	C++
Rudra Sa...	0.114004	C++
Kanish K...	0.194182	C++
Rudra Sa...	0.118437	C++
deepak s...	0.100913	C++
raj kama...	0.10082	C++
Kanish K...	0.190607	C++
raj kama...	0.100924	C++
Himadri ...	0.100798	C++
Rudra Sa...	0.123953	C++
Sampreet...	0.101077	C++

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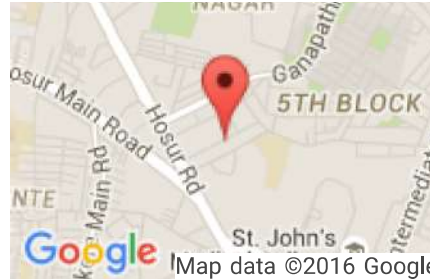
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