

The contest is in progress. It ends 4 days from now.

Contests > IEEEExtreme 7.0 (WarmUp Session) >

Demo_Problem_AC^{Max Score: 100pts} dynamic

Problem

☰ Submissions

🏆 Leaderboard

💬 Discussions

In image analysis, it is common to analyze a bitmap and observe the shapes present in it. For this problem, design an algorithm to detect shapes in a given bitmap. The shapes present in the map shall be from the set Square, Rectangle, Triangle and Parallelogram.

In the bitmap each pixel is represented as a bit, 1 - representing black and 0 - representing white. Participants are expected to detect the shapes outlined in black.

Input

The first line will contain the size of the bit map in pixels represented as (Row,Column). E.g. 6,8 this means a bit map of 6 rows and 8 columns.

The next line will contain a series of decimal digits from 0 to 255 separated by spaces. Each digit will represent a collection of 8 binary bits in the bitmap. IE. 55 represents a binary pattern 10000101.

Note: There can be multiple shapes in a bitmap.

Output

The shapes present in the bitmap in ascending order, separated by a comma. Eg. Rectangle, Square, Triangle

Note: There is NO linefeed or space at the end of the output

Sample Input 1:

```
6 8
0 126 66 66 126 0
```

Sample Output 1:

Rectangle

Sample Input 2:

```
6 16
0 0 120 120 72 144 73 32 123 192 0 0
```

Sample Output 2:

Parallelogram, Square

Suggest Edits

EmacsNormalVim

Select Language: C

save code

```
1 #include <stdio.h>
2 #include <string.h>
3 #include <math.h>
4 #include <stdlib.h>
5
6 int main() {
7
8     /* Enter your code here. Read input from STDIN. Print output to STDOUT */
9     return 0;
10 }
11
```

Line: 1 Col: 1 Count: 190

☐ Use a custom test case

 Upload Code as File

Compile & Test

Submit Code