Gokays Lands

Time Limit: 2.0s   **Memory Limit:** 256M

KODTÜ6 Question G - JOTFORM Sponsorship Question
Gokay's Lands

Execution time limit is 2 seconds.
Runtime memory usage limit is 256 megabytes.

In a country called Jotform, there was a landowner called Gokay. He has two sons, Buri and Korhan, and a lot of lands. These lands have both infertile and fertile acres. One day he decides to sell these lands. But before he sells he asks his sons if they want any acres to themselves. He has only two conditions, they will get the same amount of acres from each land and the land they will get has to be a rectangle. Buri and Korhan thinks and they decide to get the fertile acres. The acres will not intersect. Can you help them to maximize the area of their lands?

The maps for the lands is drawn like this:

```
1 0 0 1 1 1
1 0 0 1 1 1
1 0 0 0 1 0
1 1 0 0 0 0
1 1 0 0 1 1
1 0 0 0 1 1
```

Where ones show the fertile acres and zeroes show infertile acres. For this land they can both get 6 acres. One will get (1x6) the other one will get (3x2).

Input

The boolean matrix with max rows 10000 and max columns 10000. Items separated by space and columns separated by new line. When the input is other than 0 or 1 then matrix input is finished.

Output

Maximum area of the submatrix and coordinates of the corners for both matrices. Coordinates should be written like this: [[Rectangle1Row1, Rectangle1Col1, Rectangle1Row2, Rectangle1Col2], [Rectangle2Row1, Rectangle2Col1, Rectangle2Row2, Rectangle2Col2]]

Example

Input:

```
1 0 0 1 1 1
1 0 0 1 1 1
1 0 0 0 1 0
1 1 0 0 0 0
1 1 0 0 1 1
1 0 0 0 1 1
-
```

Output:

```
Area: 6
Coordinates: [[0, 0, 5, 0], [0, 3, 1, 5]]
```