Coming Alive

There's a rectangle consisting of m * n cells. A cell can become "alive" only if EXACTLY two of its four neighbor cells are alive. You are to determine if the entire rectange can become "alive"; if so print "possible", otherwise print "impossible".

The input will be a sequence of rectangles and configurations. Retangles are specified by two integers m and n in that order on one line. The list of cells that are initially alive is provided as ordered pairs, one pair per line, terminated by the pair 0 0. The coordinates of the cells are indexed 1, 2, ..., m and 1, 2, ..., n.
The input terminates with an end of file.

The rectangle will not be larger than 500 * 500 or smaller than 1 * 1.

Example Input:

```
3 3
1 1
2 2
3 3
0 0
3 3
1 1
2 2
3 3
3 1
0 0
```

Example Output:

```
possible
impossible
```

File: alive.txt
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Date: Fri Jun 28 11:53:09 EDT 2002

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RCS Info (may not be true date or author):

    $Author: hc3 $
    $Date: 2002/06/28 15:49:21 $
    $RCSfile: alive.txt,v $
    $Revision: 1.5 $