# Maze

# ZPRAC-16-17-Lab4

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[50 points]

Rachita still does not want to return anybody's money. So, she proposes a game for Nishant. If Nishant wins, she will pay double the amount she owes him else Nishant will pay half of it. Nishant will get a large share if he wins. Being a greedy person he agrees. Now, the game is described as follows:

**Question starts:**

Given a maze of size $M \times N$ made of '1' and '0', Nishant has to enter from the first row and exit from the last following only zeroes. Nishant can exit from any column in the last row. He should start from the first column in the first row. If no such path (path of '0's) exists, Rachita loses. If such a path exists, you have to help him find the path and win the game.

Nishant can move as follows (consider his current position to be $(a,b)$):

(1) If $(a+1,b)$ is '0' he has to move to the next row $(a+1)$

(2) Else, if $(a,b+1)$ is '0' he moves to the next column $(b+1)$

Nishant starts at $(0,0)$

INPUT Format:
M(**integer**) N(**integer**)
M x N grid made of '1' and '0'. Top left will always be '0'.

You have to output the entry point of each row. If no entry is possible in a row (path does not exist) print "RACHITA LOOSES".

**Example**
INPUT:
4 5
00111
10001
10101
11100
OUTPUT:
0
1

1
RACHITA LOOSES

INPUT:
5 6
011111
000110
101101
100000
111110
OUTPUT:
0
0
1
1
5

**Hint:** For every row, store start and end of path of '0' for previous row. For example:
1100011
1110111 // for this row, store 2,4 as start and end of path on previous row