Rat in a maze

↳ This a very famous question for backtracking

SRC	0	0	0	0
1	1	0	0	0
1	1	1	0	0
1	0	0	0	1
1	1	1	1	DEST

Rat has to reach the destination from the source.

0 means the path is blocked
1 means the path is open

- Rat can move Left, Right, Down, Up
- We can move forward only when:
  - The index is inside the array.
  - Next position is 1.
  - We haven't visited that path before. (Will create a VISITED ARRAY for that)
- Use of backtracking:

Suppose we reached a point when one part of code is done, now when we move to the other part, we have to backtrack other ~~sentences~~ parts too. So we make the visited array as it was before after completing one part.

Bare Care - When we reach the destination we assume that we have reached the base case, here, we will add the path to the answer vector

1	0	0
1	1	0
1	1	1

1	0	0
0	0	0
0	0	0

- We have to initialize V.A [0] [0] as one

Time Complexity:

$$TC = O(4^n)$$