



Objective:

- The purpose of this quiz is to focus on the very basic fundamental concepts practiced so far in previous labs.

Question No 1:

(10)

Consider the following matrix filled with zero and one.

	0	1	2	3	4	5	6	7
0	0	1	1	0	0	0	0	0
1	0	0	1	0	0	0	0	0
2	0	0	1	0	1	0	1	0
3	0	0	1	0	1	0	0	0
4	0	1	1	1	1	1	1	1
5	1	0	1	0	1	0	1	0
6	0	0	0	1	0	0	1	0
7	1	1	0	1	1	1	1	0

You can think of zeros as islands and ones as water.

If you are at some island then you can move in only four directions (top/bottom/left/right).

For Example:

- Assume, you are at (3,0) then you can move on top (2,0), or right (3,1), or towards bottom (4,0) but not left because its end of map.
- Assume you are at (7,2) then you can only move towards top i.e. (6,2)

Considering the above discussion there are 6 islands in above map.

Your task is to write a function which will receive a matrix of order 'N', each location filled with either 0 or 1 and your position (x,y) on the map. Your function will explore the complete island that you are on by changing the values from 0 to 2.

For Example

If we call **explore(matrix, 8, 6, 2)**, for the above matrix then the received matrix status becomes as follows:

	0	1	2	3	4	5	6	7
0	0	1	1	0	0	0	0	0
1	0	0	1	0	0	0	0	0
2	0	0	1	0	1	0	1	0
3	0	0	1	0	1	0	0	0
4	0	1	1	1	1	1	1	1
5	1	2	1	0	1	0	1	0
6	2	2	2	1	0	0	1	0
7	1	1	2	1	1	1	1	0