CS5103/MC5101: Assignment 6 **Date: 04/09/24**

Question

Rashmi is a coding geek. She will only befriend you if you solve her coding problem. Subham wants to be friend with her. But unfortunately, he is not good at coding and hence he asks for your help. Please help him to become friends with Rashmi. Rasmi framed the problem statement as follows:

You are given a matrix of size N*N. You are given a source point where a cup is placed. You are also given the destination point where the cup has to reach. The operation you can perform is left, right, top, and bottom, and every operation costs 1 unit. There are some barriers in the path also whose coordinates will be given. Find the cost of the path which leads to the shortest path. **20M**

Input:

The first line contains N as an input. The second line will contain the x and y coordinates of the source point. The third line will contain the x and y of the destination point. The fourth line will contain number of points m which are blocked. Following this m points will be provided.

Output:

Output a single integer denoting the cost of the shortest path.

Sample Input:	**Output:**
3 1 1 2 2 1 0 0	2

Problem Setter:
Subham Raj