

### Problem 3:

Given an undirected graph print the order in which the nodes will be visited in a Breadth First Search. Begin from vertex 0 and at each step visit the smallest vertex first.

If the graph is on  $n$  vertices, the vertex set is from  $\{0, \dots, n-1\}$ . The input graph is given in adjacency matrix format. The first line of the input specifies  $n$ , the number of vertices. The following  $n^2$  entries of 0s and 1s denote the row major ordering of the adjacency matrix.

**Sample Input:**

5  
0  
0  
1  
1  
1  
0  
0  
0  
0  
0  
1  
0  
0  
1  
0  
1  
0  
1  
0  
0  
1  
0  
0  
0  
0

**Sample Output:**

0 2 3 4 1