

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
0
1
1
1
0
0
0
0
0
1
0
0
1
0
1
0
1
0
0
0
0
0
0
0
0
0
```

Sample Output:

```
0 2 3 4 1
```