

CS 302 Introduction to Data Structures  
University of Nevada, Las Vegas  
Spring 18

*Assignment 12*  
*Due: Saturday, May 5, 2018*

**Listing Adjacent Nodes**

In an undirected graph you are to print the adjacent nodes for each node of the graph.

**Input**

The input should be read from the file `graph.txt`. Use file redirection for this.

- The first line of the input contains only one token,  $n$  – the number of nodes of an undirected graph; the nodes then are named  $1, \dots, n$ .
- Next, the boolean adjacency matrix is read in – line by line –  $n$  lines in total. The program should check that all diagonal elements are 0 (i.e. `false`) and that the matrix is symmetric; print an error message if this is not the case.

**Output**

For each node, print out the name of the adjacent nodes, one line for each node.

**How to submit**

Create one file with your program `asgn12.cpp`. Email this as an attachments to `deshmk1@unlv.nevada.edu`. Subject of your email must be "Assignment 12", `<your name>`, `<your student ID number>`.