

Lab 4
Due Date: 10/15/2014
New Beginnings
Professor York

Reminder: For each algorithm that you code, fill out an algorithm summary sheet and include it in your portfolio along with a printout of your code.

1. Given a graph $G=(V,E)$, implement a depth-first search traversal of the graph. The output of your algorithm should be the graph G , with its vertices marked with consecutive positive integers in the order they are first encountered.
2. Given a graph $G=(V,E)$, implement a breadth-first search traversal of the graph. The output of your algorithm should be the graph G , with its vertices marked with consecutive positive integers in the order they are first encountered.

The input file for both parts of this lab is named “data7.txt”. The first element in the file is a positive integer (n) denoting the number of vertices in the graph, followed by a blank line, followed by an $n \times n$ matrix of 0’s and 1’s. This matrix is the adjacency matrix of the graph G .