Graph: Finding Euler Circuit

Objectives

- Be familiar with graph representations and its applications.
- Be able to implement graph and solve some simple graph problems.

Instructions

In this programming assignment, you are about to implement graphs using adjacency list represenation and solve a traditional graph problem: finding Euler circuit. The algorithm is given at the last part of this document.

You will use the classes you used for the previous programming assignments. Use the diagram given on page 609 in the textbook (Chapter 9) for the graph representation. Stack and queue with linked list implementaton are also used in this program assignment. Note that you need to add a function named peek() to class stack. The function only looks at the info of the top node on a stack.

Upon completion of coding, you need to use two graphs to test your programs: graph1.dat and graph2 provided in the shared folder (search starting from vertex 'a'). You need to manually verify if your program finds correct Euler circuits for those graphs.

Submissions

Zip all the source code into a single file and submit to the Blackboard. Don't include any project configuration files. We will use run your program in our own project.

General Advice

General advice about this programing assignment: a) Be clear on how to represent graphs using adjacency list. b) Be able to find Euler circuits manually on paper before coding. c) Learn to use debugger to find program problems. d) Use conventional coding format to help check your programs easily.