Programming Report # 4

Graph Traversal

Due March 15, 2010

For this report, you are going to test depth-first and breadth-first traversal.

Depth-first traversal

Given a graph of a certain number of connected components (C), depth (D) and branching factor (B), perform a depth-first traversal of it to find the number of components.

Breadth-first traversal

Given a graph with differing values of C, D and B mentioned above, perform a breadth-first traversal to identify all the nodes in each component.

Do both of these tasks with differing values of C, D and B to find how these values affect the two algorithms' performance.

Please provide graphs of timing data.