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Course: CS 311
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Programming Assignment 2 Report

Data Structure of Q: LinkedList<String>

Data Structure of visited: HashSet<String>

Reason of choosing the above data structures: LinkedList has the convenience of easy to operate when you want to add and remove, and HashSet is better for generate a graph.

# of edges: 8076

# of vertices: 200

Vertex with largest out degree in the graph WikiCS.txt: /wiki/Computer_Science

Diameter of the graph: 1

Vertex/page with highest centrality: /wiki/Computer_Science

Time complexity of public methods in GraphProcessor.java:

outDegree: O(1)

bfsPath: O(|V| + |E|)

diameter: O((|V| + |E|)*|V|^2)

centrality: O((|V| +|E|)*|V|^2)

PS: all adds-on classes are included in graphProcessor and wikiCrawler, compute will work in test1 only when change it from private to public.

This is a tough PA… my head exploded… >_<