CPSC 319 Assignment #4

Question 1:

In worst-case, breadth-first and depth-first would result in the same amount of time. Breadth-first would be more suitable in a Graph that was longer than it is wide, and depth-first would be more suitable in a situation where the graph was wider than it is long. Complexity for breadth-first would be O(E) where E is number of Edges, and depth-first would also be O(E). (Basically O(n) for both cases).

Question 2:

Again, if the graph has a large height, but isn’t wide, and if the query file asks for a path between a node that exists near the top of the graph to a node existing near the bottom, depth would more efficient. If the graph however, was very wide, and the query file asked for a node existing near the “left” of the graph, to the “right side” where both are near the “top” of the graph, then breadth-first would be much more efficient than depth-first.