

CSC263: Graphs and BFS

Question 1

Consider the graph where each vertex is a webpage and each edge indicates whether one webpage links to another.

Is this graph

- Undirected? Directed?
- Unweighted? Weighted?
- Simple? Non-simple?
- Acyclic? Cyclic?
- Connected? Disconnected?
- Dense? Sparse?

Question 2

For an undirected, simple graph with v vertices: what is the maximum number of edges? What is the minimum number of edges assuming that we want a connected graph?

Question 3

For an undirected, connected, cyclic graph: prove that there is some edge that can be removed without disconnecting the graph.