Before Class:
- *Journal Up*

1. Graph Basics
   - What might you choose to represent with a graph?
   - What would you want to do with them?
   - Representations
   - Some ordering is always assumed
   - Advantages of each

2. Depth-First Search
   - DFS/BFS on trees
   - Need to have nodes with timestamps (init 0)
   - Also keep predecessor
   - Searches are like building a tree
   - Example / Code
   - Different types of edges
   - Can learn about subtrees from timestamp
   - Note: this is just visit, need to do something
   - What if graph is not connected?
   - How much time does it take?

3. Breadth-First Search
   - Use a queue to keep track of where to look next
   - Timestamps are a bit of overkill - use depth (init -1)
   - Example / Code
   - Ideal for duplicates
   - What if graph is not connected?
   - How much time does it take?

4. Topological Sort
   - Show unmatched vertices
   - Add ordering
   - Where should we have edges?
   - Topological Sort example
   - This tells us the order in which we should do things.
   - When can we do this? (Directed, acyclic)
   - How much time does it take?

Next Class:
- *Finding the Shortest Path*
- *Homework Back*
- *Video Games?*
- *Evaluations!*