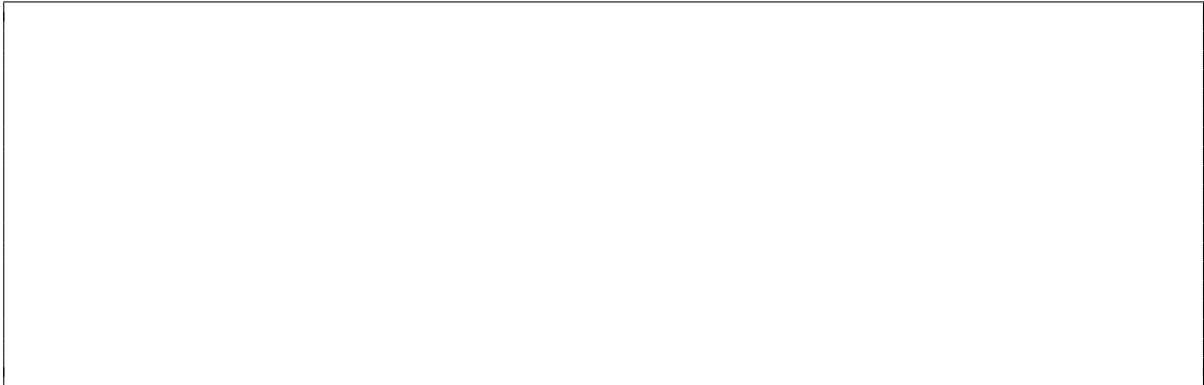


6 - 2
2 - 0
3 - 6
11 - 8
8 - 4
10 - 3

5 - 2
2 - 3
8 - 1
7 - 11
7 - 8
3 - 10

5 - 10
4 - 1
1 - 11
0 - 6
4 - 8

Figure 1: A set of vertices connected within a graph



Undirected Graphs

6. When representing a graph in memory, when is it better to use an adjacency list? When is it better to use an adjacency matrix?

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7. Given the list of vertices and edges in Figure 1, draw the resulting graph.



8. Given the list of vertices and edges in Figure 1, write out the resulting adjacency list once the graph is loaded into memory.

9. Does breadth first search tell us anything about the distance from node v to node w when neither is at the root of the search?

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10. A colleague suggests you to use a stack instead of a queue when running breadth first search. Would your colleague's suggestion still compute shortest paths in a non-edge-weighted undirected graph? Why or why not?

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