Writing Assignment # 3

Graphs

Due February 22, 2010

1. The following data is interpreted as an edge list for an undirected graph: *x*-*y* indicates an edge connecting vertices *x* and *y*. The graph only contains vertices that appear in the edge list.

0-1
0-2
0-5
0-6
3-4
3-5
4-5
4-6
7-8
9-10
9-11
9-12
11-12

* What is the adjacency matrix of this graph?
* What is the adjacency list?
* If it exists, what is the Hamilton tour? If not, why not? Also give a minimum set of additional edges needed to create one, and list the resulting tour.

2. Given the following undirected graph: (a-b, a-c, b-d, b-e, c-f, c-g, d-h, e-h, f-h, g-h)

* Give the order of vertices visited by a DFS starting at vertex ***a***.
* Give the order of vertices visited by a BFS starting at vertex ***a***.