

Khayyam Saleem

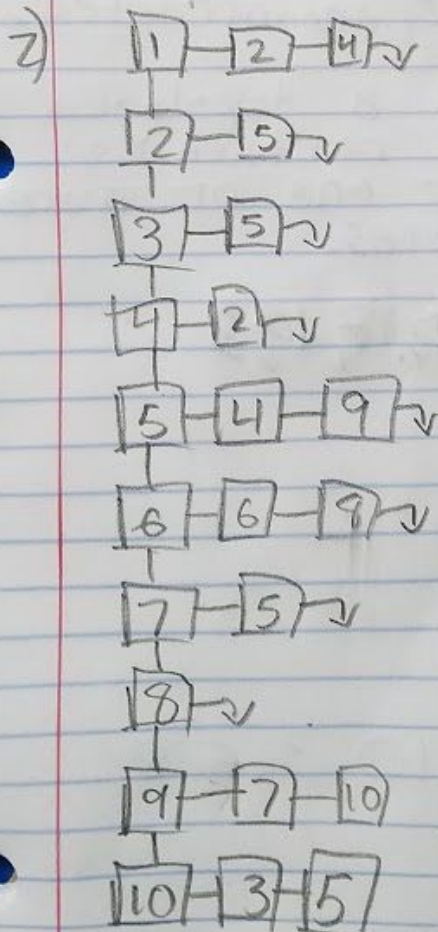
I pledge my honor that I have abided by the Stevens Honor System. - Khayyam

10/19/18

CS385 HW#3

1)

	1	2	3	4	5	6	7	8	9	10
1	0	1	0	1	0	0	0	0	0	0
2	0	0	0	0	1	0	0	0	0	0
3	0	0	0	0	1	0	0	0	0	0
4	0	1	0	0	0	0	0	0	0	0
5	0	0	0	1	0	0	0	0	1	0
6	0	0	0	0	0	1	0	1	0	0
7	0	0	0	0	1	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	1	0	0	1
10	0	0	1	0	1	0	0	0	0	0



3) 1, 2, 4, 5, 9, 7, 10, 3, 6, 8

4) 1, 2, 5, 4, 9, 7, 10, 3, 6, 8

5) a. $\Theta(V^2)$ $v \Rightarrow$ vertices
b. $\Theta(V+E)$ $v \Rightarrow$ vertices, $e \Rightarrow$ edges

6) a. $\Theta(V^2)$ $v \Rightarrow$ vertices
b. $\Theta(V+E)$ $e \Rightarrow$ edges

7) An adjacency list is better when the graph is sparse, and directed.

8) You cannot perform a topological sort on a graph containing a closed loop or one or more cyclical dependencies.

9) 1, 4, 2, 5, 6, 8, 9, 7, 10, 3

~~1, 2, 5, 4, 9, 7, 10, 3, 6, 8~~