

### Homework 3

**Due Date: 23:59, Monday, 07/12/2021**

- (20 points.) Find a Longest Common Subsequence (LCS) of  $x = \langle 1, 0, 0, 1, 0, 1, 0, 1 \rangle$  and  $y = \langle 0, 1, 0, 1, 1, 0, 1, 1, 0 \rangle$
- (20 points.) According to the following adjacency list (Fig.1), draw the corresponding *directed graph*.
- (20 points.) According to the following adjacency matrix (Fig.2), draw the corresponding *undirected graph*.

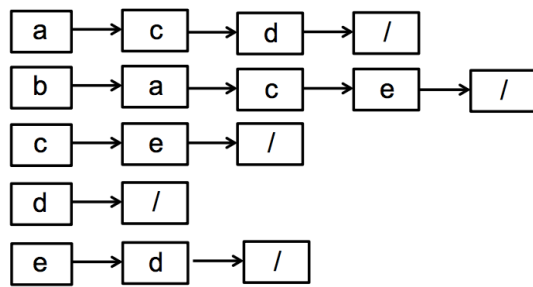
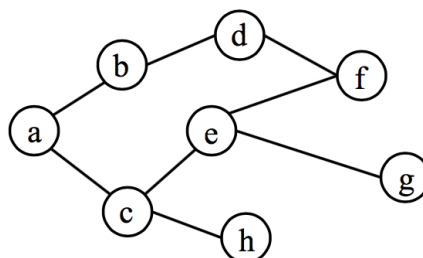


Fig.1

	a	b	c	d
a	1	0	0	1
b	0	0	1	0
c	0	1	0	0
d	1	0	0	0

Fig.2

- Given the following undirected graph.



- (20 points.) Draw the Depth First Search (DFS) trees corresponding to this graph.
- (20 points.) Draw the Breath First Search (BFS) trees corresponding to this graph.