Tutorial

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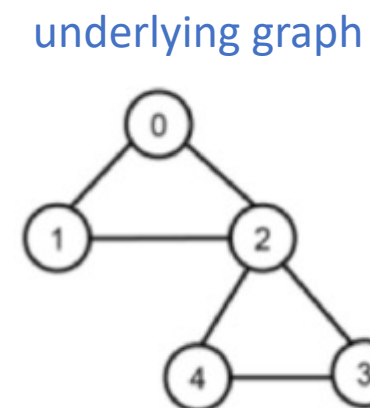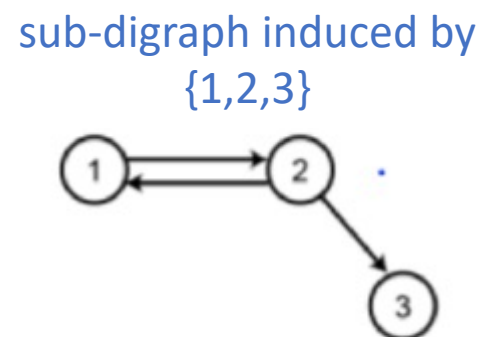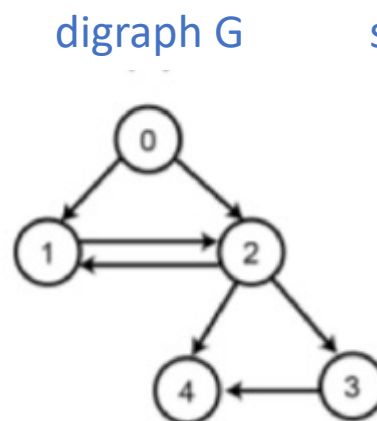https://ankechiang.github.io/cs220_swu.html#week10

OUTLINE

- Question 1: Graph Traversal
- Question 2: Graph Traversal
- Question 3: Graph Traversal
- Question 4: Graph Traversal
- Question 5: Graph Traversal
- Question 6: Graph Traversal
- Question 7: Topological Sorting
- Question 8: Girth Computation

Question 1.1-1.3

1. Draw the digraph G.

2. Draw the sub-digraph induced by {1, 2, 3}.

3. Draw the underlying graph of G.

0: 1 2

1: 2

2: 1 3 4

3: 4

4:

digraph G

sub-digraph induced by {1,2,3}

underlying graph

Question 1.4

- 4. If the search forest F contains exactly the following arcs (0, 1), (1, 2), (3, 4), what is the order of nodes visited?

Step1: The order is, we call the visit function on node 3, and visit 3 and 4.

Step2: Then, another run of visit function is called on node 0, where we visit 0, then 1 and 2.

Step3: Therefore, the order we visit the nodes is 3, 4, 0, 1, 2.