Design and Analysis of Algorithms

6.2 Dynamic Programming

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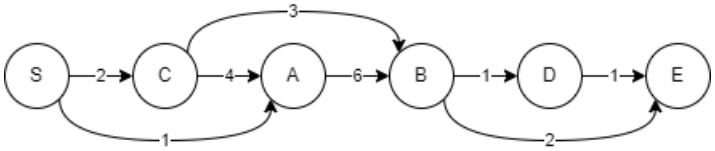
6.2.2

Run a Depth First Search on the following graph (with restarting)

- Show the post/pre visit numbers
- Draw the DFS tree with: tree edges, forward edges, back edges and cross edges clearly labeled.



Linearized DAG

I think we just need to initialize to $-\infty$ and update when we find a longer path.

Initialize all $dist(\cdot)$ values to $-\infty$
$dist(s) = 0$
for all $v \in V\{s\}$, in linearized order **do**
  $dist(v)=max_{(u,v)\in E}\{dist(u) + l(u, v)\}$
end for

Node	0	1	2	3	4	5
S	0	0	0	0	0	0
C	∞	2	2	2	2	2
A	∞	1	6	6	6	6
B	∞	5	5	10	10	10
D	∞	∞	∞	∞	11	11
E	∞	∞	∞	12	12	12