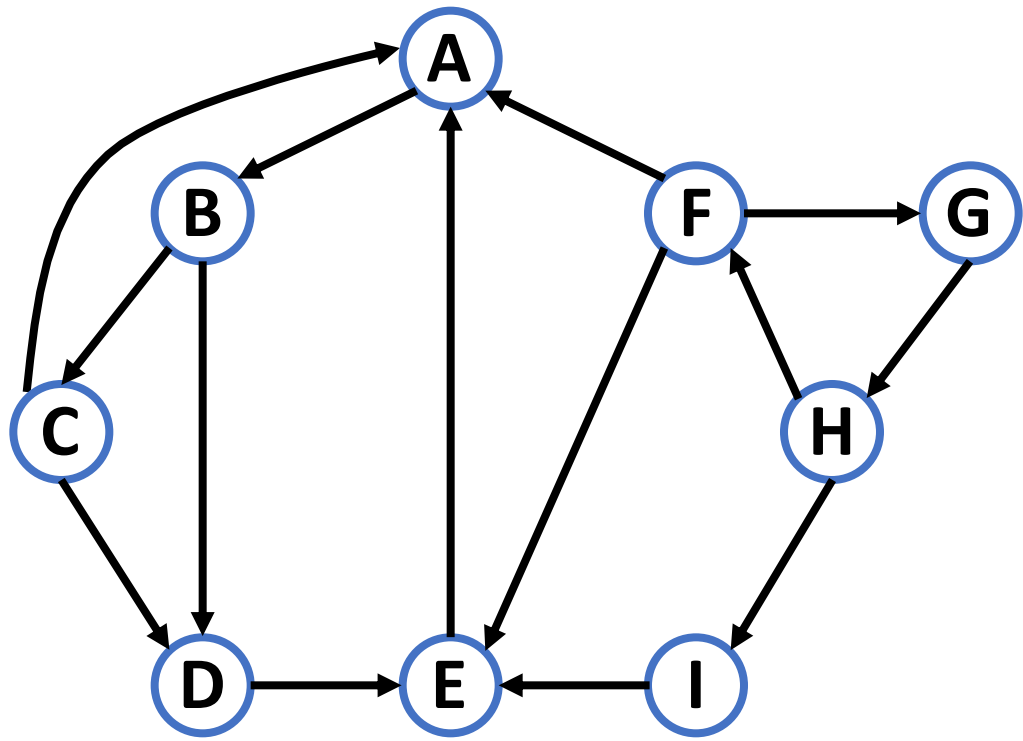
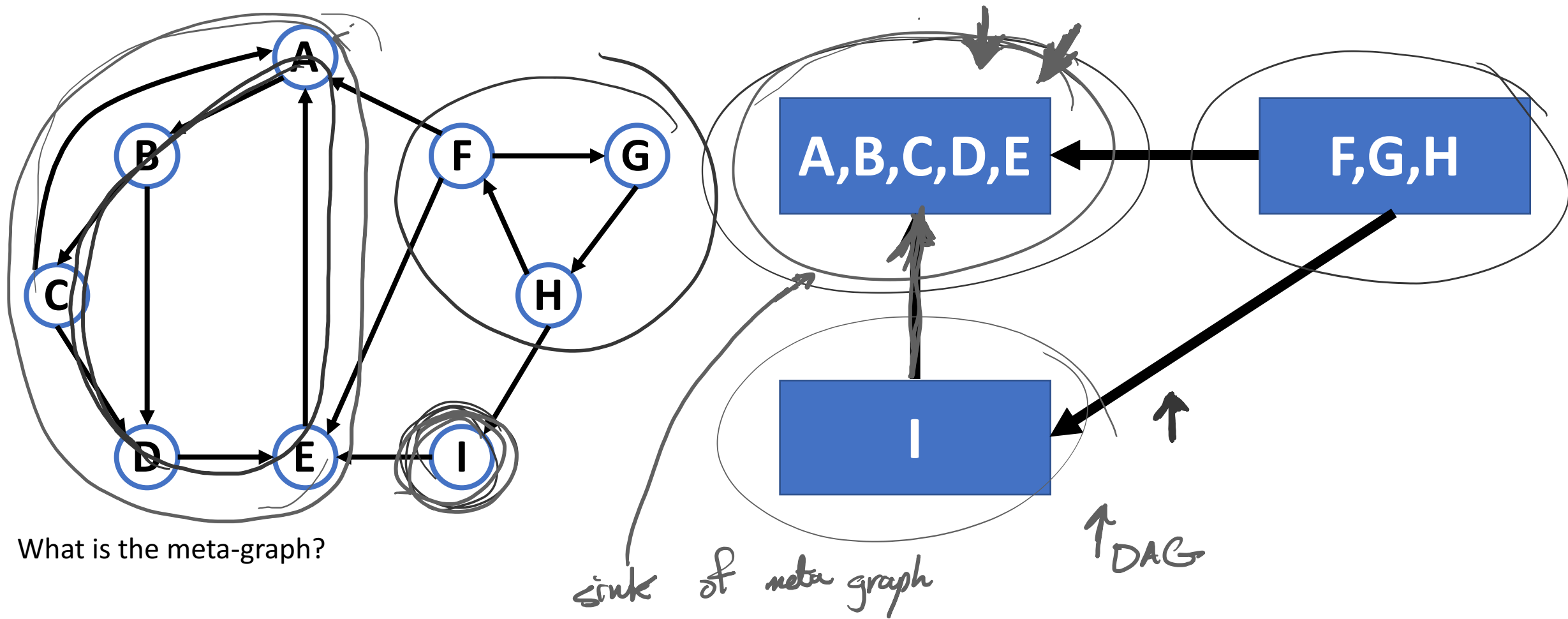


Lecture 16 – Depth First Search Pre-/Post-numbering



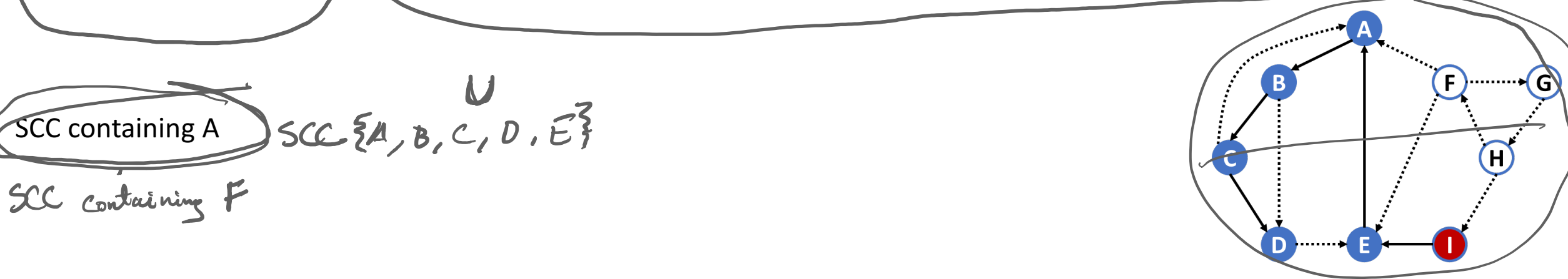
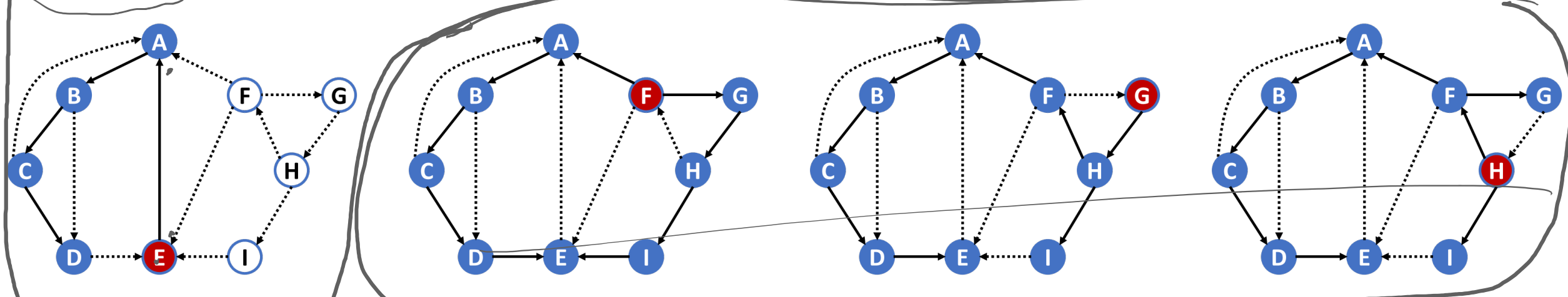
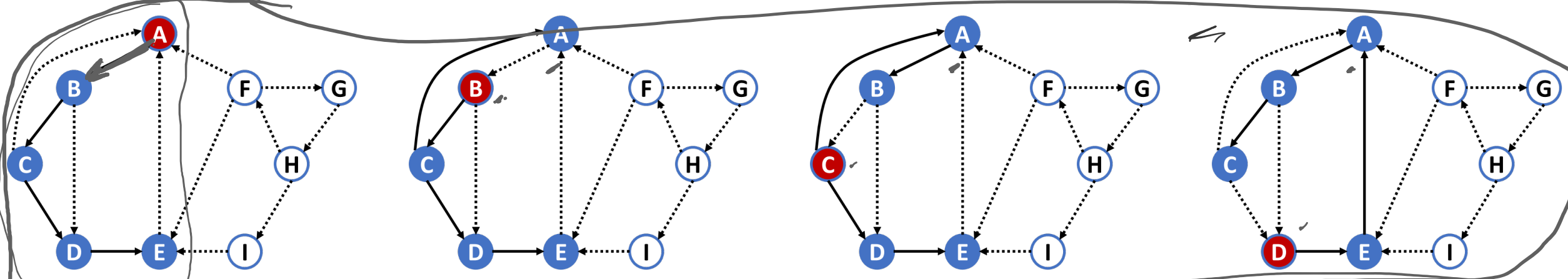
What is the meta-graph?





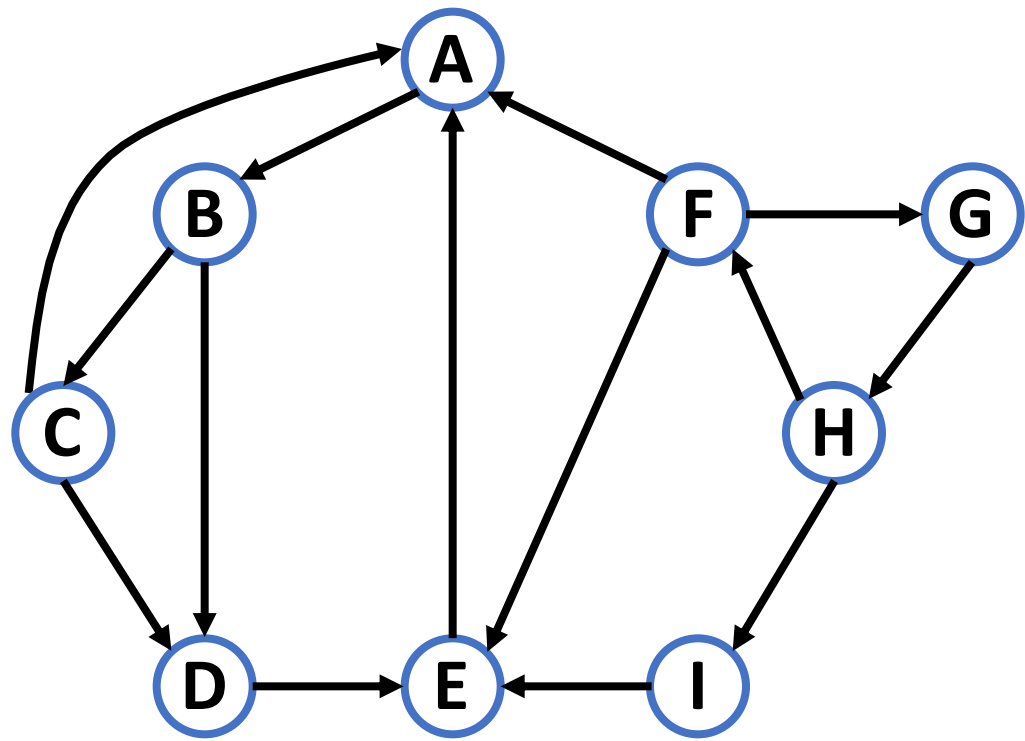
What is the meta-graph?

How can we find a vertex that belongs to the meta-graph sink

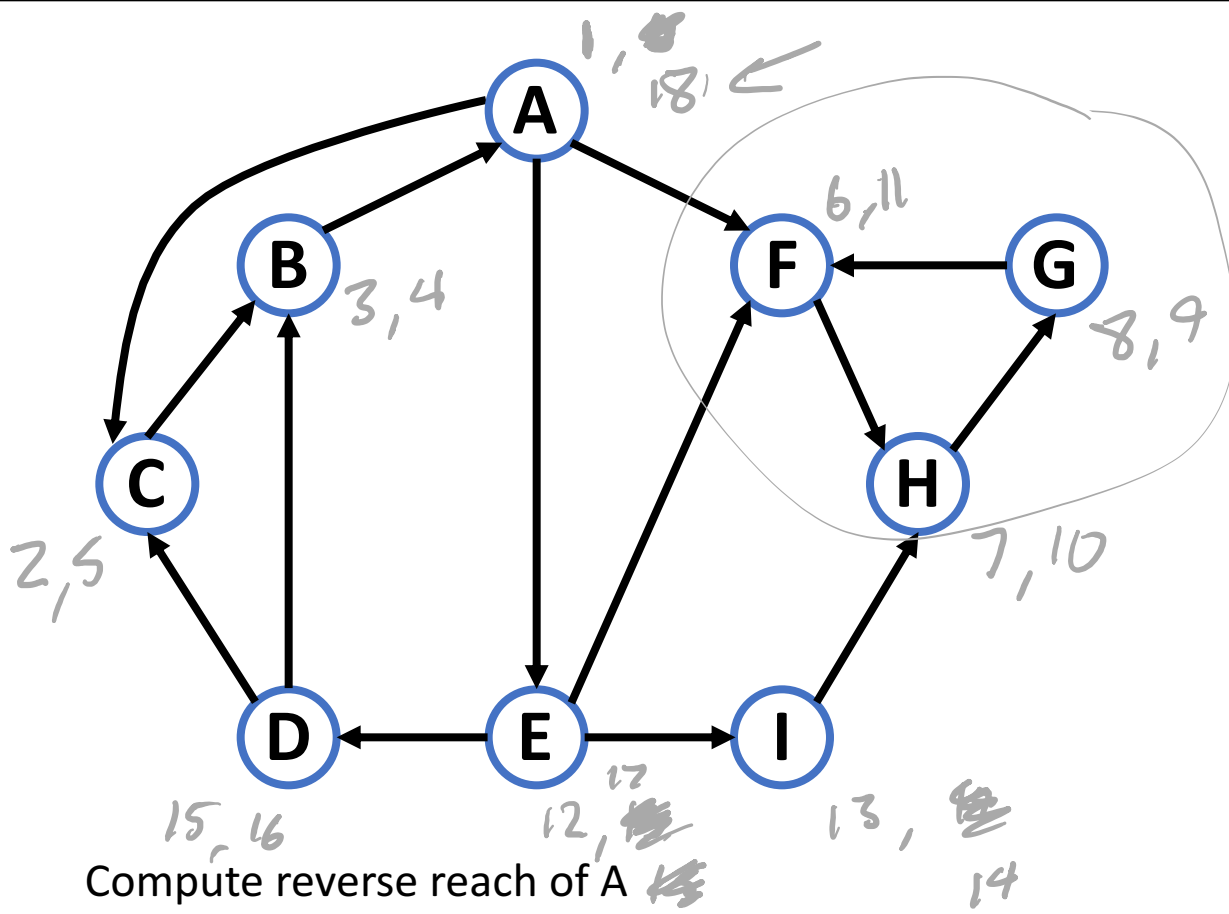


SCC containing A \cup SCC $\{A, B, C, D, E\}$

SCC containing F



Compute reach of A



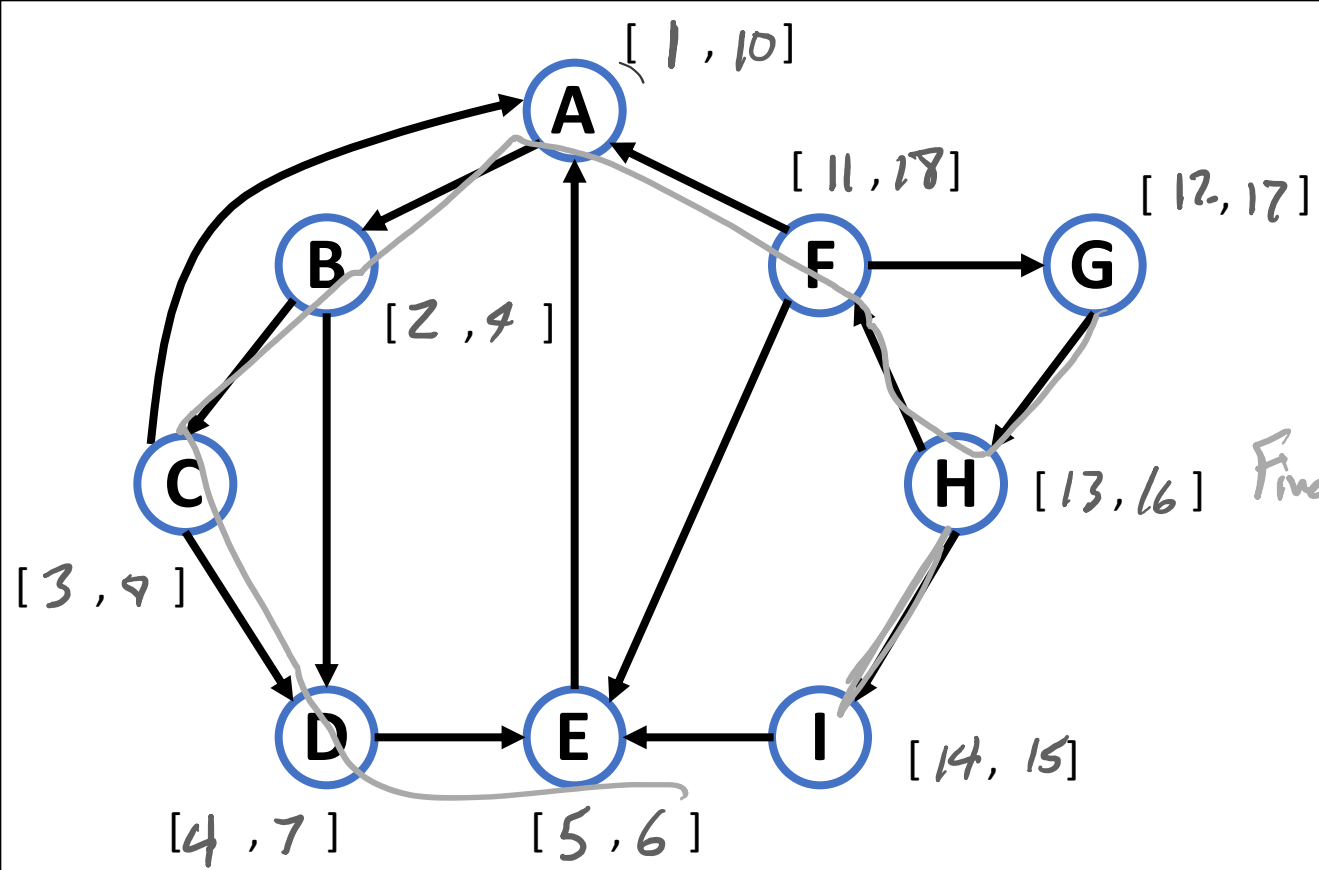
A is sink

We could find sink in $O(n)$

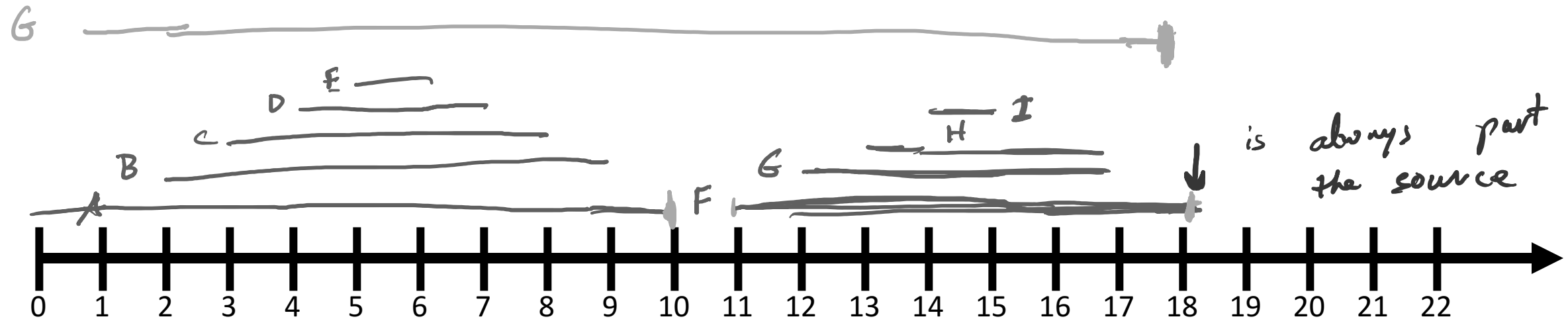
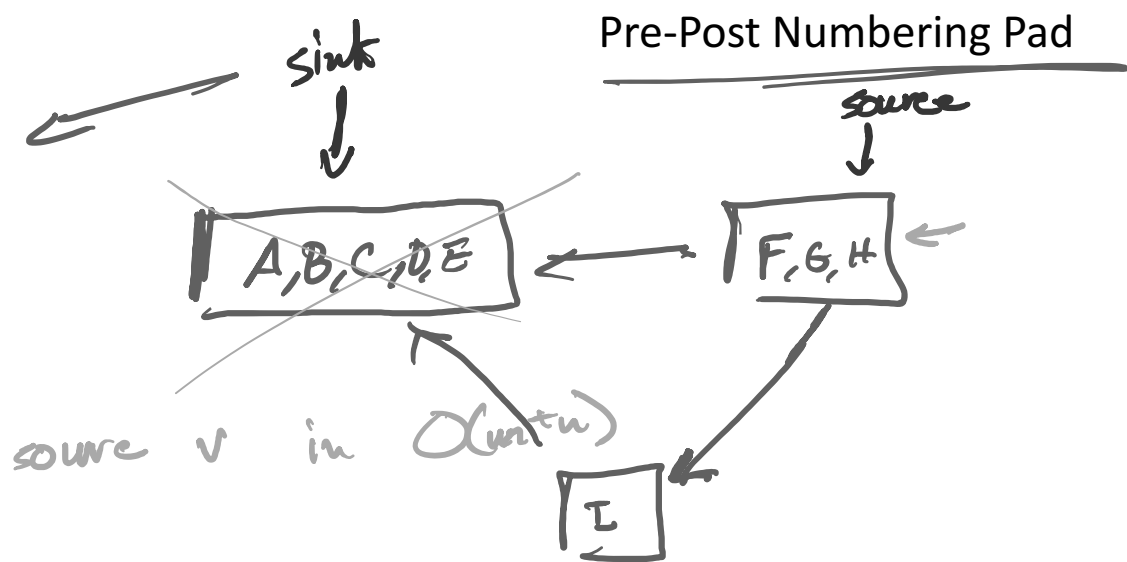
A find SCC A
 Mark A, B, C, D, E as SCC
 as visited

I find SCC I
 Mark as visited

F find SCC {G, F}
 Mark F, G, H as visited



Find source v in $O(n^2)$



is always part of the source