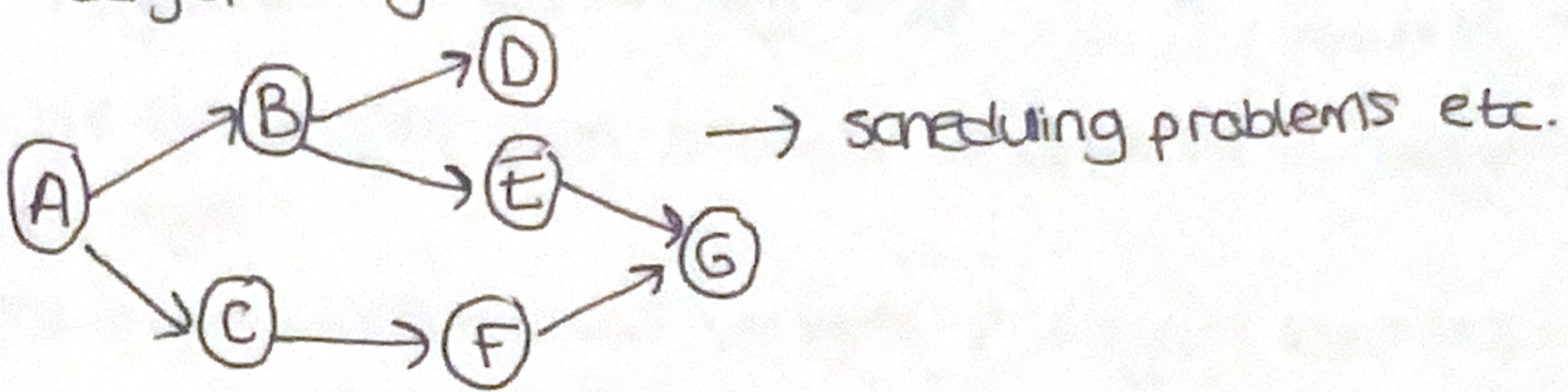
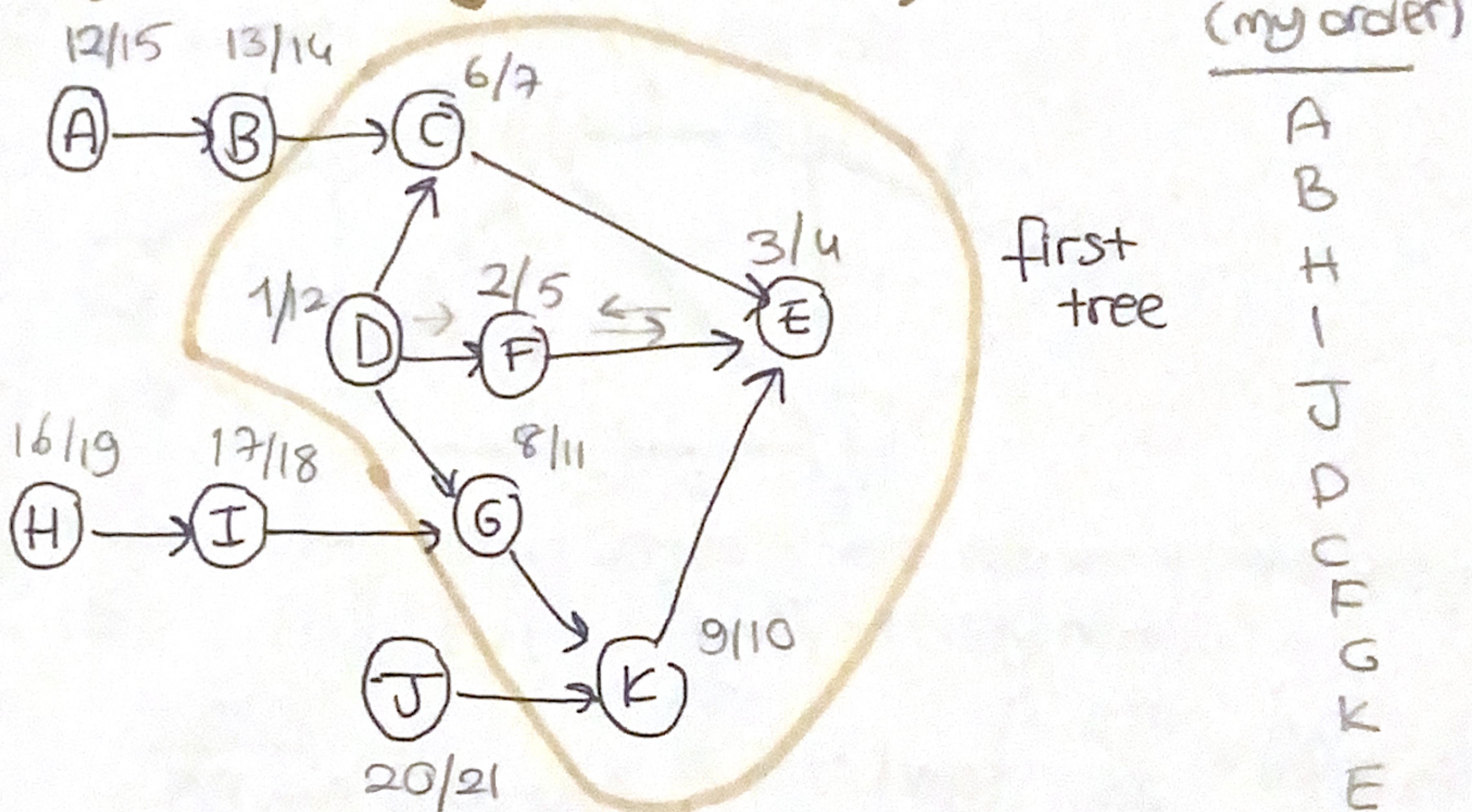


Directed Acyclic Graphs

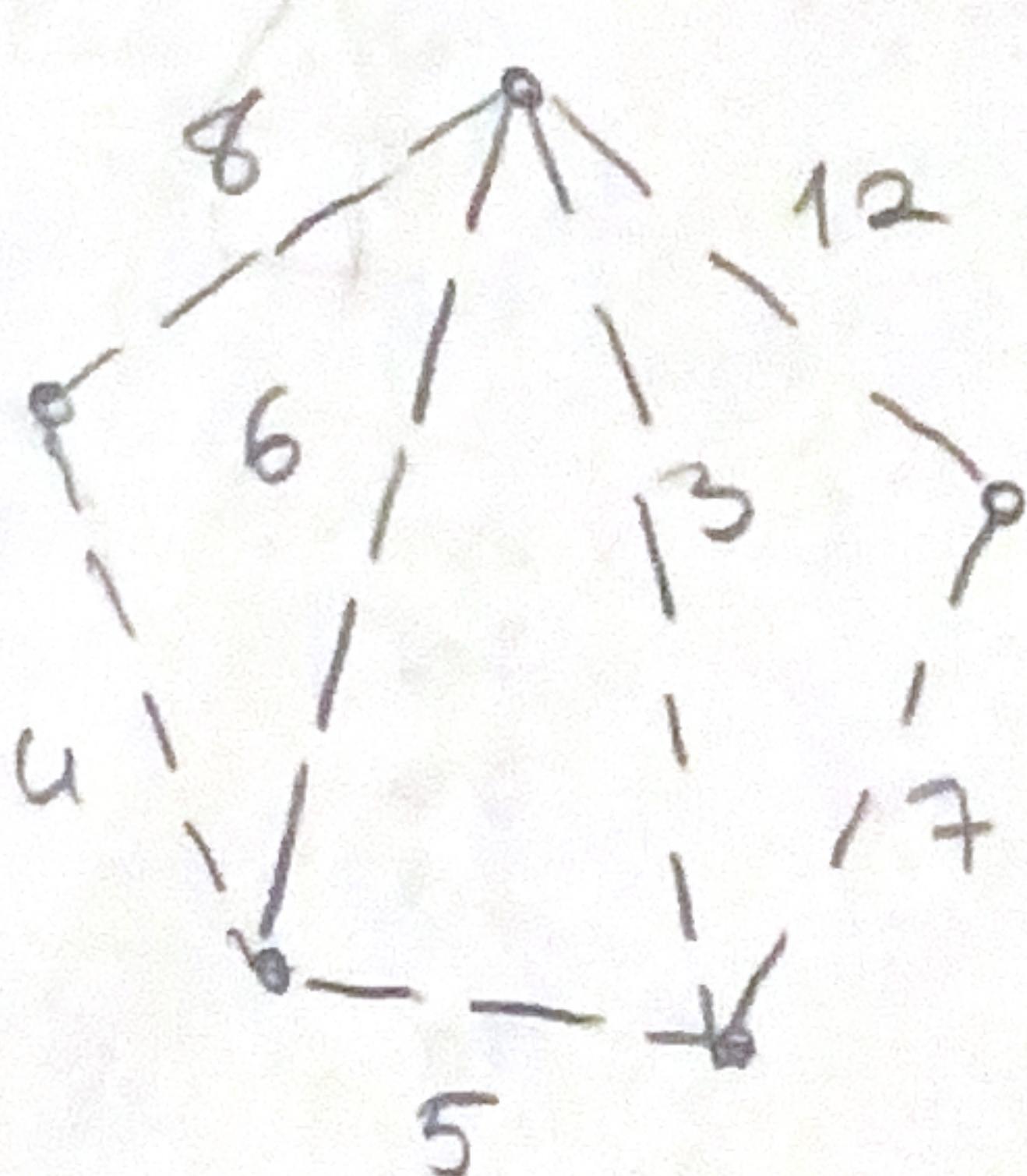
- No back edge, no cycles



Topological Sorting (with DACs)



Minimum Spanning Tree



→ Connect roads with min cost to connect all the houses

Input $\rightarrow G(V, E)$

weight $w(u, v)$

node node

T connects all the vertices (spanning tree)
 $\min w(T) = \sum w(u, v)$

MST has:

- * no cycles
- * $|V|-1$ edges (vertices - 1)
- * Might not be unique (another tree might have same value)