

# Algorithm WD

- The quantity  $W(u, v)$  is the minimum number of registers on any path from vertex  $u$  to vertex  $v$ .
  - We call a path  $u \xrightarrow{p} v$  such that  $w(p) = W(u, v)$  a *critical path* from  $u$  to  $v$ .
- The quantity  $D(u, v)$  is the maximum total propagation delay on any critical path from  $u$  to  $v$ .
- Both quantities are undefined if there is no path from  $u$  to  $v$ .

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## Complexity

- Time complexity:  $\mathcal{O}(V^3)$ .
- Space complexity:  $\mathcal{O}(V^2)$ .