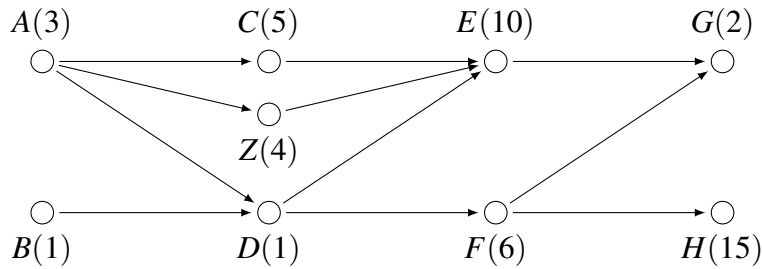


Goal Learn the Backflow Algorithm and, then, implement the Critical Path Algorithm.

1. **Backflow Algorithm**

- (a) Introduce an “end” vertex, say X , with a time of $[0]$.
- (b) From X , move back through every vertex assigning it the maximum time to reach vertex X .

2. Apply the Backflow Algorithm to the digraph below.

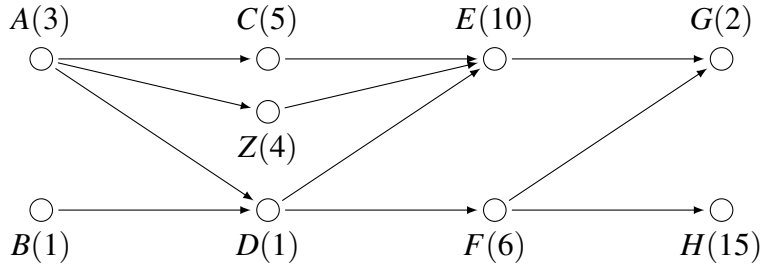


3. Use your work above to answer the questions below.

- (a) Find a critical path and the critical time in the digraph above. What do you observe about the numbers you produced in the Backflow Algorithm?
- (b) Determine the priority list using the Decreasing Time Algorithm.
- (c) Determine the priority list by ordering the the vertices according to decreasing **critical time**.

4. In your own words, state the Critical Time Algorithm.

5. Use your two priority lists from the previous page to construct a schedule using two processors.



(a) decreasing time priority list: _____

time	
done	
ready	

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
P_1																										
P_2																										

(b) decreasing **critical** time priority list: _____

time	
done	
ready	

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
P_1																										
P_2																										