

Data Structure Homework VI

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Question 1

Iteration	Vertex selected	d[A]	d[B]	d[C]	d[D]	d[E]	d[F]	d[G]	d[H]
Initial		0	∞	∞	∞	∞	∞	∞	∞
1	A	0	8	2	5	∞	∞	∞	∞
2	C	0	8	2	4	7	∞	∞	∞
3	D	0	6	2	4	5	10	7	∞
4	E	0	6	2	4	5	10	6	∞
5	B	0	6	2	4	5	10	6	∞
6	G	0	6	2	4	5	8	6	12
7	F	0	6	2	4	5	8	6	11

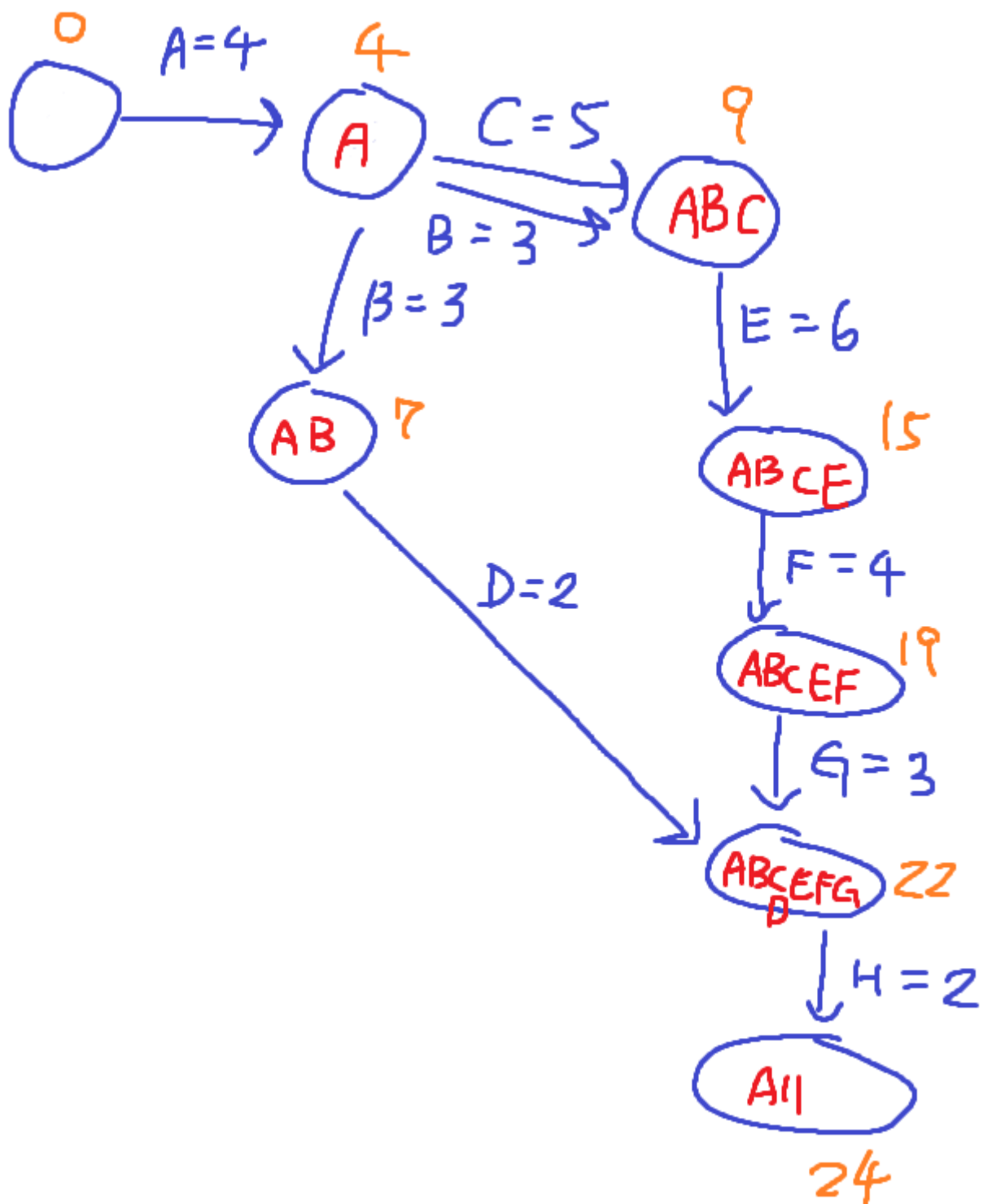
Question 2

Initialize					
	0	1	2	3	4
0	0	6	INF	7	INF
1	INF	0	5	8	-4
2	INF	-2	0	INF	INF
3	INF	INF	-3	0	9
4	2	INF	7	INF	0
k = 0					
	0	1	2	3	4
0	0	6	INF	7	INF
1	INF	0	5	8	-4
2	INF	-2	0	INF	INF
3	INF	INF	INF	0	INF
4	2	8	7	9	0
k = 1					
	0	1	2	3	4
0	0	6	11	7	2
1	INF	0	5	8	-4
2	INF	-2	0	6	-6
3	INF	INF	-3	0	9
4	2	8	7	9	0

k = 2					
	0	1	2	3	4
0	0	6	11	7	2
1	INF	0	5	8	-4
2	INF	-2	0	6	-6
3	INF	-5	-3	0	-9
4	2	5	7	9	0
k = 3					
	0	1	2	3	4
0	0	2	4	7	-2
1	INF	0	5	8	-4
2	INF	-2	0	6	-6
3	INF	-5	-3	0	-9
4	2	4	6	9	0
k = 4					
	0	1	2	3	4
0	0	2	4	7	-2
1	-2	0	5	5	-4
2	-4	-2	0	3	-6
3	-7	-5	-3	0	-9
4	2	4	6	9	0

Question 3

3-1



3-2

Subtask	A	B	C	D	E	F	G	H
Earliest start time	0	4	4	7	9	15	19	22
Latest start time	0	17	4	20	9	15	19	22

3-3 A->C->E->F->G->H Because Earliest = Latest

3-4 Yes, because E is critical activity.