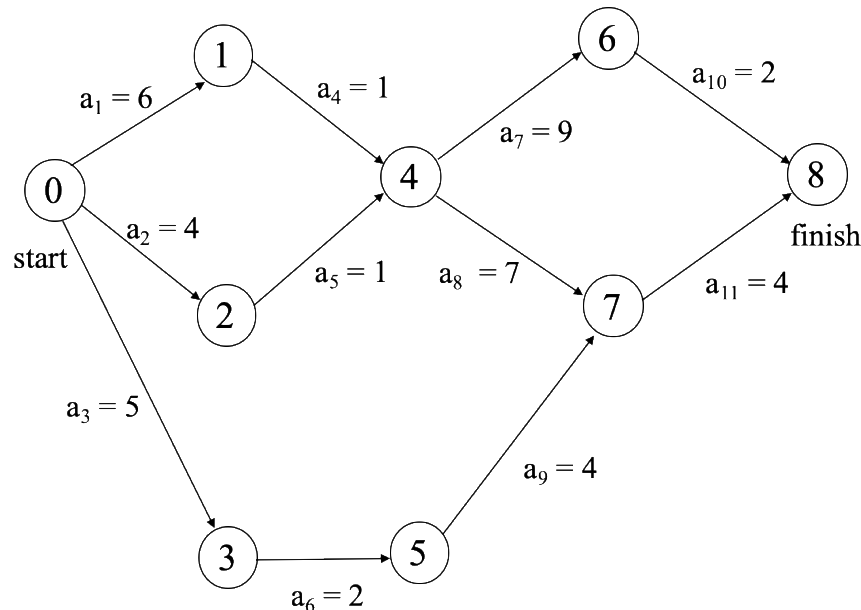


Data Structure Programming Project #4

郭建志

Activity-on-Edge (AOE) Networks

- Given:
- An AOE network
- Vertices represent events
- Edge represent tasks
- Numbers represent time required to perform the task



Activity-on-Edge (AOE) Networks

- Goal:
- If the project is feasible
- Find the early and late times for each task

- Find the degree of criticality for each task

Activity	Early e	Late l	Slack $l - e$	Critical $l - e = 0$
a ₁	0	0	0	Yes
a ₂	0	2	2	No
a ₃	0	3	3	No
a ₄	6	6	0	Yes
a ₅	4	6	2	No
a ₆	5	8	3	No
a ₇	7	7	0	Yes
a ₈	7	7	0	Yes
a ₉	7	10	3	No
a ₁₀	16	16	0	Yes
a ₁₁	14	14	0	Yes

- Otherwise,
- Indicate the infeasibility
- Print “No solution”

Input Sample 1: input.txt

11

#tasks

0 1 6

Event1 Event2 Number

0 2 4

...

0 3 5

1 4 1

2 4 1

3 5 2

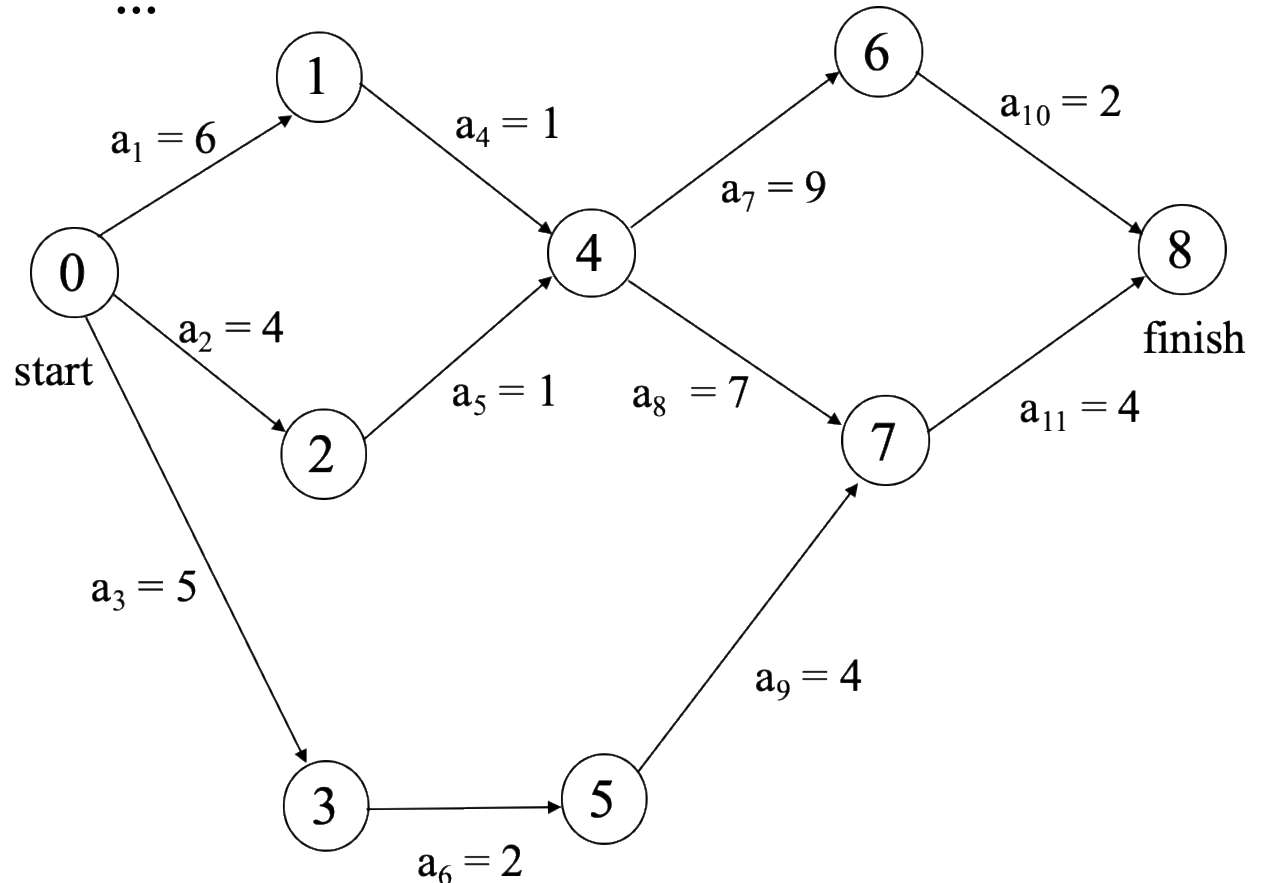
4 6 9

4 7 7

5 7 4

6 8 2

7 8 4



Output Sample 1: output.txt

11

0 0 0 y

0 2 2 n

0 3 3 n

6 6 0 y

4 6 2 n

5 8 3 n

7 7 0 y

7 7 0 y

7 10 3 n

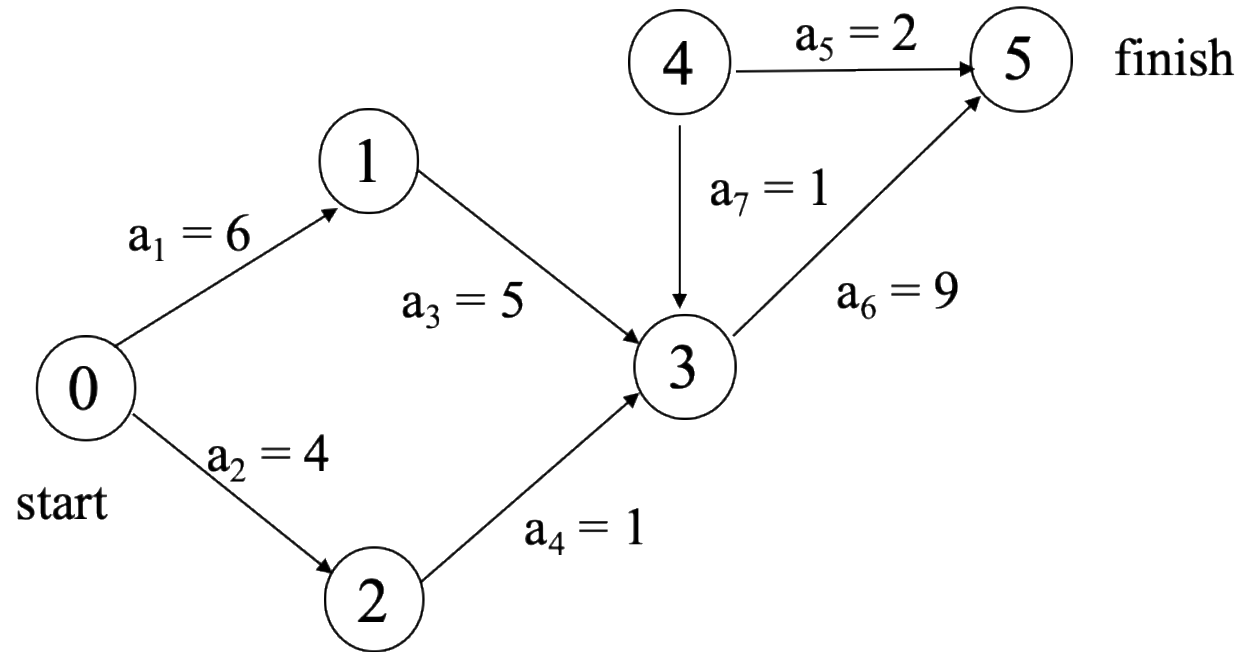
16 16 0 y

14 14 0 y

Activity	Early <i>e</i>	Late <i>l</i>	Slack <i>l - e</i>	Critical <i>l - e = 0</i>
a ₁	0	0	0	Yes
a ₂	0	2	2	No
a ₃	0	3	3	No
a ₄	6	6	0	Yes
a ₅	4	6	2	No
a ₆	5	8	3	No
a ₇	7	7	0	Yes
a ₈	7	7	0	Yes
a ₉	7	10	3	No
a ₁₀	16	16	0	Yes
a ₁₁	14	14	0	Yes

Input Sample 2: input.txt

#tasks	Event1	Event2	Number
7			
0	1	6	
0	2	4	
1	3	5	
2	3	1	
3	5	9	
4	5	2	
4	3	1	



Output Sample 2: output.txt

No solution

Note

- Deadline:
12/13 Thu (有問題可以再調整)
- E-course
- **C Source code**