

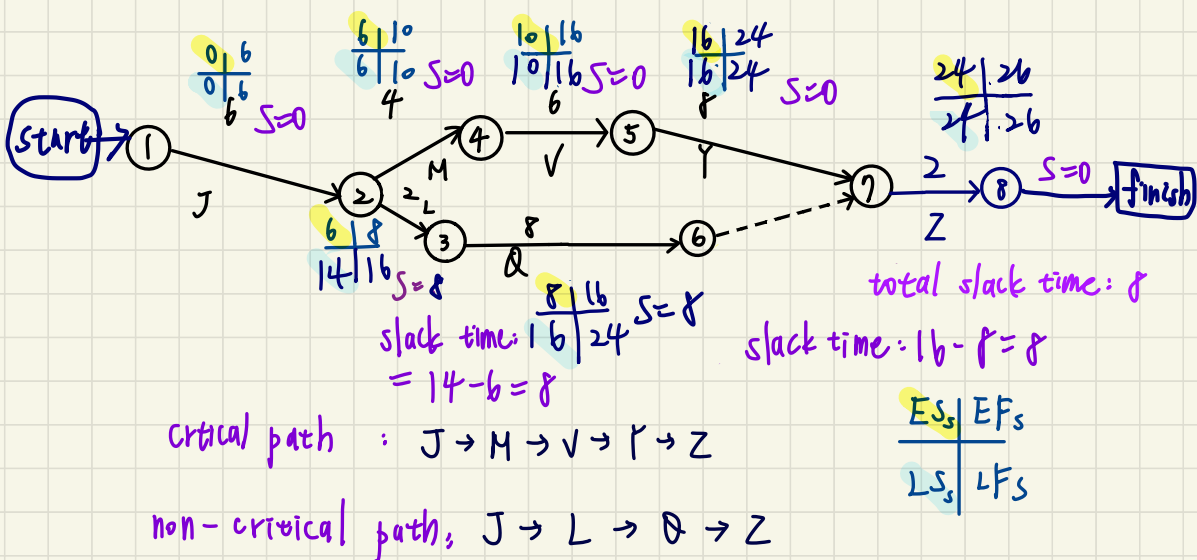
Homework #1

22. The requirements for systems analysts and programmers for the GUMBY project are as follows:

Activity	J	M	V	Y	L	Q	Z
Predecessors	—	J	M	V	J	L	Y, Q
Duration (weeks)	6	4	6	8	2	8	2
Systems Analysts (weekly)	8	5	3	2	5	3	5
Programmers (weekly)	3	4	2	3	3	2	3

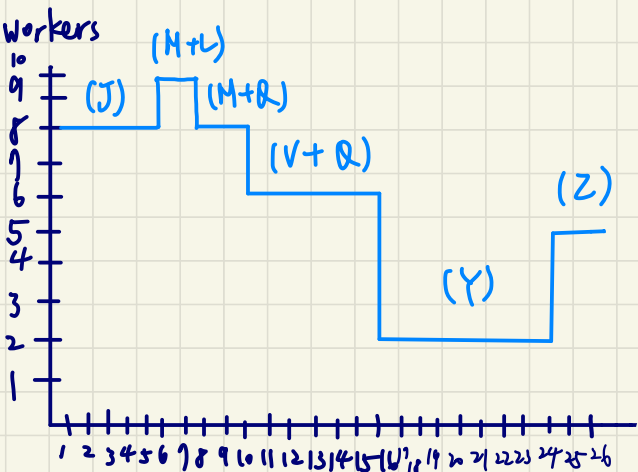
- Compute ESs, LSs, and total slack times.
- Then show the separate resource loadings for systems analysts and programmers, assuming early start times.
- Suppose the maximum weekly availability is eight systems analysts and five programmers. Can activities be scheduled to satisfy these constraints without delaying the project?

a.

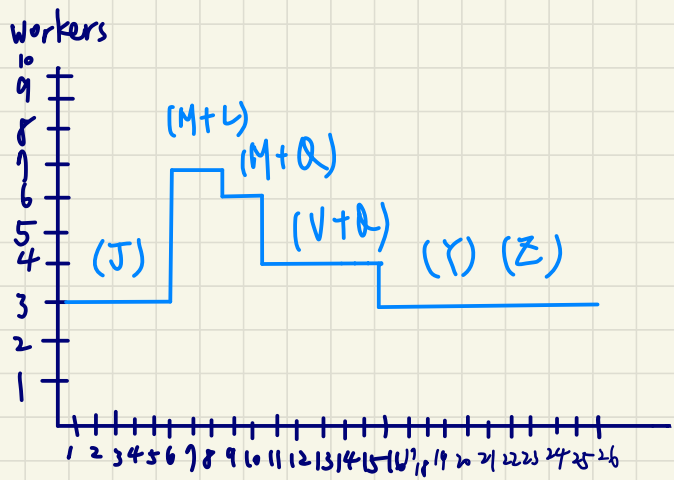
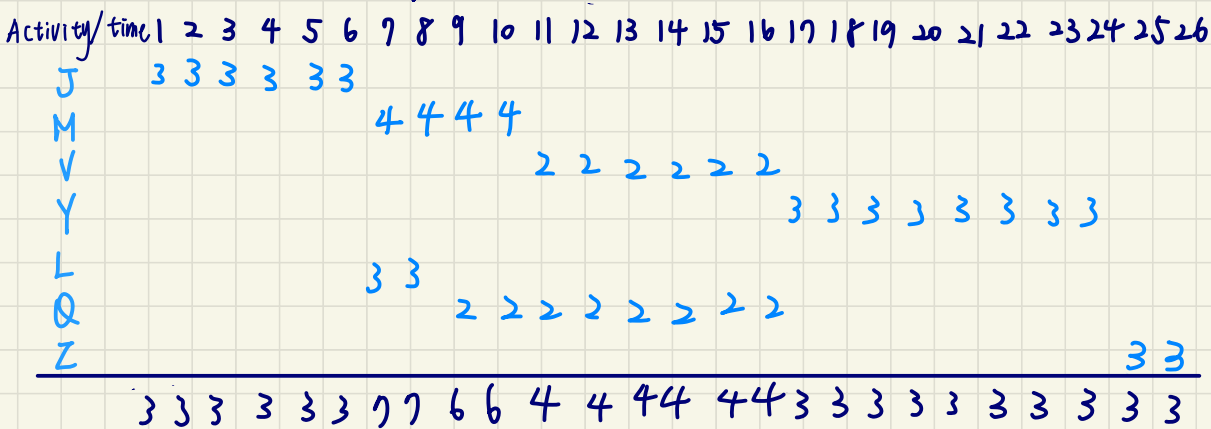


b.

Resource loading for system analyst



Resource loading for programmers

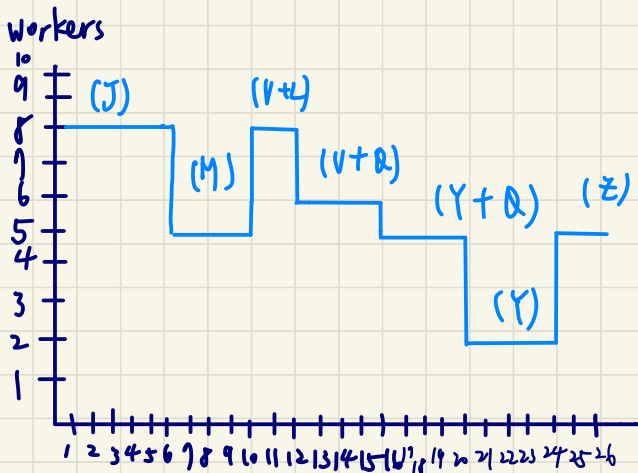


C. Only two activities L and R can be rescheduled without delaying the duration of the entire project.

Constraints for systems analyst: 8. ^{10 is over} programmer: 5 ^{7 is over}

Resource loading for system analyst

start L in 11 week according delay R



Resource loading for programmers

Activity/time	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	26
J		3	3	3	3	3																				
M							4	4	4	4																
V											2	2	2	2	2	2										
Y																	3	3	3	3	3	3	3	3		
L											3	3														
Q													2	2	2	2	2	2	2	2						
Z																									3	3
	3	3	3	3	3	3	4	4	4	4	5	5	4	4	4	4	5	5	5	5	3	3	3	3	3	3

