COS418 Precept 7 - Raft

03/16&17, 2022

Q1-4: Are the following log configurations possible?

More specifically, does there exist a sequence of events such that the servers in the system end up with these log entries?

If you think it is possible, list the steps and all the nodes that must have been leaders. If you think it is not, explain.

Q1

	1	2	3	4	5
S0	1	1	2	3	
S1	1	1	2	3	
S2	1	1	2	3	
S3	1	1			
S4	1	1	1	1	1

Q2

	1	2	3	4	5
S0	1	1	2	3	
S1	1	1	2	3	
S2	1	1	2	3	
S3	1	1	4		
S4	1	1	1	1	1

Q3

	1	2	3	4	5
S0	1	1	5	6	
S1	1	1	5	6	
S2	1	1	5	6	
S3	1	1	4		
S4	1	1	1	1	1

Q4

	1	2	3	4
S0	1	1		
S1	1	1	1	3
S2	1	1	3	

Q5-8: Which entries are committed?

For each of the following, explain why an entry must be committed, or describe the conditions that would lead to the entry getting overridden.

Q5

Is entry 2 guaranteed to be committed?

	1	2
S0	1	2
S1	1	2
S2	1	2
S3	1	
S4	1	

Q6

Is entry 3 guaranteed to be committed?

	1	2	3
S0	1	1	2
S1	1	1	2
S2	1	1	2
S3	1	3	
S4	1		

Q7

Is entry 3 guaranteed to be committed?

	1	2	3	4
S0	1	1	2	4
S1	1	1	2	4
S2	1	1	2	
S3	1	3		
S4	1			

Q8

Is entry 3 guaranteed to be committed?

	1	2	3	4
S0	1	1	2	4
S1	1	1	2	4
S2	1	1	2	
S3	1	3		
S4	1	1	2	4