

Part 2: Conflict Serializability (20 points)

Consider the following three transactions and schedule (time goes from top to bottom). Is this schedule conflict-serializable? Show why or why not.

Answer:

No, there is a cycle in the diagram as following:

1. W1(A) - R2(A) leads to a conflict from TXN1 to TXN2
2. W1(A) - W3(A) leads to a conflict from TXN1 to TXN3
3. R3(B) - W1(B) leads to a conflict from TXN3 to TXN1

T1	T2	T3
R1(A)		
W1(A)		
		R3(A)
		W3(A)
	R2(A)	
R1(B)		
		R3(B)
W1(B)		
		W3(B)
	R2(B)	
	commit	
commit		
		commit