

View Serializability

T1	T2
read(A)	
A := A - 50	
write(A)	
read(B)	
B := B + 50	
write(B)	
	read(A)
	temp := A * 0.1
	A := A - temp
	write(A)
	read(B)
	B := B + temp
	write(B)

Schedule-1



Are these two schedules
View Equivalent?

T1	T2
	read(A)
	temp := A * 0.1
	A := A - temp
	write(A)
	read(B)
	B := B + temp
	write(B)
read(A)	
A := A - 50	
write(A)	
read(B)	
B := B + 50	
write(B)	

Schedule-2

T1	T2
read(A)	
A := A - 50	
write(A)	
read(B)	
B := B + 50	
write(B)	
	read(A)
	temp := A * 0.1
	A := A - temp
	write(A)
	read(B)
	B := B + temp
	write(B)

Schedule-1



These two schedules
are
not View Equivalent

T1	T2
	read(A)
	temp := A * 0.1
	A := A - temp
	write(A)
	read(B)
	B := B + temp
	write(B)
read(A)	
A := A - 50	
write(A)	
read(B)	
B := B + 50	
write(B)	

Schedule-2

T1	T2
read(A)	
A:= A – 50	
write(A)	
read(B)	
B:= B + 50	
write(B)	
	read(A)
	temp := A*0.1
	A:= A – temp
	write(A)
	read(B)
	B:= B + temp
	write(B)

Schedule-1

➡
**Are these two schedules
View Equivalent?**

T1	T2
read(A)	
A:= A – 50	
write(A)	
	read(A)
	temp := A*0.1
	A:= A – temp
	write(A)
read(B)	
B:= B + 50	
write(B)	
	read(B)
	B:= B + temp
	write(B)

Schedule-3

T1	T2
read(A)	
A:= A – 50	
write(A)	
read(B)	
B:= B + 50	
write(B)	
	read(A)
	temp := A*0.1
	A:= A – temp
	write(A)
	read(B)
	B:= B + temp
	write(B)

Schedule-1

➡
**These two schedules
are View Equivalent**

T1	T2
read(A)	
A:= A – 50	
write(A)	
	read(A)
	temp := A*0.1
	A:= A – temp
	write(A)
read(B)	
B:= B + 50	
write(B)	
	read(B)
	B:= B + temp
	write(B)

Schedule-3

Note:

- A schedule *S* is view serializable, if it is view equivalent to a serial schedule.
- Here, **Schedule-3 is View Serializable**. [because, this schedule is view equivalent to a serial schedule (Schedule-1)]
- Every conflict serializable schedule is also view serializable.
- Here, **Schedule-3 is both View Serializable and Conflict Serializable**.

Every conflict serializable schedule is also view serializable, but there are view serializable schedules that are not conflict serializable.

T3	T4	T6
read(Q)		
	write(Q)	
write(Q)		
		write(Q)

Schedule-9



Are these two schedules
View Equivalent?

Are these two schedules
Conflict Equivalent?

T3	T4	T6
read(Q)		
write(Q)		
	write(Q)	
		write(Q)

T3	T4	T6
read(Q)		
	write(Q)	
write(Q)		
		write(Q)

Schedule-9



These two schedules
are View Equivalent
but

not Conflict Equivalent

T3	T4	T6
read(Q)		
write(Q)		
	write(Q)	
		write(Q)

➤ Here, Schedule-9 is View Serializable but not Conflict Serializable.

Note:

Every view serializable schedule that is not conflict serializable has blind writes.

Other Examples

T1	T5
read(A)	
A:= A - 50	
write(A)	
	read(B)
	B:= B - 10
	write(B)
read(B)	
B:= B + 50	
write(B)	
	read(A)
	A:= A + 10
	write(A)

Schedule-8



Are these two schedules
View Equivalent?

Are these two schedules
Conflict Equivalent?

T1	T5
read(A)	
A:= A - 50	
write(A)	
read(B)	
B:= B + 50	
write(B)	
	read(B)
	B:= B - 10
	write(B)
	read(A)
	A:= A + 10
	write(A)

T1	T5
read(A)	
A:= A - 50	
write(A)	
	read(B)
	B:= B - 10
	write(B)
read(B)	
B:= B + 50	
write(B)	
	read(A)
	A:= A + 10
	write(A)

Schedule-8



These two schedules
produce same outcome, but
neither Conflict Equivalent
nor View Equivalent

T1	T5
read(A)	
A:= A - 50	
write(A)	
read(B)	
B:= B + 50	
write(B)	
	read(B)
	B:= B - 10
	write(B)
	read(A)
	A:= A + 10
	write(A)