

Concurrency Control



Example Schedules

Transactions:

T1: transfers \$50 from A to B

T2: transfers 10% of A to B

Example 1: a "serial" schedule

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

Constraint: The sum of A+B must be the same

Before: 100+50

=150, consistent

After: 45+105

Example Schedule

- Another “serial” schedule:

T1	T2	
		Before: 100+50
	read(A)	
	tmp = A*0.1	=150, consistent
	A = A - tmp	
	write(A)	After: 40+110
	read(B)	
	B = B+ tmp	Consistent but not the same as previous schedule..
	write(B)	
read(A)		
A = A -50		
write(A)		
read(B)		
B=B+50		
write(B)		Either is OK!