T1:

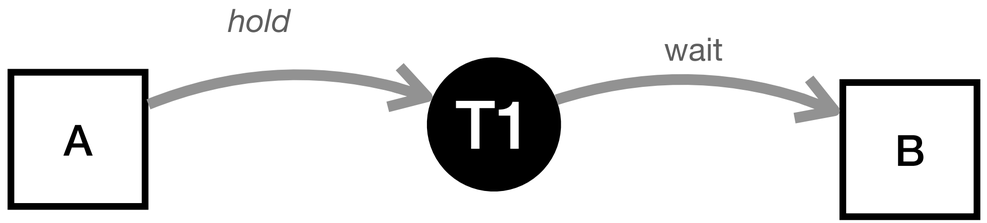
```
begin
write C
read B
write C
commit
```

T2:

```
begin
write B
read C
read C
commit
```

Find a schedule that causes a deadlock using the **two-phase locking algorithm**

T1	T2
Write C	
Read B (blocked)	
Write C	
	Write B
	Read C (blocked)
	Read C



Find a schedule that causes a deadlock

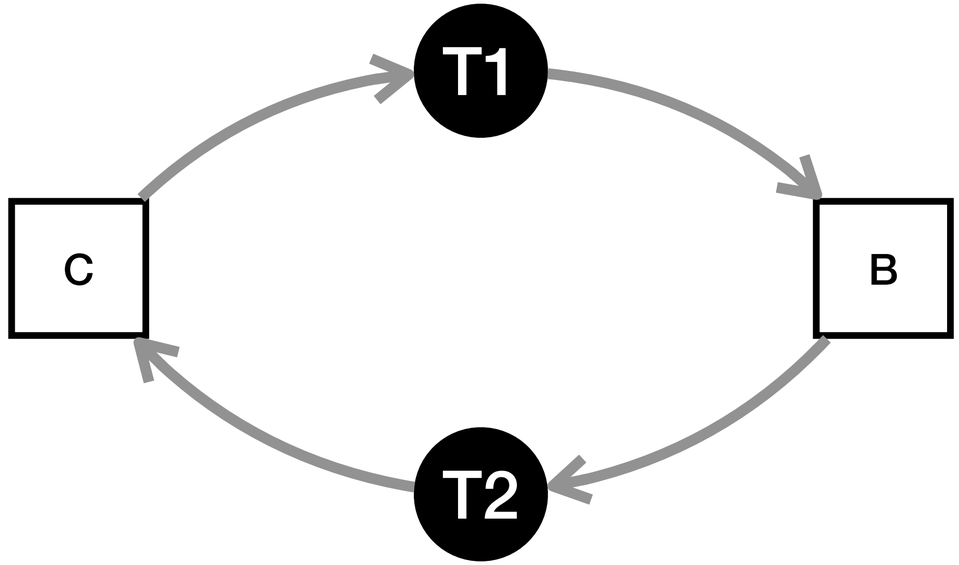
T1:

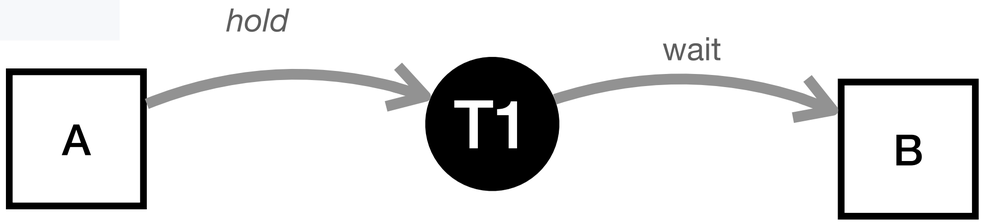
```
begin
write C
read B
write C
commit
```

T2:

```
begin
write B
read C
read C
commit
```

T1	T2
Request C	
Write C	
	Request B
	Write B
Request B (Blocked)	
	Request C (Blocked)
Release C	
	Release B
Release B	
Request C	Read C
Write C	Read C
Release C	Release C





Find a schedule that causes a deadlock **two-phase locking algorithm**

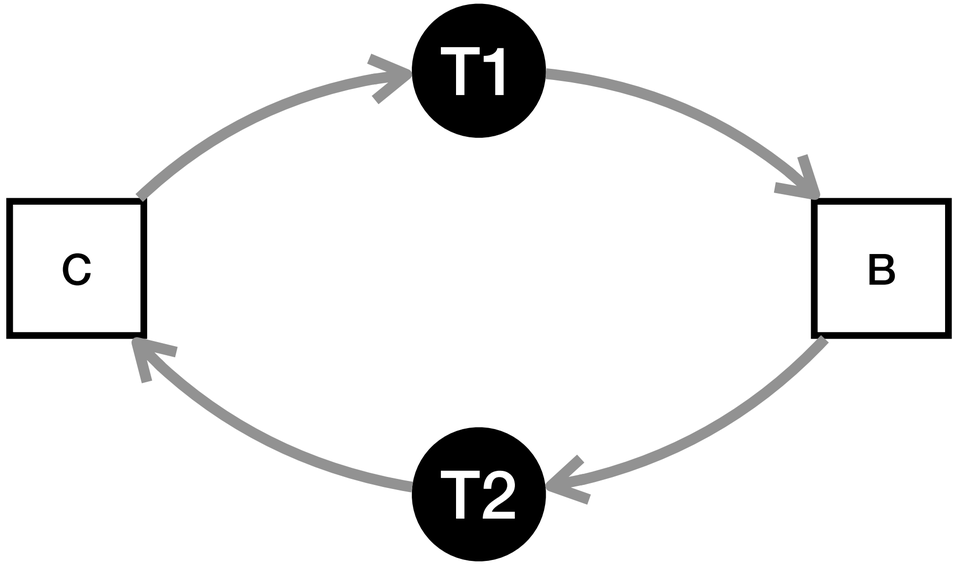
T1:

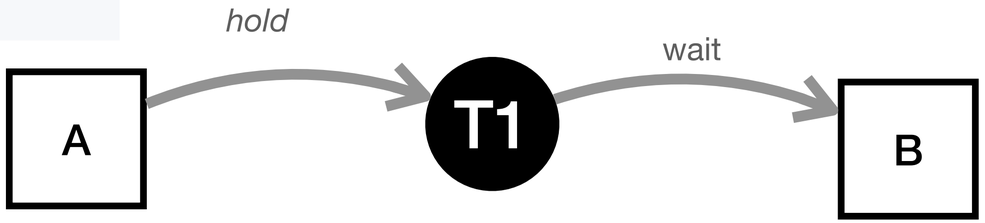
```
begin
write C
read B
write C
commit
```

T2:

```
begin
write B
read C
read C
commit
```

T1	T2
Request C	
Write C	
	Request B
	Write B
Request B (Blocked)	
	Request C (Blocked)
Read B	
Release B	
Write C	
Release C	
	Read C
	Read C
	Release C
	Release B





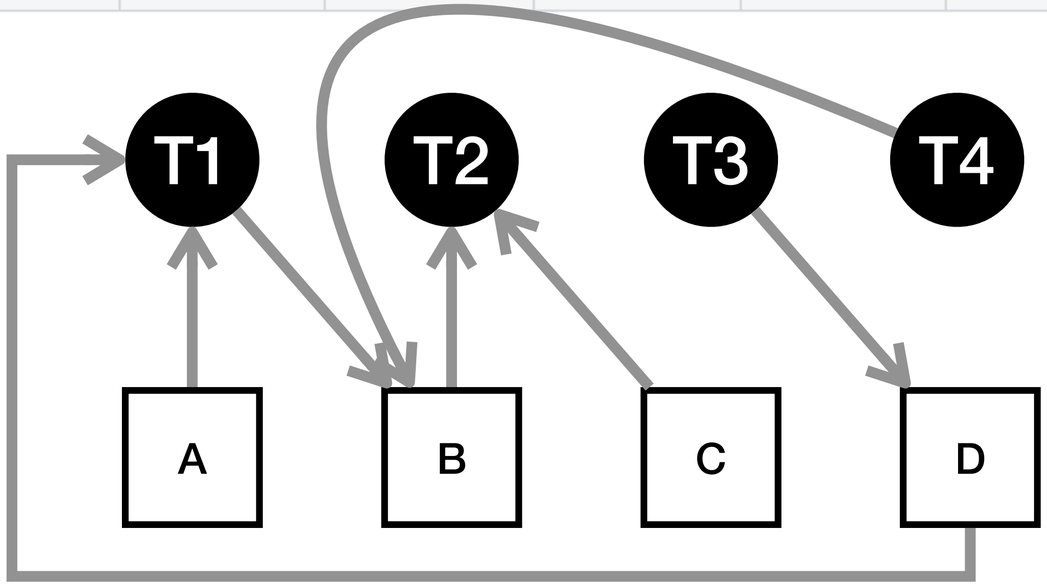
Find a schedule that cause a **non-repeatable read** assuming no concurrency control

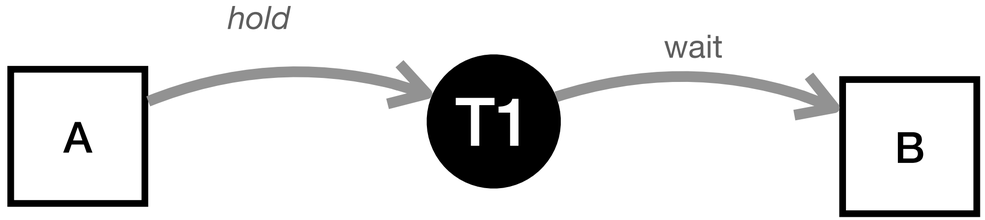
T1	T2
	Write B
	Read C (1)
Write C (2)	
Read B	
Write C (3)	
	Read C (3)

T1	T2
	Write B
Write C (2)	
Read B	
	Read C (1)
Write C (3)	
	Read C (3)

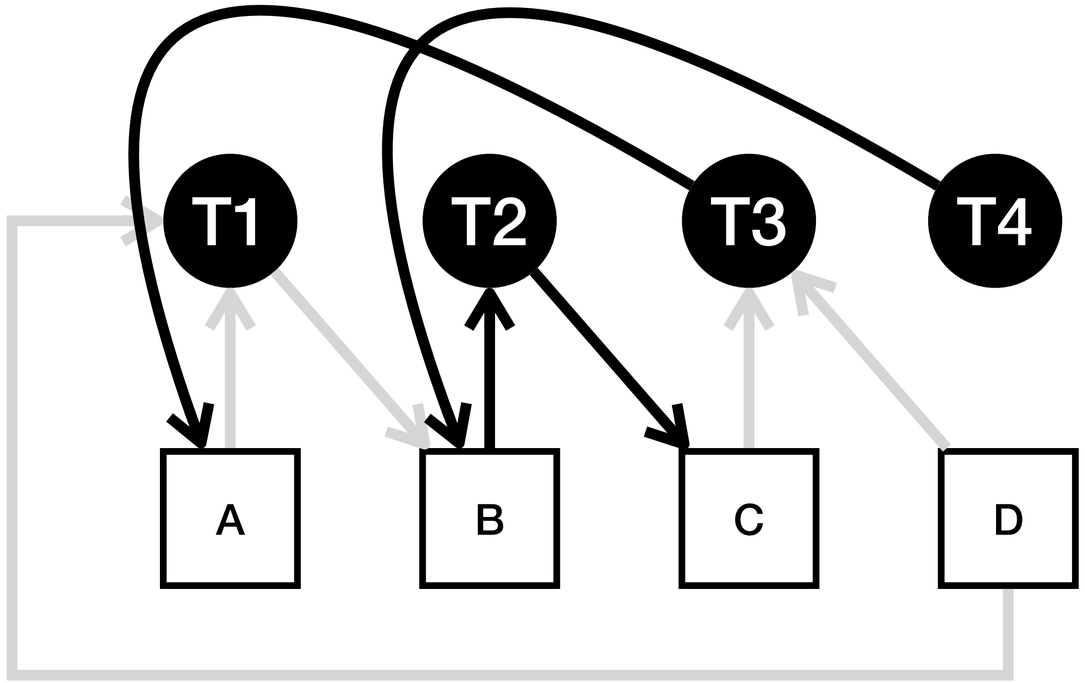
T1	T2
	Write B
	Read C (1)
Write C (2)	
	Read C (2)
Read B	
Write C (3)	

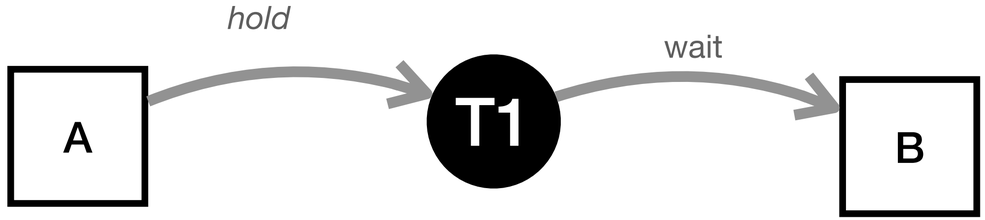
Tr	1	2	3	4	5	6	7	8	9
1	S(A)	S(D)		S(B)					
2			X(B)				X(C)		
3					S(D)	S(C)			X(A)
4								X(B)	

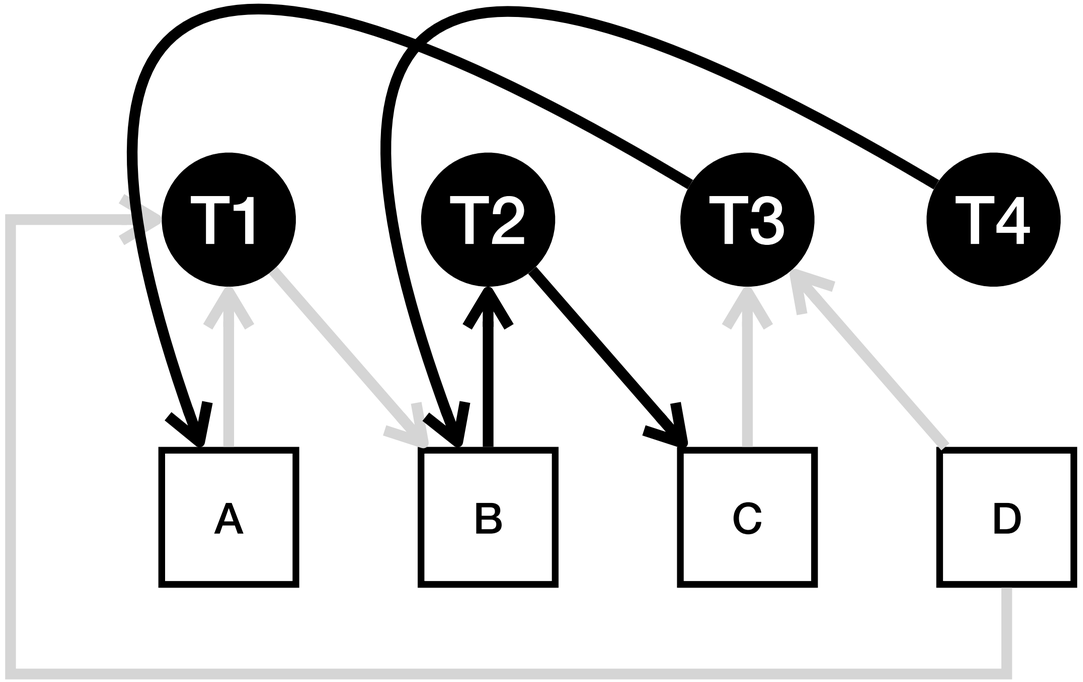


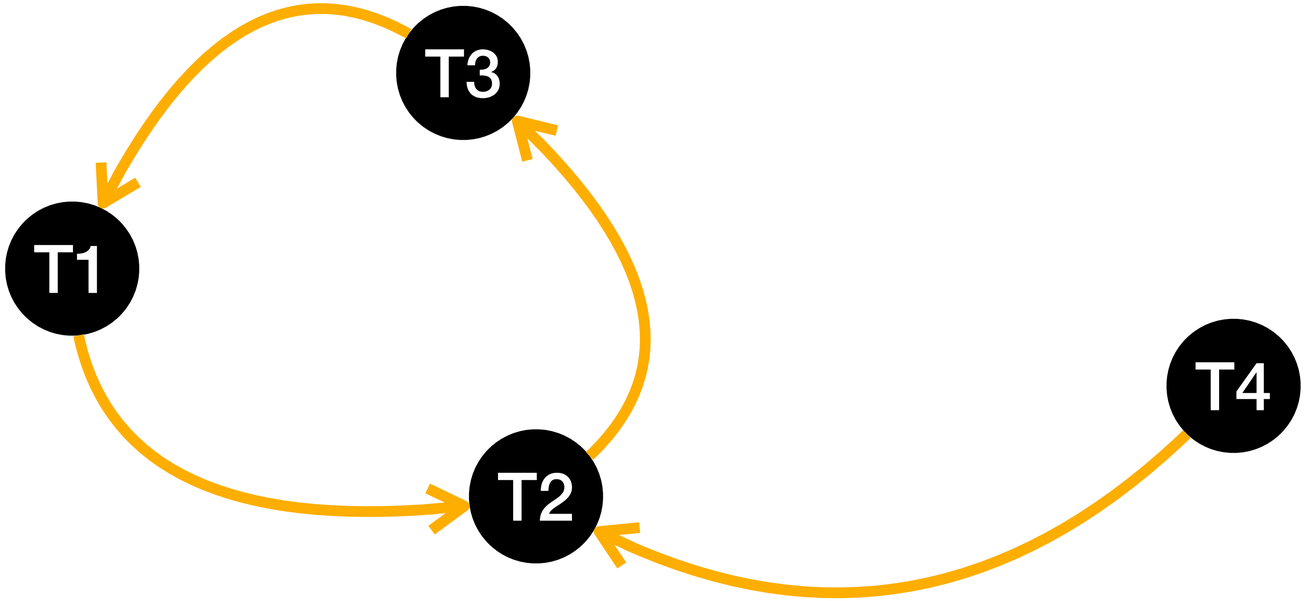


Tr	1	2	3	4	5	6	7	8	9
1	S(A)	S(D)		S(B)					
2			X(B)				X(C)		
3					S(D)	S(C)			X(A)
4								X(B)	






T1
T2
T3
T4
A
B
C
D


T3
T1
T4
T2