```sql
create table kv(k integer primary key, v varchar(10));

insert into kv values(10, '10-a');
insert into kv values(20, '20-a');
```

```
k |v    |
--+----+
10|10-a|
```

kv	10|10-a|	T1	T2	T3
T2	begin transaction isolation level read committed;			
T3	begin transaction isolation level repeatable read;			
T1	begin transaction isolation level read committed; update kv set v = '10-b' where k=10; select * from kv; commit;	10|10-b|		
T2	select * from kv; commit;		10|10-b|	
T3	select * from kv; commit;			10|10-a|

kv	10|10-a|	T1	T2
T1	begin transaction isolation level serializable; update kv set v = '10-b' where k=10; select * from kv;	10|10-b|	
T2	begin transaction isolation level serializable; update kv set v = '10-c' where k=10;		wartet
T1	commit;		Serialisierungsfehler
T2	rollback;		
kv	10|10-b|		

kv	10|10-a|	T1	T2
T1	begin transaction isolation level serializable; update kv set v = '10-b' where k=10; select * from kv;	10|10-b|	
T2	begin transaction isolation level serializable; update kv set v = '10-c' where k=10;		wartet
T1	rollback;		
T2	select * from kv; commit;		läuft weiter 10|10-c|
kv	10|10-c|		

kv	10|10-a| 20|20-a|	T1	T2
T1	begin transaction isolation level serializable; update kv set v = '10-b' where k=10; select * from kv order by k;	10|10-b| 20|20-a|	
T2	begin transaction isolation level serializable; update kv set v = '20-b' where k=20; select * from kv order by k;		10|10-a| 20|20-b|
T1	commit;		Serialisierungsfehler
T2	rollback;		
kv	10|10-b| 20|20-a|		

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kv	10|10-a| 20|20-a|	T1	T2
T1	begin transaction isolation level serializable; update kv set v = '10-b' where k=10; select * from kv order by k;	10|10-b| 20|20-a|	
T2	begin transaction isolation level serializable; update kv set v = '20-b' where k=20; select * from kv order by k;		10|10-a| 20|20-b|
T1	commit;		
T2	commit;		
kv	10|10-b| 20|20-b|		

kv	10|10-a| 20|20-a|	T1	T2	T3
T2	begin transaction isolation level serializable; select * from kv order by k;		10|10-a| 20|20-a|	
T1	begin transaction isolation level serializable; update kv set v = '10-b' where k=10; select * from kv order by k; commit;	10|10-b| 20|20-a|		
T3	begin transaction isolation level serializable; select * from kv order by k; commit;			10|10-b| 20|20-a|
T2	update kv set v = '20-b' where k=20;		Serialisierungsfehler	
T2	rollback;			
kv	10|10-b| 20|20-a|			

kv	10|10-a| 20|20-a|	T1	T2	T3
T2	begin transaction isolation level repeatable read; select * from kv order by k;		10|10-a| 20|20-a|	
T1	begin transaction isolation level repeatable read; update kv set v = '10-b' where k=10; select * from kv order by k; commit;	10|10-b| 20|20-a|		
T3	begin transaction isolation level repeatable read; select * from kv order by k; commit;			10|10-b| 20|20-a|
T2	update kv set v = '20-b' where k=20; select * from kv order by k;		10|10-a| 20|20-b|	
T2	commit;			
kv	10|10-b| 20|20-b|			

kv	10|10-a| 20|20-a|	T1	T2
T1	begin transaction isolation level read committed; select * from kv where k=10;	10|10-a|	
T2	`begin transaction isolation level serializable;` `select * from kv order by k;`		10|10-a| 20|20-a|
T2	update kv set v = '10-c' where k=10; select * from kv order by k;		10|10-c| 20|20-a|
T1	`update kv set v = '10-b' where k=10;`	wartet	
T2	`commit;`		
T1	select * from kv where k=10; commit;	10|10-b|	
kv	10|10-b| 20|20-a|		

		T1	T2
kv	10|10-a| 20|20-a|	T1	T2
T1	begin transaction isolation level read committed; select * from kv where k=10 for update;	10|10-a|	
T1			
T2	begin transaction isolation level serializable; select * from kv order by k;		10|10-a| 20|20-a|
T2	update kv set v = '10-c' where k=10;		wartet
T1	update kv set v = '10-b' where k=10;		wartet
T1	commit;		Serialisierungsfehler
T2	rollback;		
kv	10|10-b| 20|20-a|		