

Transaction 1

```
use sakila;
set autocommit = false;
-- read uncommitted
set session transaction isolation level read uncommitted;
start transaction;
select * from film where film_id = 70;
update film set title = 'read uncommitted' where film_id = 70;
rollback;
commit;
```

```
-- read committed
set session transaction isolation level read uncommitted;
show variables like 'transaction_isolation';
start transaction;

select * from film where film_id = 72;
update film set title = "Mohit sharma 3" where film_id = 72;

rollback;
commit;
```

```
-- non-repeatable reads
set session transaction isolation level read uncommitted;
show variables like 'transaction_isolation';
start transaction;

select * from film where film_id = 2;
update film set title = "Mohit sharma part 2" where film_id = 2;

rollback;
commit;
```

```
-- repeatable read
set session transaction isolation level read uncommitted;
show variables like 'transaction_isolation';
start transaction;

select * from film where film_id = 2;
select * from film where film_id = 180;
```

```
update film set title = "temp 3" where film_id = 2;  
update film set title = "repeatable read show" where film_id = 180;
```

```
rollback;  
commit;
```

```
-- Phantom read  
set session transaction isolation level read uncommitted;  
start transaction;
```

```
select * from language;  
insert into language (language_id , name , last_update)  
values (11, 'Haryanvi', now());
```

```
commit;
```

```
-- serializable
```

```
set session transaction isolation level serializable;  
start transaction;  
show variables like 'transaction_isolation';
```

```
select * from film where film_id = 12;  
update film set title = 'xyz' where film_id = 12;
```

```
UPDATE film SET rental_rate = rental_rate + 1.0 where film_id = 12;  
commit;
```

```
-- deadlock  
set session transaction isolation level repeatable read;  
start transaction;
```

```
select * from film where film_id = 13 for update;  
select * from film where film_id = 12 for update;
```

```
commit;
```

Transaction 2

```
use sakila;
set autocommit = false;
-- read uncommitted
set session transaction isolation level read uncommitted;
start transaction;
select * from film where film_id = 70;
commit;

-- read committed
set session transaction isolation level read committed;
show variables like 'transaction_isolation';

start transaction;

select * from film where film_id = 72;
update film set title = "Mohit sharma" where film_id = 72;

commit;

-- non-repeatable reads
set session transaction isolation level read committed;
show variables like 'transaction_isolation';

start transaction;

select * from film where film_id = 2;
update film set title = "Mohit sharma part 3" where film_id = 2;

commit;

-- repeatable read
set session transaction isolation level repeatable read;
show variables like 'transaction_isolation';

start transaction;

select * from film where film_id = 12; -- check read uncommitted
select * from film where film_id = 180;
update film set description = "check read uncommitted" where film_id = 12;

commit;
```

```
-- Phantom read
set session transaction isolation level repeatable read;
start transaction;
```

```
select * from language;
```

```
update language
set name = 'English';
```

```
commit;
```

```
SET SQL_SAFE_UPDATES = 0;
show variables like 'SQL_SAFE_UPDATES';
```

```
-- serializable
set session transaction isolation level serializable;
start transaction;
SELECT COUNT(*) FROM film;
select * from film where film_id = 12;
update film
set title = "Mohit"
where film_id = 12;
commit;
```

```
-- deadlock
```

```
set session transaction isolation level repeatable read;
start transaction;
```

```
select * from film where film_id = 12 for update;
select * from film where film_id = 13 for update;
```

```
commit;
```