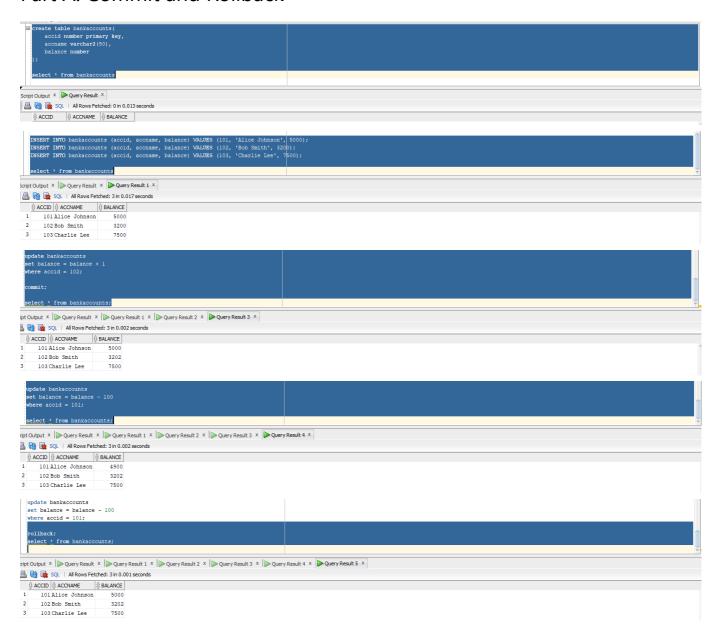# DBMS LAB 6

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- 123CS0061

TCL Commands

Exercise 1

Part A: Commit and Rollback

Part B: Transactions with Savepoints & Serializable

```
update bankaccounts
set balance = balance - 5000
where accid = 104;

savepoint sp1;
select * from bankaccounts;

update bankaccounts
```

📋 🗐 📄 SQL | All Rows Fetched: 5 in 0.001 seconds

	ACCID	ACCNAME	BALANCE
1	101	Alice Johnson	5000
2	102	Bob Smith	3202
3	103	Charlie Lee	7500
4	104	Charlie Caplin	1900
5	105	Ash Ketchem	900

```
update bankaccounts
set balance = balance + 5000
where accid = 105;

savepoint sp2;
select * from bankaccounts;
```

📋 🗐 📄 SQL | All Rows Fetched: 5 in 0.001 seconds

	ACCID	ACCNAME	BALANCE
1	101	Alice Johnson	5000
2	102	Bob Smith	3202
3	103	Charlie Lee	7500
4	104	Charlie Caplin	1900
5	105	Ash Ketchem	5900

```
update bankaccounts
set balance = balance - 3000
where accid = 103;

select * from bankaccounts;
```

📋 🗐 📄 SQL | All Rows Fetched: 5 in 0.002 seconds

	ACCID	ACCNAME	BALANCE
1	101	Alice Johnson	5000
2	102	Bob Smith	3202
3	103	Charlie Lee	4500
4	104	Charlie Caplin	1900
5	105	Ash Ketchem	5900

```
rollback to sp2;
select * from bankaccounts;
```

📋 🗐 📄 SQL | All Rows Fetched: 5 in 0.001 seconds

	ACCID	ACCNAME	BALANCE
1	101	Alice Johnson	5000
2	102	Bob Smith	3202
3	103	Charlie Lee	7500
4	104	Charlie Caplin	1900
5	105	Ash Ketchem	5900

```
rollback to sp1;
select * from bankaccounts;
```

📋 🗐 📄 SQL | All Rows Fetched: 5 in 0.003 seconds

	ACCID	ACCNAME	BALANCE
1	101	Alice Johnson	5000
2	102	Bob Smith	3202
3	103	Charlie Lee	7500
4	104	Charlie Caplin	1900
5	105	Ash Ketchem	900

```
commit;
select * from bankaccounts;
```

Script Output × | Query Result × | Query Result 1 × | Query Result 2 × | Query Result 3 × | Query Result 4 × | Query Result 5 × | Query Result 6 × | Query Result 7 × | Query Result 8 × | Query Result 9 × | Query Result 10 × | Query Resul... ×

SQL | All Rows Fetched: 5 in 0.003 seconds

	ACCID	ACCNAME	BALANCE
1	101	Alice Johnson	5000
2	102	Bob Smith	3202
3	103	Charlie Lee	7500
4	104	Charlie Caplin	1900
5	105	Ash Ketchem	900

Oracle SQL Developer : Lab6

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Lab5.sql | Lab51.sql | Lab6.sql | Lab6

Worksheet   Query Builder

```
SET TRANSACTION ISOLATION LEVEL SERIALIZABLE;

UPDATE BANK_ACCOUNTS
SET BALANCE = BALANCE + 1000
WHERE ACC_ID = 201;

SELECT * FROM BANK_ACCOUNTS;
```

Script Output ×

ScriptRunner Task

Transaction ISOLATION succeeded.

Click on an identifier with the Control key down to perform "Go to Declaration"

Light rain
At night

Q Search

ENG   15:11
IN   16-09-2025

Exercise 2

Part A: Commit, Rollback and Savepoints

```sql
create table orders (
    order_id number primary key,
    cust_name varchar2(50),
    product varchar2(50),
    amount number
);

insert into orders (order_id, cust_name, product, amount) values (1, 'alice', 'laptop', 1200);
insert into orders (order_id, cust_name, product, amount) values (2, 'bob', 'smartphone', 800);
insert into orders (order_id, cust_name, product, amount) values (3, 'charlie', 'tablet', 450);
insert into orders (order_id, cust_name, product, amount) values (4, 'diana', 'monitor', 300);
```

Script Output × | Query Result × | Query Result 1 × | Query Result 2 × | Query Result 3 ×

SQL | All Rows Fetched: 4 in 0.001 seconds

	ORDER_ID	CUST_NAME	PRODUCT	AMOUNT
1	1 alice	laptop	1200
2	2 bob	smartphone	800
3	3 charlie	tablet	450
4	4 diana	monitor	330

```sql
update orders
set amount = amount + (0.1)*amount
where order_id = 4;

select * from orders;
commit;
```

Script Output × | Query Result × | Query Result 1 × | Query Result 2 ×

SQL | All Rows Fetched: 4 in 0.004 seconds

	ORDER_ID	CUST_NAME	PRODUCT	AMOUNT
1	1 alice	laptop	1200
2	2 bob	smartphone	800
3	3 charlie	tablet	450
4	4 diana	monitor	330

```sql
update orders
set amount = amount + (0.1)*amount
where order_id = 4;

commit;
rollback;
select * from orders;
```

Script Output × | Query Result × | Query Result 1 × | Query Result 2 × | Query Result 3 × | Query Result 4 ×

SQL | All Rows Fetched: 4 in 0.001 seconds

	ORDER_ID	CUST_NAME	PRODUCT	AMOUNT
1	1 alice	laptop	1200
2	2 bob	smartphone	800
3	3 charlie	tablet	450
4	4 diana	monitor	363

```sql
savepoint sp1;
insert into orders (order_id, cust_name, product, amount) values (5, 'fiona', 'mud', 800);

select * from orders;
```

Script Output × | Query Result × | Query Result 1 × | Query Result 2 × | Query Result 3 × | Query Result 4 × | Query Result 5 × | Query Result 6 ×

SQL | All Rows Fetched: 5 in 0.002 seconds

	ORDER_ID	CUST_NAME	PRODUCT	AMOUNT
1	1 alice	laptop	1200
2	2 bob	smartphone	800
3	3 charlie	tablet	450
4	4 diana	monitor	363
5	5 fiona	mud	800

```sql
savepoint sp2;
update orders
set amount = amount - 100
where order_id = 3;

select * from orders;
```

Script Output × | Query Result × | Query Result 1 × | Query Result 2 × | Query Result 3 × | Query Result 4 × | Query Result 5 × | Query Result 6 × | Query Result 7 ×

SQL | All Rows Fetched: 5 in 0.001 seconds

	ORDER_ID	CUST_NAME	PRODUCT	AMOUNT
1	1 alice	laptop	1200
2	2 bob	smartphone	800
3	3 charlie	tablet	350
4	4 diana	monitor	363
5	5 fiona	mud	800

```
rollback to sp2;

select * from orders;
```

Script Output × | ▷ Query Result × | ▷ Query Result 1 × | ▷ Query Result 2 [X] | ▷ Query Result 3 × | ▷ Query Result 4 × | ▷ Query Result 5 × | ▷ Query Result 6 × | ▷ Query Result 7 × | ▷ Query Result 8 ×

📄 🔦 📇 SQL | All Rows Fetched: 5 in 0.003 seconds

	ORDER_ID	CUST_NAME	PRODUCT	AMOUNT
1	1 alice		laptop	1200
2	2 bob		smartphone	800
3	3 charlie		tablet	450
4	4 diana		monitor	363
5	5 fiona		mud	800

```
rollback to sp1;
select * from orders;
```

Script Output × | ▷ Query Result × | ▷ Query Result 1 × | ▷ Query Result 2 × | ▷ Query Result 3 × | ▷ Query Result 4 × | ▷ Query Result 5 × | ▷ Query Result 6 × | ▷ Query Result 7 × | ▷ Query Result 8 × | ▷ Query Result 9 ×

📄 🔦 📇 SQL | All Rows Fetched: 4 in 0.003 seconds

	ORDER_ID	CUST_NAME	PRODUCT	AMOUNT
1	1 alice		laptop	1200
2	2 bob		smartphone	800
3	3 charlie		tablet	450
4	4 diana		monitor	363

Part B: Transactions with read only and read-write mode

```
set transaction read only;

select * from orders;

insert into orders (order_id, cust_name, product, amount) values (5, 'eva', 'keyboard', 100);

select * from orders;
```

Script Output × | ▷ Query Result × | ▷ Query Result 1 × | ▷ Query Result 2 × | ▷ Query Result 3 × | ▷ Query Result 4 × | ▷ Query Result 5 × | ▷ Query Result 6 × | ▷ Query Result 7 × | ▷ Query Result 8 × | ▷ Query Result 9 × | ▷ Query Result 10 × | ▷ Query Result 11 ×

📌 🖊 💾 📇 | Task completed in 0.503 seconds

```
1 row inserted.

>>Query Run In:Query Result 6

Savepoint created.

1 row updated.

>>Query Run In:Query Result 7

Rollback complete.

>>Query Run In:Query Result 8

Rollback complete.

>>Query Run In:Query Result 9

Error starting at line : 33 in command -
set transaction read only
Error report -
ORA-01453: SET TRANSACTION must be first statement of transaction

https://docs.oracle.com/error-help/db/ora-01453/01453. 00000 -  "SET TRANSACTION must be first statement of transaction"
*Cause:    self-evident
*Action:   commit (or rollback) transaction, and re-execute
>>Query Run In:Query Result 10
```

```
commit;
set transaction read write;
insert into orders (order_id, cust_name, product, amount) values (5, 'eva', 'keyboard', 100);

update orders set amount = amount + 50 where order_id = 1;
rollback;

select * from orders where order_id in (1, 5);
```

Script Output × | ▷ Query Result × | ▷ Query Result 1 × | ▷ Query Result 2 × | ▷ Query Result 3 × | ▷ Query Result 4 × | ▷ Query Result 5 × | ▷ Query Result 6 × | ▷ Query Result 7 × | ▷ Query Result 8 × | ▷ Query Result 9 × | ▷ Query Result 10 × | ▷ Query Result 11 × | ▷ Q...

📄 🔦 📇 SQL | All Rows Fetched: 2 in 0.005 seconds

	ORDER_ID	CUST_NAME	PRODUCT	AMOUNT
1	1 alice		laptop	1200
2	5 eva		keyboard	100