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BRANCH :- Comps -B. **BATCH: B.**

EXPERIMENT 3: To perform DCL, TCL commands

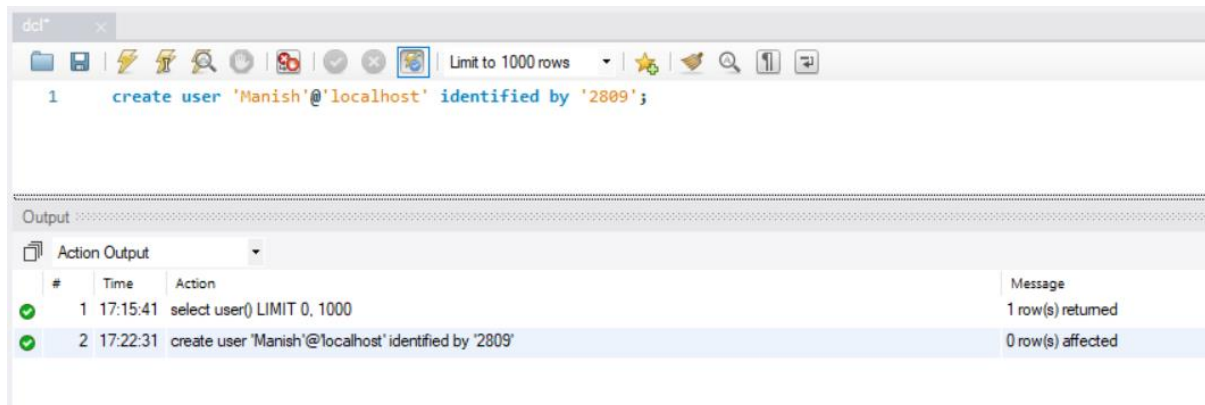
- Data Control Language: Grant, Revoke, Roles.
- Transaction Control Language: Commit, Rollback, Save point

SUBJECT :- DBMS (DATABASE MANAGEMENT SYSTEM)

TOPIC NO.1: DDL Commands:

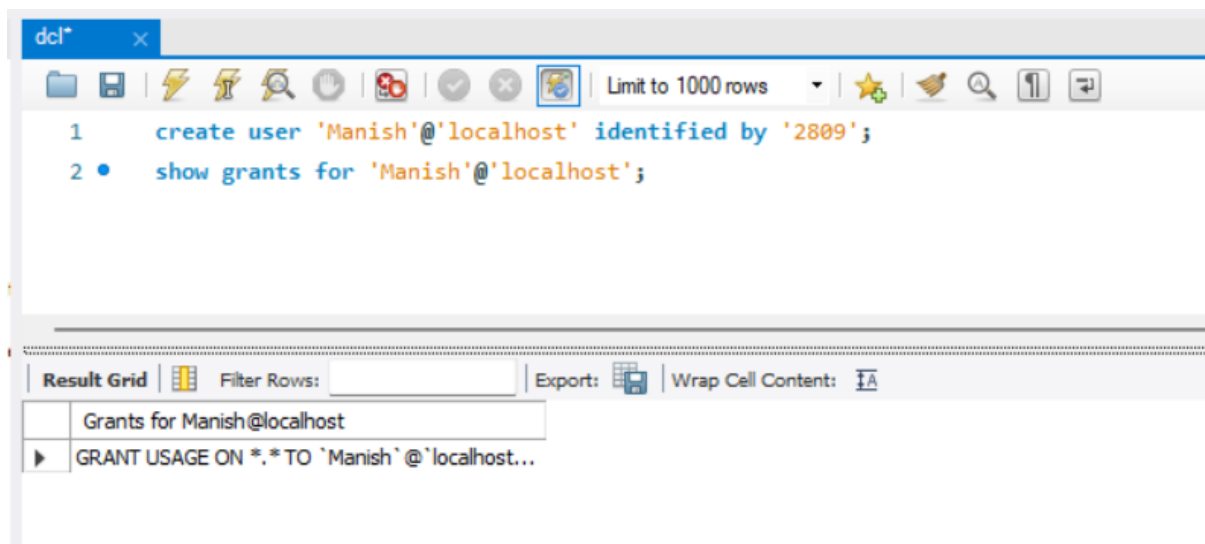
1. Create user by your name by using create user command:

create user 'Manish'@'localhost' identified by '2809';



2. Show the default permission for user:

show grants for 'Manish'@'localhost';



3. Create a database and one table in it/use created database and tables:

create database exp3;

use exp3;

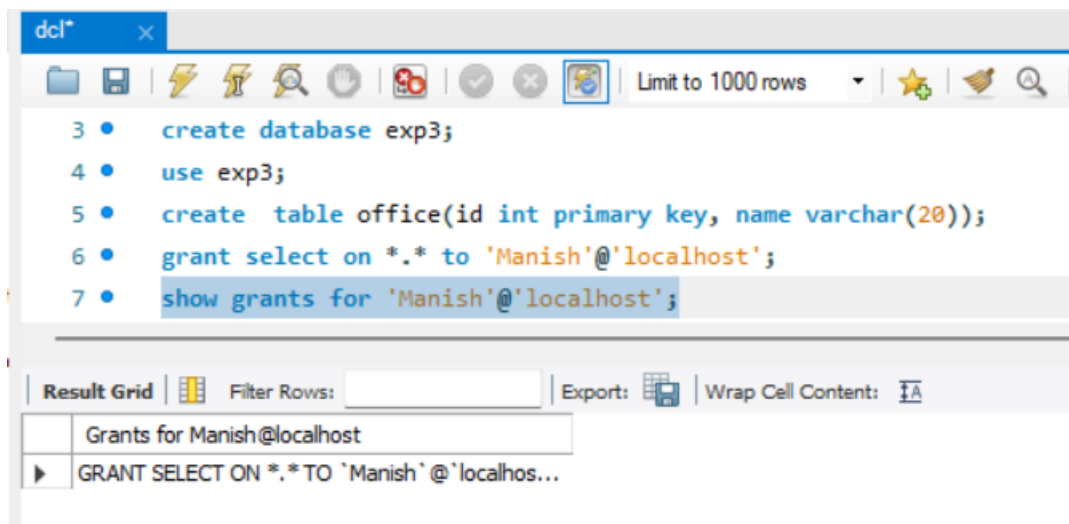
create table office(id int primary key, name varchar(20));

✓	4	17:26:33	create database exp3	1 row(s) affected
✓	5	17:26:44	use exp3	0 row(s) affected
✓	6	17:29:00	create table office(id int primary key, name varchar(20))	0 row(s) affected

4. Give select permission to new user to created table:

grant select on *.* to 'Manish'@'localhost';

show grants for 'Manish'@'localhost';



5. Try to insert value in table note the result:

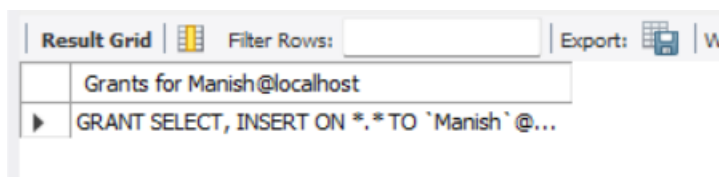
insert into office (id, name) values (1, 'Manish');

Error Code: 1142. INSERT command denied to user 'Manish'@'localhost' for table 'exp3'.office'

6. Give the insert permission to new user :

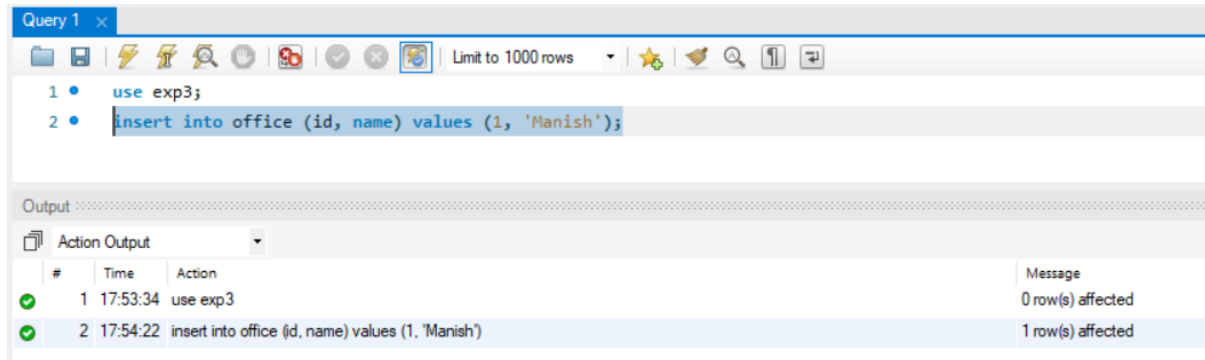
grant insert on *.* to 'Manish'@'localhost';

show grants for 'Manish'@'localhost';



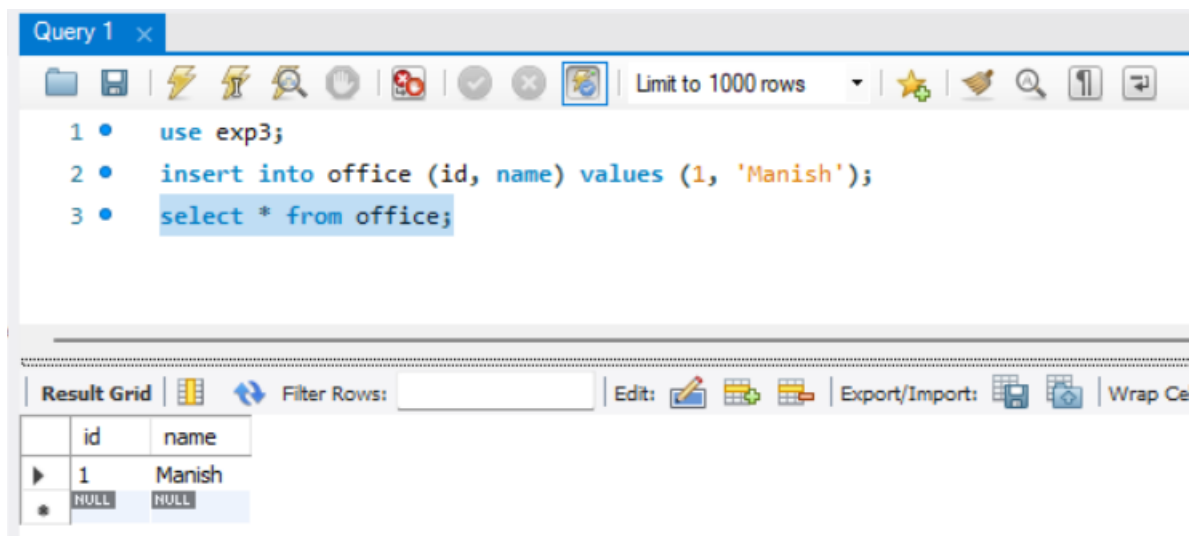
7. Insert some value in the table:

insert into office (id, name) values (1, 'Manish');



8. Display the table:

select * from office;



9. Update the table and note down the result:

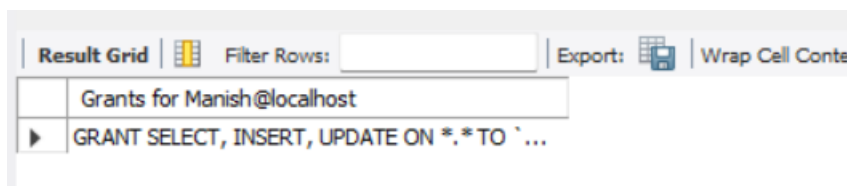
update office set name='Nishant' where id=1;

Error Code: 1142. UPDATE command denied to user 'Manish'@'localhost' for table 'exp3'.office'

10. Give the update permission to the user:

grant update on *.* to 'Manish'@'localhost';

show grants for 'Manish'@'localhost';



• After Giving Update Permission:

update office set name='Nishant' where id=1;

Result Grid	Filter Rows:	Edit:
	id	name
▶	1	Nishant
✱	NULL	NULL

11. Give all permission to user:

```
grant all on *.* to 'Manish'@'localhost';
```

```
show grants for 'Manish'@'localhost';
```

Result Grid	Filter Rows:	Export:	Wrap C
	Grants for Manish@localhost		
▶	GRANT ALL PRIVILEGES ON *.* TO 'Manish'@...		

12. Revoke update permission from and try to update the table:

```
revoke update on *.* from 'Manish'@'localhost';
```

Result Grid	Filter Rows:	Export:	Wr
	Grants for Manish@localhost		
▶	GRANT SELECT, INSERT, DELETE, CREATE, DR...		

```
update office set name='Krunal' where id=1;
```

Error Code: 1142. UPDATE command denied to user 'Manish'@'localhost' for table 'exp3'.office'

13. Create the role:

```
create role 'accountant';
```

✓	31 18:26:03	create role 'accountant'	0 row(s) affected
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14. Give select privileges to new role:

```
grant select on office to accountant;
```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
	Grants for accountant		
▶	GRANT USAGE ON *.* TO 'accountant'		
	GRANT SELECT ON 'exp3'. 'office' TO 'accou...		

15. Create new user:

```
create user 'Nishant'@'localhost' identified by '2810';
```

✓ 41 18:37:02 create user 'Nishant'@'localhost' identified by '2810'

0 row(s) affected

16. Give the role to new user.

create role 'financer';

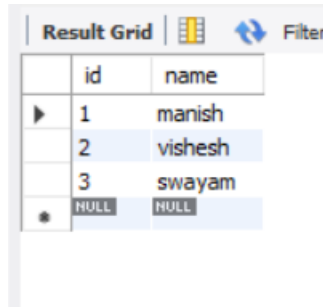
grant 'financer' to 'Nishant'@'localhost';

show grants for 'Nishant'@'localhost';

Result Grid	Filter Rows:	Export:	Wrap
Grants for Nishant@localhost			
▶	GRANT 'financer' TO 'Nishant'@'localhost'		
	GRANT USAGE ON *.* TO 'Nishant'@'localhos...		

TOPIC NO.2: TCL Commands:**1. Display the table you have created:**

select * from data;

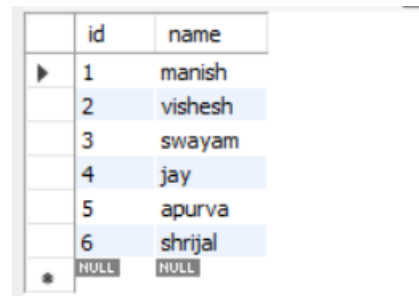


The screenshot shows a 'Result Grid' window with a table containing 4 rows and 2 columns: 'id' and 'name'. The rows are: (1, 'manish'), (2, 'vishesh'), (3, 'swayam'), and (4, 'NULL'). A star icon is visible at the bottom left of the grid.

	id	name
▶	1	manish
	2	vishesh
	3	swayam
★	NULL	NULL

2. Perform some insert , update and delete operation on table:

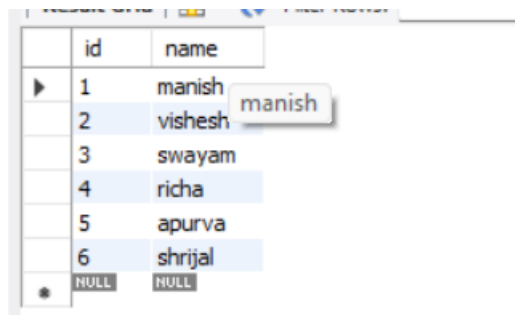
insert into data (id, name) values (4, 'jay') , (5, 'apurva'), (6, 'shriral');



The screenshot shows a 'Result Grid' window with a table containing 7 rows and 2 columns: 'id' and 'name'. The rows are: (1, 'manish'), (2, 'vishesh'), (3, 'swayam'), (4, 'jay'), (5, 'apurva'), (6, 'shriral'), and (7, 'NULL'). A star icon is visible at the bottom left of the grid.

	id	name
▶	1	manish
	2	vishesh
	3	swayam
	4	jay
	5	apurva
	6	shriral
★	NULL	NULL

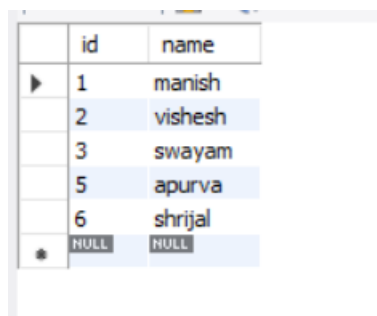
update data set name = 'richa' where id = 4;



The screenshot shows a 'Result Grid' window with a table containing 7 rows and 2 columns: 'id' and 'name'. The rows are: (1, 'manish'), (2, 'vishesh'), (3, 'swayam'), (4, 'richa'), (5, 'apurva'), (6, 'shriral'), and (7, 'NULL'). A star icon is visible at the bottom left of the grid. A tooltip with the text 'manish' is hovering over the 'name' cell of the first row.

	id	name
▶	1	manish
	2	vishesh
	3	swayam
	4	richa
	5	apurva
	6	shriral
★	NULL	NULL

delete from data where id=4;



The screenshot shows a 'Result Grid' window with a table containing 6 rows and 2 columns: 'id' and 'name'. The rows are: (1, 'manish'), (2, 'vishesh'), (3, 'swayam'), (4, 'apurva'), (5, 'shriral'), and (6, 'NULL'). A star icon is visible at the bottom left of the grid.

	id	name
▶	1	manish
	2	vishesh
	3	swayam
	4	apurva
	5	shriral
★	NULL	NULL

insert into data (id, name) values (7, 'x') , (8, 'y'), (9, 'z');

Result Grid			Filter Rows:
	id	name	
▶	1	manish	
	2	vishesh	
	3	swayam	
	5	apurva	
	6	shrijal	
	7	x	
	8	y	
	9	z	
*	NULL	NULL	

3. Display the table:

Result Grid			Filter Rows:
	id	name	
▶	1	manish	
	2	vishesh	
	3	swayam	
	5	apurva	
	6	shrijal	
	7	x	
	8	y	
	9	z	
*	NULL	NULL	

4. Use rollback command &

5. Display the table and write your observation: rollback;

Result Grid			Filter Row
	id	name	
▶	1	manish	
	2	vishesh	
	3	swayam	
	5	apurva	
	6	shrijal	
*	NULL	NULL	

6. Insert one row in the table:

insert into data (id, name) values (7, 'x');

Result Grid			Filter Row
	id	name	
▶	1	manish	
	2	vishesh	
	3	swayam	
	5	apurva	
	6	shrijal	
	7	x	
*	NULL	NULL	

7. Use commit command:

✓ 28 17:21:50 commit

8. Insert one more row :

insert into data (id, name) values (8, 'y');

Result Grid		
	id	name
▶	1	manish
	2	vishesh
	3	swayam
	5	apurva
	6	shrijal
	7	x
	8	y
✱	NULL	NULL

9. Use rollback command and observe the output: rollback;

Result Grid		
	id	name
▶	1	manish
	2	vishesh
	3	swayam
	5	apurva
	6	shrijal
	7	x
✱	NULL	NULL

We were returned to output where last commit was declared.

10. Update the table and again use the rollback command:

update data set name = 'z' where id = 7;



Result Grid		
	id	name
▶	1	manish
	2	vishesh
	3	swayam
	5	apurva
	6	shrijal
	7	z
✱	NULL	NULL

rollback;



	id	name
▶	1	manish
	2	vishesh
	3	swayam
	5	apurva
	6	shriral
	7	x
✱	NULL	NULL

11. Delete one row and use rollback command:

delete from data where id=7;

Result Grid				Filter Row
	id	name		
▶	1	manish		
	2	vishesh		
	3	swayam		
	5	apurva		
	6	shriral		
✱	NULL	NULL		

rollback;

Result Grid				Filter
	id	name		
▶	1	manish		
	2	vishesh		
	3	swayam		
	5	apurva		
	6	shriral		
	7	x		
✱	NULL	NULL		

12. Create savepoint:

✓	46	17:47:37	savepoint m
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13. Perform one insertion , deletion and update operation:

insert into data (id, name) values (10, 'mj');

update data set name = 'aj' where id = 10;

delete from data where id=6;

Result Grid		
	id	name
▶	1	manish
	2	vishesh
	3	swayam
	5	apurva
	7	x
	10	aj
*	NULL	NULL

14. Use rollback command:

rollback to savepoint m;

Result Grid		
	id	name
▶	1	manish
	2	vishesh
	3	swayam
	5	apurva
	6	shriral
	7	x
*	NULL	NULL

15. Perform update operation :

update data set name = 'aj' where id = 5;

Result Grid		
	id	name
▶	1	manish
	2	vishesh
	3	swayam
	5	aj
	6	shriral
	7	x
*	NULL	NULL

16. Use rollback and observe the output:

rollback;

Result Grid		
	id	name
▶	1	manish
	2	vishesh
	3	swayam
	5	apurva
	6	shriral
	7	x
*	NULL	NULL