DCL COMMANDS

Aim:

To learn how to use various DCL commands GRANT and REVOKE SQL commands

Procedure and Syntax:

Data Control Language(DCL) is used to control privileges in Database. To perform any operation in the database, such as for creating tables, sequences or views, a user needs privileges. Privileges are of two types,

System: This includes permissions for creating session, table, etc and all types of other system privileges.

Object: This includes permissions for any command or query to perform any operation on the database tables.

In DCL we have two commands,

GRANT: Used to provide any user access privileges or other privileges for the database.

REVOKE: Used to take back permissions from any user.

Allow a User to create session

When we create a user in SQL, it is not even allowed to login and create a session until and unless proper permissions/privileges are granted to the user.

Following command can be used to grant the session creating privileges.

GRANT CREATE SESSION TO username;

Allow a User to create table

To allow a user to create tables in the database, we can use the below command,

GRANT CREATE TABLE TO username;

Provide user with space on tablespace to store table

Allowing a user to create table is not enough to start storing data in that table. We also must provide the user with privileges to use the available tablespace for their table and data.

ALTER USER username QUOTA UNLIMITED ON SYSTEM;

The above command will alter the user details and will provide it access to unlimited tablespace on system.

NOTE: Generally unlimited quota is provided to Admin users.

Grant all privilege to a User

sysdba is a set of priviliges which has all the permissions in it. So if we want to provide all the privileges to any user, we can simply grant them the sysdba permission.

```
GRANT sysdba TO username
```

Grant permission to create any table

Sometimes user is restricted from creating come tables with names which are reserved for system tables. But we can grant privileges to a user to create any table using the below command,

```
GRANT CREATE ANY TABLE TO username
```

Grant permission to drop any table

As the title suggests, if you want to allow user to drop any table from the database, then grant this privilege to the user,

```
GRANT DROP ANY TABLE TO username
```
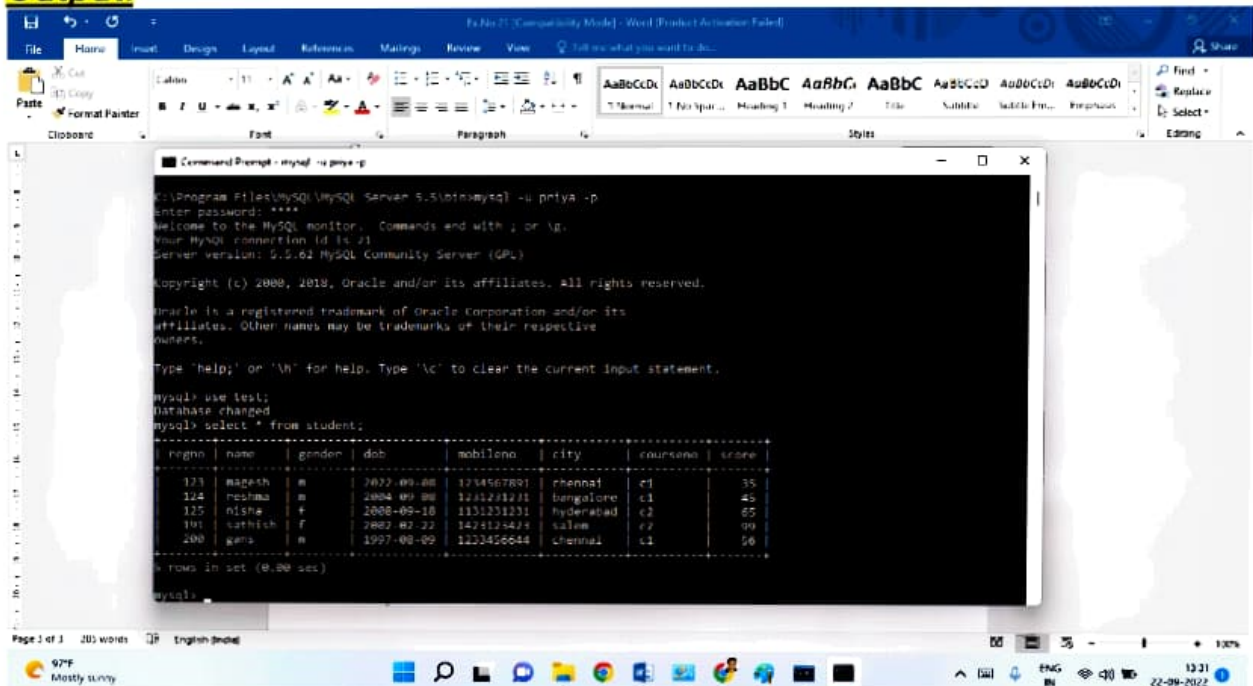
To take back Permissions

And, if you want to take back the privileges from any user, use the REVOKE command.

```
REVOKE CREATE TABLE FROM username
```

RESULT: Thus the DCL commands GRANT and REVOKE SQL executed successfully.

```
C:\Program Files\MySQL\MySQL Server 5.5\bin>mysql -u priya -p
Enter password: ****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 21
Server version: 5.5.62 MySQL Community Server (GPL)

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use test;
Database changed
mysql> select * from student;
+-------+---------+--------+------------+------------+-----------+----------+-------+
| regno | name    | gender | dob        | mobileno   | city      | courseno | score |
+-------+---------+--------+------------+------------+-----------+----------+-------+
|   123 | magesh  | m      | 2022-09-08 | 1234567891 | chennai   | c1       |    35 |
|   124 | reshma  | m      | 2004-09-08 | 1212121211 | bengalore | c1       |    45 |
|   125 | nisha   | f      | 2008-09-18 | 1131231231 | hyderabad | c2       |    65 |
|   191 | sathish | f      | 2002-02-22 | 1424123424 | salem     | c2       |    99 |
|   200 | gans    | m      | 1997-08-09 | 1233456644 | chennai   | c1       |    56 |
+-------+---------+--------+------------+------------+-----------+----------+-------+
5 rows in set (0.00 sec)

mysql>
```