

Assignment No:-2

- Aim: Design and develop (SQL DDL) statement to define, alter and drop the Schema.
- Objective: Write suitable DDL command to define, alter and drop down the schema.
- Theory: Theory must include following point with the hierarchy diagram.

SQL Language Statement

DDL	DML	DCL	TCL
Create	Insert	Grant	Commit
Alter	Update	Revoke	Rollback
Drop	Delete		Saves point
Rename	Select		
Truncate			

- Definition

DDL:- (Data definition language) consists of SQL commands that can be used to define the database schema. It is used to create and modify the structure of database objects in database. It creates, deletes and modifies the database structure but not the data.

DATA MANAGER
YASHWIN AGARWAL

1. Create → To create the database. The user has to give information like table name, column names & their data types.

* Syntax: `create table table-name (column-1 datatype, column-2 datatype);`

`CREATE TABLE table-name (column-1
datatype, column-2 datatype);`

* e.g.: `CREATE TABLE student_info`

`college_id INT(2), college-name`

`VARCHAR(30), Branch VARCHAR(10));`

2. ALTER : This command is used to add, delete or change columns in the existing table. The user needs to know the existing table name and can do add, delete or modify tasks easily.

* Syntax:

`ALTER TABLE table-name ADD`

`column-name datatype;`

* e.g.: In student - info table - name to add a new column for CGPA.

`ALTER TABLE Student_info`

`ADD CGPA number;`

3. **DROP**: This command is used to remove an existing table along with its structure from the database.

* Syntax : `DROP TABLE table-name;`

* Eg: To drop table student - info,

`DROP TABLE Student - info;`

4. **Rename**: To change name of table with or without data present using this command.

* Syntax: `RENAME TABLE <Table-name> to <new-table-name>;`

* Eg: To change the name of the table employee to emp we can use rename command:

`RENAME TABLE Employee to Emp;`

5. **Truncate** → This command is used to remove all rows from table but the structure of table still exists.

* Syntax: `TRUNCATE Table table-name;`

* Eg: To remove details of all students of all students for new batches but wants

to keep the table structure.

`TRUNCATE TABLE student_info;`

DCL (Data Control language) these include commands such as GRANT and REVOKE which mainly deal with the rights, permission and other controls of the database system.

1. GRANT → It is used to grant a privilege to a user. It allows specified users to perform specified tasks.

* Syntax :- `GRANT privilege-name on objectname to user;`

* e.g : `GRANT SELECT, UPDATE on employee to NEHA.`

2. REVOKE → It is used or employed to remove a privilege from a user.

* Syntax : `REVOKE privilege-name on objectname from user;`

* e.g : `REVOKE SELECT, UPDATE ON employee TO NEHA.`

- INPUT: Database
- OUTPUT: DDL & DCL Commands
- Conclusion: Thus, we have learnt DDL & DCL commands thoroughly.
- FAQs

1. How to drop a column from a table?
 → The 'DROP COLUMN' command is used to delete a column in an existing table.

* Syntax:

```
ALTER TABLE table-name
DROP COLUMN column-name;
```

e.g. To drop

2. How to add a primary key in an already existing table?

→ If you want to add a primary key to an already existing table, you have to use the ALTER syntax in SQL, ALTER TABLE Table-Name ADD CONSTRAINT constraint-name PRIMARY KEY(column-name)

3. How to create a new user in MySQL?

→ To create new user in MySQL you can use SQL commands you will need administrative privileges to create new user

Steps

- 1) Log in to MySQL: Open a terminal and log in the MySQL server as a user with administrative privilege.
- 2) Create The User - Use The Create user statement to create new user.
Create user 'username'@'localhost'
host identifies by 'password';
Current privilege After creating The user, you should grant the necessary privileges to the user.

Grant All privileges on databases name to 'username'@'localhost';

Assignment 2 Commands

Name: Vedant Vichare

Roll No. : 35

Prn: 1032222186

Panel :B

DDL Commands: -

Exercise-1

- mysql -u root -p
Enter password: *****
- mysql> create database info;
- mysql> use info;
- mysql> create table Suppliers(Sid int not null unique primary key,Name varchar(15) not null,Status varchar(15) not null default'Available',City varchar(10) not null);
Query OK, 0 rows affected (0.03 sec)
- mysql> desc Suppliers;
4 rows in set (0.00 sec)
- mysql> create table Parts(Pid int not null unique primary key,Pname varchar(10) not null,Colour varchar(10) not null default'Black',Weight float not null,City varchar(10) not null);
Query OK, 0 rows affected (0.03 sec)
- mysql> desc Parts;
5 rows in set (0.00 sec)
- mysql> create table Projects(Jid int not null unique primary key, Jname varchar(10) not null,City varchar(10) not null);
Query OK, 0 rows affected (0.02 sec)
- mysql> create table Shipment (Sid int not null,Pid int not null,Jid int not null,Qty int not null default'1',foreign key(Sid) references Suppliers(Sid),foreign key(Pid) references Parts(Pid),foreign key(Jid) references Projects(Jid));
Query OK, 0 rows affected (0.03 sec)
- mysql> desc Shipment;
4 rows in set (0.00 sec)

- mysql> alter table suppliers drop City;
Query OK, 0 rows affected (0.01 sec)
- mysql> alter table suppliers add (City varchar(15) not null);
Query OK, 0 rows affected (0.01 sec)Records: 0 Duplicates: 0 Warnings: 0

Exercise 2

- mysql> create database info2;
Query OK, 1 row affected (0.01 sec)
- mysql> use info2;
Database changed
- mysql> create table Hotel(HotelNo int not null unique primary key,Name varchar(10) not null,City varchar(10) not null);
Query OK, 0 rows affected (0.02 sec)
- mysql> desc Hotel;
3 rows in set (0.00 sec)
- mysql> create table Room(RoomNo int not null primary key,HotelNo int not null,foreign key(HotelNo) references Hotel(HotelNo),Type varchar(20) not null default'Duplex Suite',Price float not null default'2500');
Query OK, 0 rows affected (0.02 sec)
- mysql> desc Room;
4 rows in set (0.00 sec)
5 rows in set (0.00 sec)
- mysql> create table Guest(GuestNo int not null unique primary key,GuestName varchar(20) not null,GuestAddress varchar(25) not null);
Query OK, 0 rows affected (0.01 sec)
- mysql> desc Guest;
3 rows in set (0.00 sec)
- mysql> create table Booking(HotelNo int not null,foreign key(HotelNo) references Hotel(HotelNo),RoomNo int not null,foreign key(RoomNo) references Room(Room No),Datefrom char(8) not null,Dateto char(8) not null,GuestNo int not null,foreign key (GuestNo) references Guest(GuestNo));
Query OK, 0 rows affected (0.02 sec)
- mysql> desc Booking;

DCL Commands

- mysql> create database vedant;
Query OK, 1 row affected (0.01 sec)
- mysql> use vedant;
Database changed
- mysql> create table student(id int,name varchar(10));
Query OK, 0 rows affected (0.02 sec)

- mysql> insert into student values(1,'vedant');
Query OK, 1 row affected (0.01 sec)
 - mysql> insert into student values(2,'manish');
Query OK, 1 row affected (0.00 sec)
 - mysql> select * from student;
-
- mysql> select user from mysql.user;
 - mysql> create user 'sample' '@' localhost' identified by 'sample123';
Query OK, 0 rows affected (0.02 sec)
 - mysql> create user 'sample@localhost' identified by 'sample123';
Query OK, 0 rows affected (0.01 sec)
 - mysql> select user from mysql.user ;
 - mysql> show grants for 'sample' '@' localhost';
 - mysql> grant insert on vedant.student to 'sample' '@' localhost';
Query OK, 0 rows affected (0.01 sec)
 - mysql> show grants for 'sample' '@' localhost';
 - mysql> grant select on vedant.student to 'sample' '@' localhost';
Query OK, 0 rows affected (0.00 sec)
 - mysql> show grants for 'sample' '@' localhost';
 - mysql> revoke select on vedant.student from 'sample' '@' localhost';
Query OK, 0 rows affected (0.00 sec)
 - mysql> show grants for 'sample' '@' localhost';
 - mysql> drop user 'sample' '@' localhost';
Query OK, 0 rows affected (0.00 sec)

command prompt

- mysql> show databases;
-
- mysql> use vedant;
Database changed
 - mysql> select * from student;

Assignment 2 Output

Name: Vedant Vichare

Roll No. : 35

Prn: 1032222186

Panel :B

DDL Commands: -

Exercise-1

Output

```
mysql> desc Suppliers;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+
| Sid   | int       | NO   | PRI   | NULL    |        |
| Name  | varchar(15) | NO   |        | NULL    |        |
| Status | varchar(15) | NO   |        | Available |        |
| City  | varchar(10)  | NO   |        | NULL    |        |
+-----+-----+-----+-----+-----+
```

```
mysql> desc Parts;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+
| Pid   | int       | NO   | PRI   | NULL    |        |
| Pname | varchar(10) | NO   |        | NULL    |        |
| Colour | varchar(10) | NO   |        | Black   |        |
| Weight | float     | NO   |        | NULL    |        |
| City  | varchar(10)  | NO   |        | NULL    |        |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

```
mysql> desc Projects;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+
| Jid   | int       | NO   | PRI   | NULL    |        |
| Jname | varchar(10) | NO   |        | NULL    |        |
| City  | varchar(10)  | NO   |        | NULL    |        |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> desc Shipment;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+
| Sid   | int   | NO   | MUL  | NULL    |       |
| Pid   | int   | NO   | MUL  | NULL    |       |
| Jid   | int   | NO   | MUL  | NULL    |       |
| Qty   | int   | NO   |       | 1        |       |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

Alter Commands

Output

```
mysql> alter table suppliers drop City;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc Suppliers;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Sid   | int       | NO   | PRI | NULL    |        |
| Name  | varchar(15) | NO   |     | NULL    |        |
| Status | varchar(15) | NO   |     | Available |        |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> alter table suppliers add (City varchar(15) not null);
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc Suppliers;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Sid   | int       | NO   | PRI | NULL    |        |
| Name  | varchar(15) | NO   |     | NULL    |        |
| Status | varchar(15) | NO   |     | Available |        |
| City  | varchar(15) | NO   |     | NULL    |        |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

Exercise 2

DCL COMMANDS

Output

```
mysql> desc Hotel;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| HotelNo | int       | NO   | PRI | NULL    |       |
| Name     | varchar(10) | NO   |     | NULL    |       |
| City     | varchar(10) | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> desc Room;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default      | Extra |
+-----+-----+-----+-----+-----+
| RoomNo | int       | NO   | PRI | NULL        |       |
| HotelNo | int       | NO   | MUL | NULL        |       |
| Type    | varchar(20) | NO   |     | Duplex Suite |       |
| Price   | float      | NO   |     | 2500         |       |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

```
mysql> desc Guest;
+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| GuestNo | int       | NO   | PRI | NULL    |       |
| GuestName | varchar(20) | NO   |     | NULL    |       |
| GuestAddress | varchar(25) | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> desc Booking;
```

Field	Type	Null	Key	Default	Extra
HotelNo	int	NO	MUL	NULL	
RoomNo	int	NO	MUL	NULL	
Datefrom	char(8)	NO		NULL	
Dateto	char(8)	NO		NULL	
GuestNo	int	NO	MUL	NULL	

```
5 rows in set (0.00 sec)
```

DCL COMMANDS

Output

```
mysql> select user from mysql.user;
+-----+
| user      |
+-----+
| adeeb     |
| adi22     |
| kaushik1  |
| mysql.infoschema |
| mysql.session |
| mysql.sys    |
| root       |
| tanvi      |
+-----+
8 rows in set (0.00 sec)

mysql> select user from mysql.user
      -> ;
+-----+
| user      |
+-----+
| sample@localhost |
| adeeb     |
| adi22     |
| kaushik1  |
| mysql.infoschema |
| mysql.session |
| mysql.sys    |
| root       |
| sample     |
| tanvi      |
+-----+
10 rows in set (0.00 sec)

mysql> show grants for 'sample'@'localhost';
+-----+
| Grants for sample@localhost          |
+-----+
| GRANT USAGE ON *.* TO `sample`@`localhost` |
+-----+
1 row in set (0.00 sec)

mysql> show grants for 'sample'@'localhost';
+-----+
| Grants for sample@localhost          |
+-----+
| GRANT USAGE ON *.* TO `sample`@`localhost` |
| GRANT INSERT ON `vedant`.`student` TO `sample`@`localhost` |
+-----+
2 rows in set (0.00 sec)
```

```
mysql> show grants for 'sample'@'localhost';
+-----+
| Grants for sample@localhost
+-----+
| GRANT USAGE ON *.* TO `sample`@`localhost`
| GRANT SELECT, INSERT ON `vedant`.`student` TO `sample`@`localhost` |
+-----+
2 rows in set (0.00 sec)

mysql> show grants for 'sample'@'localhost';
+-----+
| Grants for sample@localhost
+-----+
| GRANT USAGE ON *.* TO `sample`@`localhost`
| GRANT INSERT ON `vedant`.`student` TO `sample`@`localhost` |
+-----+
2 rows in set (0.00 sec)

mysql> show databases;
+-----+
| Database
+-----+
| vedant
| information_schema
| performance_schema
+-----+
3 rows in set (0.01 sec)

mysql> select * from student;
+---+---+
| id | name |
+---+---+
| 1 | vedant |
| 2 | manish |
+---+---+
2 rows in set (0.00 sec)
```