**Commands in sql:**

To create database - create database db\_name;

To list all the dbs- show databases;

To use a specific db- use db\_name;

To delete a specific db – **drop** database db\_name;

To create table- **create table table\_name** ( column\_name\_1 datatype constraint null/not null, column\_name\_2 datatype constraint null/not null, -------) ;

To list all tables in a db – **sh0w tables**;

To see the tables attributes – **desc** table\_name;

**Sql statements:**

**Ddl** (data definition language): create, alter, drop, truncate.

**Dml** (data manipulation language): insert, delete, update.

**Tcl** (transaction control language): commit, rollback, savepoint.

**Dcl** (data control language): grant, revoke.

**Database:** it is a place to store the data in a systematic and organized manner.

**DDL (DATA DEFINITION LANGUAGE): CREATE, ALTER, DROP, TRUNCATE**

**1.Create:** used to create the database, tables.

**Create table table\_name**

(

Column\_name\_1 datatype constraint null/not null,

Column\_name\_2 datatype constraint null/not null,

-------) ;

Ex: create table habitat (id int primary key auto\_increment,

name varchar (64));

To create a table with a foreign key:

Create table animal (id int primary key auto\_increment,

Name varchar (64),

Species varchar (64),

Age int,

Habitat\_id int,

Foreign key (habitat\_id) references habitat(id));

**2.Alter:** used to modify (add rename) the table(column) into existing table.

* Add column

Syntax: alter table table\_name

add column\_name datatype constraint null/not null [after column\_name\_x(optional)]

* Drop column

Syntax: alter table table\_name

drop column\_name;

* Modify datatype

Syntax: alter table table\_name

modify column\_name datatype constraint null/ not null

* Modify null / not null

Syntax: alter table table\_name

modify column\_name existing\_datatype null/ not null

* Change the column name

Syntax: alter table table\_name

change old\_column\_name new\_col\_name existing datatype;

**3. Modify constraints in sql**

Alter table table\_name  
add constraint primary key (column\_name);  
  
alter table table\_name  
add constraint unique (column\_name);  
  
alter table table\_name  
add constraint check (column\_name);  
  
alter table table\_name  
add constraint foreign key (column\_name) references parent\_table\_name (column\_name);

**4.Drop:** this command is used to drop the table.

Syntax:

Drop table table\_name;

Remove primary key

🡪Syntax: alter table table\_name drop primary key;

Remove unique constraint (by constraint name)

🡪 Syntax: alter table table\_name drop index constraint\_name;

Remove foreign key constraint (by constraint name)

🡪 Syntax: alter table table\_name drop foreign key constraint\_name;

Remove check constraint (by constraint name)

🡪 Syntax: alter table table\_name drop check constraint\_name;

**5.Truncate:** this command is used to delete the all records that are present in the table.

Syntax:

Truncate table table\_name;

**(DML)- DATA MANIPULATION LANGUAGE**

**1.Insert**: this command is used to add records inside a table.

* Syntax 1: insert values directly into all columns

Insert into table\_name values (v1, v2, ..., vn), (v1, v2, ..., vn);

* Syntax 2: insert values into specific columns

Insert into table\_name (col1, col2, ..., coln)  
values (v1, v2, ..., vn), (v1, v2, ..., vn);

* Syntax 3: insert data using select statement

Insert into table\_name (col1, col2, ...)  
Select col1, col2, ... From another\_table where condition;

**2.Update:** this command is used to modify the records that are present in the table.

Syntax:

Update table\_name  
set column1 = value1, column2 = value2, ...  
Where condition;

Example:

Update animal  
set age = 10  
where id = 3;

**3.Delete:** this command is used to delete the records that are present in the table.

Syntax:

Delete from table\_name  
[where condition] ;

Example:

Delete from product

Where id=3;

**TCL (TRANSACTION CONTROL LANGUAGE):**

**1. Commit:** used to save all the transactions permanently in the database.

Syntax: Commit;

**2. Rollback**: used to undo transactions that have not yet been saved to the database.

Syntax: Rollback;

**3. Savepoint**: used to set a savepoint within a transaction to which you can later roll back.

Syntax:

Savepoint savepoint\_name;  
rollback to savepoint\_name;

**DQL [Data Query Language]**

**PROJECTIONS:**

Projections means the retrieval of data from the table by using column names.

Syntax: SELECT column\_name FROM table\_name;

1. SELECT clause:

This command is used to display the records from the table.

SELECT clause takes column name as a argument.

1. FROM clause:

FROM clause is used to put the table under execution.

FROM clause is the first executable clause.

It will go to the database, search for the given table and puts the table under execution.

FROM clause takes table name as a argument.

Note: Asterisk [\*] is used to select all the columns from the table.

**ALIAS:**

It is a alternative name given to the columns present in resultant table.

SYNTAX:

SELECT column\_name\_1 AS alias\_1,

column\_name\_2 AS alias\_2,

column\_name\_3 “alias #3”

* We can pass alias name by using AS keyword or “double quotes”.
* With or without using AS keyword, we can pass alias name.
* We can use double quotes for the alias if there are spaces and special characters involved in it.