DCL

DCL (Data Control Language) includes commands like GRANT and REVOKE, which are useful to give "rights & permissions." Other permission controls parameters of the database system.

Examples of DCL commands:

Commands that come under DCL:

Grant

Revoke

Grant:

This command is use to give user access privileges to a database.

Syntax:

GRANT SELECT, UPDATE ON MY_TABLE TO SOME_USER, ANOTHER_USER;

For example:

GRANT SELECT ON Users TO'Tom'@'localhost;

Revoke:

It is useful to back permissions from the user.

Syntax:

REVOKE privilege_nameON object_nameFROM {user_name |PUBLIC |role_name}

For example:

REVOKE SELECT, UPDATE ON student FROM BCA, MCA;

STRUCTURE CREATION , ALTERATION

CREATION:

There are two CREATE statements available in SQL:

CREATE DATABASE

CREATE TABLE

CREATE DATABASE

A Database is defined as a structured set of data. So, in SQL the very first step to store the data in a well structured manner is to create a database. The CREATE DATABASE statement is used to create a new database in SQL.

Syntax:

CREATE DATABASE database_name;

database_name: name of the database.

Example Query:

This query will create a new database in SQL and name the database as my_database.

CREATE DATABASE my_database;

CREATE TABLE

We have learned above about creating databases. Now to store the data we need a table to do that. The CREATE TABLE statement is used to create a table in SQL. We know that a table comprises of rows and columns. So while creating tables we have to provide all the information to SQL about the names of the columns, type of data to be stored in columns, size of the data etc. Let us now dive into details on how to use CREATE TABLE statement to create tables in SQL.

Syntax:

CREATE TABLE table_name(column1 data_type(size),column2 data_type(size),column3 data_type(size),....);

Table_Name: name of the table.

column1 name of the first column.

Data_Type: Type of data we want to store in the particular column.

For example,int for integer data.

size: Size of the data we can store in a particular column. For example if for a column we specify the data_type as int and size as 10 then this column can store an integer number of maximum 10 digits.

Example Query:

This query will create a table named Students with three columns, ROLL_NO, NAME and SUBJECT.

CREATE TABLE Students(ROLL_NO int(3),NAME varchar(20),SUBJECT varchar(20));

This query will create a table named Students. The ROLL_NO field is of type int and can store an integer number of size 3. The next two columns NAME and SUBJECT are of type varchar and can store characters and the size 20 specifies that these two fields can hold maximum of 20 characters.

ALTERATION

The SQL ALTER TABLE command is used to add, delete or modify columns in an existing table. You should also use the ALTER TABLE command to add and drop various constraints on an existing table.

Syntax

The basic syntax of an ALTER TABLE command to add a New Column in an existing table is as follows.

ALTER TABLE table_name ADD column_name datatype;

The basic syntax of an ALTER TABLE command to DROP COLUMN in an existing table is as follows.

ALTER TABLE table_name DROP COLUMN column_name;

The basic syntax of an ALTER TABLE command to change the DATA TYPE of a column in a table is as follows.

ALTER TABLE table_name MODIFY COLUMN column_name datatype;

The basic syntax of an ALTER TABLE command to add a NOT NULL constraint to a column in a table is as follows.

ALTER TABLE table_name MODIFY column_name datatype NOT NULL;

The basic syntax of ALTER TABLE to ADD UNIQUE CONSTRAINT to a table is as follows.

ALTER TABLE table_name

ADD CONSTRAINT MyUniqueConstraint UNIQUE(column1, column2...);

The basic syntax of an ALTER TABLE command to ADD CHECK CONSTRAINT to a table is as follows.

ALTER TABLE table_name

ADD CONSTRAINT MyUniqueConstraint CHECK (CONDITION);

The basic syntax of an ALTER TABLE command to ADD PRIMARY KEY constraint to a table is as follows.

ALTER TABLE table_name

ADD CONSTRAINT MyPrimaryKey PRIMARY KEY (column1, column2...);

The basic syntax of an ALTER TABLE command to DROP CONSTRAINT from a table is as follows.

ALTER TABLE table_name

DROP CONSTRAINT MyUniqueConstraint;

If you're using MySQL, the code is as follows −

ALTER TABLE table_name

DROP INDEX MyUniqueConstraint;

The basic syntax of an ALTER TABLE command to DROP PRIMARY KEY constraint from a table is as follows.

ALTER TABLE table_name

DROP CONSTRAINT MyPrimaryKey;

If you're using MySQL, the code is as follows −

ALTER TABLE table_name

DROP PRIMARY KEY;