

SQL (STRUCTURAL QUERY LANGUAGE)

- SQL is a standard query language for storing, manipulating and retrieving data in databases.
- Each command having its own meaning.
- By this language we can communicate with DB or DWH.
- It is non-case sensitive.
- It is not GUI (Graphical User Interface)

Commands of SQL or Sub-languages of SQL

DDL (Data Definition Language)

- CREATE
- ALTER
ADD, MODIFY, RENAME, DROP.
- RENAME
- DROP
- TRUNCATE

DML (Data Manipulation Language)

- INSERT
- UPDATE
- SELECT
- DELETE

DCL (Data Control Language)

- Grant
- Revoke

TCL (Transaction Control Languages)

- ROLLBACK
- COMMIT

DQL (Data Query Language)

- Select

Data Types in SQL

Number : It accept only numerical value

Char : It accept the character and numerical

valueVarchar2 : It accept the character and numerical

valueDate : It accept the dates

CHAR	VARCHAR2
Fixed Length	Flexible Length
Name char(10)	Name varchar2(10)
Raju----- ('-' empty is unused)	Raju -----('-' send back to DB)
Maximum size of length is 0 - 255	Maximum size of length is 0 - 255

1. DDL (Data Definition Language):

- DDL commands are used to define the DB objects.
- These commands are directly interact with DB hence auto commit (Automatic Save).
- These commands are not rollback.
- These commands are deals with only structure of the table.

CREATE: This command is used for define or create the DB object like table, views, Store procedure etc...

Syntax:

```
CREATE TABLE <TABLE NAME> (COLUMN_NAME DATATYPE (SIZE),  
COLUMN_NAME2 DATATYPE (SIZE), COLUMN_NAME3 DATATYPE (SIZE).....);
```

Example:

```
CREATE TABLE COLLEGE (REGNUMBER VARCHAR2 (10), STUDENTNAME CHAR  
(30), PHONENUMBER NUMBER (10), BRANCH VARCHAR2 (10));
```

DESC:

Display the description of the table (structure of table)

Example:

DESC College;

REGNUMBER	VARCHAR2 (10)
STUDENTNAME	CHAR (30)
PHONENUMBER	NUMBER (10)
BRANCH	VARCHAR2 (10)

ALTER: This command is used for changes or modify structure of the attribute i.e. this command is meant for only structure of the attribute.

(Attribute name datatype (size))

❖ ADD:

By using this command we can add or insert the attribute (column) to the existing table.

Syntax:

ALTER TABLE <TN> ADD (CN1 DATATYPE (SIZE), CN2 DATATYPE (SIZE),);

Example:

ALTER TABLE COLLAGE ADD (HOD VARCHAR2 (10), CITY VARCHAR2 (20));

❖ **MODIFY:**

By using this command we can change the data type and size.

Syntax:

Example: ALTER TABLE <TABLENAME> MODIFY (COLUMN_NAME1 DATATYPE(SIZE), COLUMN_NAME2 DATATYPE (SIZE),.);

ALTER TABLE COLLAGE MODIFY (HOD CHAR (10));

❖ **DROP:**

By using this command we can delete the column permanently from the DB.

Syntax:

ALTER TABLE <TABLENAME> DROP (COLUMN_NAME1);

Example:

ALTER TABLE COLLAGE DROP (CITY);

❖ **RENAME:**

By using this command we can give the new name to the existing name to attribute (rename).

Syntax:

**ALTER TABLE <TABLENAME> RENAME COLUMN EXISTING
COLUMN_NAME TO NEW COLUMN_NAME;**

Example:

ALTER TABLE COLLAGE RENAME COLUMN HOD TO BRANCHHEAD;

DROP:

By using this command we delete the table permanently from DB.

Syntax:

DROP TABLE <TABLE NAME>;

Example:

DROP TABLE COLLAGE;

RENAME

- By using this command we can give new name to the table.

Syntax:

RENAME <EXISTING TABLE_NAME> TO <NEW TABLE_NAME>;

Example:

RENAME COLLAGE TO COLLAGE_1;

FLASHBACK <DB OBJECT NAME> TO BEFORE DROP;

FLASHBACK TABLE COLLAGE TO BEFORE DROP;

To view the objects in recycle bin:

SELECT * FROM RECYCLE BIN

or

SHOW RECYCLE BIN.

TRUNCATE

- By using this command we can delete whole data of the table at a single shot, but structure remainssame.

Syntax:

TRUNCATE TABLE

**<TABLE_NAME>Example: TRUNCATE
TABLE COLLAGE_1;**