SQL COMMANDS

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DQL(Data Query Language)

To fetch the data from the database

Example: SELECT

DML(Data Manipulation Language)-

To modify the database objects

Example: INSERT,UPDATE,DELETE

DDL(Data Definition Language)

To create & modify database objects

Example: CREATE,DROP,ALTER,TRUNCATE

1.Fundamentals of SQL

CREATE

CREATE statement is used to create a table

Syntax:

```
CREATE TABLE ''TABLE_NAME''(
    ''COLUMN1''  ''DATA_TYPE''  CONSTRAINTS,
    ''COLUMN2''  ''DATA_TYPE''  CONSTRAINTS,
    ''COLUMN3''  ''DATA_TYPE''  CONSTRAINTS,
    ……..
    ''COLUMN N''  ''DATA_TYPE'' CONSTRAINTS
);
```

INSERT

INSERT statement is used insert new data into the table

Syntax:

INSERT INTO

"TABLE_NAME" (COL1, COL2, ……..COL_N)

VALUES (Col_val_1,Col_val_2, ……. Col_val_N);

Import data from file(PostgreSQL)

For csv file

COPY TABLE_NAME(column1, column2,…) FROM FILE_PATH DELIMITER ' , ' CSV HEADER;

For txt file

COPY TABLE_NAME(column1, column2,…) FROM FILE_PATH DELIMITER ' , ' ;

SELECT

SELECT statement is used to retrieve data from the table

Syntax

SELECT * FROM "TABLE_NAME";

For select one column

SELECT "COLUMN_NAME" FROM "TABLE_NAME";

For select multiple columns

SELECT "COLUMN1,COLUMN2,..."

FROM "TABLE_NAME";

For select all columns

SELECT * FROM "TABLE_NAME";

DISTINCT

DISTINCT keyword is used to eliminate all duplicate records & fetch only unique records

Syntax:

SELECT DISTINCT(*) FROM "TABLE_NAME";

WHERE

WHERE clause is used to filter a records

Syntax:

SELECT "COLUMN_NAME(S)"

FROM “TABLE_NAME “

WHERE CONDITION;

AND/OR

The AND/OR is used to combine multiple conditions

Syntax:

SELECT “COLUMN_NAMES(s)”

FROM “TABLE_NAME”

WHERE CONDITION AND/OR CONDITION;

UPDATE

It is used to modify the existing data in the table

Syntax:

UPDATE “TABLE_NAME”

SET COL_1=VAL_1,COL_2=VAL_2,…

WHERE CONDITION;

DELETE

It is used to delete existing records in the table

Syntax:

For delete all rows

```
DELETE FROM "TABLE_NAME";
```

For delete single/multiple row(s)

```
DELETE FROM "TABLE_NAME "
WHERE CONDITION;
```

ALTER

It is used to change the definition or structure of the table

Syntax:

ADD COLUMN

```
ALTER TABLE " TABLE_NAME"
ADD "COLUMN_NAME " "DATA_TYPE";
```

DROP COLUMN

```
ALETR TABLE "TABLE_NAME"
DROP "COLUMN_NAME";
```

MODIFY DATA TYPE

```
ALTER TABLE "TABLE_NAME"
ALTER COLUMN "COL_NAME" TYPE NEW_DATA_TYPE;
```

RENAME COLUMN

ALTER TABLE "TABLE_NAME"

RENAME COLUMN "COL_NAME" TO "NEW_NAME";

ADD CONSTRAINTS

ALTER TABLE "TABLE_NAME"

ADD CONSTRAINT COL_NAME CHECK CONDITION;

2.Filtering Commands

IN

Used to reduce multiple OR logical operator in SELECT,DELETE,INSERT & UPDATE statements

Syntax:

SELECT "COL_NAME" FROM "TABLE_NAME"

WHERE "COL_NAME" IN ('VAL1', 'VAL2',...);

BETWEEN

Used to retrieve data within a given range

Syntax:

SELECT "COL_NAME(S)" FROM "TABLE_NAME"

WHERE "COL_NAME" BETWEEN "VAL1" AND "VAL2";

LIKE

Used to perform pattern matching/regex using wildcards(% , _)

% - match any string of any length

_ - match on a single character

Syntax:

SELECT "COL_NAME" FROM "TABLE_NAME"

WHERE "COL_NAME" LIKE 'PATTERN';

3.Ordering Commands

ORDER BY

Used to sort the data & it is only used in SELECT statement