**SQL Commands**

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| **DDL** | **DML** |
| Used to define database objects like tables, indexes, views, etc. | Used to manipulate data within the database. |
| Examples of DDL statements include CREATE, ALTER, and DROP. | Examples of DML statements include SELECT, INSERT, UPDATE, and DELETE. |
| Changes made using DDL affect the structure of the database. | Changes made using DML affect the data stored in the database. |
| DDL statements are not transactional, meaning they cannot be rolled back. | DML statements are transactional, meaning they can be rolled back if necessary. |
| DDL statements are usually executed by a database administrator. | DML statements are executed by application developers or end-users. |
| DDL statements are typically used during the design and setup phase of a database. | DML statements are used during normal operation of a database. |
| Examples of DDL statements: CREATE TABLE, DROP TABLE, ALTER TABLE, CREATE INDEX, etc. | Examples of DML statements: SELECT, INSERT, UPDATE, DELETE, etc. |

**DDL(Data Definition Language) Commands**

1. **CREATE:** This command is used to create the database or its objects (like table, index, function, views, store procedure, and triggers).

***CREATE TABLE <TABLE NAME>(COLUMN1 DATATYPE(SIZE), COLUMN2 DATATYPE(SIZE), …., COLUMNN DATATYPE(SIZE));***

1. **DROP:** This command is used to delete objects from the database.

***DROP TABLE <TABLE NAME>;***

1. **ALTER:** This is used to alter the structure of the database.

***ALTER TABLE <TABLE NAME> <CHANGES>***

e.g. 1. ALTER TABLE STUDENTS ADD COLUMN ADDRESS

VARCHAR2(30);

2. ALTER TABLE STUDENTS DROP COLUMN MARKS;

1. **TRUNCATE:** This is used to remove all records from a table, including all spaces allocated for the records are removed.

***TRUNCATE TABLE <TABLE NAME>;***

1. **RENAME:** This is used to rename an object existing in the database.

***ALTER TABLE <TABLE NAME> RENAME TO <NEW TABLE NAME>;***

**DML(Data Manipulation Language) Commands**

1. **SELECT:** It is used to retrieve data from the database.

**To select all data**

***SELECT \* FROM <TABLE NAME>;***

**To select specific columns**

***SELECT COL1, COL2, …, COLN FROM <TABLEL NAME>;***

**To select all columns according to certain conditions**

***SELECT \* FROM <TABLE NAME> WHERE <CONDITION>;***

**To select specific columns according to certain conditions**

***SELECT COL1, COL2, ..., COLN FROM <TABLE NAME> WHERE <CONDITION>;***

1. **INSERT:** It is used to insert data into a table.

***Insert into <table name> values(val1, val2, …, valN);***

***OR***

***Insert into <table name> values(col1=val1, col2=val2, …, colN=valN);***

***#note: to insert multiple values into the table without writing the whole line every time we enter, we have to write insert command once, and after that “/” can be used to put direct values according to column names, as user inputs are taken in a program.***

SQL> insert into table name values(‘&col1’, ‘&col2’, …., ‘&colN’);

SQL> /

SQL> Enter value for col1 : val1

1. **UPDATE:** It is used to update existing data within a table.

***UPDATE TABLE <TABLE NAME> SET <COLUMN NAME>=<NEW VAL> WHERE <CONDITION>;***

1. **DELETE:** It is used to delete records from a database table.

***DELETE FROM <TABLE NAME> WHERE <CONDITION>;***

**TCL (Transaction Control Language) Commands**

1. **COMMIT:** Commits a Transaction.

***COMMIT;***

1. **ROLLBACK:** Rollbacks a transaction in case of any error occurs.

***ROLLBACK;***

1. **SAVEPOINT:** Sets a save point within a transaction.

***SAVEPOINT <SAVEPOINT NAME>;***