
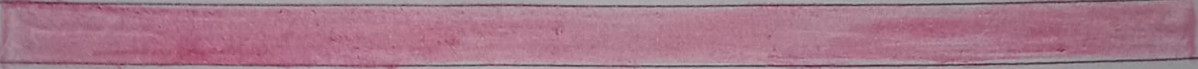
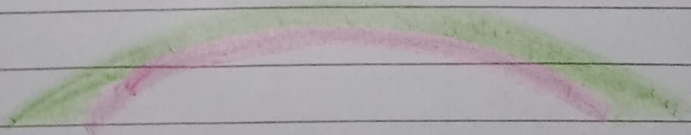


# ASSIGNMENT - 2



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## Data Language

Structured Query Language (SQL) as we all know is the database language by the use of which we can perform certain operations on the existing database and also we can use this language to create a database. SQL uses certain commands like Create, Drop, Insert, etc. to carry out the required tasks.

There are some SQL commands are mainly categorized into four categories are as follows as:

(i) DDL.

Data Definition Language

(ii) DQL

Data Query Language

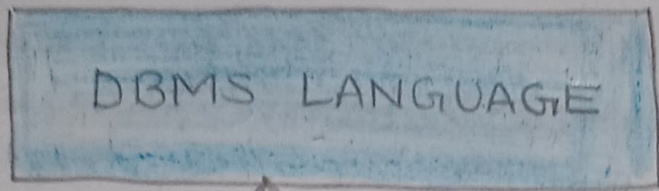
(iii) DML

Data Manipulation Language

(iv) DCL

Data Control Language

Read, update, manipulate and store data in a database using database languages.



DDL

DCL

DML

TCL



Once data is stored or filled it requires manipulation like insertion, deletion, updating and modification of data. For example these operations a set of languages are provided by the database management system (DBMS). So, the database languages are used to read, update and store data in the database.

## 1. DDL (Data Definition Language)

DDL or Data Definition Language actually consists of the SQL commands that can be used to define the database schema. It simply deals with descriptions of the database schema and is used to create and modify the structure of database objects in the database.

The language is used to create database, tables, alter them, etc. With this, you can also rename the database schema.

## Data Definition Language

- Create
- Drop
- Truncate
- Rename



## Examples of DDL commands :

- (i) CREATE - It is used to create the database or its objects (like table, index, function, views, store procedure and triggers).
- (ii) DROP - It is used to delete objects from the database.
- (iii) ALTER - It is used to alter the structure of the database.
- (iv) TRUNCATE - It is used to remove all records from a table including all spaces allocated for the records are removed.
- (v) COMMENT - It is used to add comments to the data dictionary.
- (vi) RENAME - It is used to rename an object existing in the database.



## 2. DQL (Data Query Language)

DQL statements are used for performing queries on the data within schema objects. The purpose of the DQL command is to get some schema relation based on the query passed to it.

### Example of DQL:

(1) SELECT - It is used to retrieve data from the database.

## 3. DML (Data Manipulation Language)

The SQL commands that deal with the manipulation of data present in the database belong to DML or Data Manipulation Language and this includes most of the SQL statements.

The language used to manipulate the database like inserting data, updating table, retrieving record from a table, etc. is

## Data Manipulation Language

- Select
- Insert
- Delete
- Update



is known as Data Manipulation Language.

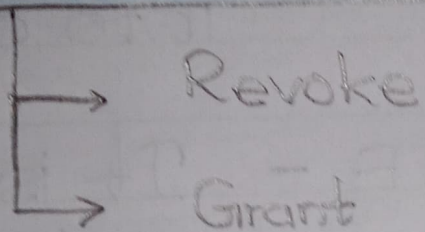
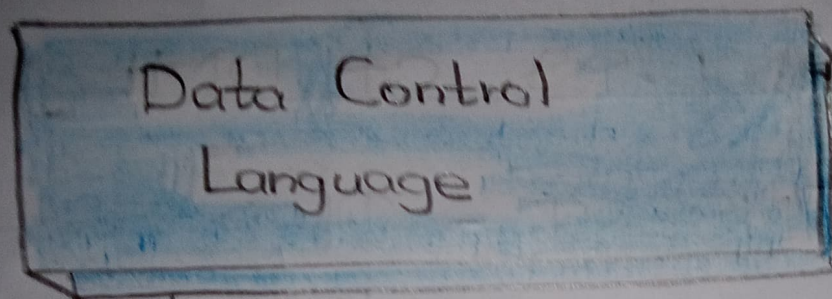
### Examples of DML:

- (i) INSERT - It is used to insert data into a table.
- (ii) UPDATE - It is used to update existing data within a table.
- (iii) DELETE - It is used to delete records from a database table.

### 4. DCL (Data Control Language)

DCL includes commands such as GRANT and REVOKE which mainly deal with the rights, permissions and other controls of the database system.

GRANT privilege to a user using the GRANT statement. In the same way, revoke the privilege using the REVOKE statement. Both of these





These statements come under the Data Control Language (DCL).

### Examples of DCL commands:

- (i) GRANT - It gives users access privileges to database.
- (ii) REVOKE - It withdraw user's access privileges given by using the GRANT command.

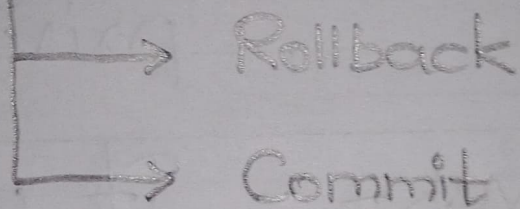
## 5. TCL (Transaction Control Language)

TCL commands deal with the transaction within the database.

TCL is a language which manages the transactions within the database. It is used to execute the changes made by the data manipulation language statements. The TCL commands are: Commit, Rollback and Savepoint. Transaction control language is mainly used to manage transaction in the database.



## Transaction Control Language





## Examples of TCL commands:

- (i) COMMIT - It commits a transaction.
- (ii) ROLLBACK - It rollbacks a transaction in case of any error occurs.
- (iii) SAVEPOINT - It sets a savepoint within a transaction.
- (iv) SET TRANSACTION - It specifies the characteristics for the transaction.

## Structured Query Language (SQL)

Many data description languages use a declarative syntax to define columns and data types. Structured Query Language (SQL); however, uses a collection of imperative verbs whose effect is to modify the schema of the database by adding, changing or deleting definitions of tables or other elements. These statements can be freely mixed with other SQL