

What is DDL and DML?

Asked 9 years, 11 months ago Active 3 months ago Viewed 447k times



I have heard the terms DDL and DML in reference to databases, but I don't understand what they are.

318

What are they and how do they relate to SQL?



sql ddl dml



108



edited Jun 13 '19 at 19:51



Dancrumb

21.7k 5 53 118

asked Apr 5 '10 at 11:52



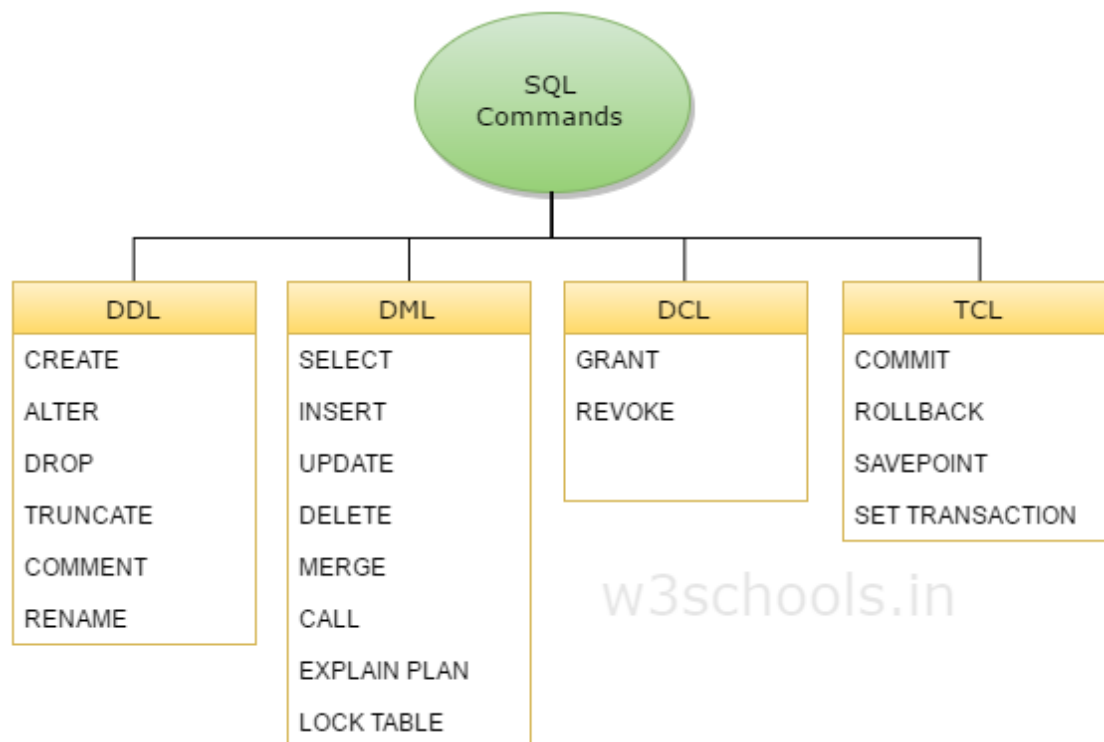
Sachindra

4,351 6 24 36

12 Answers



229



More information see here: [MySQL What is DDL, DML and DCL?](#), the original is as follows:

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DDL is short name of Data Definition Language, which deals with database schemas and descriptions, of how the data should reside in the database.

- CREATE – to create database and its objects like (table, index, views, store procedure, function and triggers)
- ALTER – alters the structure of the existing database
- DROP – delete objects from the database
- TRUNCATE – remove all records from a table, including all spaces allocated for the records are removed
- COMMENT – add comments to the data dictionary
- RENAME – rename an object

DML

DML is short name of Data Manipulation Language which deals with data manipulation, and includes most common SQL statements such SELECT, INSERT, UPDATE, DELETE etc, and it is used to store, modify, retrieve, delete and update data in database.

- SELECT – retrieve data from the a database
- INSERT – insert data into a table
- UPDATE – updates existing data within a table
- DELETE – Delete all records from a database table
- MERGE – UPSERT operation (insert or update)
- CALL – call a PL/SQL or Java subprogram
- EXPLAIN PLAN – interpretation of the data access path
- LOCK TABLE – concurrency Control

DCL

DCL is short name of Data Control Language which includes commands such as GRANT, and mostly concerned with rights, permissions and other controls of the database system.

- GRANT – allow users access privileges to database
- REVOKE – withdraw users access privileges given by using the GRANT command

TCL

TCL is short name of Transaction Control Language which deals with transaction within a database.

- COMMIT – commits a Transaction
- ROLLBACK – rollback a transaction in case of any error occurs
- SAVEPOINT – to rollback the transaction making points within groups
- SET TRANSACTION – specify characteristics for the transaction



- 1 you might want to expand you answer a little in any future case that link would become unavailable – [svarog](#) Jun 28 '17 at 8:20
- 2 Sometimes you'll also see commands such as SELECT / SHOW / EXPLAIN / HELP split off from DML and grouped under DQL , with the Q from Query -- because they don't really manipulate anything. – [okdewit](#) Nov 17 '17 at 14:04
- 1 TRUNCATE should be DML – [Pete Alvin](#) Sep 2 '18 at 10:20



333



DDL is [Data Definition Language](#) : it is used to define data **structures**.

For example, with SQL, it would be instructions such as `create table` , `alter table` , ...



DML is [Data Manipulation Language](#) : it is used to manipulate **data itself**.

For example, with SQL, it would be instructions such as `insert` , `update` , `delete` , ...

answered Apr 5 '10 at 11:56



Pascal MARTIN

358k 64 613 636

- 6 DESCRIBE is DDL or DML? – [Tom J Muthirenthi](#) Jan 19 '17 at 3:21
- 2 @TomJMuthirenthi I don't think DESCRIBE fits into any of the two. It just returns it's own representation of how a Table/DB is structured. You can achieve the same thing with e.g. CREATE but not as "human-readable" – [JensV](#) Sep 11 '17 at 15:26

If SELECT is considered DML, then DESCRIBE should be considered DDL. – [Shloim](#) Aug 29 '18 at 14:56



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DDL is **Data Definition Language** : Specification notation for defining the database schema. It works on Schema level.

DDL commands are:

`create`, `drop`, `alter`, `rename`



For example:

`create table` account (

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DML is Data Manipulation Language .It is used for accessing and manipulating the data.

DML commands are:

`select, insert, delete, update, call`

For example :

`update account set balance = 1000 where account_number = 01;`

edited Jul 23 '19 at 12:01

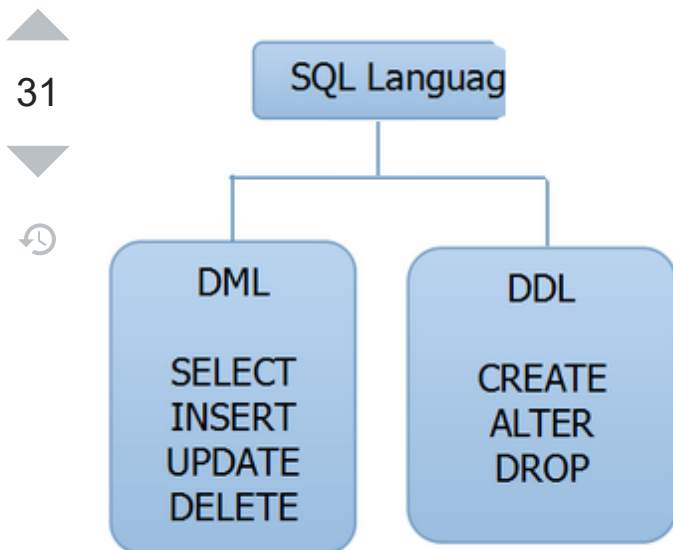
answered Jul 31 '17 at 17:13



Raju

575 5 10

- 1 @isapir There are three general ways you can “manipulate” data in SQL: (1)You can change which results are presented. (2)You can change how the results are presented or organized (in terms of things like sort order, etc). (3)You can change the underlying data. In the first case, you can change which results are presented by using different WHERE clauses, JOIN predicates, etc, in a SELECT statement, ie- "select * from account ;" will give a much different result (assuming account has more than 1 row) than select * from account where balance = 1000; – [Raju](#) Sep 30 '18 at 8:28
- 1 When you select the data in different formats, you modify the presentation of the data for that query, and not the data itself. The M in DML stands for Manipulation, or in laymen terms Modification, of the data. SELECT does not modify the data. Alternatively, TRUNCATE does, and is therefore a DML instruction and NOT a DDL one. – [isapir](#) Sep 30 '18 at 17:43



DDL, Data Definition Language

- Create and modify the structure of database object in a database.

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- CREATE , ALTER , DROP , TRUNCATE , COMMIT , etc.

DML, Data Manipulation Language

DML statement are affect on table. So that is the basic operations we perform in a table.

- Basic crud operation are perform in table.
- These crud operation are perform by the SELECT , INSERT , UPDATE , etc.

Below Commands are used in DML:

- INSERT , UPDATE , SELECT , DELETE , etc.

edited May 5 '17 at 21:47



Dorian

16.2k 6 94 98

answered Dec 31 '16 at 8:38



JegsVala

1,435 16 23



In layman terms suppose you want to build a house, what do you do.

13

DDL i.e Data Definition Language



1. Build from scratch
2. Rennovate it
3. Destroy the older one and recreate it from scratch



that is

1. CREATE
2. ALTER
3. DROP & CREATE

DML i.e. Data Manipulation Language

People come/go inside/from your house

1. SELECT
2. DELETE
3. UPDATE
4. TRUNCATE

DCL i.e. Data Control Language

You want to control the people what part of the house they are allowed to access and kind of access.

1. GRANT PERMISSION

edited Jun 21 '18 at 3:16

answered Jul 4 '17 at 6:42



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11

DML is abbreviation of **Data Manipulation Language**. It is used to retrieve, store, modify, delete, insert and update data in database.

Examples: SELECT, UPDATE, INSERT statements



DDL is abbreviation of **Data Definition Language**. It is used to create and modify the structure of database objects in database.

Examples: CREATE, ALTER, DROP statements

Visit this site for more info: <http://blog.sqlauthority.com/2008/01/15/sql-server-what-is-dml-ddl-dcl-and-tcl-introduction-and-examples/>

edited Jul 6 '18 at 0:49



Pang

7,938

16

70

108

answered Nov 22 '13 at 1:55



Uc.IT_samuel

193

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3

DDL is Data Definition Language: Just think you are defining the DB. So we use CREATE,ALTER TRUNCATE commands.

DML is after defining we are Manipulating the data. So we use SELECT,INSERT, UPDATE, DELETE command.



Remember DDL commands are auto-committed. You don't need to use COMMIT statements. DML (Data Manipulation Language) commands need to be committed/rolled back.

answered Jun 6 '16 at 13:52



Chinmoy

838

8

11

▲
2

DDL = Data Definition Language, any commands that provides structure and other information about your data



DML = Data Manipulation Language, there's only 3 of them, INSERT, UPDATE, DELETE. 4, if you will count `SELECT * INTO x_tbl from tbl` of MSSQL (ANSI SQL: `CREATE TABLE x_tbl AS SELECT * FROM tbl`)



answered Apr 5 '10 at 12:01



Michael Buen

34.3k

6

82

110



In simple words.

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answered Sep 9 '15 at 11:00



Sakib

91 7

DDL: Change the schema 2 **DML:** Change the data Seems specific to MySQL limitations ([rails's source code](#))

answered May 5 '17 at 21:48



Dorian

16.2k 6 94 98

DDL

2 Create,Alter,Drop of (Databases,Tables,Keys,Index,Views,Functions,Stored Procedures)

DML

Insert ,Delete,Update,Truncate of (Tables)

answered Jul 2 '17 at 11:57



rajender kumar

326 2 10

DDL stands for Data Definition Language. DDL is used for defining structure of the table such as create a table or adding a column to table and even drop and truncate table. **DML** stands for Data Manipulation Language. As the name suggest DML used for manipulating the data of table. There are some commands in DML such as insert and delete.

answered Apr 26 '17 at 7:27



Rishish

11 2



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