What is DDL and DML? [closed]

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

What are they and how do they relate to SQL?

sql   ddl   dml

★

94

edited Jun 13 at 19:51   asked Apr 5 '10 at 11:52

Dancrumb   **Sachindra**
18.5k   4   50   109   **2,074**   5   23   35

closed as too broad by meagar ♦ Dec 31 '18 at 19:15

Please edit the question to limit it to a specific problem with enough detail to identify an adequate answer. Avoid asking multiple distinct questions at once. See the How to Ask page for help clarifying this question.

If this question can be reworded to fit the rules in the help center, please edit the question.

12 Answers

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305

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DDL is **Data Definition Language** : it is used to define data **structures**.

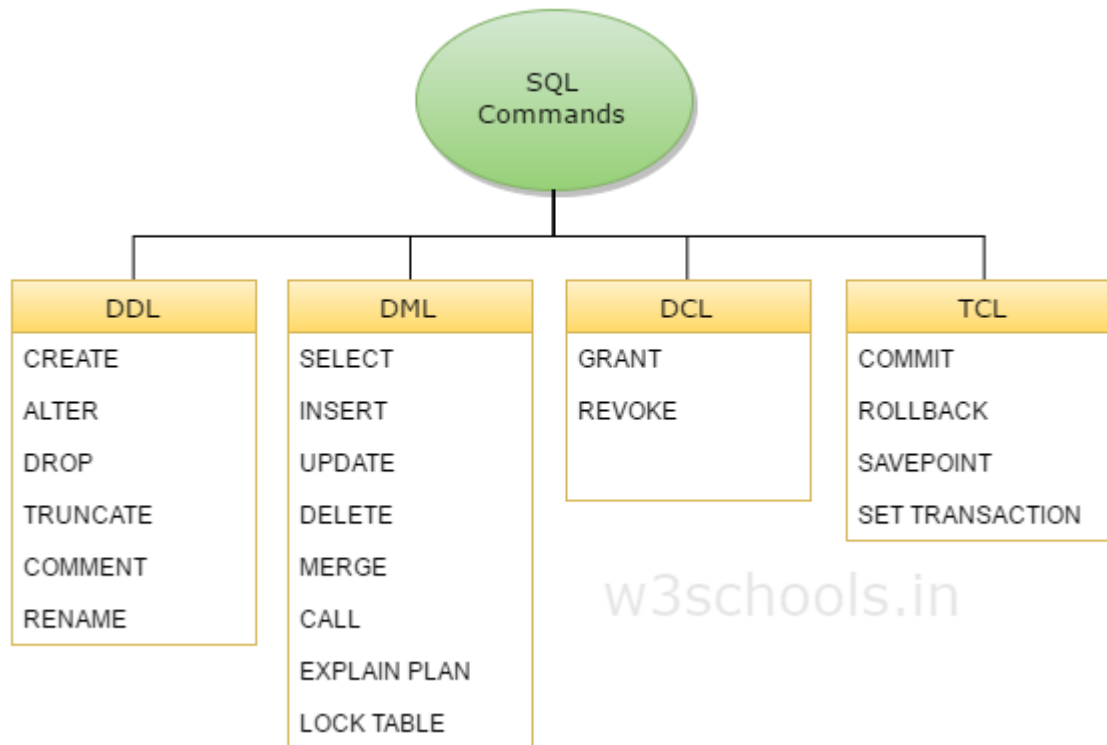For example, with SQL, it would be instructions such as `create table` , `alter table` , ...

DML is **Data Manipulation Language** : it is used to manipulate **data itself**.

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4   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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More information see here: MySQL What is DDL, DML and DCL?, the original is as follows:

DDL

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- 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.

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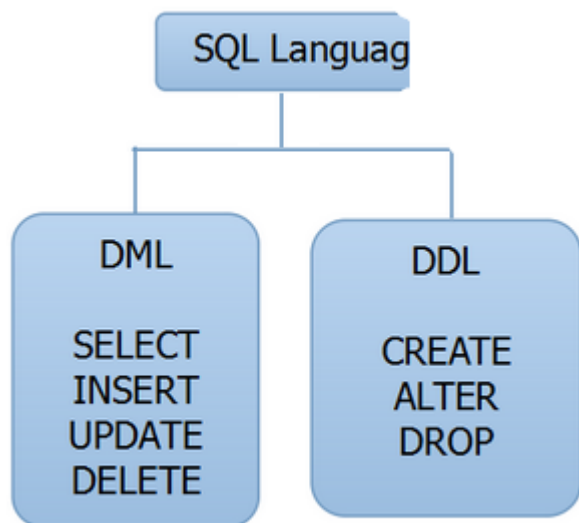- SET TRANSACTION – specify characteristics for the transaction

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

1   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. – Fx32 Nov 17 '17 at 14:04

     TRUNCATE should be DML – Pete Alvin Sep 2 '18 at 10:20

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DDL, Data Definition Language

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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	answered Dec 31 '16 at 8:38
Dorian	JegsVala
14.1k 4 82 93	**1,220** 14 22

This is excellent. — Tigerjz32 Mar 24 '17 at 21:18

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

28

DDL commands are:

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

For example:

```
create table account (
  account-number  char(10),
 balance integer);
```

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

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For example :

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

edited Oct 5 '18 at 15:54   answered Jul 31 '17 at 17:13

Raju
444   5   10

@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 ✎

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

13

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

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

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

Satish Patel
1,040　17　32

9

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　　　　　answered Nov 22 '13 at 1:55

Pang　　　　　　　　　　　Uc.IT_samuel
7,154　16　68　108　　　　**138**　1　9

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.

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answered Jun 6 '16 at 13:52

Chinmoy
768   7   11

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[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
32.8k   5   76   105

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In simple words.

DDL(Data definition language): will work on structure of data. define the data structures.

DML (data manipulation language): will work on data. manipulates the data itself

answered Sep 9 '15 at 11:00

Sakib
56   7

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DDL: Change the schema

DML: Change the data

Seems specific to MySQL limitations ([rails's source code](#))

answered May 5 '17 at 21:48

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DDL

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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
156   1   9

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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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