**Data base**

1. Database is use to store a data permanently and can work with a large data.
2. To interact with Database you must know the SQL language.
3. To perform operations on the large data can be possible in a minimum time using a SQL.
4. Different type of DB
   1. **Relational Database**
      1. In this type the data will be store in a structure way such as table column format.
      2. There will be a multiple table present and they will be related with each other.
      3. Example: Mysql, Oracle, MSSql server, Postgres, DB2 etc…
   2. Document Database
      1. In this type o database you an store a JSON data.
      2. The values can be inserted and retrieve in the form of json only.
      3. This is not a structure database.
      4. Example: MongoDB
   3. Graph Database
      1. The data representation will be in the form of tree structure.
      2. In this you will get visualization of the data.
      3. Example: Neo4J

Database Download and installation

MySql:

<https://dev.mysql.com/downloads/installer/>



Install MySql:

<https://www.youtube.com/watch?v=OM4aZJW_Ojs>

**Important**

Note down the port number (3306), username (root) and password during the Setup.

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**Structure Query Language (SQL)**

1. SQL is a query language which is used to interact with the database.
2. This language is a case insensitive.
3. In the SQL you can execute a single query at a time to perform operations on the database.
4. To execute a group of queries you can use the PL/SQL which considers as an advance part of the SQL.
5. SQL queries are categorized into 5 parts
   1. DDL
      1. Data Definition Language (DDL)
      2. The queries are used to work with a database schemas, structures such as table, database, constrains etc.
      3. Queries: **Create, alter, drop**.
   2. DML
      1. Data Manipulation Language (DML)
      2. The queries are use to perform operations on the data from the table such as create data, updating data, deleting data.
      3. Queries: **insert, Update, Delete**
   3. DCL
      1. Data Control Language (DCL)
      2. Using this queries you can decide which user can perform which operations can be setup.
      3. Queries: **Grant, Revoke**
   4. TCL
      1. Transaction Control Language (TCL)
      2. It is use to perform the database transaction. That’s is one transaction can be of multiple queries.
      3. Queries: Commit, Rollback, savepoint
   5. DQL
      1. Data Query Language (DQL)
      2. Is use to retrieve the data from the table.
      3. Query: Select