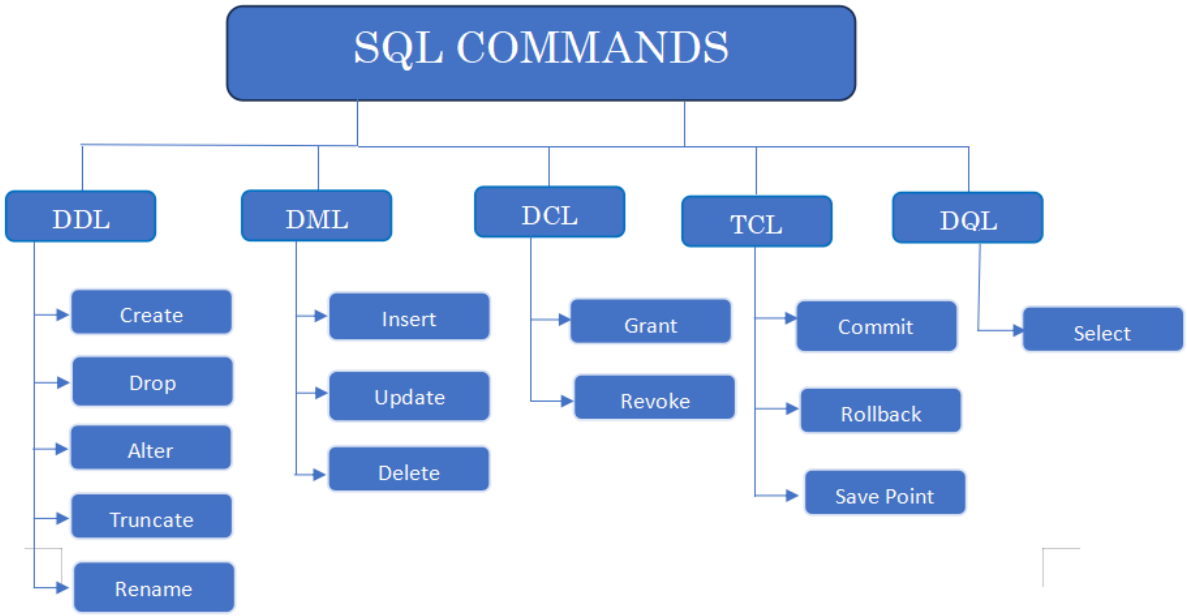
SQL COMMANDS



DDL: DDL Stands for Data Definition Language. An SQL command is used to define the database schema.

DDL is a set of commands used to create, modify and delete the database structure but not data.

- **CREATE**: This command is used to create the database or its objects (like table, index, function, views, store procedure, and triggers).
- **DROP**: This command is used to delete objects from the database.
- **ALTER:** This is used to alter the structure of the database.
- **TRUNCATE:** This is used to remove all records from a table, including all spaces allocated for the records are removed.
- **RENAME:** This is used to rename an object existing in the database.

DML: DML stands for 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. It is the component of the SQL statement that controls access to data and to the database.

- **INSERT**: It is used to insert data into a table.
- **UPDATE:** It is used to update existing data within a table.
- **DELETE**: It is used to delete records from a database table.

DQL: Data Query Language.

DQL is used to fetch the data from the database. It uses only one command.

- **SELECT**

SELECT: It is used to retrieve data from database.

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: This command gives users access privileges to the database.

REVOKE: This command withdraws the user's access privileges given by using the GRANT command

TCL: Transaction Control Language

- Transactions group a set of tasks into a single execution unit.
- Each transaction begins with a specific task and ends when all the tasks in the group are successfully completed.
- If any of the tasks fail, the transaction fails.
- Therefore, a transaction has only two results: success or failure.

- **COMMIT:** Commits a Transaction.

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

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Let's create a Database.

I'm using MYSQL DBMS

- MySQL is an open-source relational database management system
- MySQL is known for its ease of use and scalability

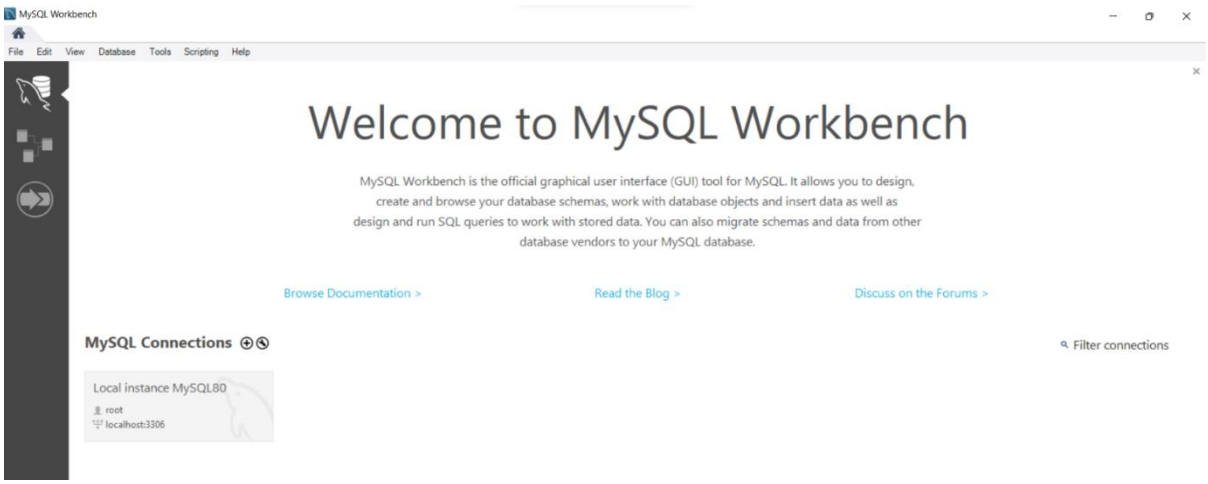
How to create a database in MYSQL:

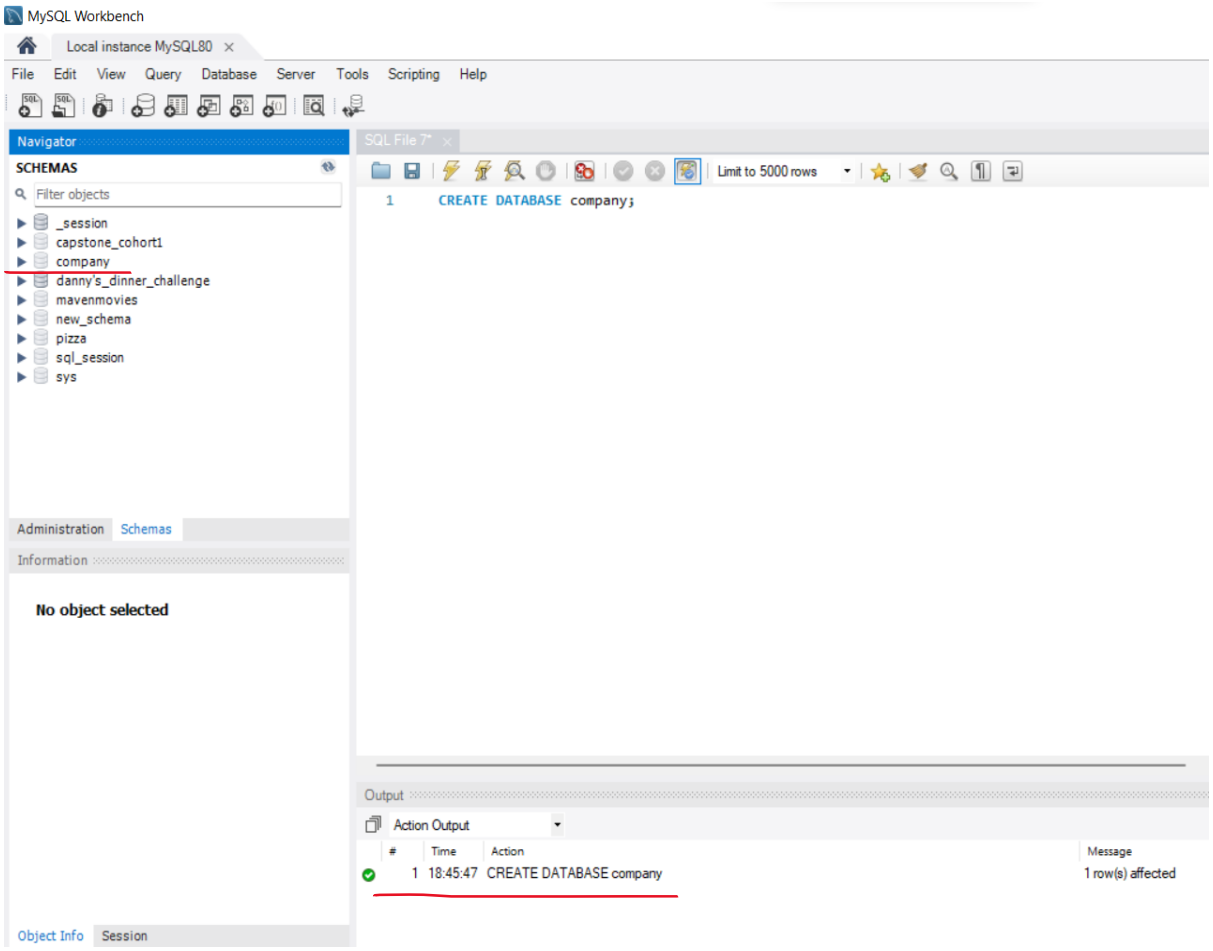
1 open My SQL

2 Enter the administrator password.

3 Type the following command

To create a new database: **`CREATE DATABASE database_name;`**

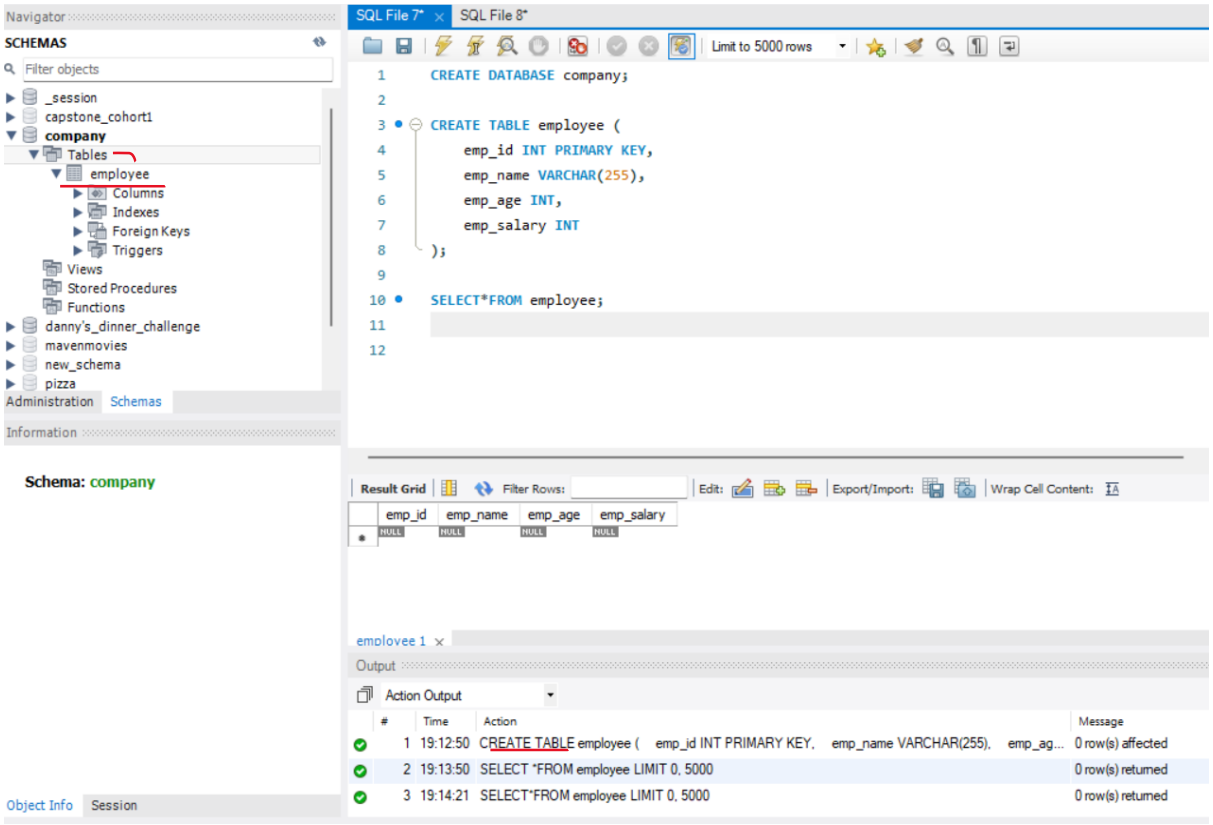




Now the database is created, let's add a table. What should be inside a table.

The table consists of data of a company like employee information, salary of an employee, Departments etc.

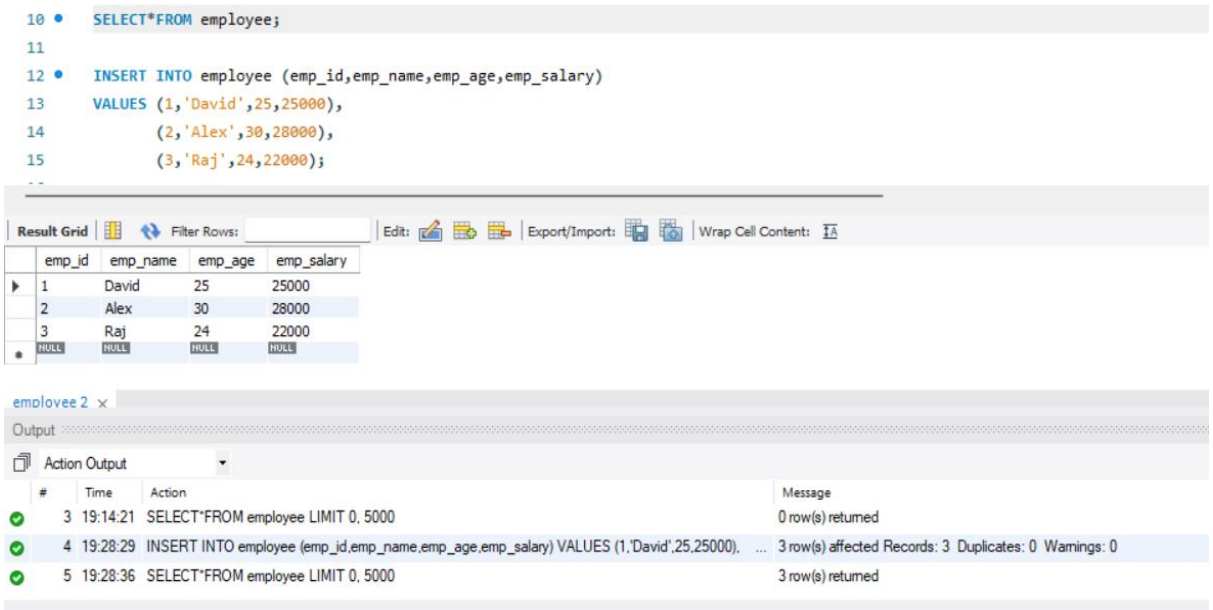
To create a table, use the command CREATE TABLE employees;



NOW we have the structure of a table,

How to insert values into the table;

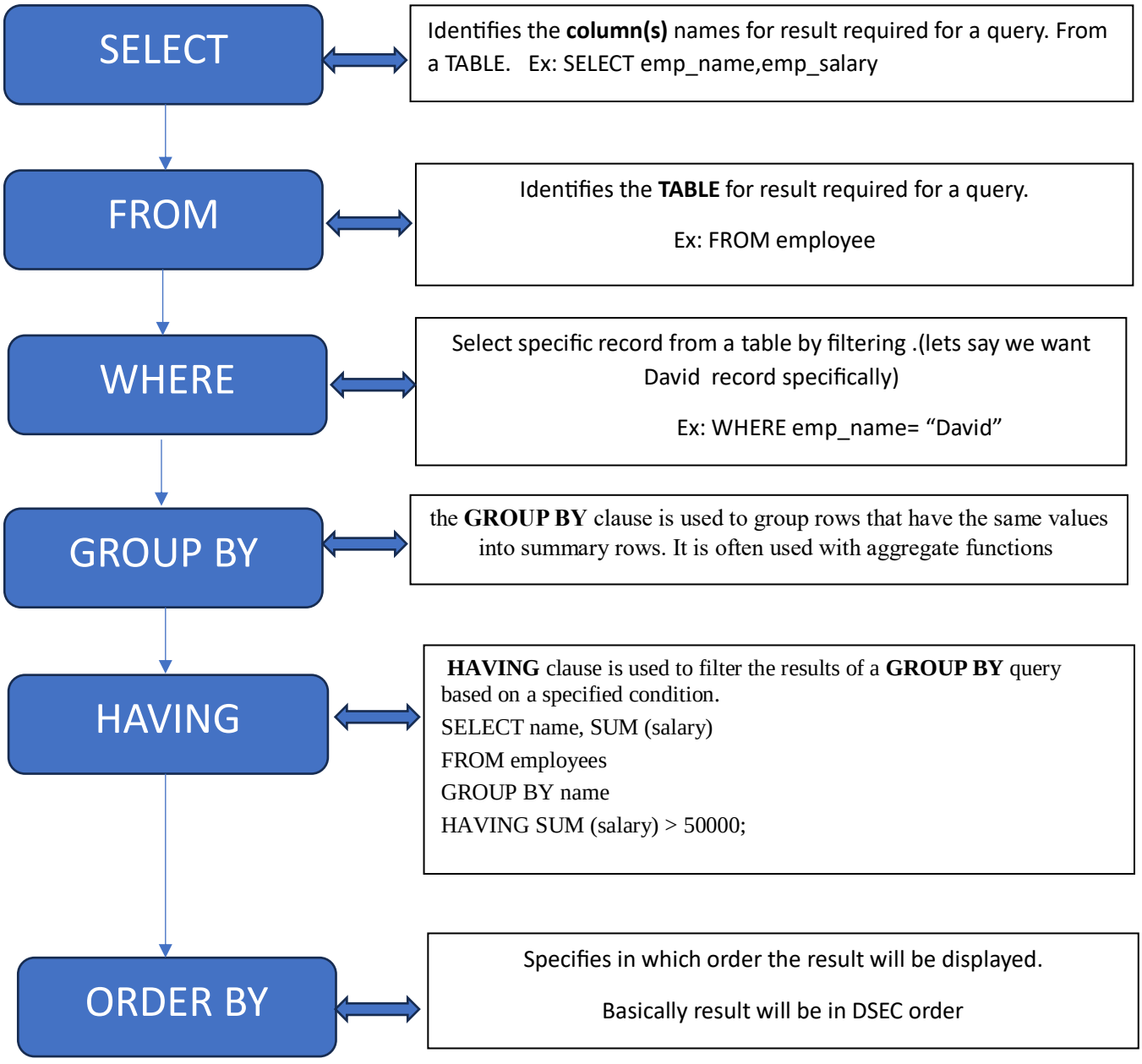
INSERT INTO table_name (column1, column2, column3, ...) VALUES (value1, value2, value3, ...);



Now we have a database and table. let's start exploring other commands of SQL.

QUERY: In SQL, a **query** is a command used to retrieve data from a database. It is essentially a question that a user asks the database to get the required information .

There are so many keywords in SQL. But we use 6 common key words called big six elements used in query.



This is how we usually write a query but inside the database, order of execution will be different.

ORDER OF EXCEUTION IN SQL QUERY:

FROM → JOIN → WHERE → GROUP BY → HAVING

SELECT → ORDER BY → LIMIT