**What is a Database?**

A database is an organized collection of data, generally stored and accessed electronically from a computer system. In simple terms, a database is a collection of data stored in a computer system.  
When you order a product on a commercial website, your order is stored in a database. You withdrew money from your bank account. Your bank stores this transaction in the database.  Social media platforms such as Facebook, Instagram, Twitter use databases to store data like members, their friends, member activities, messages, advertisements, etc.

**What is DBMS?**

DBMS stands for Database Management System. It is a software that controls the creation, maintenance and use of a database. DBMS ensures that the data is consistent, organized and is easily accessible by serving as an interface between the database and its users.

**What is RDBMS?**

RDBMS stands for Relational Database Management System. The key difference here, compared to DBMS, RDBMS stores the data into the collection of tables, which is related by common fields between the columns of the table. Most popular database management systems like MySQL, Microsoft SQL Server, Oracle, IBM DB2 and Amazon Redshift use RDBMS.

## What is SQL?

SQL stands for Structured Query Language and used to communicate with a database. With SQL, you can access or manipulate data stored in the database. There are different types of access. These are:  
Retrieval of data from the database  
Insertion of new data into the database  
Updating the data in the database  
Deletion of data from the database  
Besides, you can create new databases and tables using SQL.

## What are the tables and fields?

A table is an organized collection of data stored in the form of columns and rows. Columns can be categorized as vertical and rows as horizontal. The columns in a table are called fields while the rows can be referred to as records.

## What is a Query?

A query is a simple code written in order to get the information from the database. Query can be designed in such a way that it matches your expectations of the result set. In simple terms, it is a question to the database.

## What is Clause?

The clause in SQL is defined to limit the result set by providing conditions to the query. This condition usually filters some rows from the whole set of records.

## What are some common clauses used with SELECT query in SQL?

Some common SQL clauses used in conjunction with a SELECT query are as follows:  
WHERE clause in SQL is used to filter records that are required, based on specific conditions.  
ORDER BY clause in SQL is used to sort the records based on some fields in ascending or descending order.  
GROUP BY clause in SQL is used to group records with identical data and can be used in conjunction with some aggregation functions to produce summarized results from the database.  
HAVING clause in SQL is used to filter records in combination with the GROUP BY clause. It is different from WHERE, since WHERE clause cannot filter aggregated records.

## What is a JOIN?

This is a keyword used to combine records (rows) from two or more tables in a SQL database based on a related column between the two.

## What are the types of JOIN and explain each?

There are four different types of JOINs in SQL:

Inner Join.  
Inner join retrieves records that have matching values in both tables involved in the join.

Right Join.  
Right join retrieves all the records from the right and the matched records from the left table. In simple terms, it returns all the rows from the right side table even though there are no matches in the left side table.

Left Join.  
Left join retrieves all the records from the left and the matched records from the right table. In simple terms, it returns all the rows from the left side table even though there are no matches in the right side table.

Full Join.  
Full join retrieves all the records where there is a match on either the left or right table. This means it returns all the rows from the left side table and all the rows from the right side table.

CRUD işlemleri nelerdir?

## What is CRUD

If you are in the technical field, often times you will need to create new files to work with. By being familiar with how to create and manipulate files in the terminal, you may save yourself a bit of hassle and time.

CRUD is an acronym that stands for create, read, update, and delete. These are the most basic actions that you can perform on files.

## CRUD Instructions

This instruction set will go over Linux commands that allow you to perform CRUD actions in the terminal. You will use the touch command to create new files, the cat command to read and update files, and the rm command to delete unwanted files.

You will also learn how to copy and move files using the mv command.

[✱](https://www.toptal.com/designers/htmlarrows/symbols/heavy-asterisk/) Data Definition Language (DDL) specifies the database schema. The statements used in DDL are CREATE, ALTER, DROP. DDL statements are typically used to set up and configure a new database before we insert data.

[✱](https://www.toptal.com/designers/htmlarrows/symbols/heavy-asterisk/) Data Manipulation Language (DML) enables users to access or manipulate data. INSERT, UPDATE, DELETE, SELECT are the statements used in DML.

[✱](https://www.toptal.com/designers/htmlarrows/symbols/heavy-asterisk/) Data Control Language (DCL) is used to grant or revoke/withdraw access control. Its statements are REVOKE and GRANT.

[✱](https://www.toptal.com/designers/htmlarrows/symbols/heavy-asterisk/) Transaction Control Language (TCL) controls the transactions of DML and DDL commands. Its statements are BEGIN and COMMIT.