

But wait, what is SQL and what is a relational database? What is SQL?

SQL is a language used for relational databases to query or get data out of a database.

SQL is also referred to as SQL and is short for its original name Structured English Query Language.

So SQL is a language used for a database to query data.

But what is data and what is a database?

Data is a collection of facts in the form of words, numbers, or even pictures.

Data is one of the most critical assets of any business.

It is used and collected practically everywhere.

Your bank stores data about you, your name,

address, phone number, account number et cetera.

Your credit card company and your paypal accounts also store data about you.

Data is important; so, it needs to be

secure, and it needs to be stored and accessed quickly.

The answer is a database.

So, what is a database?

Databases are everywhere and used every day, but they are largely taken for granted.

A database is a repository of data. It is a program that stores data.

A database also provides the functionality for adding, modifying, and querying that data.

There are different kinds of databases of different requirements.

The data can be stored in various forms.

When data is stored in tabular form, the data is organized in tables like in a spreadsheet, which is columns and rows. That's a relational database.

The columns contain properties about the item such as last name, first name, email address, city.

A table is a collection of related things like a list of employees or a list of book authors.

In a relational database, you can form relationships between tables.

So a database is a repository of data.

A set of software tools for the data in the database is called a database management system or DBMS for short.

The terms database, database server, database system, data server, and database management systems are often used interchangeably.

For relational databases, it's called a relational database management system or RDBMS.

RDBMS is a set of software tools that controls the data such as access, organization, and storage.

And RDBMS serves as the backbone of applications in many industries including banking, transportation, health, and so on. Examples of relational database management systems are my SQL, Oracle Database, DB2 Warehouse, and DB2 on Cloud.

For the majority of people using a database, there are five simple commands to create a table,

insert data to populate the table,

select data from the table,

update data in the table,

delete data from the table.

So those are the building blocks for SQL for data science.

You can now describe what is SQL, what is data,

what is a database, and what is a relational database.

You know that RDBMS stands for Relational Database Management System,

and you can list five basic SQL commands to create a table,

insert data to populate the table,

select data from the table,

update data in the table,

and delete data from the table.

