

# the Master Course

{CODENATION}

# An introduction to **Databases.**

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# Databases

## What is a database?

A database is quite simply a computerised system that stores information.

# Databases

## What is a **database**?

Databases can hold structured or non-structured data.

# Databases

**Think of a database like a filing cabinet, it could hold information on employees, all with the same structured information in alphabetical order.**

**Or, it could hold all of the mail you've received in a year, all with different information with no real order to it.**

# Databases

**In order to interact with a database we need to use something called a Database Management System or DBMS.**

# Databases

## What is a DBMS?

A DBMS is essentially a way for us to **manipulate** the contents of a database.

A DBMS will provide a variety of ways to **manage the data** in our database.

# Databases

Let's quickly create our own  
**pseudo database** and **DBMS** in our  
CLI.



# Databases

There are **many different** DBMS's to choose from, at this point in the course we are going to use **MongoDB**.

# Databases

**MongoDB** is a **NoSQL** database, which allows us to store **structured** or **non-structured** data.

# Databases

## Local vs Cloud-Hosted?

We have two main options with databases, we can either host them on our **Local Machine** or use a **Cloud Hosted** option.

# Databases

## Local Database

A local database is stored on our **personal machine**, only accessible via a **direct connection** to our **hardware**.

The **speed and efficiency** of the database is then governed by the **quality of our hardware**.

# Databases

## Cloud Hosted Database

A cloud hosted database is available through the internet, it is hosted on a **collection of servers elsewhere**, and isn't limited by the **speed of our hardware**, rather it is governed by the **speed of both our internet and the cloud provider**.