

# What is a database

Databases are like large buckets that store data in an organized manner. A few examples of when we would like to create a database:

- A database for a university to save data about students, courses, and lecturers.
- A database for a car agency to track sales, car storage, and workers.
- A database for a hospital to save information about patient's history to provide good health care
- And many more

Inside a database there are tables, and each table has a name, column names, and rows. For example, this is a `workers` table:

	firstname	lastname	age	exp_years	gender
1	Ghully	Thuas	29	2.3	Female
2	Bostal	Shkolky	32	0.2	Male
3	Qaostu	Malop	21	4	Female

The `workers` table has 5 columns and 3 rows. We don't need any tool to know that we have 3 workers and it is easy to calculate the average age of all of them  $(29 + 32 + 21) / 3$  but what happens when we have a thousand rows or even a million rows?

For that, we have databases and the SQL language. database stores all of the tables and SQL extracts the data.

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