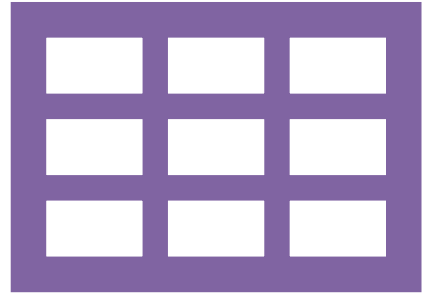




DATABASES

What's a Database?

- An organised collection of information
- Usually a table is made of rows and columns like the CSV files we have used before.
- Difference: a database can link multiple tables together.
- Databases have depth as opposed to a “flat” file like a spreadsheet or CSV file.



StudentID	Year	Subject	Fees
1001	1	English	Paid
1002	2	English	Paid
1003	3	Computers	Unpaid
1004	3	Maths	Paid
1005	1	Computers	Unpaid
1006	3	Maths	Paid

**WHAT'S A
DATABASE?**

IMDb

Multiple different
“Tables”


What is the primary
key for IMDb?

What is a Relational Database?

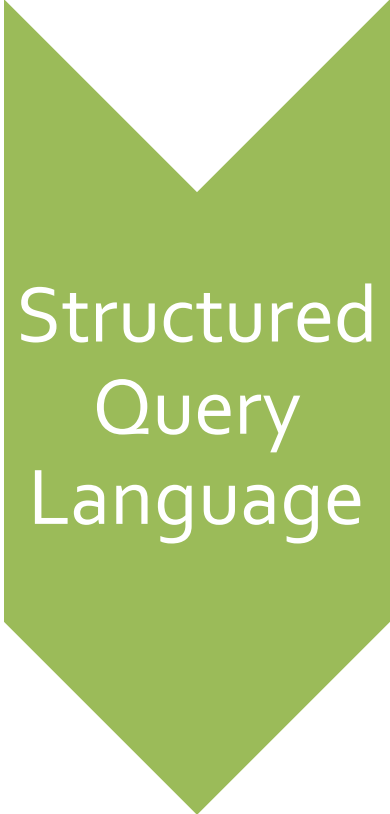
A database that links between tables by using a key.



A key is one piece of data that is always linked to a certain set of data. In the example we just showed the StudentID would be a good key to use.



Primary Key: a unique identifier of each record in a database

A green shield-shaped graphic with a white border, containing the text "Structured Query Language".

Structured
Query
Language

SQL

StudentID	Year	Subject	Fees
1001	1	English	Paid
1002	2	English	Paid
1003	3	Computers	Unpaid
1004	3	Maths	Paid
1005	1	Computers	Unpaid
1006	3	Maths	Paid

DATABASE TERMINOLOGY

Record: a horizontal row that is considered an entry in the database

StudentID	Year	Subject	Fees
1001	1	English	Paid
1002	2	English	Paid
1003	3	Computers	Unpaid
1004	3	Maths	Paid
1005	1	Computers	Unpaid
1006	3	Maths	Paid

DATABASE TERMINOLOGY

Field: The column names that each record contains

Some of The Most Important SQL Commands

SELECT - extracts data from a database

UPDATE - updates data in a database

DELETE - deletes data from a database

INSERT INTO - inserts new data into a database

CREATE DATABASE - creates a new database

ALTER DATABASE - modifies a database

CREATE TABLE - creates a new table

ALTER TABLE - modifies a table

DROP TABLE - deletes a table

CREATE INDEX - creates an index (search key)

DROP INDEX - deletes an index