

Complete SQL Bootcamp

「Video 1」 Introduction SECTION I: Course Introduction

- Course objective: Use SQL to interact with a database & analyze information

• Great skill to have!

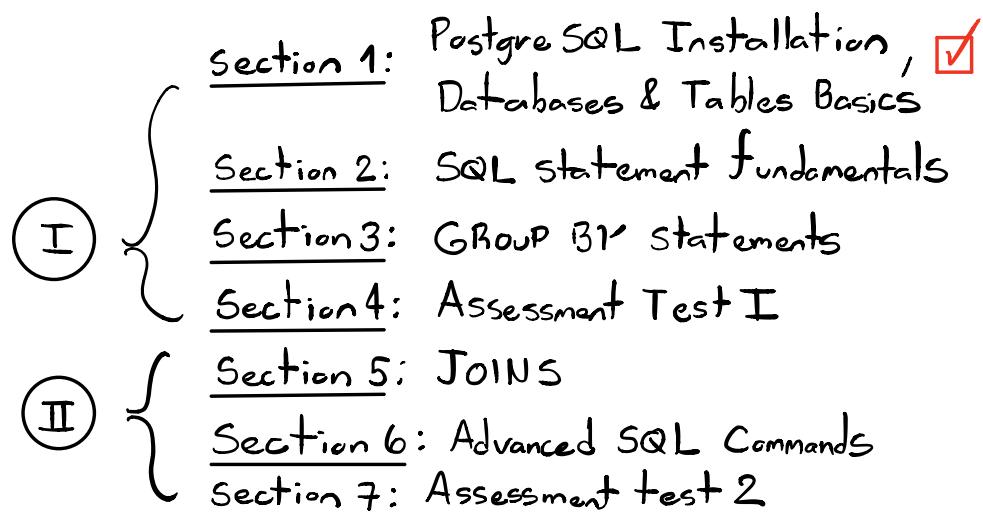
- We will be using PostgreSQL

} → Syntax & skills
can be applied to
other softwares

that use SQL:

- ↳ Amazon Redshift
- ↳ Microsoft SQL Server
- ↳ MySQL
- ↳ ORACLE DATA BASE

「Video 2」 Course Curriculum



- III
- Section 8: Create Databases & Tables
 - Section 9: Assessment test 3
 - Section 10: Conditional Expressions and Procedures
 - Section 11: Extra lectures : PostgreSQL with Python
 - Section 12: Special offers

« Video 4 » Overview of Databases

Lecture overview {

- what are databases?
- why use databases?

- Databases are systems that allow users to store and organize data.
- They are useful when dealing with large amounts of data.
- Typical users

- Databases have a wide variety of users!

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- Analysts
 - Marketing
 - Business
 - Sales
- Technical
 - Data Scientist
 - Software Engineer
 - Web Developers

- Basically anyone needing to deal with data!
 - ↳ Great use case to work with a DB!

- From Spreadsheets to DB

- Most users have some familiarity with spreadsheet software (e.g. Excel)
- Let's discuss use cases for spreadsheets versus databases.

Spreadsheets

- One time analysis
- Quickly need to chart something out
- Reasonable data size
 - ↳ Excel / Google Spreadsheets may handle.
- Ability for untrained people to work with data.

Databases

- * Data Integrity
- * Can handle massive amounts of data.

↳ would make Excel / Google spreadsheets CRASH!

- * Quickly combine different datasets.
- * Automate steps for re-use

↳ SQL Syntax

- * Can support data for websites and applications

↳ Websites / web applications

/ Mobile applications

⇒ Linked to some sort of database.

Spreadsheet \leftrightarrow DB

Tabs \longleftrightarrow Tables

Columns \longleftrightarrow Columns

Rows \longleftrightarrow Rows

Similarities

b/w Spreadsheets & DB

Database Platform options

PostgreSQL	<ul style="list-style-type: none">• Free (open source)• Widely used on internet	<ul style="list-style-type: none">• Multiplatform
MySQL / Maria SQL	<ul style="list-style-type: none">• Free (open source)• Widely used on internet	<ul style="list-style-type: none">• Multiplatform
MS SQL Server Express	<ul style="list-style-type: none">• Free but limited	<ul style="list-style-type: none">• Windows
Microsoft Access	<ul style="list-style-type: none">(-) Cost(-) Not easy to use just SQL	
SQLite	<ul style="list-style-type: none">Free (open source)(-) Mainly Command line	

- PostgreSQL is a great DB option to learn how to use SQL. ⇒ Easy to install and use.

↳ Most of the commands are general for other management systems.

- SQL → Structured Query Language Learned in this Course can be applied to a variety of DB or SQL based software.

- **SQL** → The programming language used to communicate with our DB's.

DATA BOTH IN & OUT

Example:

```

    SELECT customer_id, first_name,
           last_name
      FROM sales
     ORDER BY first_name
  
```

• We will learn this later!

SQL Syntax

- SQL is useful for a lot of things

SQL

↳ PostgreSQL

⋮
Amazon Redshift

Software

- Looker
- Periscope

Big Data

- Hive (Hadoop abstraction)
- Google BigQuery
- FB Presto

All run on Some Sort of
SQL Syntax