

PostgreSQL Bootcamp

This course will teach you how to explore, modify, and export data from a database. You'll be introduced to foundational concepts like tables, data types, and queries. Once you understand the basics of viewing tables, you'll be introduced to more advanced querying techniques like filtering and aggregating. You will be able to drill down into specific cases or step back and see larger patterns. You'll also learn how to combine information from different tables using join statements and views. The final day of the course will cover advanced techniques like creating subqueries and stored procedures. This course will use Postgres, an advanced open-source database. Concepts from this course will apply equally to other databases such as MySQL and SQL Server, with the minor syntax differences noted during class.

Group classes in NYC and on-site training is available for this course. For more information including upcoming class dates and pricing, visit training-nyc.com/courses/postgresql-bootcamp or email contact@nyimtraining.com

Course Outline

Foundations

Basic Concepts

- What is a relational database?
- What is SQL?
- What is Postgres?
- Database tables
- Rows and columns
- Data types

Graphical User Interface

Object Explorer

- Query Window
- Results Grid
- Setting Options

Querying

Select Statements

- Syntax of a SELECT statement
- Selecting specific columns
- Using a LIMIT clause
- Distinct records
- Using a WHERE clause
- Field and Table Aliases

Filtering and Aggregating

- Filtering with Text Criteria
- Wildcard Filters
- Filtering with Numeric Criteria
- Using SUM, COUNT and AVG
- Using MAX and MIN
- Group-by Statements

Adding Data

Creating tables

- Primary keys
- Foreign keys
- Data normalization
- Create statement
- Constraints

Inserting data

- Insert statement
- Nulls, empty strings and zeros
- Update Statement
- Setting Conflict Actions

Combining tables

Joins

- Inner Joins
- Full Outer Joins
- Left/Right Joins

Views

- Creating a view
- Performance issues

Advanced Topics

Advanced querying

- Subqueries
- Querying JSON data

Stored Procedures

- Creating a stored procedure
- Transactions
- Temp Tables

Functions

- String Functions
- Cast Function
- Convert Function
- Rounding Functions

Dealing with CSVs

- Loading data from a CSV
- Exporting a table to CSV

