Publication date : 02/28/2024

Course : SQL for PostgreSQL

Practical course - 3d - 21h00 - Ref. SGS
Price : 1740 € E.T.

4,5 / 5

This course introduces you to the SQL language in a PostgreSQL environment. You'll learn how to create tables or views, perform simple queries, joins, data groupings and nested queries. All these skills will remain valid with other relational databases.

Teaching objectives

At the end of the training, the participant will be able to:

- Get an overview of DBMSs
- Understanding the PostgreSQL database
- Create simple and complex queries
- Handling internal and external joins
- Using regular expressions
- Window functions

Intended audience

Anyone wishing to use SQL in PostgreSQL.

Prerequisites

Basic computer skills.

Course schedule

1 General introduction to DBMS

- Notion of DBMS.
- Database Management System (DBMS) and work environment.
- The relational model.
- Defining a relationship.
- Primary and foreign keys.
- Integrity constraints.
- The diagram of a relationship and a comic strip.

PARTICIPANTS

Anyone wishing to use SQL in PostgreSQL.

PREREQUISITES

Basic computer skills.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

2 Tools and types in PostgreSQL

- Launching the psql tool.
- Internal psql commands.
- Script execution.
- Types used in PostgreSQL.
- Character strings, constants, numeric constants, DATE / TIMESTAMP / INTERVAL constants.

Hands-on work

Internal commands and script execution with psql.

3 Introduction to SQL

- Different categories of statements in SQL.
- Introduction to SELECT.
- Create tables and views.
- Introduction to update instructions: INSERT, UPDATE, DELETE.
- Using sequences.
- Introduction to transactions.

Hands-on work

SELECT instructions, table creation, update instructions.

4 Single table consultation

- Prefixes, aliases and operators.
- Sorting and deleting duplicates.
- FETCH / LIMIT / OFFSET.
- Using functions.
- NULL value.
- Aggregates.
- Grouping: GROUP BY, HAVING.

Hands-on work

Set up comprehensive queries, covering all the points discussed.

5 Multi-table queries

- Join and Cartesian product, different syntaxes.
- External joints.
- Nested queries, IN / EXISTS operators.
- Multicolumn and multiline comparisons: nested comparisons and queries, ANY, ALL and SOME operators.
- Set operators: union, difference, intersection.
- Nested FROM queries.
- Use of CTE (WITH clause).
- The division.

Hands-on work

Create nested joins and queries.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

6 Advanced features

- Special types: ENUM, TABLES, RANGES.
- Use regular expressions and the SIMILAR operator.
- Introduction to Window functions, OVER() clause.

Hands-on work
Execute queries with special types.

Dates and locations

REMOTE CLASS
2026 : 1 June, 14 Sep., 16 Dec.

PARIS LA DÉFENSE
2026 : 1 June, 14 Sep., 16 Dec.