



## PostgreSQL Developer Training

Thank you for contacting our **SQL School** Training Institute. We assure you 100% Practical, Step by Step Trainings on **PostgreSQL Dev** Training.

### Whom we are?

Over 19 Years of strong commitment in training excellence, we assure you 100% practical, step by step learning process paired with Assignments, Use Case Scenarios and Realtime Project Implementations for your Resume and Job Work. We are sure, you will have a wonderful journey with us.

 <p><b>Quality Training Assured</b></p>		<p><b>Trending Job Roles</b></p> <ul style="list-style-type: none"> <li>➤ Data Analyst</li> <li>➤ Data Scientist</li> <li>➤ Data Engineer</li> <li>➤ Solution Architect</li> <li>➤ Consultant, more .. !</li> </ul>
MSSQL	Azure	<p><b>Training Highlights</b></p> <ul style="list-style-type: none"> <li>✓ Step by Step</li> <li>✓ LIVE Project(s)</li> <li>✓ Job Assistance</li> <li>✓ Resume Guidance</li> <li>✓ Concept wise FAQs</li> </ul> 
Oracle	AWS	
MySQL	Snowflake	
Postgres	Power BI	
Python	Salesforce	
Java	SAP	
DevOps	AI	
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## Details of our PostgreSQL Dev Training

### What is Postgres?

Postgres is a opensource Platform to store, manage and administer databases. Very easy and versatile. Easy to manage and operate.

### What is PostgreSQL Developer Job Role?

A PostgreSQL Developer is responsible for designing, developing, and maintaining databases using PostgreSQL, an open-source relational database management system. Here are some key responsibilities and skills required for a PostgreSQL Developer job

### What are PostgreSQL Developer Job Role Key Responsibilities ?

1. Designing and implementing database schemas, tables, and relationships
2. Developing and optimizing SQL queries, stored procedures, and functions
3. Creating and maintaining database indexes, views, and triggers
4. Ensuring data integrity, security, and performance
5. Troubleshooting database issues and optimizing database performance
6. Collaborating with cross-functional teams to design and implement database solutions
7. Writing and maintaining technical documentation

### What about the Lab? What are the System Requirements?

Here are the system requirements to install PostgreSQL:

#### Hardware Requirements:

1. RAM: 8 GB or Higher
3. Storage: 10 GB or more of free disk space

#### Software Requirements:

Operating System: PostgreSQL supports various operating systems, including:

- Linux (Ubuntu, Red Hat, CentOS, etc.)
- Windows (10, 8, 7, Server 2019, etc.)
- macOS (10.12 or later)
- FreeBSD / OpenBSD / Solaris

### What about Placement Assistance?

We train you with step-by-step activities, concept wise FAQs and Answers. Resume Guidance and Placement Assistance part of this PostgreSQL DBA Course.

### How do I join the course?

Reach us for free demo on +91 9666440801 or visit us on [www.sqlschool.com/schedules](http://www.sqlschool.com/schedules)

### Who can join this course?

The PostgreSQL course is suitable for various professionals and individuals who want to learn about PostgreSQL Development.

# Detailed Course Curriculum

## Module 1: PostgreSQL Development

### Chapter 1: Introduction to PostgreSQL

- ✓ Overview of PostgreSQL
- ✓ History and Evolution of PostgreSQL
- ✓ Features, Versions and Benefits of PostgreSQL
- ✓ PostgreSQL Architecture.

### Chapter 2: SQL Fundamentals

- ✓ Introduction to SQL
- ✓ Basic SQL syntax
- ✓ Data types and operators
- ✓ Querying data (SELECT, FROM, WHERE, GROUP BY, HAVING)
- ✓ Modifying data (INSERT, UPDATE, DELETE)

### Chapter 3: Working with Tables and Designing

- ✓ Approaching Database Design
- ✓ Creating and managing tables in PostgreSQL

### Chapter 4: Data Types and Operators

- ✓ PostgreSQL data types (integer, string, date, time, etc.)
- ✓ PostgreSQL operators (arithmetic, comparison, logical, etc.)
- ✓ Using PostgreSQL data types and operators in SQL queries

### Chapter 5: Joins

- ✓ Understanding relationships between tables in PostgreSQL
- ✓ Creating and managing relationships between tables
- ✓ Using Joins to combine data from multiple tables
- ✓ Types of Joins (INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL OUTER JOIN)

### Chapter 6: Subqueries and Views

- ✓ Using subqueries in PostgreSQL
- ✓ Creating and managing views in PostgreSQL
- ✓ Using views to simplify complex queries
- ✓ Using subqueries and views to improve query performance

### Chapter 7: Tools (psql & pgAdmin) and catalog

- ✓ Using psql command line interface (CLI)
- ✓ pgAdmin(GUI)
- ✓ pg\_catalog
- ✓ information\_schema

## **Chapter 8: CRUD Operations**

- ✓ CRUD Introduction
- ✓ Create Table, Data Types, Constraints, Functions and Operators
- ✓ Retrieve Data in PostgreSQL
- ✓ Update Records in a Table
- ✓ Delete Records in a Table
- ✓ Truncate

## **Chapter 9: Tablespaces**

- ✓ Tablespace Introduction.
- ✓ Default Tablespace (pg\_default & pg\_global).
- ✓ Local & Global Tablespaces.
- ✓ Create/Drop Tablespaces.

## **Chapter 10: Backup and Restore**

- ✓ Introduction to PostgreSQL Backups
- ✓ Backup using pg\_dump and psql utilities
- ✓ Restore using pg\_restore and psql utilities

## **Chapter 11. MVCC (Multi-Version Concurrency Control) in PostgreSQL**

- ✓ What is MVCC in PostgreSQL?
- ✓ How does MVCC work in PostgreSQL?
- ✓ Key Data Structures in MVCC
- ✓ Benefits of MVCC in PostgreSQL
- ✓ Transaction ID Wraparound

## **Chapter 12: Constraints, One-to-One and One-to-Many Relationships**

- ✓ Constraints (Primary Key, Unique, Foreign Key and NOT NULL etc...)
- ✓ Auto-Generated ID's
- ✓ Understanding and Identifying One-to-One and One-to-Many Relationships
- ✓ Delete dependencies

## **Chapter 13: Indexing and Types**

- ✓ Introduction to Indexes
- ✓ Basic Index Types (B-Tree, Hash and Function/Expression)

## **Chapter 14: Data Loading**

- ✓ Moving, Copying, Export, Import, copy etc...
- ✓ pgloader
- ✓ 14.3. Foreign Data Wrappers (FDW)

### **Chapter 15: Extensions**

- ✓ What are Extensions in PostgreSQL?
- ✓ Types of Extensions in PostgreSQL
- ✓ Examples of Extensions in PostgreSQL
- ✓ How to Install/Uninstall Extensions in PostgreSQL

### **Chapter 16: Common Table Expressions (CTE)**

- ✓ Types of CTEs
- ✓ Examples
- ✓ Benefits
- ✓ Use Cases

### **Chapter 17: Introduction to PL/pgSQL**

- ✓ Overview of PL/pgSQL
- ✓ History and evolution of PL/pgSQL
- ✓ Features and benefits of PL/pgSQL
- ✓ Installing and configuring PL/pgSQL

### **Chapter 18: PL/pgSQL Basics**

- ✓ Variables and Data Types
- ✓ Operators and Expressions
- ✓ Control Structures (IF, LOOP, WHILE)
- ✓ Functions and Procedures

### **Chapter 19-20: PL/pgSQL Functions and Procedures**

- ✓ Creating and managing functions and procedures
- ✓ Function types (scalar, aggregate, window)
- ✓ Function parameters and return types
- ✓ Procedure types (stored procedures, functions)
- ✓ Procedure parameters and return types
- ✓ Using functions in SQL queries

### **Chapters 21-22: PL/pgSQL Triggers and Exception Handling**

- ✓ Creating and managing triggers
- ✓ Trigger types (before, after, instead of)
- ✓ Using triggers to enforce data integrity
- ✓ Understanding exceptions in PL/pgSQL
- ✓ Creating and managing exceptions
- ✓ Using exceptions to handle errors

## Module 2: PostgreSQL Tuning

### Chapter 23: Basic Query/Performance Tuning

- ✓ Understanding Query Performance using EXPLAIN and ANALYZE
- ✓ EXPLAIN vs EXPLAIN ANALYZE
- ✓ Query Optimization using Indexes
- ✓ Statistics

### Chapter 24: Advanced Query/Performance Tuning – Part 1

- ✓ Understanding COST calculations
- ✓ SELECTIVITY
- ✓ OPTIMIZER
- ✓ Optimization with Materialized views

### Chapter 25: Advanced Query/Performance Tuning – Part 2

- ✓ Access Methods
- ✓ Sequential Scan, Index Scan and Bitmap Scan
- ✓ Nested Loop Join, Hash Join and Merge Join
- ✓ Use Cases

### Chapter 26: Advanced Database Tuning– Part 3

- ✓ Postgres Server Tuning Parameters
- ✓ Configuration Tuning
- ✓ Monitoring and Profiling

**This PostgreSQL Developer Course is 100% Practical, Step by Step. Reach us now!**

[contact@sqlschool.com](mailto:contact@sqlschool.com)

**New batch Schedules:** [www.sqlschool.com/Register](http://www.sqlschool.com/Register)

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**Trainer:** Mr. Srinivas

**Profile:** <https://sqlschool.com/wp-content/uploads/2025/07/Trainer-Srinivas.pdf>

#### Training Modes:

- ✓ LIVE Online
- ✓ Inhouse Classroom
- ✓ Self-Paced Videos

**All sessions are practical, step by step. Kindly ensure on-time practice for best results.**

For Free Demo, Latest Schedules, call us on +91 9666 64 0801 or visit [www.sqlschool.com/register](http://www.sqlschool.com/register)