POSTGRESQL
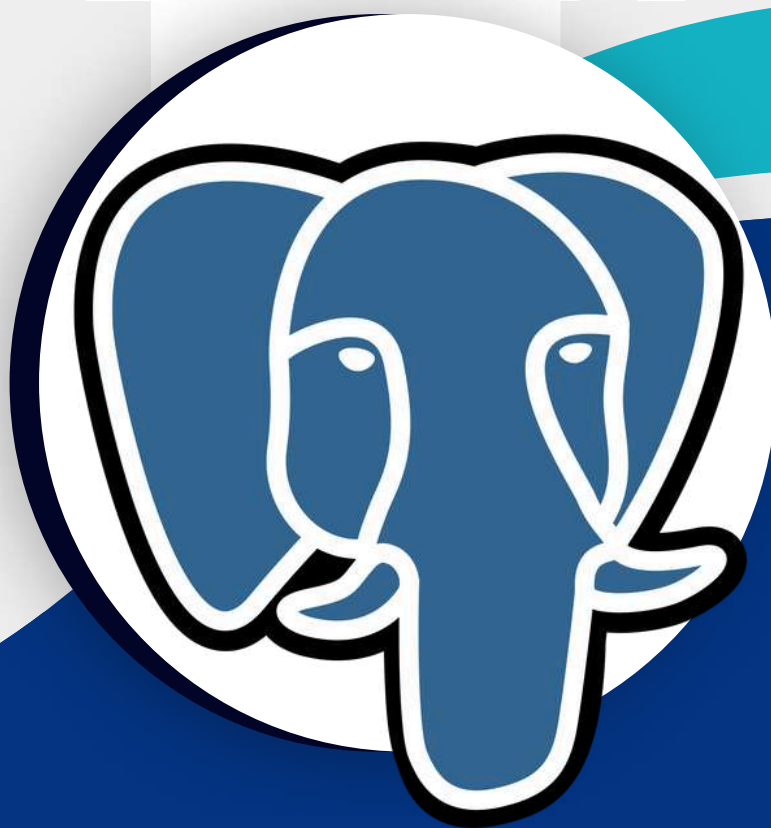## DBA

Master the World's Most Advanced Open-Source Database
Learn PostgreSQL, Lead the Future.

Detailed Syllabus

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About Learnomate

At Learnomate Technologies, we take pride in being one of the best software training institutes, offering a wide range of IT training programs and services that cater to learners across the globe. Our mission is simple: to empower aspiring IT professionals with the skills they need to excel in today's competitive tech world. With our global reputation, we are known for delivering high-quality training that transforms careers.

Our CEO, Ankush Thavali, is a renowned Oracle DBA expert, and his training programs are widely recognized for their depth, practicality, and success rates. Backed by a team of highly skilled trainers, we provide the best training material and an exceptionally supportive team to ensure a seamless learning journey for our students.

At Learnomate, we believe that financial constraints should never stop you from achieving your IT dreams. That's why we offer flexible payment options, including EMI and installment plans, making quality IT education accessible to everyone. Whether you're an aspiring professional or looking to upskill, our programs are designed to suit your needs and help you succeed.

Join us today and experience why thousands of students worldwide trust Learnomate Technologies to be their partner in IT growth. Let's build your future together!

What we offer in this training?

The world of data is expanding faster than ever, and companies are actively seeking skilled professionals who can manage, scale, and optimize databases efficiently. Our PostgreSQL Training Program is designed to equip you with in-demand expertise in one of the world's most powerful and popular open-source relational databases.

Why PostgreSQL?

- PostgreSQL powers major companies like Apple, Instagram, and Skype.

- Recognized globally for reliability, flexibility, and performance.

- Demand for PostgreSQL DBAs and Developers is growing rapidly in startups and enterprises.

- Open-source, cloud-friendly, and future-ready.

Why Choose Learnomate?

- End-to-end training on PostgreSQL essentials, administration, and tuning.

- Hands-on practice with replication, high availability, and disaster recovery.

- Real-world scenarios like handling slow queries, database crashes, and migrations.

- Focus on query optimization, performance troubleshooting, and automation.

- Soft skills, teamwork strategies, and interview preparation for job.

1.Introduction to PostgreSQL

- Overview and history
- Installing and configuring PostgreSQL on various platforms (Linux, Windows, macOS)
- Basic configuration settings

2. Database Basics

- Introduction to the PostgreSQL cluster
- Creating a cluster
- Cluster operations: STOP, START, STATUS (with multiple options)
- Key PostgreSQL environment variables:
- PGDATA, PGHOST, PGPORT, PGUSER, PGPASSWORD, PGDATABASE
- How to set them for session or system-wide usage
- Benefits: simplifying routine DBA commands and scripts
- Creating and managing databases
- Data types and table creation
- SQL concepts and languages

3. SQL Fundamentals

- Writing basic queries
- Joins (INNER, OUTER, LEFT, RIGHT)
- Aggregate functions (SUM, AVG, COUNT, etc.)
- Common Table Expressions (CTE)
- Constraints and their usage
- Indexes and their types

4. Performance Tuning Basics

- Using EXPLAIN and EXPLAIN ANALYZE to understand query execution
- Query optimization techniques

5. Configuration Management

- Overview of configuration files
- Detailed explanation of PostgreSQL parameters - Majorly used and most common to consider
- User authentication with pg_hba.conf file

6. PostgreSQL Architecture

- In-depth understanding of PostgreSQL architecture

7. Database Maintenance operations

- VACUUM, ANALYZE, and VACUUM FULL
- REINDEX and REINDEX CONCURRENTLY
- External tools like pg_repack

8. User and Role Management

- Managing roles and privileges
- Default privileges and security best practices
- Object-level privileges (detailing permissions for various objects like tables, views, sequences, etc.)

9. Backup and recovery techniques

- Logical Backups:pg_dumpall, pg_dump, and pg_restore (detailed discussion)
- WAl archiving in detail
- Physical Backups:pg_basebackup, pg_start_backup(), and pg_stop_backup()
- External backup tool - pgbackrest in details

10. Disaster Recovery

- Point-In-Time Recovery (PITR)
- Full Recovery

11. Extensions in PostgreSQL

- Introduction
- Popular extension like pg_stat_statements
- Upgrading extensions

12. High Availability and Replication

- Replication types: Synchronous and Asynchronous
- Streaming replication
- Logical replication
- Use of Replication Slots

13. DATABASE UPGRADE

- Minor version upgrade
- Major version upgrade – Multiple methods

14. PARTITIONING

- Table partitioning concepts and implementation

15. INTRODUCTION TO PL/pgSQL

16. DATABASE SECURITY

- Security best practices for database protection

17. PostgreSQL ADMINISTRATION

- Logging and monitoring
- Troubleshooting and debugging
- Generate the pgbadger report
- Performance reports

18. MIGRATION

- Database migration from Oracle to PostgreSQL

Course Details

- **Duration of course: 2 Months**
- **Duration of class for everyday: daily 1hr**
- **Mode of class: Online-Zoom**

TRAINING HIGHLIGHTS

- **Recording Access shared to students on Learnomate App**
- **Professional Resume building by Industrial working mentors**
- **Dedicated Support Team to solve issues [8 Am to 8 Pm]**
- **Placement assistance/Job requirement notification support/HR contacts**
- **Training Certificate: Receive a recognized certificate upon course completion**
- **LinkedIn, Naukri.com Profile: Enhance your online presence with professionally curated profiles.**
- **Flexible Learning Options: Choose between offline and online training to suit your schedule.**
- **Interview Preparation, Mock Interviews: Nail your interviews with our tailored preparation and mock interview sessions**
- **Real-time Scenarios Explained: Learn through practical examples to master real-world applications.**
- **❓ Doubt Sessions: Clarify your doubts through dedicated doubt-clearing sessions.**

Contact details

If you required any further information, please fill free to contact us.

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