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Learning Style: Virtual Classroom

Technology: Oracle

Difficulty: Beginner

Course Duration: 2 Days

Next Course Date: **March 2, 2026**

Oracle Database Foundations (TTOR20510)



About This Course:

This boot camp covers foundational knowledge of Oracle Database architecture, core components, backup, recovery, security, and basic administration. It's ideal for new DBAs, IT professionals, or anyone preparing for Oracle's 1Z0-006

Foundations exam. You will engage in hands-on labs to reinforce learning and apply concepts immediately.

Course Objectives:

- Describe Oracle Database architecture: instance, database, memory, processes
- Understand storage structures: tablespaces, datafiles, control files, redo logs
- Perform basic instance operations: startup, shutdown, manage logs
- Apply security basics: users, privileges, roles, authentication
- Explain backup, recovery, and basic data protection
- Use Oracle tools (SQL*Plus, Enterprise Manager) for basic admin tasks

Audience:

- New DBAs beginning their Oracle career path
- IT professionals who need foundational Oracle skills
- System administrators or support staff assisting with Oracle systems

Prerequisites:

- Basic relational database knowledge
- Familiarity with SQL queries recommended
- General IT knowledge of operating systems and file management

Course Outline:

1) Oracle Architecture & Components

- Difference between instance and database
- Memory structures (SGA, PGA)
- Background processes
- Physical files: datafiles, control files, redo logs

Lab

- Query V\$ and dictionary views to identify components
- Inspect the file structure of a running database

2) Storage & Logical Structures

- Logical structures: tablespaces, segments, extents, blocks
- Types of tablespaces (SYSTEM, UNDO, TEMP, user)
- Datafile operations: add, resize, rename

Lab

- Create and manage tablespaces
- Add and resize datafiles
- Map logical to physical structures

3) Instance Operations & Logging

- Startup modes, shutdown modes
- Redo logs, archived redo logs
- Rollforward, recovery basics
- Alert log and trace files

Lab

- Start and stop instance in various modes
- Simulate a log switch, archive logs

- Explore the alert log and trace directories

4) User Security & Privileges

- Users, roles, system and object privileges
- Authentication methods
- Password policies, default roles

Lab

- Create users and roles
- Grant and revoke privileges
- Configure authentication mode

5) Backup & Recovery Fundamentals

- Recovery concepts: complete, incomplete recovery
- Recovery tools overview (RMAN, user-managed)
- Data protection modes

Lab

- Simulate basic backup and restore (user-managed)
- Recover a database to a point in time

6) Tools & Administration Interfaces

- SQL*Plus, SQL Developer basics
- Enterprise Manager basics
- Data dictionary and catalog views

Lab

- Use SQL*Plus to query, create objects, run scripts

- Use EM to view database status
- Explore data dictionary views