Mastering Oracle Database Administration & SQL

In today's data-driven landscape, Oracle stands as a cornerstone for mission-critical applications across diverse industries. This comprehensive course from Ecorporate Trainings is meticulously designed to transform aspiring professionals and seasoned developers into proficient Oracle Database Administrators (DBAs) and SQL specialists. Gain the expertise to build, manage, and secure enterprise-grade databases with unwavering confidence.

About Ecorporatetrainings:-

Ecorporatetrainings leading e-learning platform providing live instructor-led interactive online training. We cater to professionals and students across the globe in categories like Big Data & Hadoop, Business Analytics, NoSQL Databases, Java & Mobile Technologies, System Engineering, Project Management and Programming, UI/UX design. We have an easy and affordable learning solution that is accessible to millions of learners.

Ecorporatetrainings Masters Program will provide you in-depth knowledge of front-end and back-end technologies including JavaScript, HTML, CSS, NodeJS, Python, AngularJS, MongoDB, SQL ,AI and ML UI/UX Design ,Oracle Database and many more thereby making you an expert full stack web developer. The program provides access to 200+ hours of interactive online learning, 10+ industry-based use cases, skills specific assessments and other resources. There are no prerequisites for enrolment to the Masters Program. It is designed and developed to accommodate diverse professional backgrounds. Our Masters Program recommends the ideal path for becoming a Full Stack Developer ,Analyst ,Database and Oracle expert ,however, it is learners preference to complete the courses in any order they intend to.

Introduction to Oracle Database Architecture

Embark on your journey by understanding the fundamental architecture of Oracle Database. This section delves into the core distinctions between Oracle and other Relational Database Management Systems (RDBMS) platforms, providing you with a foundational understanding. You will explore various Oracle editions and their features, tailored for robust enterprise solutions, and gain insight into the intricate components of Oracle instances and database structures, understanding how they seamlessly integrate to power global operations.

Core Architecture

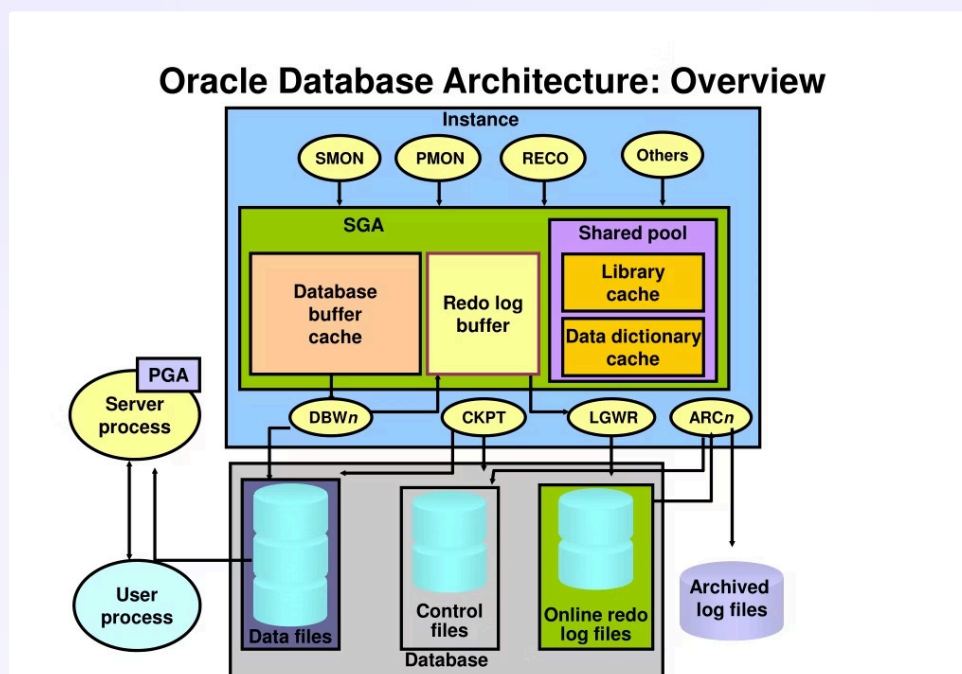Differentiate Oracle from other RDBMS platforms.

Enterprise Features

Explore Oracle editions and solutions for large organisations.

Instance Components

Learn about Oracle instances and database structures.

Oracle Database Architecture: Overview

Instance

SMON PMON RECO Others

SGA

Database buffer cache

Redo log buffer

Shared pool

Library cache

Data dictionary cache

PGA
Server process

DBWn CKPT LGWR ARCn

User process

Data files

Control files

Online redo log files

Archived log files

Database

Oracle SQL Fundamentals: Querying Data Like a Pro

Unlock the power of data manipulation with Oracle SQL. This module guides you from basic query writing to advanced data retrieval techniques. You'll master essential SELECT statements, apply powerful WHERE conditions for precise filtering, and utilise GROUP BY and ORDER BY clauses for organised data presentation. Furthermore, you will dive deep into various JOIN types (Inner, Outer, Self, Cross) and subqueries, along with set operations like UNION and INTERSECT, enabling you to extract and combine data with unparalleled proficiency. Learn to leverage built-in functions to manipulate and transform data efficiently.

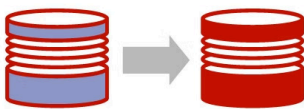## SELECT Mastery
Write precise and efficient SQL queries.

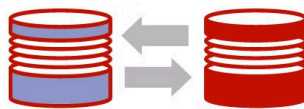## JOIN Operations
Combine data from multiple tables with confidence.

Advanced Functions
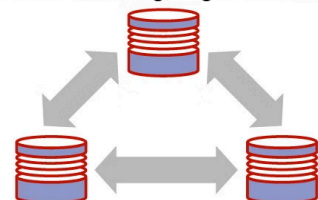Manipulate and extract data using built-in SQL functions.
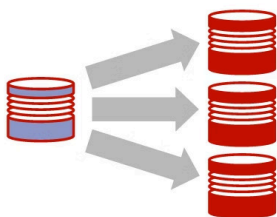

UNIDIRECTIONAL
Reporting Instance
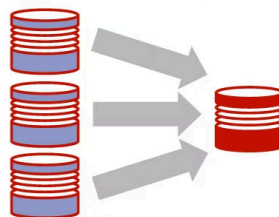
BI-DIRECTIONAL
Instant Failover "Active-Active"

PEER-TO-PEER
Load Balancing, High Availability

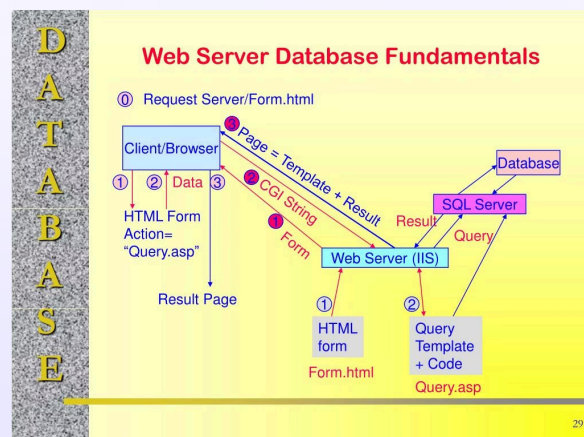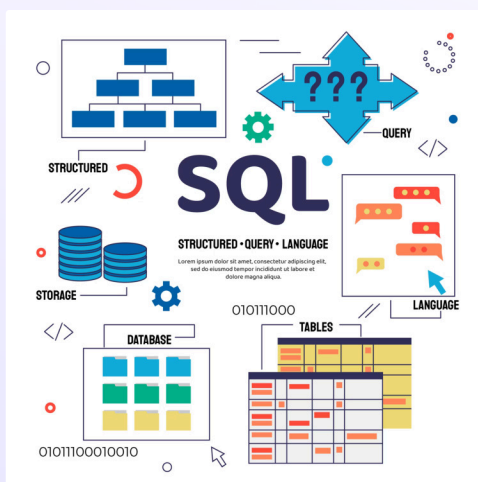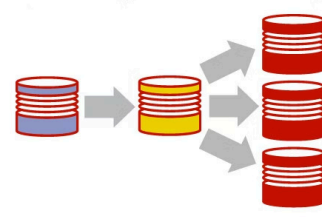**BROADCAST**
Data Distribution

CONSOLIDATION
Data Warehouse/Mart/Store

CASCADING
Scalability, Database Tiering

Web Server Database Fundamentals

PL/SQL Programming for Database Automation

Elevate your database capabilities by learning PL/SQL, Oracle's powerful procedural language. This section focuses on developing robust and automated database solutions. You'll gain expertise in using variables, controlling program flow with loops and conditional statements, and handling exceptions for resilient code. A key focus will be on creating and optimising procedures, functions, triggers, and packages, allowing you to automate routine tasks and implement complex business logic directly within the database environment.

1

Procedural Logic
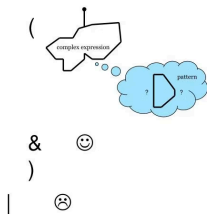
Implement variables, loops, and conditional statements.

2

Database Objects

Create procedures, functions, triggers, and packages.

3

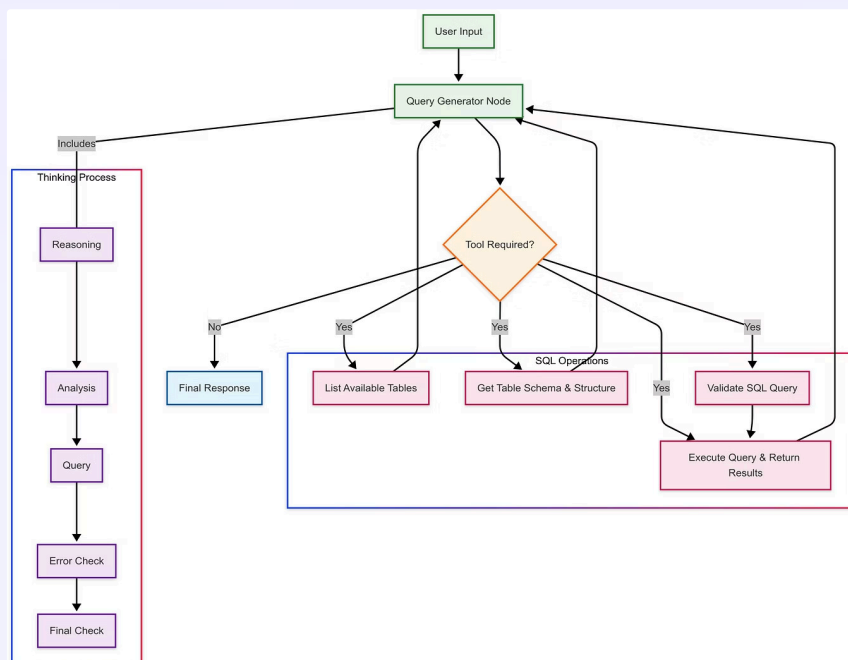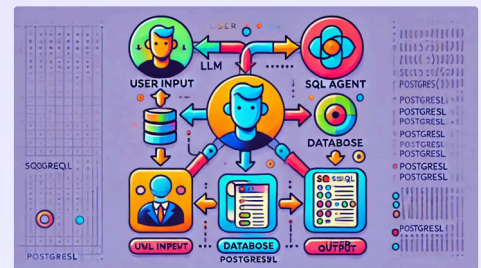### Task Automation

Automate routine DBA tasks and data workflows.

# Comprehensive Oracle Database Administration (DBA)

This extensive module provides the essential skills for effective Oracle Database Administration. You will learn to install and configure Oracle Database across various environments, mastering the critical processes of database startup and shutdown. Efficiently manage tablespaces, datafiles, and storage to ensure optimal database performance. The course covers user management, including creating users, assigning roles, and managing privileges, crucial for maintaining database security and access control. Furthermore, you will gain hands-on experience with reliable backup and recovery using RMAN and leverage Oracle Data Pump for swift data export and import operations.

- Install and configure Oracle Database.

- Manage database lifecycle: startup and shutdown.

- Administer storage: tablespaces and datafiles.

- Implement user, role, and privilege management.

- Perform backup and recovery using RMAN.

- Utilise Oracle Data Pump for efficient data movement.
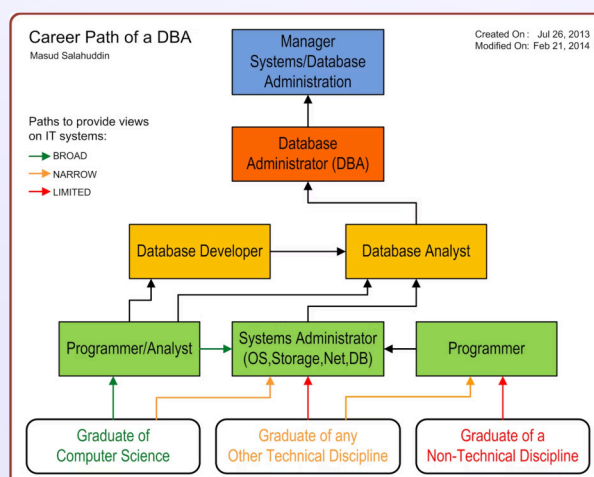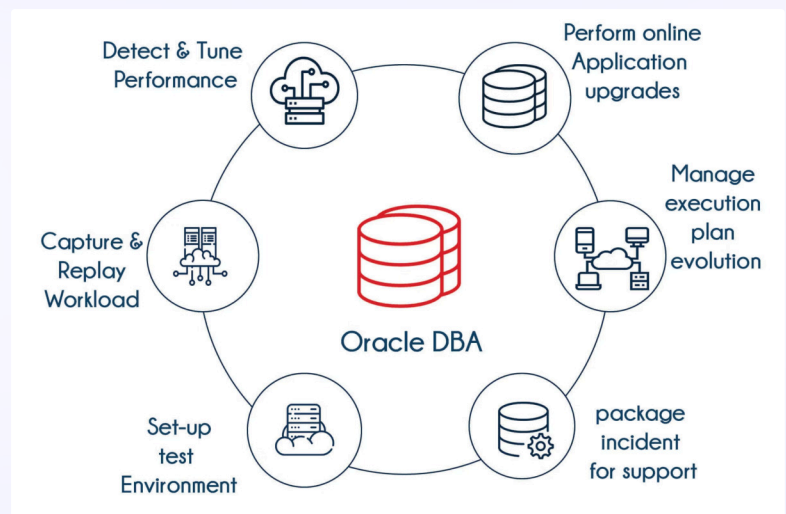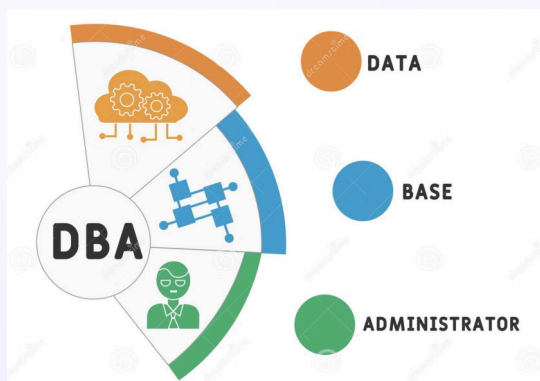
Oracle Database Performance Tuning & Optimisation

Optimise your Oracle database for peak performance. This section teaches you how to proactively identify and troubleshoot performance bottlenecks using industry-standard tools like AWR (Automatic Workload Repository), ASH (Active Session History), and ADDM (Automatic Database Diagnostic Monitor) reports. You will master the implementation of indexes and partitioning strategies to accelerate query execution and manage memory and configuration parameters for high-throughput environments. Learn to analyse execution plans and apply advanced query optimisation techniques to ensure your database operations run as efficiently as possible.

Identify Bottlenecks
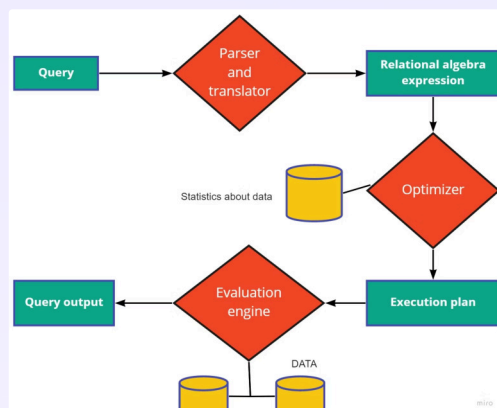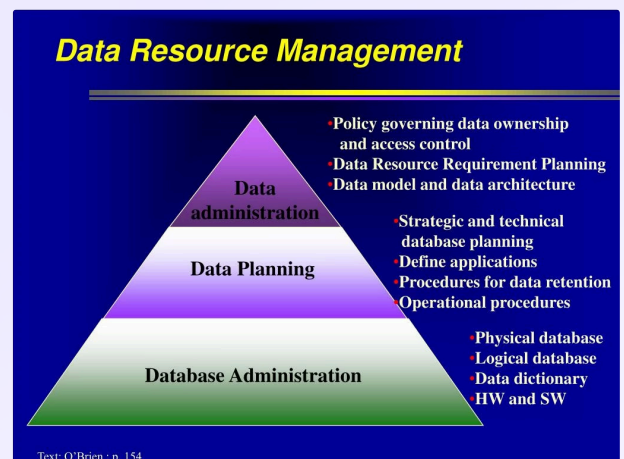
Use AWR, ASH, and ADDM for performance diagnosis.

Resource Management

Optimise memory and configuration parameters.

Query Optimisation

Implement indexes, partitions, and fine-tune queries.

Troubleshooting

Diagnose and resolve common performance issues.

Finding Bottlenecks: Queues in a Database System

Database System Concepts, 5th Ed.   23.9   ©Silberschatz, Korth and Sudarshan

Data Resource Management

- Policy governing data ownership and access control
- Data Resource Requirement Planning
- Data model and data architecture

Data administration

- Strategic and technical database planning
- Define applications
- Procedures for data retention
- Operational procedures

Data Planning

- Physical database
- Logical database
- Data dictionary
- HW and SW

Database Administration

Text: O'Brien : p. 154

Server troubleshooting checklist

Troubleshooting server problems gets easier if you follow basic guidelines for server management:

1. Identify range of effect
2. Evaluate the server in question
3. Check records of server statuses and changes
4. Check in with team members
5. Monitor environment comprehensively, retain log data
6. Review and clarify SLA terms with vendors

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Robust Oracle Security & Networking

Secure your Oracle database against vulnerabilities and ensure seamless connectivity. This module covers the implementation of robust database security strategies, including managing users, strong password policies, and comprehensive permission policies. You will learn to utilise roles and profiles for granular access control and enable auditing to track all database activities, safeguarding sensitive data. Additionally, the course provides essential knowledge on configuring Oracle Net Services, setting up listeners, TNS names, and SQL*Net for multi-client environments, and troubleshooting common connectivity issues for large-scale deployments.

Database Security
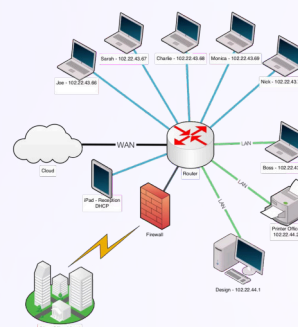
Implement robust security policies and access controls.
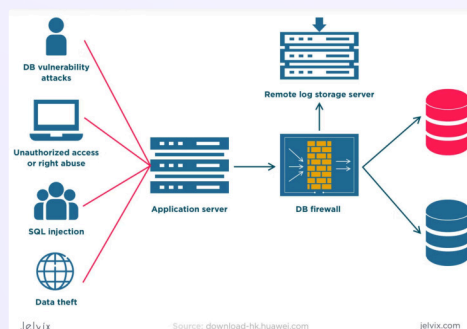
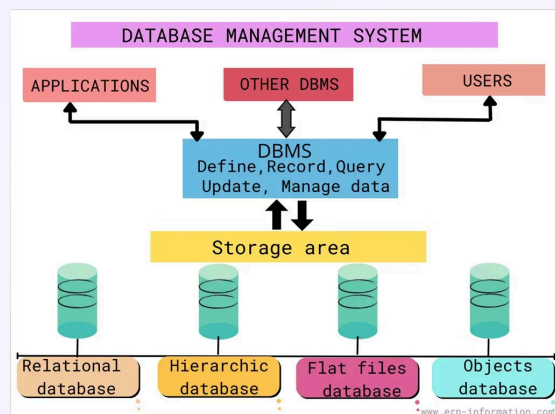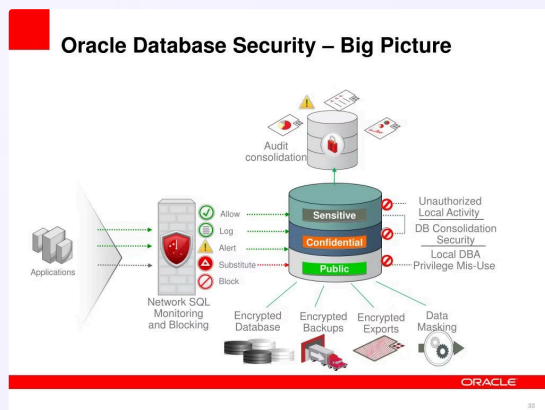## User Management

Manage users, roles, and privileges securely.

Network Configuration

Set up Oracle Net Services for client connectivity.

Oracle Database Security – Big Picture

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Real-World Projects & Hands-On Labs

Theory transforms into practical expertise through our intensive real-world projects. You will apply your acquired knowledge by designing a complete database schema for a sample business scenario, mimicking real-life challenges. Automate daily DBA tasks using powerful PL/SQL scripts and gain crucial experience by running end-to-end performance optimisation and recovery simulations. This practical component ensures you can confidently work with real-time datasets and manage complex deployment configurations, preparing you for immediate impact in professional roles.

- Design database schemas for practical scenarios.
- Automate DBA tasks using PL/SQL.
- Perform performance optimisation and recovery simulations.
- Work with real-time datasets and deployment configurations.
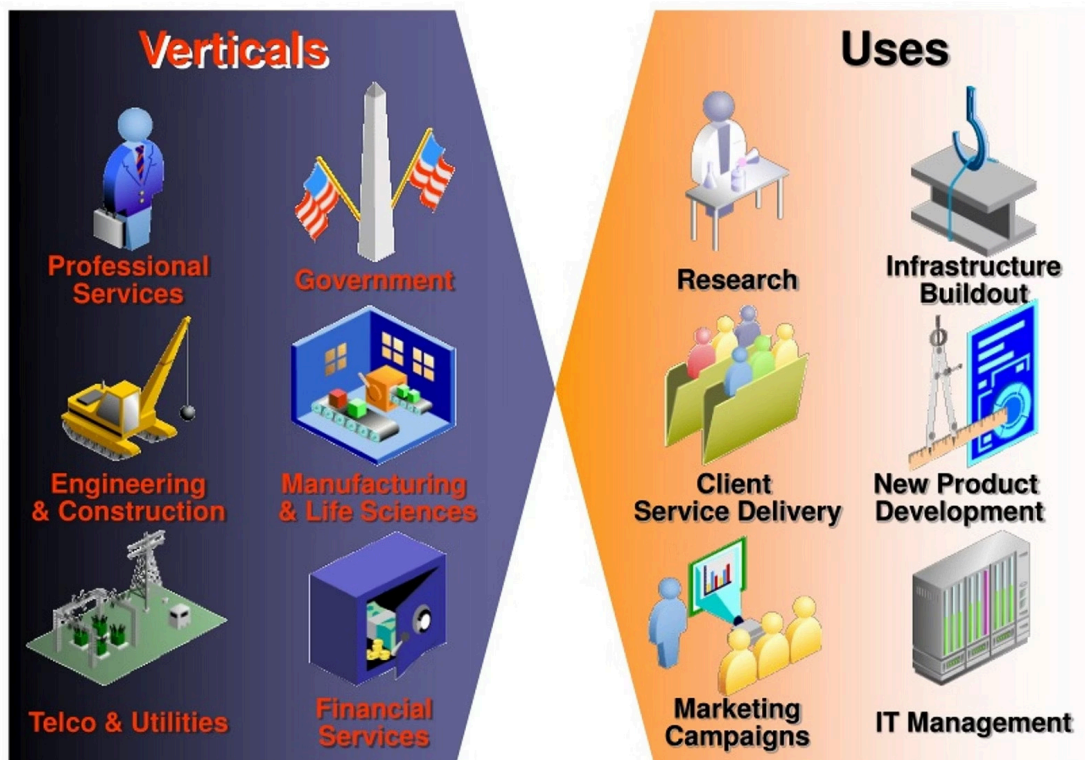
Certification & Career Support

Ecorporate Trainings is committed to your career advancement beyond just course completion. This programme provides dedicated support to help you prepare for industry-recognised certifications such as Oracle Certified Associate (OCA) and Oracle Certified Professional (OCP). Benefit from expert assistance with resume writing, specifically tailored for Oracle-centric roles, and participate in mock interviews to hone your presentation skills. We also offer portfolio reviews and provide insights into various career paths, including freelance, full-time, and consulting opportunities in database administration and development.

1 Certification Preparation	2 Resume & Interview Prep	3 Career Path Insights
Guidance for OCA and OCP exams.	Tailored support for Oracle roles.	Explore diverse opportunities in the field.

Industry recognised Certification:

Upon successful completion of the Oracle Database Administration and Sql Training Course, you will receive an industry-recognised certification from Ecorporate Trainings. This certification serves as a testament to your acquired expertise and commitment to professional development in the Oracle Database Administration and Sql field.

"Certification from Ecorporate Trainings validates your skills and enhances your professional credibility in the competitive tech market."

This credential will significantly boost your CV, opening doors to new career opportunities and demonstrating your readiness to contribute to Designing-driven projects. It's a valuable asset that will distinguish you in the eyes of employers.

Our certification validates your skills across the crucial areas of designing, signalling to potential employers that you possess the practical knowledge required for immediate impact. It sets you apart, demonstrating your commitment to professional development and your readiness to tackle complex Oracle Database Administration and Sql designing challenges.

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Completion Certificate

Oracle Database Administration and Sql

This certificate is awarded to an individual or team that has demonstrated exceptional work quality or results in the relevant project.

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Why Choose Ecorporate Trainings?

At Ecorporate Trainings, we are dedicated to providing an unparalleled learning experience that translates into tangible career growth. Our commitment is reflected in our key offerings:

- **Industry-Expert Trainers:** Learn from professionals with extensive real-world experience in Oracle technologies.
- **Real-Time Project Experience:** Gain practical skills through hands-on projects that mirror industry scenarios.
- **Career Guidance and Certification Support:** Comprehensive support to help you achieve your career aspirations and certifications.
- **Flexible Online Sessions:** Convenient learning options designed to fit your schedule.
- **Post-Training Support & Resume Mentorship:** Continued assistance even after course completion to ensure your success.

Don't miss this opportunity to transform your career with highly sought-after Oracle skills. Visit **whttps://www.ecorporatetrainings.com/** to register your interest and be the first to know when enrollment opens. Master Oracle. Boost Your Career. Become a Certified Database Professional. Only at Ecorporate Trainings — Where Learning Leads to Real Opportunity.

For more Details & Call to Action..

The "Oracle Database Administration and Sql" is promising to be a game-changer for your QA career. Upon successful completion of the course, you will receive an industry-recognized certification from Ecorporate Trainings, validating your expertise and enhancing your professional credibility.

Test smarter. Automate faster. Grow bigger — with Ecorporate Trainings. Don't miss this opportunity to become a Oracle expert. Visit our website and be among the first to enroll!

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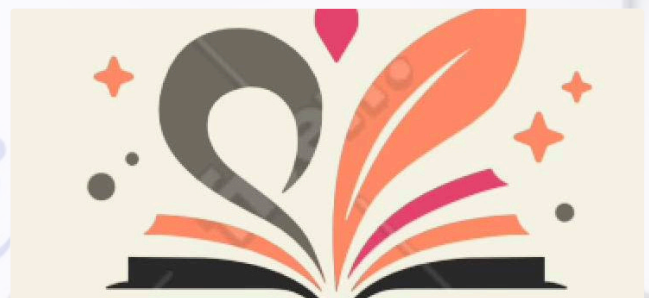
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