Objective: Oracle has many advantages and features that make it popular and thereby makes it as the world’s largest enterprise software company. Oracle is used for almost all large applications and one of the main applications in which Oracle takes its major presence is banking. In fact, ten of the world’s top 10 banks run Oracle applications this is because Oracle offers a powerful combination of technology and comprehensive, integrated business applications, including key functionality built specifically for banks. After studying this course, student should be able to do the following:

Install, create, and administer Oracle Database 10g
Configure the database for an application
Employ basic monitoring procedures
Implement a backup and recovery strategy
Move data between databases and files

Brief Course Content
This course can be done in modular form as per the detail below

<table>
<thead>
<tr>
<th>Module</th>
<th>Module Name</th>
<th>Duration</th>
<th>Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORA-1</td>
<td>Oracle Database 10g: SQL</td>
<td>4 Weeks</td>
<td>4000/-</td>
</tr>
<tr>
<td>ORA-2</td>
<td>Oracle Database 10g: Administration</td>
<td>4 Weeks</td>
<td>5000/-</td>
</tr>
</tbody>
</table>

Module 1: Oracle Database 10g: SQL (ORA-1)
Module 2: Oracle Database 10g: DBA (ORA-2)

Relational Databases & SQL
About relational databases
Elements of SQL
Using SQL*Plus
About SQL*Plus
Using the ms windows SQL*Plus tool
Using the iSQL*Plus web tool
Entering commands & syntax
Building a select statement
About the select statement
Selecting columns
Using alias names
Building a where clause
About logical operators
Equality operator
Boolean operators
Null & between operators
Finding text strings
In operator
Ordering the result table
About the order by clause
Multiple column sorts
Specifying the sort sequence
About null values within sorts
Using column aliases
Pseudo columns & functions
About pseudo columns & functions
Using ROWID
Using ROWNUM
Using the functions
Using the dual table
Sessiontimezone function
Joining tables
About joins
Inner join
Reflexive join
Non-key join
Outer join
Using set operators
About the set operators
Set operator examples
Summary functions
About summary functions
Summary functions with distinct
Using subqueries
About subqueries
Complex table reference

Introduction


Installing the Oracle Database Software


Creating an Oracle Database

Planning the Database, Database Configuration Assistant (DBCA), Using the DBCA to Create a Database, Password Management, Creating a Database Design Template, Using the DBCA to Delete a Database, Summary, Practice Overview: Using the DBCA.

Managing the Oracle Instance


Managing Database Storage Structures

Administering User Security

Database User Accounts  Predefined Accounts: SYS and SYSTEM  Creating a User  Authenticating Users  Administrator Authentication
Unlocking a User Account and Resetting the Password, Privileges, System Privileges, Object Privileges, Revoking System Privileges withADMIN OPTION, Revoking Object Privileges with GRANT OPTION, Benefits of Roles, Assigning Privileges to Roles and Roles to Users,
Predefined Roles, Creating a Role, Secure Roles, Assigning Roles to Users, Profiles and Users, Implementing Password Security Features,
Creating a Password Profile, Supplied Password Verification Function: VERIFY_FUNCTION, Assigning Quota to Users, Summary, Practice
Overview: Administering Users.

Managing Schema Objects

What Is a Schema?  Accessing Schema Objects  Naming Database Objects  Specifying Data Types in Tables  Creating and Modifying Tables,
Understanding Data Integrity, Defining Constraints, Constraint Violations, Constraint States, Constraint Checking, Creating Constraints
with SQL: Examples, Viewing the Columns in a Table, Viewing the Contents of a Table, Actions with Tables, Dropping a Table, Truncating a
Table, Indexes, Types of Indexes, ee Index, Bitmap Indexes, Index Options, Creating Indexes, What Is a View?, Creating Views, Sequences,
Creating a Sequence, Using a Sequence, Temporary Tables, Temporary Tables: Considerations, Data Dictionary: Overview, Data Dictionary

Managing Data and Concurrency

Manipulating Data Through SQL  The INSERT Command  The UPDATE Command  The DELETE Command  The MERGE Command  The
COMMIT and ROLLBACK Commands PL/SQL, Administering PL/SQL Objects, PL/SQL Objects, Functions, Procedures, Packages, Package
Specification and Body, Build Packages, Triggers, Triggering Events, Locks, Locking Mechanism, Data Concurrency, DML Locks, Enqueue
Mechanism, Lock Conflicts, Possible Causes of Lock Conflicts, Detecting Lock Conflicts, Resolving Lock Conflicts, Resolving Lock Conflicts
Using SQL, Deadlocks, Summary, Practice Overview: Managing Data and Concurrency.

Managing Undo Data

Data Manipulation  Undo Data  Transactions and Undo Data  Storing Undo Information  Undo Data Versus Redo Data  Monitoring Undo
Administering Undo, Configuring Undo Retention, Guaranteeing Undo Retention, Sizing the Undo Tablespace, Using the Undo Advisor,
Summary, Practice Overview: Managing Undo Segments.

Implementing Oracle Database Security

Industry Security Requirements, Separation of Responsibilities , Database Security , Principle of Least Privilege , Applying the Principle of
Least Privilege, Monitoring for Suspicious Activity, Standard Database Auditing, Enabling Auditing, Uniform Audit Trails, Enterprise
Manager Audit Page, Specifying Audit Options, Using and Maintaining Audit Information, Valued Auditing, Fin Aided Auditing, FGA Policy,
Configuring the Oracle Network Environment


Proactive Maintenance


Performance Management

Performance Monitoring, Performance Monitoring: Top Sessions, Performance Monitoring: Top Services, SQL Tuning Advisor: Overview, SQL Tuning Advisor Options and Recommendations, Using the SQL Tuning Advisor, Using the SQL Tuning Advisor: Example, SQL Tuning Advisor: SQL Statistics, SQL Tuning Advisor: Identifying Duplicate SQL, Using the SQL Access Advisor, Managing Memory Components, Enabling Automatic Shared Memory Management (ASMM), Manually Setting Shared Memory Management, Using the Memory Advisor, Dynamic Performance Statistics, Troubleshooting and Tuning Views, Invalid and Unusable Objects, Summary, Practice Overview: Monitoring and Improving Performance.

Backup and Recovery Concepts

Categories of Failures, Statement Failure, User Process Failure, Network Failure, User Error, Instance Failure, Background Processes and Recovery: Checkpoint (CKPT), Background Processes and Recovery: Redo Log Files and LogWriter, Background Processes and Recovery: Archiver (ARCn), Instance Recovery, Phases of Instance Recovery, Tuning Instance Recovery, Using the MTTR Advisor, Media Failure, Configuring for Recoverability, Control Files, Redo Log Files, Multiplexing the Redo Log, Archive Log Files, Archive Log File: Naming and Destinations, ARCHIVELOG Mode, Summary, Practice Overview: Configuring for Recoverability.

Performing Database Backups

Performing Database Recovery


Performing Flashback


Moving Data


Eligibility

BCA/BSC/MCA/MSc and Higher