

# Course Brochure

## ORACLE 10g-11g-12c

### Overview

- This course will introduce participants to the importance of good initial database design, and the methods used to tune a production of Oracle 10g,11g,12c database. The focus is on Database and Instance tuning rather than specific operating system performance issues. This course counts towards the Hands-on course requirement for the Oracle 10g, 11g,12c OCA Certification.

### Pre-requisites

- Knowledge of Operating System. Preferably knowledge of C Language.

### Applications

## COURSE CONTENTS

### INTRODUCTION

- ❖ Introduction to Database And RDBMS
- ❖ Introduction to Oracle
  - Versions
  - Editions
  - Installation, Uninstallation
  - Directory Structure

### SQL

- ❖ Introduction to SQL.
- ❖ Classifications of SQL
- ❖ Languages of SQL
  - DQL/DRL, DML, DDL, TCL, DCL, SCL
- ❖ Oracle Data Types
- ❖ Operators
- ❖ Functions
  - Character
  - Number
  - Date
  - Data Conversion
  - Ranking/Window
- ❖ Joins
  - SQL Joins
  - ANSI Joins
- ❖ Tree Walking
- ❖ Sub Queries
  - Some/Any, All, Exists Not Exists

### Database Objects

- ❖ Tables
  - Dictionary Tables
  - User Defined Tables
  - Temporary Tables
  - Table Partitions
  - Large Objects(LOBs)
- ❖ Constraints
  - Normalization And
  - Denormalization

- ❖ Views
- ❖ Synonyms
- ❖ Sequences
- ❖ Index
- ❖ Clusters

### PL /SQL

- ❖ Introduction to PL/SQL
- ❖ Data types
- ❖ Control Statements
- ❖ Exceptions
  - Built-In Exceptions
  - User defined Exceptions
  - Pragma Exceptions
- ❖ Cursors
- ❖ Sub-Programs
  - Procedures
  - Functions
- ❖ **AUTONOMOUS TRANASCTIONS**
  - Packages
  - Triggers
- ❖ **BULK BINDS**
  - Advantages
  - Using for All Statement
  - Using bulk collect clause
  - Bulk Fetches
  - Bulk Returns

### 10g FEATURES

- ❖ Grid Computing Technology
- ❖ Flashback Table (Undrop table)
- ❖ Faster Dump & Pump Operations for Backup & Recovery
- ❖ Regular Expressions Support
- ❖ Merge command Enhancements
- ❖ SQLPLUS enhancements
- ❖ Enhancements to DBMS\_OUTPUT
- ❖ Enhancements in ORDBMS

## COURSE CONTENTS

### 11g Features

- ❖ New Data Type Enhancements
- ❖ Read only tables
- ❖ Invisible indexes
- ❖ Virtual columns
- ❖ Sequence Assignment
- ❖ Common table expression (CTE)
- ❖ PIVOT & UNPIVOT
- ❖ Dynamic SQL Enhancements
- ❖ CONTINUE statement
- ❖ Trigger Enhancements
- ❖ Configuring and Working With SQL Developer Tool

### 12c Features

- ❖ Online table partition or sub-partition migration
- ❖ Invisible column
- ❖ Multiple indexes on a single column
- ❖ DDL logging

- ❖ Table partitions maintenance enhancements
- ❖ Truncate table cascade
- ❖ Limiting ROWS for TOP-N query results
- ❖ Session level sequences
- ❖ SQL Plus enhancements

### ORDBMS

- ❖ Introduction to ORDBMS
- ❖ Data Types
- ❖ Object Types
- ❖ Working With Methods
- ❖ Method Overloading
- ❖ Collections
  - VArray
  - Nested Table
  - Indexed Array