

Dear Student,

Based upon your enquiry we are pleased to send you the course curriculum for Oracle DBA 11g

## SQL (Structured Query Language)

### Software Installation (Environment Setup for Oracle on Window10)

- Network Adopter (Microsoft Loopback)
- Oracle11g on Window10
- Java SDK
- SQL Developer

### Database Concepts

- Database
- Schema
- Instance
- DBMS/RDBMS
- Transaction
- Table

### Introduction of SQL

- Sub-Language
- DDL
- DML
- DCL
- TCL
- DQL

### Data Definition Language (DDL)

- CREATE a Table
- Alter a Table
- Rename a Table
- Drop a Table
- Truncate a Table

## Data Manipulation Language (DML)

- INSERT data into a Table
- DELETE data from Table
- UPDATE data from Table
- Difference between DELETE & TRUNCATE
- Difference between DELETE & DROP

## Data Control Language (DCL)

- Types of Privileges
  - System Privileges
  - Object Privileges
- GRANT Privileges
- REVOKE Privileges

## Transaction Control Language (TCL)

- COMMIT
- ROLLBACK
- SAVEPOINT

## Data Query Language (DQL):-

- **SELECT data from table**
  - a) All columns with all rows
  - b) All columns with selected rows
  - c) Selected columns with all rows
  - d) Selected columns with selected rows
- **Filtering Data**
  - 1) WHERE Command
    - a) Comparison Operators (>,>=,<,<=,=)
    - b) Logical Operators (AND, OR & NOT)
    - c) Special Operator (BETWEEN,IN,LIKE,ANY,ALL,EXISTS)
    - d) Working with NULL values (IS NULL & IS NOT NULL)
    - e) Arithmetic operators (+,-,\*,/)

- 2) sorting data ORDER BY clause
- 3) Distinct Clause
- 4) NULL values treatment with Sorting Data

## **SET Operators**

- UNION
- UNION ALL
- INTERSECT
- MINUS

## **Group the data**

- Aggregate/Summary Functions (MIN,MAX,AVG,COUNT)
- GROUP BY clause
- GROUP BY with multiple columns
- GROUP BY with HAVING clause
- GROUP By with ROLLUP & CUBE Function

## **JOINS**

- Cross Join
- Inner Join
- Natural Join
- Outer Join
  - a) Left Outer Join
  - b) Right Outer Join
  - c) Full Outer Join
- Other Types :-
  - 1) Equi Join
  - 2) Non-Equi JOIN
  - 3) Self Join

## Functions

- NUMBER functions  
(SQRT,POWER,TRUNC,ROUND,MOD,CEIL,FLOOR,GREATEST,LEAST )
- STRING functions  
(UPPER,LOWER,INITCAP,LENGTH,SUBSTR,INSTR,LPAD,RPAD, LTRIM,RTRIM,TRIM,REPLACE,TRANSLATE,CONCAT,REVERSE)
- DATE functions  
(SYSDATE,LAST\_DAY,NEXT\_DAY,ADD\_MONTHS,MONTHS\_BETWEEN,TRUNC,ROUND)
- Conversion functions (TO\_CHAR,TO\_DATE,TO\_NUMBER)
- Special Function (CASE,DECODE ,TIMESTAMP\_TO\_SCN,SCN\_TO\_TIMESTAMP)
- Functions for NULL values (NVL,NVL2,NULLIF,COALESCE)

## Analytical Function

- Ranking Function (ROW\_NUMBER,RANK,DENSE\_RANK)
- Aggregate Function (MAX,MIN,AVG,COUNT)
- Row Comparison Function (LAG,LEAD)
- Order by Clause
- Partition by Clause
- Windowing Clause

## Alternative Name (ALIAS name)

- Column Alias
- Table Alias

## PSEUDO Columns

- ROWNUM
- ROWID
- CURRVAL
- NEXTVAL
- LEVEL

## Constraints

- Introduction of constraints
- Type of constraints
  - a) Primary Key
  - b) Unique Key
  - c) Not Null
  - d) Check Constraint
  - e) Foreign Key
- Difference between Primary Key & Unique Key
- Difference between Primary Key & Foreign Key
- Column level & Table level Constraints
- Composite Constraints
- Implementation of Constraint
  - a) by CREATE TABLE command
  - b) by ALTER TABLE command
- Enable/Disable Constraints

## VIEWS

- Purpose of View
- Modify an existing view
- CREATE a View
- Types of View (Read Only, Updateable, Complex, Force)
- DML operation through View

## SEQUENCE (Number series Generator)

- CREATE a Sequence
- ALTER a Sequence
- DROP a Sequence
- SELECT value from Sequence (currval & nextval PSEUDO Columns)

## SYNONYMS (Alternative Name of Database Object)

- TYPE of SYNONYMS
- CREATE a SYNONYMS (PUBLIC & PRIVATE)
- DROP a SYNONYMS

## SUB Query

- Introduction of SUB Query
- Sub queries on multiple columns
  - a) Pairwise Comparison
  - b) Non-Pairwise Comparison
- Sub query in FROM clause (Inline View)
- Sub query in WITH clause
- Scalar Sub queries
- Correlated SUB Query

## Index

- Introduction of Index
- Type of Index (B-TREE & BITMAP)
- CREATE INDEX
- DROP INDEX
- RENAME INDEX
- Unique Index
- Function Based Index
- Local Partitioned Index
- Global Partitioned Index

## SQL\*LOADER

### Query building Process

- Gather the Business Requirement
- Select all the columns needed
- add the necessary Filters
- perform the Grouping
- perform Filtering at Group level
- Sort the data

## Oracle Database 11g: Administration

### ORACLE Architecture

#### ➤ System Global Area (Memory Architecture)

##### ✓ Shared Pool

- Data Dictionary Cache
- Library Cache
- Result Cache
- User Global Area

##### ✓ Large Pool

##### ✓ Java Pool

##### ✓ DB Buffer Cache

##### ✓ Log Buffer Cache

##### ✓ Stream Pool

##### ✓ Background processes

(SMON,PMON,MMON,DBWR,LGWR,CKPT,ARCH)

#### ➤ File Architecture

##### ✓ Parameter File (Pfile & Spfile)

##### ✓ Control File

##### ✓ Redo Log File

##### ✓ Data File

##### ✓ Archive File

##### ✓ Password File

### Installation on Linux

- Through GUI
- Software through GUI and DBCA for DB Creation
- Software through GUI and Create Database for DB Creation

- Silent Installation (Through Response File)

## **Startup & Shutdown Database**

- Startup nomount
- Startup mount
- Startup open/startup
- Shutdown immediate
- Shutdown abort
- Shutdown transactional

## **Database Stages & their uses and change one stage to another**

- Nomount
- Mount
- Open

## **Listener Command**

lsnrctl start/stop/status

## **Enable & Disable Archivelog Mode**

## **Enable & Disable Flashback Mode**

## **Tablespace Management (Create,Alter,drop)**

- Temporary Tablespace
- Undo Tablespace
- Permanent Tablespace



---

## User/Role/Profile Management(Create,Alter,drop)

### Backup & Recovery

- a) Imp/Exp
- b) Datapump (Impdp/Expdp)
- c) RMAN
  - 1) RMAN catalog creation and database registration on catalog
  - 2) RMAN commands
  - 3) RMAN Scripts and their execution & scheduling (cronjob)

### Cloning/Refresh of Database

- a) With RMAN
- b) Without RMAN

### Flashback

- a) Flashback Query
- b) Flashback Version Query
- c) Flashback Transaction Query
- d) Flashback table
- e) Flashback Database
- f) Flashback Query Functions

### Patching

- Types of Patch
- Opatch Utility

### Auditing

### Performance Tuning

- a) AWR report
- b) ASH report
- c) Explain Plan with SQL Trace
- d) Tkprof Utility
- e) Hints

- f) Analyze table/index/schema
- g) SQL Tuning Advisor

## **Index Management**

## **Partition Management**

Types of Partitions  
Create Partition Table  
Partition Table Operation  
(ADD, DROP, MERGE, TRUNCATE, SPLIT, EXCHANGE, MOVE)

## **ASM (Automatic Storage Management) setup with grid**

## **Datagaurd Setup**

## **Database Upgrade**

- a) By DBUA
- b) Without DBUA

## **Data Dictionaries**

- **Dynamic Performance Views**  
V\$SQL, V\$SESSION, V\$LOCK, V\$SYSSTAT, V\$DATABASE, V\$DATAFILE

## **Linux Basics**

- Grep
- Find
- Awk
- Sed
- Regular expression

---

## Trainer Profile (Mr. Ratnesh Gupta)

(Oracle Database Administration, Working in MNC)

- 10 Years total Experience as an Oracle DBA.
- Having Good Experience in Oracle DBA, Oracle SQL, PL/SQL, OCA and OCP.
- Involved in Corporate Training from last 6 Years

**Fees: - 17500**

**Duration: - 4.5 Months**

### Available Discounts

- Flat 10% Discount on onetime payment.
- Flat 10% Discount if joining on the same day of demo or enquiry.
- Special discount for group joining (minimum 5 students)
- Got someone's reference??, get flat ₹ 500 Discount. .
- Flat 10% Discount for our old students. .

**Note: - maximum two discounts are applicable for a single student**

### Trainer Online Tutorial Link:-

**<https://gupta79ratnesh1.blogspot.in/>**



# ORACLE

---

## Counselling

Tech Altum