

# RDBMS and its applications using Oracle

## Description

Our Oracle instructor led Internship is designed to give a firm foundation on Oracle Database which will cover SQL and PL/SQL concepts which are required to create database objects like tables, views, stored procedures, functions, triggers etc. and also gives idea about writing queries and sub-queries with Joins.

## Expectations and Goals

After the completion of the Oracle Internship at Ardent, you should be able to:

- Learn how to write basic SQL queries, sorting and filtering data.
- Write DDL and DML queries to create and manage database tables.
- Explore different types of functions available in SQL.
- Apply different joining techniques to database tables and sub queries exploit the concepts like view, sequence, and index synonym. Utility of TCL Command and DCL Command Understand the need of PL/SQL.
- Create cursors and deal with exceptions.
- Learn to use procedures and functions.
- Create packages and triggers.
- Concept of ORDBMS.
- Handling LOB Data Type.

- + Live Sessions by the mentor.
- + Opportunity to interact with trainer.
- + After each session the recording of the session shall be provided.
- + Doubt clearing sessions.
- + 24/7 Support team to assist in software installation and other issues.
- + Live Project implementation.
- + Internship Certificate.
- + Ardent Certificate contains logos of all the affiliations like Microsoft, Adobe, AutoDESK, EC-COUNCIL, MSME, NCVT, ISO 9001:2015.
- + Softcopy of study materials shall be provided.

## Prerequisites

Basic Knowledge of Computer.

## Course Schedule

Module	Topic
<b>Module 1</b>	<b>Introduction to DBMS &amp; RDBMS</b> Normalization E R Diagram
<b>Module 2</b>	<b>Basic SQL Construct</b> Arithmetic Operation and Expressions Importance of NULL values and Concatenate operators Column naming conventions Restricting and Sorting Data Applying where and order by clauses Pattern matching using LIKE IN Operator Logical AND, OR and NOT operators

	Between and Not Between conditions
<b>Module 3</b>	<b>Data Definition Language (DDL)</b> Create Alter Rename Truncate Drop Purge Data Manipulation Language (DML) Inserting rows Updating rows Deleting rows Merge Statement
<b>Module 4</b>	<b>Functions in SQL and Subquery</b> Single Row Functions Character functions Number functions Date functions Other functions (NVL,NVL2,COALESCE,decode) Multi Row Functions Aggregate functions Group by clause Group by clause with NVL function Having clause Subquery Need of subqueries Types of subqueries Subquery operators
<b>Module 5</b>	<b>Joining Tables,TCL Command &amp;DCL Command</b> Inner Join, Outer Join, Left outer, Right outer, Full outer, Non Equi-Join,Self-Join TCL command Commit,rollback,save point DCL command Grant, Revoke

<p><b>Module 6</b></p>	<p><b>View,Sequence,Index,Synonym</b>  Views  Need of views  Creating and Querying a view  Simple and Complex Views  DML on views  Sequence  Index  Synonym</p>
<p><b>Module 7</b></p>	<p><b>Introduction to PL/SQL</b>  Basics of PL/SQL  PL/SQL block structure  Data types and variables  Operators and %TYPE attribute  Writing a PL/SQL program  Control Structures  IF-THEN-ELSE statement  Basic, while and for loops  %ROWTYPE attribute</p>
<p><b>Module 8</b></p>	<p><b>Cursors and Exception Handling</b>  Introduction to cursors Types of cursors  Creating, using and deleting a cursor  Cursor attributes  Exception Handling  Need of handling exception  Predefined and non-predefined exceptions  User defined exceptions  Raising and trapping exceptions</p>
<p><b>Module 9</b></p>	<p><b>Procedures and Functions</b>  Need of procedures  Block structure of a procedure  Creating and invoking a procedure with IN and OUT parameters  Altering and Dropping a procedure  Need of functions over procedures  Block structure of a functions  Creating and invoking a function  Altering and Dropping a function</p>
<p><b>Module 10</b></p>	<p><b>Packages and Triggers</b>  Concept of a package  Creating a package using package header and package body  Invoking package members in a PL/SQL program with an example  Dropping a package  Definition of trigger  Creating a DDL trigger with an example  Creating a DML trigger with an example  Dropping a trigger</p>
<p><b>Module 11</b></p>	<p><b>ORDBMS</b>  Object</p>

	VArray Nested Table
<b>Module 12</b>	<b>Handling LOB Data Types</b> CLOB BLOB
<b>Module 13</b>	<b>Architecture Of Oracle</b>
<b>Module 14</b>	<b>Export And Import DataPump</b>
<b>Module 15</b>	<b>Loading Data From Flat File into the Table</b> SQLLOADER
<b>Module 16</b>	<b>Performance Tuning</b> Index Materialized view Cache Table Partitioned Table
<b>Module 17</b>	Project work and documentation