

Oracle Training in Patna

If you want to become a oracle database developer then you are in the right place. We are providing **Best Oracle Training in Patna** by industry standards and the trainers are certified by Oracle Corp. We are specialized to provide RDBMS and especially for Oracle SQL and PISQL. Our trainers are coming from various IT companies who have nearly 10+ years in IT industries. As of now we trained nearly 1000+ Oracle Professional.

Demand increases day by day for professionals in the information technology (IT) industry and the same time the competitions also very strong between the professionals. Particularly for oracle database professional the level of demand continues to growing gradually and they need a spark to achieve what they are really looking for. Ever green Scope in Oracle technologies like **DBA (Data base Administrator), Oracle SQL PISQL Developer, Application Developer (D2K), Backend Developer.**

This oracle training course syllabus designed with the help of several working professionals. After finishing this training you can able to write complex sql and plsql scripts and which will be real-time scenarios in all companies.

Oracle Certified Associate (OCA)

Oracle Certificate Associate exam exactly suitable for fresher and who want to become an oracle developer in the IT Market and these is the basic level exam conducted by **Oracle Corporation**. Eligible to take this exam is candidate should have interest in developer track. We already providing oracle training in Patna for the students who wants to become OCA. This certificate gives opportunity for the graduates to get job in the MNC's. The responsibilities of **Oracle SQL PISQL Developer** is to develop the basic level SQL queries and simple named blocks for the applications.

Oracle Certified Professional (OCP)

Oracle Certified Professional certificate provides by the oracle corporation once you cleared two papers. Eligible to take this exam is need to clear first part in OCA. End users always look for quick results from any internet application. Besant Technologies oracle training play a major role for the students who wants to write OCP. The Oracle Certified Professional has the responsibility of taken care of speed up the result using their coding techniques, PISQL is the powerful procedural language which we can do the efficient coding programs for using bunch of data's. For example BULK COLLECT we can use these command to fetch billions of rows and insert this into a table. These credentials has more value in the current IT Market and these **Oracle Certified Professionals** have more responsibility to develop the database applications.

Oracle SQL Training in Patna

Our SQL Training in Patna aims to teach beginners how to use the SQL in RDBMS. SQL Training provided by real-time corporate experts. Placement oriented **SQL Training in Patna** by top industry professionals and standards are certified by Oracle Corporation. From basic level to advanced level training will be provided for students placement in top companies like **TCS, CTS, WIPRO, INFOSYS, IBM** and **BOA**.

SQL stands for Structured Query Language which is mainly used to manage data in a RDBMS. SQL is the most used database language. We are having the syllabus which was issued by Oracle Corp.

Our SQL Training Institute is located in Patna Velachery and fully filled with real-time faculties and top consultants in IT sector.

Oracle SQL Training Syllabus

Introduction to Oracle Database

- List the features of Oracle Database 11g
- Discuss the basic design, theoretical, and physical aspects of a relational database
- Categorize the different types of SQL statements
- Describe the data set used by the course
- Log on to the database using SQL Developer environment
- Save queries to files and use script files in SQL Developer

Retrieve Data using the SQL SELECT Statement

- List the capabilities of SQL SELECT statements
- Generate a report of data from the output of a basic SELECT statement
- Select All Columns
- Select Specific Columns
- Use Column Heading Defaults
- Use Arithmetic Operators
- Understand Operator Precedence
- Learn the DESCRIBE command to display the table structure

Learn to Restrict and Sort Data

- Write queries that contain a WHERE clause to limit the output retrieved
- List the comparison operators and logical operators that are used in a WHERE clause
- Describe the rules of precedence for comparison and logical operators
- Use character string literals in the WHERE clause
- Write queries that contain an ORDER BY clause to sort the output of a SELECT statement
- Sort output in descending and ascending order

Usage of Single-Row Functions to Customize Output

- Describe the differences between single row and multiple row functions
- Manipulate strings with character function in the SELECT and WHERE clauses
- Manipulate numbers with the ROUND, TRUNC, and MOD functions

- Perform arithmetic with date data
- Manipulate dates with the DATE functions

Invoke Conversion Functions and Conditional Expressions

- Describe implicit and explicit data type conversion
- Use the TO_CHAR, TO_NUMBER, and TO_DATE conversion functions
- Nest multiple functions
- Apply the NVL, NULLIF, and COALESCE functions to data
- Use conditional IF THEN ELSE logic in a SELECT statement

Aggregate Data Using the Group Functions

- Use the aggregation functions in SELECT statements to produce meaningful reports
- Divide the data in groups by using the GROUP BY clause
- Exclude groups of data by using the HAVING clause

Display Data From Multiple Tables Using Joins

- Write SELECT statements to access data from more than one table
- View data that generally does not meet a join condition by using outer joins
- Join a table by using a self join

Use Sub-queries to Solve Queries

- Describe the types of problem that sub-queries can solve
- Define sub-queries
- List the types of sub-queries
- Write single-row and multiple-row sub-queries

The SET Operators

- Describe the SET operators
- Use a SET operator to combine multiple queries into a single query
- Control the order of rows returned

Data Manipulation Statements

- Describe each DML statement
- Insert rows into a table
- Change rows in a table by the UPDATE statement
- Delete rows from a table with the DELETE statement
- Save and discard changes with the COMMIT and ROLLBACK statements
- Explain read consistency

Use of DDL Statements to Create and Manage Tables

- Categorize the main database objects
- Review the table structure
- List the data types available for columns

- Create a simple table
- Decipher how constraints can be created at table creation
- Describe how schema objects work

Other Schema Objects

- Create a simple and complex view
- Retrieve data from views
- Create, maintain, and use sequences
- Create and maintain indexes
- Create private and public synonyms

Control User Access

- Differentiate system privileges from object privileges
- Create Users
- Grant System Privileges
- Create and Grant Privileges to a Role
- Change Your Password
- Grant Object Privileges
- How to pass on privileges?
- Revoke Object Privileges

Management of Schema Objects

- Add, Modify and Drop a Column
- Add, Drop and Defer a Constraint
- How to enable and disable a Constraint?
- Create and Remove Indexes
- Create a Function-Based Index
- Perform Flashback Operations
- Create an External Table by Using ORACLE_LOADER and by Using ORACLE_DATAPUMP
- Query External Tables

Manage Objects with Data Dictionary Views

- Explain the data dictionary
- Use the Dictionary Views
- USER_OBJECTS and ALL_OBJECTS Views
- Table and Column Information
- Query the dictionary views for constraint information
- Query the dictionary views for view, sequence, index and synonym information
- Add a comment to a table
- Query the dictionary views for comment information

Manipulate Large Data Sets

- Use Subqueries to Manipulate Data

- Retrieve Data Using a Subquery as Source
- Insert Using a Subquery as a Target
- Usage of the WITH CHECK OPTION Keyword on DML Statements
- List the types of Multitable INSERT Statements
- Use Multitable INSERT Statements
- Merge rows in a table
- Track Changes in Data over a period of time

Data Management in Different Time Zones

- Time Zones
- CURRENT_DATE, CURRENT_TIMESTAMP, and LOCALTIMESTAMP
- Compare Date and Time in a Session's Time Zone
- DBTIMEZONE and SESSIONTIMEZONE
- Difference between DATE and TIMESTAMP
- INTERVAL Data Types
- Use EXTRACT, TZ_OFFSET and FROM_TZ
- Invoke TO_TIMESTAMP, TO_YMINTERVAL and TO_DSINTERVAL

Retrieve Data Using Sub-queries

- Multiple-Column Subqueries
- Pairwise and Nonpairwise Comparison
- Scalar Subquery Expressions
- Solve problems with Correlated Subqueries
- Update and Delete Rows Using Correlated Subqueries
- The EXISTS and NOT EXISTS operators
- Invoke the WITH clause
- The Recursive WITH clause

Regular Expression Support

- Use the Regular Expressions Functions and Conditions in SQL
- Use Meta Characters with Regular Expressions
- Perform a Basic Search using the REGEXP_LIKE function
- Find patterns using the REGEXP_INSTR function
- Extract Substrings using the REGEXP_SUBSTR function
- Replace Patterns Using the REGEXP_REPLACE function
- Usage of Sub-Expressions with Regular Expression Support
- Implement the REGEXP_COUNT function

PISQL Training in Patna

Our PISQL Training in Patna aims to teach beginners and employees how to use the PISQL in real-time projects. PISQL Training provided by corporate experts who already having more than 10+ Experience. Placement oriented **PISQL Training in Patna** by Besant Technologies and our standards are certified by Oracle Corporation.



This course introduces students to PL/SQL and explains the benefits of this programming language. Participants learn to create PL/SQL blocks of application code that can be shared by multiple forms, reports, and data management applications. The course also imparts how to create anonymous PL/SQL blocks, stored procedures, and functions. Participants learn about declaring identifiers and trapping exceptions. Demonstrations and hands-on practice reinforce the fundamental concepts.

Oracle PISQL Training course is designed for developers from basic PL/SQL and SQL language skills. Developing, executing, and managing PL/SQL stored program units are dealt with in detail. Participants can enhance their skills by gaining in-depth knowledge of PL/SQL stored program units such as procedures, functions, packages, and database triggers. Participants also learn to utilize some of the Oracle-supplied packages.

Our PISQL Training Institute is located in Patna Velachery and fully filled with real-time faculties and top consultants in IT sector.

Oracle PISQL Training Syllabus

Introduction

- Course Objectives
- Course Agenda
- Human Resources (HR) Schema
- Introduction to SQL Developer

Introduction to PL/SQL

- PL/SQL Overview
- Benefits of PL/SQL Subprograms
- Overview of the Types of PL/SQL blocks
- Create a Simple Anonymous Block
- Generate Output from a PL/SQL Block

PL/SQL Identifiers

- List the different Types of Identifiers in a PL/SQL subprogram
- Usage of the Declarative Section to define Identifiers
- Use variables to store data
- Identify Scalar Data Types
- The %TYPE Attribute
- What are Bind Variables?
- Sequences in PL/SQL Expressions

Write Executable Statements

- Describe Basic PL/SQL Block Syntax Guidelines
- Comment Code

- Deployment of SQL Functions in PL/SQL
- How to convert Data Types?
- Nested Blocks
- Identify the Operators in PL/SQL

Interaction with the Oracle Server

- Invoke SELECT Statements in PL/SQL to Retrieve data
- Data Manipulation in the Server Using PL/SQL
- SQL Cursor concept
- Usage of SQL Cursor Attributes to Obtain Feedback on DML
- Save and Discard Transactions

Control Structures

- Conditional processing Using IF Statements
- Conditional processing Using CASE Statements
- Use simple Loop Statement
- Use While Loop Statement
- Use For Loop Statement
- Describe the Continue Statement

Composite Data Types

- Use PL/SQL Records
- The %ROWTYPE Attribute
- Insert and Update with PL/SQL Records
- Associative Arrays (INDEX BY Tables)
- Examine INDEX BY Table Methods
- Use INDEX BY Table of Records

Explicit Cursors

- What are Explicit Cursors?
- Declare the Cursor
- Open the Cursor
- Fetch data from the Cursor
- Close the Cursor
- Cursor FOR loop
- Explicit Cursor Attributes
- FOR UPDATE Clause and WHERE CURRENT Clause

Exception Handling

- Understand Exceptions
- Handle Exceptions with PL/SQL
- Trap Predefined Oracle Server Errors
- Trap Non-Predefined Oracle Server Errors

- Trap User-Defined Exceptions
- Propagate Exceptions
- RAISE_APPLICATION_ERROR Procedure

Stored Procedures and Functions

- Understand Stored Procedures and Functions
- Differentiate between anonymous blocks and subprograms
- Create a Simple Procedure
- Create a Simple Procedure with IN parameter
- Create a Simple Function
- Execute a Simple Procedure
- Execute a Simple Function

Create Stored Procedures

- Create a Modularized and Layered Subprogram Design
- Modularize Development With PL/SQL Blocks
- Describe the PL/SQL Execution Environment
- Identify the benefits of Using PL/SQL Subprograms
- List the differences Between Anonymous Blocks and Subprograms
- Create, Call, and Remove Stored Procedures Using the CREATE Command and SQL Developer
- Implement Procedures Parameters and Parameters Modes
- View Procedures Information Using the Data Dictionary Views and SQL Developer

Create Stored Functions

- Create, Call, and Remove a Stored Function Using the CREATE Command and SQL Developer
- Identify the advantages of Using Stored Functions in SQL Statements
- List the steps to create a stored function
- Implement User-Defined Functions in SQL Statements
- Identify the restrictions when calling Functions from SQL statements
- Control Side Effects when calling Functions from SQL Expressions
- View Functions Information

Create Packages

- Identify the advantages of Packages
- Describe Packages
- List the components of a Package
- Develop a Package
- How to enable visibility of a Package's components?
- Create the Package Specification and Body Using the SQL CREATE Statement and SQL Developer
- Invoke Package Constructs
- View PL/SQL Source Code Using the Data Dictionary

Packages

- Overloading Subprograms in PL/SQL
- Use the STANDARD Package
- Use Forward Declarations to Solve Illegal Procedure Reference
- Implement Package Functions in SQL and Restrictions
- Persistent State of Packages
- Persistent State of a Package Cursor
- Control Side Effects of PL/SQL Subprograms
- Invoke PL/SQL Tables of Records in Packages

Implement Oracle-Supplied Packages in Application Development

- What are Oracle-Supplied Packages?
- Examples of Some of the Oracle-Supplied Packages
- How Does the DBMS_OUTPUT Package Work?
- Use the UTL_FILE Package to Interact With Operating System Files
- Invoke the UTL_MAIL Package
- Write UTL_MAIL Subprograms

Dynamic SQL

- The Execution Flow of SQL
- What is Dynamic SQL?
- Declare Cursor Variables
- Dynamically executing a PL/SQL Block
- Configure Native Dynamic SQL to Compile PL/SQL Code
- Invoke DBMS_SQL Package
- Implement DBMS_SQL with a Parameterized DML Statement
- Dynamic SQL Functional Completeness

Design Considerations for PL/SQL Code

- Standardize Constants and Exceptions
- Understand Local Subprograms
- Write Autonomous Transactions
- Implement the NOCOPY Compiler Hint
- Invoke the PARALLEL_ENABLE Hint
- The Cross-Session PL/SQL Function Result Cache
- The DETERMINISTIC Clause with Functions
- Usage of Bulk Binding to Improve Performance

Triggers

- Describe Triggers
- Identify the Trigger Event Types and Body
- Business Application Scenarios for Implementing Triggers
- Create DML Triggers Using the CREATE TRIGGER Statement and SQL Developer

- Identify the Trigger Event Types, Body, and Firing (Timing)
- Statement Level Triggers Versus Row Level Triggers
- Create Instead of and Disabled Triggers
- How to Manage, Test, and Remove Triggers?

Create Compound, DDL, and Event Database Triggers

- What are Compound Triggers?
- Identify the Timing-Point Sections of a Table Compound Trigger
- Compound Trigger Structure for Tables and Views
- Implement a Compound Trigger to Resolve the Mutating Table Error
- Compare Database Triggers to Stored Procedures
- Create Triggers on DDL Statements
- Create Database-Event and System-Event Triggers
- System Privileges Required to Manage Triggers

The PL/SQL Compiler

- What is the PL/SQL Compiler?
- Describe the Initialization Parameters for PL/SQL Compilation
- List the New PL/SQL Compile Time Warnings
- Overview of PL/SQL Compile Time Warnings for Subprograms
- List the benefits of Compiler Warnings
- List the PL/SQL Compile Time Warning Messages Categories
- Setting the Warning Messages Levels: Using SQL Developer, PLSQL_WARNINGS Initialization Parameter, and the DBMS_WARNING Package Subprograms
- View Compiler Warnings: Using SQL Developer, SQL*Plus, or the Data Dictionary Views

Manage PL/SQL Code

- What Is Conditional Compilation?
- Implement Selection Directives
- Invoke Predefined and User-Defined Inquiry Directives
- The PLSQL_CCFLAGS Parameter and the Inquiry Directive
- Conditional Compilation Error Directives to Raise User-Defined Errors
- The DBMS_DB_VERSION Package
- Write DBMS_PREPROCESSOR Procedures to Print or Retrieve Source Text
- Obfuscation and Wrapping PL/SQL Code

Manage Dependencies

- Overview of Schema Object Dependencies
- Query Direct Object Dependencies using the USER_DEPENDENCIES View
- Query an Object's Status
- Invalidation of Dependent Objects
- Display the Direct and Indirect Dependencies
- Fine-Grained Dependency Management in Oracle Database 11g

- Understand Remote Dependencies
- Recompile a PL/SQL Program Unit

Oracle DBA Training in Patna

Our **Oracle DBA Training** in Patna aims to teach beginners and employees. Oracle, the term can be defined as trademark of RDBMS. We are the **Best Oracle DBA Training Institute in Patna** in-terms of syllabus and expert teaching. Oracle rapidly converging all IT required solutions like middleware, storage and OS by acquiring leading core pioneers and technology players in market. It is providing very strong and unique supports to customers. Still now oracle has acquired around 40 companies and expands its wings around 90% on RDBMS and ERP tools and services and related technologies. Oracle DBA is a leading and demanding skill-sets in IT as well highly paid jobs since the role need to be handling the backbone of organization's vital data management at large scale.



We are **Besant Technologies** and covering Oracle DBA course at unique level in all aspects Technical as well real time oriented. Our core ideology is to nurture each Oracle DBA aspirants should be much strong in concepts as well must be opt in handling real time issues. Our faculty has extensive year's hands on experience in oracle installation, upgrade, data guard and RAC installation and strong knowledge in real time issues handling and consultant area. Especially at **Besant Technologies**, students are being trained and educated by core people, therefore we declare with sense of pride that student technical aspects would be level of IT competence. We designed syllabus at unique level, our motto is especially the DBA course deliverance shouldn't be level of certificate mode and must be level of real time focused. We keep ourselves align with IT new technology needs and empowering and enhancing our Course syllabus, since it is very strong base for us.

Our Oracle DBA Training Institute is located in Patna Velachery and fully filled with real-time faculties and top consultants in IT sector.

Oracle DBA Training Syllabus – Part 1

Introduction (Database Architecture)

- Describe course objectives
- Explore the Oracle 10g database architecture

Installing the Oracle Database Software

- Explain core DBA tasks and tools
- Plan an Oracle installation
- Use optimal flexible architecture
- Install software with the Oracle Universal Installer (OUI)

Creating an Oracle Database

- Create a database with the Database Configuration Assistant (DBCA)
- Create a database design template with the DBCA
- Generate database creation scripts with the DBCA

Managing the Oracle Instance

- Start and stop the Oracle database and components
- Use Enterprise Manager (EM)
- Access a database with SQL*Plus and iSQL*Plus
- Modify database initialization parameters
- Understand the stages of database startup
- View the Alert log
- Use the Data Dictionary

Managing Database Storage Structures

- Describe table data storage (in blocks)
- Define the purpose of tablespaces and data files
- Understand and utilize Oracle Managed Files (OMF)
- Create and manage tablespaces
- Obtain tablespace information
- Describe the main concepts and functionality of Automatic Storage Management (ASM)

Administering User Security

- Create and manage database user accounts
- Authenticate users
- Assign default storage areas (tablespaces)
- Grant and revoke privileges
- Create and manage roles
- Create and manage profiles
- Implement standard password security features
- Control resource usage by users

Managing Schema Objects

- Define schema objects and data types
- Create and modify tables
- Define constraints
- View the columns and contents of a table
- Create indexes, views and sequences
- Explain the use of temporary tables
- Use the Data Dictionary
- Manage data through SQL
- Monitor and resolve locking conflicts

Managing Undo Data

- Explain DML and undo data generation
- Monitor and administer undo
- Describe the difference between undo and redo data
- Configure undo retention

- Guarantee undo retention
- Use the undo advisor

Implementing Oracle Database Security

- Describe DBA responsibilities for security
- Apply the principal of least privilege
- Enable standard database auditing
- Specify audit options
- Review audit information
- Maintain the audit trail

Oracle DBA Training Syllabus – Part 2

Configuring the Oracle Network Environment

- Create additional listeners
- Create Net Service aliases
- Configure connect-time failover
- Control the Oracle Net Listener
- Test Oracle Net connectivity
- Identify when to use shared versus dedicated servers

Backup and Recovery Concepts

- Identify the types of failure that may occur in an Oracle Database
- Describe ways to tune instance recovery
- Identify the importance of checkpoints, redo log files, and archived log files
- Configure ARCHIVELOG mode

Performing Database Backups

- Create consistent database backups
- Back your database up without shutting it down
- Create incremental backups
- Automate database backups
- Monitor the flash recovery area

Performing Database Recovery

- Recover from loss of a control file
- Recover from loss of a redo log file
- Perform complete recovery following the loss of a data file

Performing Flashback

- Describe Flashback database
- Restore the table content to a specific point in the past with Flashback Table
- Recover from a dropped table

- View the contents of the database as of any single point in time with Flashback Query
- See versions of a row over time with Flashback Versions Query
- View the transaction history of a row with Flashback Transaction Query

Moving Data

- Describe available ways for moving data
- Create and use directory objects
- Use SQL*Loader to load data from a non-Oracle database (or user files)
- Explain the general architecture of Data Pump
- Use Data Pump Export and Import to move data between Oracle databases
- Use external tables to move data via platform-independent files

Configuring Recovery Manager

- Recovery Manager Features and Components
- Using a Flash Recovery Area with RMAN
- Configuring RMAN
- Control File Autobackups
- Retention Policies and Channel Allocation
- Using Recovery Manager to connect to a target database in default NOCATALOG mode
- Displaying the current RMAN configuration settings
- Altering the backup retention policy for a database

Using Recovery Manager

- RMAN Command Overview
- Parallelization of Backup Sets
- Compressed Backups
- Image Copy
- Whole Database and Incremental Backups
- LIST and REPORT commands
- Enable ARCHIVELOG mode for the database
- Use Recovery Manager

Recovering from Non-critical Losses

- Recovery of Non-Critical Files
- Creating New Temporary Tablespace
- Recreating Redo Log Files, Index Tablespaces, and Indexes
- Read-Only Tablespace Recovery
- Authentication Methods for Database Administrators
- Loss of Password Authentication File
- Creating a new temporary tablespace
- Altering the default temporary tablespace for a database

Incomplete Recovery

- Recovery Steps
- Server and User Managed Recovery commands
- Recovering a Control File Autobackup
- Creating a New Control File
- Incomplete Recovery Overview
- Incomplete Recovery Best Practices
- Simplified Recovery Through RESETLOGS
- Point-in-time recovery using RMAN

Flashback

- Flashback Database Architecture
- Configuring and Monitoring Flashback Database
- Backing Up the Flash Recovery Area
- Using V\$FLASH_RECOVERY_AREA_USAGE
- Flashback Database Considerations
- Using the Flashback Database RMAN interface
- Using Flashback Database EM Interface

Managing and monitoring Flashback Database operations

Dealing with Database Corruption

- Block Corruption Symptoms: ORA-1578
- DBVERIFY Utility and the ANALYZE command
- Initialization parameter DB_BLOCK_CHECKING
- Segment Metadata Dump and Verification
- Using Flashback for Logical Corruption and using DBMS_REPAIR
- Block Media Recovery
- RMAN BMR Interface
- Dumping and Verifying Segment Metadata

Monitoring and Managing Storage I

- Database Storage Structures
- Space Management Overview
- Oracle-Managed Files (OMF)
- Row Chaining and Migrating
- Proactive Tablespace Monitoring
- Managing Resumable Space Allocation
- SYSAUX Tablespace
- Monitoring table and index space usage

Monitoring and Managing Storage II

- Automatic Undo Management

- Redo Log Files
- Table Types
- Partitioned Tables
- Index-Organized Tables (IOT)
- Managing index space with SQL
- Configure optimal redo log file size
- View "Automatic Tuning of Undo Retention"

VLDB Support

- Creating Bigfile Tablespaces
- Packages and data dictionary changes to support VLDB
- Creating and maintaining temporary tablespace groups (TTG)
- Partitioning and Partitioned Indexes
- Skipping unusable indexes
- DML Error Logging
- Interpreting Bigfile ROWIDs

Automating Tasks with the Scheduler

- Scheduler Concepts
- Creating a Job Class and a Window
- Managing Jobs, Programs, Chains, Events, Schedules, priority
- Viewing and Purging Job Logs
- Creating a program and a schedule
- Creating a job that uses a program and a schedule
- Altering the program and schedule for the job and observing the behavior change of the job
- Monitoring job runs

Workshop

- Workshop Methodology, requirements, and setup
- Scenario 1: Database performance
- Scenario 2: Finding and Tuning Inefficient SQL
- Scenario 3: SGA Management – REDO
- Scenario 4: Running out of Undo Space
- Scenario 5: Missing datafile
- Scenario 6: Managing space in a tablespace – REDO
- Scenario 7: Missing TEMP data file