



IGNITED MINDS

Unleashing the Power of Technology

Oracle PLSQL

About Ignited Minds

IT Professionals with more than 15 years of Experience worked in highly reputed MNC across Europe, USA and APAC region. Proven track of experience in delivering End to End enterprises level solutions globally. Hands on Experience in cutting edge technologies such as **CRM platform, ERP Solutions, Cloud computing, full stack Development, Database Technologies, Data Analytics, Data Mining , Artificial Intelligence, Data Science, Machine Learning , automated testing and micro services based deployments.**

We stand out from others by taking care of Personal concealing to understand academic performance, initial screening, Aspirations, accessing individual strong / week areas and customized curriculum fit for each individuals. Specially designed packages so that candidates can complete training in-time bound manner for immediate start of carrier and Upscaling to next level. So Candidates can start training with minimal investment. Personally crafted syllabus comprises of basic to advanced concepts along with hundreds of sample programs with real time examples

About Course

SQL Skill is in huge demand as it widely used in all databases, reporting and data analysis. As new digital platform are evolving data management and analysis is the key area in new era of IT industry. Having strong SQL knowledge is stepping stone for many of recent evolving technologies like Artificial Intelligence, Machine Learning, DataScience, BigData, FULL Stack development and Data Analytics.

Curriculum

Overview of PL/SQL

- Why is PL/SQL?
- PL/SQL in Client/Server Architecture
- PL/SQL block Structure
- Writing Simple 'Hello world' Program
- What is ACID in database? (Atomicity, Consistency, Isolation, Durability)

PL/SQL Programming Language Fundamentals

- Character Sets and Lexical Units
- Scope and Visibility of Identifiers
- PL/SQL Expressions and Comparisons[CASE,DECODE]
- PL/SQL Error Reporting Functions

PL/SQL Datatypes

- Variable declaration, Assignments
- Make Use of Anchored Datatypes

PL/SQL Control Structures and Loops

- IF, CASE, EXPRESSIVE CASE, Nested BLOCKS
- Simple Loops, While Loops, Numeric Loops. Nested Loops Exit, Continue.

Error Handling & Built-in Expressions

- Handling Exceptions, ERRCODE, ERRMSG
- Back Trace Exceptions
- DBMS_UTILITY.format_error_stack
- DBMS_UTILITY.format_error_backtrace

User Defined Exceptions

- Exception scope
- User-defined exceptions, Declare Customized Exceptions
- Raise, Exception handler
- Exception propagation
- Exceptions: Advanced Concepts
- RAISE_APPLICATION_ERROR
- EXCEPTION_INIT pragma
- SQLCODE and SQLERRM

Design Considerations For PL/SQL Code

- Standardizing variables, Exceptions, Constants
- Definer's Rights v/s Invoker's Right Using AUTHID Clause
- Features of Autonomous Transactions

Introduction Cursor

- Cursor manipulation
- Using cursor FOR loops and nested cursors

Advance Cursor

- Using parameters with cursors and complex nested cursors
- FOR UPDATE and WHERE CURRENT cursors

Triggers

- What triggers are?? Types of triggers
- Applying business logics thru Triggers
- Autonomous Transactions
- Handling Primary Key values thru Generation
- Audit/Error logging via Triggers

Working with Compound, DDL and Event Database Triggers

- Compound Triggers
- Mutating table issues, Resolving Mutating Table Issues
- Creating Triggers on DDL Statements, user Login Audits

Collections

- PLSQL Tables
- Associative Arrays
- Nested Tables
- Collection Methods
- Varrays
- Multilevel Collections

Records

- Record types
- Table-Based and Cursor-Based Records
- User-Defined Records
- Record Compatibility
- Nested Records
- Collection of Records

Using Static SQL

- Using parameters with cursors and complex nested cursors
- FOR UPDATE and WHERE CURRENT cursors

Dynamic SQL

- EXECUTE IMMEDIATE statements
- OPEN-FOR, FETCH, and CLOSE statements
- Avoiding SQL Injection in PL/SQL

PL/SQL Bulk Operation and Exception handling

- BULK Binding, FORALL statement
- The BULK COLLECT INTO clause
- BULK COLLECT with RETURNING
- Use of LIMIT, Exception Handling

Procedures

- Creating procedures
- Passing parameters into and out of procedures
- IN, OUT , IN-OUT Parameters
- Use of COPY, NO COPY options

Oracle PLSQL

Functions

- Creating Functions, Passing parameters into and out of Functions
- Usage of Return, Calling Functions from SQL
- Using PARALLEL_ENABLE Hit
- Enabling RESULT_CACHING for a function
- DETERMINISTIC & RECURRING Clause with Functions

Packages

- The benefits of using packages
- Cursor variables, Extending the package

Tuning PL/SQL Applications for Performance

- Use of FORALL, BULK Fetch with LIMIT Option
- Use of ROWNUM to Limit Query
- Use of NOCOPY Hits
- Pipelined Table Functions
- Passing Data With Cursor Variable, use of SYS_REFCURSOR

Using Oracle Supplied Packages in Application Development

- PROFILE PL/SQL WITH DBMS_HPROF
- Accessing Files within PL/SQL with UTL_FILE
- Scheduling Jobs with DBMS_JOB
- Generating an Explain Plan with DBMS_XPLAN
- Generating Implicit Statement Results with DBMS_SQL
- Using the DBMS_UTILITY Package for Error Reporting
- Using the UTL_CALL_STACK Package for Error Reporting

Wrapping PL/SQL Source Code

- Overview of Wrapping
- Limitations of Wrapping
- Wrapping PL/SQL Code with wrap Utility
- Wrapping PL/QL Code with DBMS_DDL Subprograms