ORACLE SQL & PL/SQL ADVANCED SYLLABUS / 5 MONTHS

SQL Development - 16 lessons

- ERD and Relational DB , NF
- Controlling User Access
- Categorize main db object and create simple table
- Explain how constraints are created at the time of table creation
- Constraints practice
- Describe the purpose of DDL and DML / Insert,Update,Delete, Select ,Truncate
- Restricting and sorting Data
- Using Single row function (character,number,date function)
- Descripe use of group functions
- Group data by using Group By clause / HAVING statement
- Displaing data from Multiple tables
- Descripe the different types of JOINs /Using the Set operators
- Using Subqueries to solve queries
- Describe The types of subqueries/ use the exist, not exist operators and with clause
- Managing schema objects
- Manipulating Large data Sets
- Managing objects with Datadictionary View
- Controlling User Access
- Analytic functions
- Aggregate functions VS Analytic
- Oracle BI Piblisher modulu

PL SQL Development - 20 lessons

- Introduction to PL SQL ,Types in PL SQL, Creating Script Create PL SQL Variables
- Define variables using %TYPE %ROWTYPE
- Writing executable statements
- Writing Control structure(Conditions(IF,Case), loops For/Basic/While)
- Working With Composity data Types (Nested table, Associative Arrays,Varray,Records)
- Cursor(Implicit and Explicit Cursor)
- Handling Exceptions
- Creating Function (use collection in Function)
- Procedure (use Collection in Procedure)
- Dynamic SQL(Working on blocks with Execute_immediate and DBMS_SQL)
- Practice on Function which is return Collection,Row
- Some Examples About Pipelined Functions
- Creating packages
- Triggers
- Create Jobs (Working some examples)

4 additional modules related to PL/SQL development in Core Banking & Data Engineering

- **Lesson 1: Fundamentals of ETL with PL/SQL**
- What is ETL?
- Basics of ETL and how PL/SQL helps in the process.
- Source and Target Systems
- Understanding where data comes from and where it goes.
- Extracting Data with SQL
- Techniques to work with big datasets in PL/SQL.

Lesson 2: Transform and Load with PL/SQL

- Cleaning and Validating Data
- Fixing errors and checking data quality.
- Transforming Data
- Writing PL/SQL to change data for your needs.

•Lesson 3-4: Core Banking Concepts and PL/SQL Integration

Introduction to Core Banking Systems and PL/SQL Role

- Overview of Core Banking Operations
- How PL/SQL Automates Banking Processes
- Key Banking Concepts (Accounts, Loans, Transactions)
- Understanding Database Design in Core Banking
- Introduction to Banking-Specific PL/SQL
- Applications

Database Design and PL/SQL Basics for Banking Applications