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Oracle8i Foundation: SQL Basics and SQL*Plus

Duration: 3 days

Develop the skills to effectively interact with an Oracle8i Database.

Course Description

This introduction to SQL Basics and SQL*Plus is a hands-on course, which gives participants a basic knowledge of relational databases and how to access them through SQL and SQL*Plus. This training covers topics that are necessary to the development and administration of an Oracle 8i database.
If divided:

Participants will learn…

- To converse in relational database terminology
- To understand Structures Query Language basics:
  - WHERE Clause
  - Data Types
  - Functions
  - Data Manipulation
  - Ordering & Grouping
  - Indexing
  - Joining Tables
  - Transactions (Commit & Rollback)
  - Subqueries
  - Importing and Exporting
- Format reports using SQL*Plus commands
- Extract and organize information from the database
- Insert, update & delete information in database tables
- Create and drop tables, views, synonyms and indexes
- Load tables using SQL*Loader
- Use the Export and Import utilities

Who Needs to Attend:

Application Designers, Developers, Database Administrators and End Users

Prerequisites:

None

Course Content:

DATABASE MANAGEMENT SYSTEM OVERVIEW
- Database
- Database Management System(DBMS)
- Hierarchical DBMSs
- Network DBMSs
- Relational DBMSs (RDBMSs)

INTRODUCTION TO RELATIONAL DATABASE (RDB) DESIGN
- What is a data model?
- Why develop & utilize an entity relationship model?
- Other aspects of the data model
- Data model input
- Components of an entity relationship model
- Entities
- Examples of entities
- Determining entities
- Entity classification
- Relationships
- Physical layout properties
- Types of relationships
- Determining relationships
- Attributes
- Unique identifiers
- Reading the entity relationship (ER) model
- Syntax
- Guidelines for a model review
- Resolving many-to-many relationships
- Process
- Supertypes and subtypes
- Subtype inheritance
- Exclusive arcs
- Relationship sentence syntax
- Mandatory rules
- Domains
- Derived attributes
- Cascading
- Non-transferable relationship
- Qualified degree

NORMALIZATION
- The final normalized entity relationship model

FUNDAMENTALS OF RELATIONAL DATABASE MANAGEMENT SYSTEMS (RDBMSs)
- Relational database principles

SQL BASICS & SQL*PLUS
- Understanding the difference between SQL, SQL*Plus and PL/SQL

THE WHERE AND ORDER BY CLAUSE
- The Where clause
- Order By clause

STRUCTURED QUERY LANGUAGE (SQL) ELEMENTS
- Structured query language (SQL)
- Database schema objects
- Pseudo columns
- Object Reference
- Data Dictionary
- The dual table
- Datatypes

SINGLE ROW FUNCTIONS
- Functions
- Single row functions

GROUP FUNCTIONS
- The Group By clause
- The Having clause

THE JOIN CONDITION
- The join condition
- Table aliases
- Outer join
- Set operators

SUBQUERY

DATA MANIPULATION LANGUAGE (DML) COMMANDS
- Transaction control commands
- Inserting data into large objects (optional)

DATA DEFINITION LANGUAGE (DDL) COMMANDS
- Object naming
- The Create Table command
- Integrity constraints
- Dropping constraints
- Disabling constraints
- Enabling constraints
- Displaying constraint Information
- Indexes
- Comment command

SQL*PLUS REPORTING
- SQL*PLUS report writing commands
- Column command
- Titles
- System variables
- A master-detail report with title and column commands
- Control breaks
- Computing aggregate amounts
- Using set to customize the SQL*PLUS environment
- Using variables in SQL*PLUS
- Types of variables

ADVANCED TOPICS
- Objectives
- Correlated subquery
- Connect By
- Tree-structured query
- Oracle 8i specific terminology

Course Labs:

1. Entity Identification
2. Modeling
3. Relationship
4. Resolving M:M
5. Subtype and Exclusive Arc
6. Normalization
7. RDBMS
8. SQL*PLUS Basics
9. WHERE and ORDER By Clause
10. SQL Language Elements
11. Functions
12. Group Functions
13. Join Condition
14. Subquery
15. DML
16. Basic Data Definition Language
17. SQL*PLUS Reporting