RELATIONAL DATABASE DESIGN TOOL AND TECHNIQUES

Course number : 110

Overview

Relational databases often drive the company-critical and web-enabled applications essential for achieving success in a highly competitive market. This training course is designed to deliver the groundwork for building and working with relational databases — including Oracle, SQL Server, and MySQL — and enabling you to develop and use relational databases in your environment.

What you'll learn

- Extract core business data requirements from source documents
- Design both conceptual and logical data models using requirements
- Recognize and accurately model complex data relationships
- Apply data normalization methods to refine data models
- Physically deploy a relational schema from a logical model complete with tables, indexes, keys, and constraints

Who should attend

Pre-requis

SOFTWARE:

- Oracle's free SQL*Developer Data Modeler is used to design and generate a database
- PostgreSQL RDBMS along with the SQL Workbench/J IDE are used for database demonstrations and samples
- Concepts apply to any relational database environment

Outline

Designing and Configuring a Linux Server

An Overview of DBMS Technology

- How data is accessed, organized, and stored
- Relational and NoSQL database comparisons
- Roles involved in database design, development, and administration
- The database development process

How a Relational DBMS Works

Relational technology fundamentals

- Terminology and definitions
- Tables, attributes and relationships
- Primary and foreign keys
- Manipulating data: selection, projection, join, union, intersection, difference

Components of a relational DBMS

- An integrated, active data dictionary
- Databases, accounts, and schemas

Designing Data Models

A step-by-step approach and techniques

- Extracting core business information from requirements
- Generating conceptual data entities
- Transforming a conceptual model into a logical one
- Building a physical database from a logical model
- Building database documentation

Conceptual modeling

- Capturing core entities
- Identifying entity attributes
- Creating unique identifiers
- Graphically representing a conceptual model

Logical modeling

- Apply data types to entity attributes
- Describing relationships: one-to-one, one-to-many, many-to-many
- Building recursive relationships
- Understanding different modeling notations

Normalization Techniques

- Avoiding update anomalies
- Identifying functional dependencies
- Applying rules for normalization
- Normalizing multi-valued attributes

Building a Relational Database

Physical database design

- Implementing keys from unique identifiers
- Building foreign keys from relationships
- Enforcing business rules with check constraints

Working with design software

- Generating the DDL to build the database
- Reverse engineering to capture the design of an existing database

Applying best practices to database design

- Natural versus surrogate keys
- Exploring lookup table deployment options
- Examine vertical and horizontal data partitioning strategies
- Using record timestamps

Schedule

Location	Dates	Status
Accra	June 01, 2018 - June 30, 2018 08:00 AM - 05:00 PM	Not available Register Now >>

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