Erwin Data Modeler

Duration: 5 days

1. Introduction to Data Modeling

- **What is Data Modeling?**

    o   Importance of data modeling in database design

    o   Types of data models (Conceptual, Logical, and Physical)

- **Understanding Erwin Data Modeler**

    o   Overview of Erwin Data Modeler

    o   Features and benefits

    o   Installation and setup

2. Interface Overview

- Navigating the Erwin Data Modeler workspace

    o   Menus, toolbars, and panels

    o   Overview of key components (Diagrams, Model Explorer, and Properties Pane)

- Customizing the workspace

- Keyboard shortcuts and productivity tips

3. Creating a Conceptual Data Model

- Identifying entities and attributes

- Drawing relationships

    o   Cardinality and participation

    o   Primary and foreign keys

- Naming conventions and standards

- Generating a conceptual model

4. Building a Logical Data Model

- Transitioning from conceptual to logical models

- Adding data types and domains

- Refining keys and relationships

- Using naming standards and abbreviations

- Validation rules for logical models

5. Physical Data Modeling

- Converting logical models to physical models

- Database-specific features in physical modeling
  - Indexes, partitions, and constraints
- Data types mapping for different databases
- Generating DDL (Data Definition Language) scripts

6. Advanced Modeling Techniques

- Using sub-models
  - Managing large models with subject areas
- Reverse engineering
  - Importing databases into Erwin Data Modeler
- Forward engineering
  - Synchronizing databases with the model
- Working with views, triggers, and stored procedures

7. Team Collaboration Features

- Model versioning and governance
- Sharing and managing models using Mart Server
- Using naming and glossary standards
- Managing permissions and roles in team environments

8. Reporting and Documentation

- Generating reports
  - Standard reports and custom reporting
- Model diagrams and metadata export
- Integrating Erwin with external tools (Excel, BI tools, etc.)

9. Automation and Scripting

- Using macros and scripts to automate tasks
- Customizing Erwin Data Modeler with API
- Common use cases for automation

10. Best Practices and Real-World Examples

- Tips for effective data modeling
- Common challenges and how to overcome them
- Case studies and practical applications
  - E.g., retail, healthcare, finance databases