Training outline

Participants will learn how to:

- Create Entity Relationship Diagrams by identifying entities, attributes, relationships and constraints from a set of requirements

- Normalize the Entity Relationship Diagram to third Normal form

- Develop sound database designs by applying proven data modeling techniques

- Engineer/Reengineer the data Models into and from relational database designs

- Optimize the Relational Database Design for various functional/non functional requirements

- How to work with database change requests and maintain existing databases with the help of tools.

- Use ERwin Data Modeler

Data modeling topics covered:

- Entities, Attributes and Relationships

- Entity-Relationship Diagrams(ERD)

- Data modeling notations(IE,IDEF1X)

- Relationship types

    - Cardinality: 1:1,1:M,M:M

    - Optionality: Mandatory, Optional

    - Degree: Unary, Binary, Ternary

- Modeling super-type & sub-types

- Keys

- Logical ⇔ Physical transformations

- Relational Model

- Database Normalization

- De-normalization and performance

- Relational Algebra

- Dimensional modeling

    - Dimensional modeling process

    - Fact and dimension tables

    - Star & snow-flake schemas

    - Slowly changing dimensions

ERwin Data Modeler functions covered:

- Data Modeling and diagramming

- Subject Areas

- ER Diagrams for communication

- Forward & Reverse Engineering

- Synchronization between model ⇔ database

- Model Comparison

- Reporting & Publishing

- Domain dictionary

- Bulk Editing

- Working with objects: Tables, Columns, Constraints, Views, Indexes and other physical properties

- User Defined Properties(UDP)

- Standardizing & Reusing design elements

    - Naming Standards

    - Themes

- Dimensional Modeling, Data Movement & Mapping