

## Data Modelling Training

### Introduction:

- This course introduces people to the principles and process of logical data modeling, which is to say translating business data requirements into a graphical representation. Data Modelling Training teaches people how to analyze business requirements that should be incorporated into a logical data model, how to create the components of a logical data model, how to diagram/explain them, and how to normalize data and handle complex relationships.
- Data Modeling Training is rendered by the best subject matter experts and the tutorials prepared by these expert industry allied tutors are made with latest industry updates. Classes are available for the individual as well as for corporate batches on demand. Call the help desk for more information for online Data Modeling Training's and its details.

### DATA MODELING ONLINE TRAINING COURSE CONTENT

#### LOGICAL DATA MODELING TRAINING INTRODUCTION

- logical data modeling in requirements importance
- When to use logical data models
- Relationship b/w logical & physical data model
- Elements of a logical data model
- Read a high-level data model
- Data model prerequisites
- Data model sources of the information
- Developing a logical data model

#### PROJECT CONTEXT & DRIVERS

- Importance of the well-defined solution scope
- Functional decomposition diagram
- Context-level data flow diagram
- Sources of the requirements
- Functional decomposition diagrams
- Data flow diagrams
- Use case models
- Workflow models
- Business rules

- State diagrams
- Class diagrams
- Other documentation
- Types of modelling projects
- Transactional business systems
- Business intelligence & data warehousing systems
- Integration & consolidation of existing systems
- Maintenance of the existing systems
- Enterprise analysis
- Commercial off-the-shelf application

### CONCEPTUAL DATA MODELING TRAINING

- Discovering the entities
- Defining entities
- Documenting an entity
- Identifying attributes
- Distinguishing b/w entities & attributes

### CONCEPTUAL DATA MODELING-IDENTIFYING RELATIONSHIPS & BUSINESS RULES

- Model fundamental relationships
- Cardinality of relationships
- One-to-one
- One-to-many
- Many-to-many
- Is the relationship mandatory or optional?
- Relationships Naming

### IDENTIFYING ATTRIBUTES

- Discover attributes for the subject area
- Assign attributes to appropriate entity
- Name attributes using established naming conventions
- Documenting attributes

### ADVANCED RELATIONSHIPS

- Modeling many-to-many relationships
- Model multiple relationships b/w the same two entities

- Model self-referencing relationships
- Model ternary relationships
- Identifying the redundant relationships

### COMPLETING THE LOGICAL DATA MODEL

- Use supertypes & subtypes to manage complexity
- Use supertypes & subtypes to represent rules and constraints
- DATA INTEGRITY THROUGH NORMALIZATION
- Normalize a logical data model
- First normal form
- Second normal form
- Third normal form
- Reasons for the denormalization
- Transactional Versace business intelligence applications
- VERIFICATION & VALIDATION
- Verify the technical accuracy of a logical data model
- Using the CASE tools to assist in verification
- Verifying the logical data model using other models
- Data flow diagram
- CRUD matrix
- Data Modeling Online Course Overview:
- Data Modeling Training is the process of creating a data model for an information system by applying formal data modelling techniques using ERWIN. Data modeling Training is the formalization and documentation of processes and events occur during application software design and development. Data modeling Online Training teach techniques and tools to capture and translate complex system designs into easily understood representations of the data flows and processes and creating a blueprint for construction and re-engineering. A data model can be represented as a flowchart that illustrates the relationships between data which explores data-oriented structures and identifies entity types .
- Truly effective database design depends on having a coherent data modeling Training to work from.
- This course will help you learn the theory and process of creating data models suitable for everything from small business to enterprise and data center environments.
- how to translate a UML data model into an IE data model, model quality, the different kinds of data models, and database design.
- You will also learn how to create an SQL server database, an MS-Access database, and develop frameworks.

- Once you have completed this computer based training course, you will be fully capable of creating your own data models.
- Data Modeling Training Outline:
  - To build most applications, you must first build the database
  - To build the database, you must first have a conceptual vision
  - This vision is called a data model.
  - Development Process:
    - Prepare a data model base on business requirements
    - Construct a database design from the data model
    - Build the actual database from the database design
    - Advanced technique: data modeling patterns
    - Advanced technique: database reverse engineering
  - Course Resources:
    - An extensive collection of working files
    - A running case study illustrating the development steps
    - Tips for using Enterprise Architect, ERwin, SQL Server, and MS-Access
    - Aglossary of definitions
    - Several self-assessment tests to help you judge your progress
    - What are the requirements?
- some knowledge of programming principles is strongly recommended.
- What am I going to get from this course?
  - conceptually plan a coherent data model to plan and design enterprise-quality databases.
  - differentiate between UML and IE data models.
  - create databases with SQL and Microsoft Access.
  - What is the target audience?
    - developers and IT professionals who want a thorough understanding of formal data concepts and models as they relate to database design.
  - Who Needs to Attend for Data Modelling Training?
    - Systems analysts, business analysts, IT project managers, associate project managers, project managers, project coordinators, project analysts, project leaders, senior project managers, team leaders, product managers, and program managers
    - Prerequisites to learn Data Modelling:

- Business Analysis Essentials
- Requirements Development, Documentation, and Management
- Use Case Modeling
- Data Modeling Training learning Points:
  - Create logical data models to define business and project requirements
  - Explain the purpose, importance, and uses of logical data modeling in the requirements gathering process
  - Describe the elements of data flow diagrams and functional decomposition diagrams and their relationship to logical data models
  - Explain a logical data model to stakeholders
  - Apply logical Data Modeling Training to the overall software development life cycle and respond to business management issues

### **Data Modeling Training Essentials:**

- Data modelling Training is a design skill, and people learn it best by doing it. Accordingly, we use a format built around exercises and case studies. We cover:
  - Part I – the Basics
    - What Data Modeling Training is and where it fits
    - The Relational Model and basics of good structure, including normalisation to BCNF
    - E-R and UML notations
    - Subtypes and supertypes
    - Good practice in attribute and key definition
  - Part II – Putting it Together
    - A framework for Data modeling Training
    - Understanding user requirements
    - Developing a conceptual model
    - From conceptual model to logical model
    - The physical model and performance issues