



## Dimensional Modeling 101: Course Outline: 2 Days

### Day 1

#### Lesson 1: Data modeling: The organizing structure.

- The importance of data modeling
- Data modeling techniques
- E/R modeling
- Dimensional modeling
- Data modeling life cycle
- Modeling components
- Data warehousing
- Conceptual design
- Logical data modeling
- Physical data modeling

#### Lesson 2: Dimensional Model Design Life Cycle

- The structure and phases
- Identify business process requirements
- Create and study the enterprise business process list
- Identify business process
- Identify high level entities and measures for conformance
- Identify data sources
- Select requirements gathering approach
- Requirements gathering
- Requirements analysis
- Business process analysis summary
- Identify the grain
- Fact table granularity
- Multiple, separate grains
- Fact table types
- Check grain atomicity
- High level dimensions and facts from grain
- Final output of the identify the grain phase
- Identify the dimensions
- Dimensions
- Degenerate dimensions
- Conformed dimensions



- Dimensional attributes and hierarchies
- Date and time granularity
- Slowly changing dimensions
- Fast changing dimensions
- Cases for snowflaking
- Other dimensional challenges
- Identify the facts
- Facts
- Conformed facts
- Fact types
- Year-to-date facts
- Event fact tables
- Composite key design
- Fact table sizing and growth
- Verify the model
- User verification against business requirements
- Physical design considerations
- Aggregations
- The Bus matrix
- Inviting data mart groups to the
- Communicating with the boss
- Second level data marts

## Day 2

### Chapter 3: Case Study: Dimensional model development

- The company
- Business activities
- Product lines
- IT Architecture
- Enterprise data warehouse
- Company structure
- General business process description
- Developing the dimensional models
- Identify the requirements
- Business process list
- Identify business process
- High level entities for conformance



- Analyze the requirements
- Select requirements gathering
- Gather requirements
- Analyze the requirements
- Business process analysis summary
- Identify fact table granularity
- Identify multiple separate grains
- Identify fact table types
- Check grain atomicity
- Identify high level dimensions and facts
- Grain definition summary
- Identify the dimensions
- Identify dimensions
- Check for existing conformed dimensions
- Identify degenerate dimensions
- Identify dimensional attributes and hierarchies
- Identifying the hierarchies in the dimensions
- Date and time dimension and granularity
- Handling slowly changing dimensions
- Handling fast changing dimensions
- Identify cases for snowflaking
- Handling other dimensional challenges
- Dimensional model containing final dimensions
- Identify the facts
- Identify facts
- Conformed facts
- Identify fact types (additivity and derived types)
- Year-to-date facts
- Event facts, composite keys, and growth

#### **Chapter 4: Case Study: Analyzing a dimensional model**

- Case Study – You Name It Corporation
- About the company
- Project definition
- Business needs review
- Life cycle of a product
- Anatomy of a sale
- Structure of the organization



- Defining cost and revenue
- What do the users want?
- Draft dimensional model
- Dimensional model review guidelines
- What is the grain?
- Are there multiple granularities involved?
- Check grain atomicity
- Review granularity for date and time dimension
- Are there degenerate dimensions?
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