Dimensional Modeling
The Kimball Approach

quest for knowledge

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COURSE DESCRIPTION

OVERVIEW

The name "Kimball" is synonymous with dimensional modeling. The Kimball Group established the vocabulary and techniques for dimensional modeling, and these techniques show up in today's popular business intelligence, database, and ETL tools.

An excellent dimensional model, or star schema, is the foundation of an excellent data warehouse. This course provides the opportunity to learn the Kimball Approach of dimensional modeling. Having a great dimensional model is necessary, but not sufficient, to implementing a successful business intelligence / data warehouse system. This course prepares you to successfully implement your business intelligence /data warehouse program by covering also the essential elements of the popular Kimball Approach.

In this course you will learn practical techniques for designing, developing, and implementing your dimensional model, from the basics to the most advanced practices. Concepts are taught through a combination of lectures, case studies, and small group exercises. Our goal is to provide you with the skillset you need to lead a dimensional modeling effort at your organization, or participate in the system's successful implementation.

WHO SHOULD ATTEND

This course is designed for data warehouse architects, data modelers, database administrators, business analysts, and ETL or BI application developers and designers.

PREREQUISITES

You should be:

- Able to name and describe in a few words the main operational systems of his or her organization
- Able to name and describe in a few words the main business concerns of the end users in his or her organization
- Somewhat familiar with basic data modeling concepts such as referential integrity

COURSE OUTLINE

01 KIMBALL APPROACH OVERVIEW

- Introduction to the Kimball Approach
- Focus on the business
- The Kimball Lifecycle

02 GATHER BUSINESS REQUIREMENTS

- Program planning and management
- Gather requirements from the user community
- Gain consensus on priorities
- Document the business requirements

03 DIMENSIONAL MODELING FUNDAMENTALS

- Defining dimensional modeling
- Introduction to dimensions and facts
- Design for the enterprise with conformed dimensions

04 CASE STUDY: RETAIL SALES

- Transactional fact tables
- Surrogate keys
- Date and Time dimensions
- HierarchiesStar vs. snowflake dimensions
- Identifiers, NULLs, and Header dimensions

COURSE OUTLINE

05 TECHNICAL ARCHITECTURE

- Alternative technical architectures
- The Kimball architecture

06 WORKSHOP: CONTENT MARKETING

- Roles of dimensions
- Multiple fact tables
- Factless fact tables
- Multiple time zones
- Generic dimensions
- Comments and other freeform text

07 CASE STUDY: FINANCIAL ACCOUNTS

- Junk dimensions
- Semi-additive facts
- Multiple currencies
- Designing to support "updates" to facts
- Periodic and accumulating snapshots
- Conformed dimensions and drill-across

08 SLOWLY CHANGING DIMENSIONS

- Type 0: Retain original
- Type 1: Restate history
- Type 2: Track history
- Type 3: Add a new column
- Type 4: Mini-dimension
- Types 5-7: Having it both ways

COURSE OUTLINE

09 WORKSHOP: CHILD PROTECTIVE SERVICES

- Multivalued relationships
- Uneven dimension hierarchies

10 CASE STUDY: INSURANCE CLAIMS

- Simultaneous dimensions and facts
- Tracking the history of a snapshot
- The dimensional modeling process

11 WORKSHOP: HIGHER EDUCATION

- Pull it all together

12 ETL FOR DIMENSIONAL MODELING

- Overview
- Plan
- Extract
- Clean and conform the data
- Deliver dimension and fact tables
- Deploy, operate, and manage the BI/DW system

INSTRUCTOR

Joy Mundy has worked with business managers and IT professionals to prioritize, justify and implement large scale business intelligence and data warehousing systems since 1992. She leverages these consulting experiences when teaching DW/BI courses. She co-authored, with Ralph Kimball and other members of Kimball Group, many of the popular “Toolkit” books including The Data Warehouse Lifecycle Toolkit (Second Edition) and The Kimball Group Reader (Second Edition).

Joy began her career as a financial analyst, but soon decided that she enjoyed working with a wide variety of data. She learned the fundamentals of data warehousing by building a system at Stanford University, and then started a data warehouse consultancy in 1994. She worked at WebTV and Microsoft’s SQL Server product development team for a few years before returning to consulting with Kimball Group in 2004, until Kimball Group’s dissolution in 2016. Joy is now semi-retired, but loves teaching and the occasional consulting engagement. She graduated from Tufts University with a BS in Economics, and from Stanford University with an MS in Engineering-Economic Systems.

PRICING

The fee for this course is EUR 2.175,00 / USD 2,550.00 (+VAT) per person.

We offer the following discounts:

- 10% discount for groups of 2 or more students from the same company registering at the same time.
- 20% discount for groups of 4 or more students from the same company registering at the same time.

Note: Groups that register at a discounted rate must retain the minimum group size or the discount will be revoked. Discounts cannot be combined.

COURSE ANNOUNCEMENT

This instructor-led course is offered as a classroom training course (3 days) and as a Virtual Live class (24 hours). Our Virtual Live classes will be delivered in a part-time approach. The course content is taught in 6 half-day blocks, from 1:00pm to 5:00pm CET / 7:00am to 11:00am EST.

Relevant information about our classroom training courses during the ongoing COVID-19 situation: If circumstances such as country specific movement restrictions and international travel restrictions prevent us from running a planned classroom course as a physical event at the advertised venue, then we will run the class virtual live using a virtual training platform. This will allow students to remain at their home or office location, log in and attend a virtual live class where the instructor will present the course slides, and will receive and answer questions via our virtual classroom training platform.The content will be exactly the same as in a traditional classroom because no virus can stop us from developing skills and enhancing our knowledge.

COURSE DATES

18 – 27 MAY 2021 **VIRTUAL LIVE CLASS**

This course content is taught in 6 half-day blocks, from 1:00pm to 5:00pm CET / 7:00am to 11:00am EST. The course dates are as follows: 18, 19, 20, 25, 26 and 27 May 2021.

16 - 18 NOVEMBER 2021 **STOCKHOLM**