



SEMINAR: Data Warehousing Concepts

Description

Data warehouses and data marts are more popular now than ever before. But in order to build a successful data warehouse, it's important to first understand all the components involved and how they fit together. This seminar will teach students the basic understanding of what a data warehouse is, why it's needed, how it's used, and then introduce the concept of dimensional modeling – the foundation for data warehouse design.

Audience

Part I of this course is geared towards participants who have limited or no prior experience in data warehousing. This would include business users, managers, IT staff, or anyone else who is or will be involved with a data warehouse or data mart project. Part II will be of interest to IT staff, data modelers and technical-savvy users who have an interest in data warehouse design.

Objectives

After completing this seminar, participants will be able to...

- Define what a data warehouse is and how it differs from transactional systems
- Be knowledgeable in important data warehouse topics such as OLAP, Data Mining and ETL
- Understand the different data warehouse architectures
- Become familiar with the data warehouse project life-cycle
- Obtain a basic understand of dimensional modeling

Outline

The course is divided into two sections...

Part I – Data Warehousing Overview

- What is Data Warehousing?
- Transaction Database vs. Data Warehouse
- OLAP
- Data Mining
- Data Warehouse Architectures
- Operational Data Stores



- ETL
- Metadata
- Data Quality
- The Data Warehouse Project Lifecycle
- Roles & Responsibilities
- Challenges

Part II – Dimensional Modeling

- What is Dimensional Modeling?
- Facts & Dimensions
- Star-Schema
- E/R Model vs. Dimensional Model
- Dimensional Modeling Process
- Exercise 1: Identify Facts & Dimensions
- Surrogate Keys
- Factless Facts
- Dimension Hierarchies
- Snowflaking
- Slowly Changing Dimensions
- Degenerate Dimensions
- Role Dimensions
- Bridge Tables
- Exercise 2: Build a Star Schema
- Other Considerations
- Final Tips

Format

Format is an intense 1-day (or two ½ day) lecture and workshop seminar. Course materials are provided.