

## Introduction to Data Warehousing

### Course Summary

#### Description

This 2-day course examines and establishes the fundamental theories, concepts, domains, techniques and terminology that are essential for every business and information technology professional who is involved in data warehousing. Students are introduced to best practice approaches and structures for data warehouse development and implementation. Common definitions and characteristics of data warehouses, data warehouse architectures, readiness issues, incremental data warehouse project planning, data warehouse strategy and mistakes to avoid all receive special emphasis.

This course concentrates on data warehouse deliverables independent of any specific methods, but within the framework of best practices. It focuses on understanding deliverables that may be produced throughout the data warehouse process and issues reasons for producing them. This course closes with exploration for practical next steps the students can take. This includes steps further to develop knowledge and skills, to position oneself for success, and to get started with data warehousing.

#### Objectives

At the end of this course, students will be able to:

- Understand and apply the concepts, processes and principles of data warehousing
- Identify the components of a data warehouse architecture
- Be familiar with data warehouse terminology
- Identify success and risk factors of data warehousing
- Place deliverables within the context of a comprehensive data warehousing process
- Take practical steps to begin a success data warehousing initiative

#### Topics

- Basic Concepts and Definitions
- Project Management Deliverables
- The Dimensional Model
- Architectural Deliverables
- Data Warehouse Technology
- Implementation Deliverables
- Maintaining the DW

#### Audience

This course is ideal for:

- Anyone new to data warehousing
- Those who want to review the fundamentals of data warehousing from a best practices standpoint
- Business and systems managers who are evaluating data warehousing

#### Prerequisites

There are no prerequisites for this course.

#### Duration

One to two days

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### Course Outline

- I. Basic Concepts and Definitions**
  - A. Definition of a data warehouse (DW)
  - B. Overall architecture of a DW
  - C. DW processes: gather, store, delivery
  - D. Categories of DW technology
  - E. DW project and initiative types
- II. Project Management Deliverables**
  - A. DW strategy
  - B. DW project scope
  - C. DW project plan
  - D. Managing a DW project
  - E. The iterative release model
- III. The Dimensional Model**
  - A. Facts
  - B. Dimensions
  - C. Star schemas
  - D. Snowflakes
- IV. Architectural deliverables**
  - A. Requirements
  - B. Analysis
  - C. Design
  - D. Infrastructure
  - E. Implementation
- V. Data Warehouse Technology**
  - A. Business intelligence
  - B. Five styles of business intelligence
  - C. OLAP v. ROLAP
  - D. Data mining
- VI. Implementation Deliverables**
  - A. Outcomes from DW requirements
  - B. Outcomes from design
  - C. Outcomes from DW construction
  - D. Outcomes from deployment
  - E. Operational Deliverables
  - F. Service level agreements
  - G. Outcomes of data usage
  - H. DW monitoring
  - I. DW governance
- VII. Maintaining the DW**
  - A. Incremental DW releases
  - B. Follow-up to the DW
  - C. On-going assessment
  - D. Post mortem and lessons learned
  - E. Managing consultants
  - F. Managing the vendor
  - G. Getting started with data warehousing