
Data Modeling for the Business Analyst

Brief Description:

3 Sessions

Data Modeling is an extremely useful technique for the BA to accurately determine and communicate the user data requirements. The class focuses on the concepts of data modeling and various effective techniques used to gather the necessary information needed to create the data model. The workshop is designed to provide each participant with practical exercises for interpreting and creating logical data models. The relationship of the data model to more common process model techniques will also be discussed. Each participant receives requirements meeting agendas, scripts and templates for implementing these modeling techniques.

Description:

Data Modeling Skills focuses on how to build business models, define requirements and perform analysis for IT projects. The seminar provides business analysis modeling and techniques needed for capturing the Logical Data Model. How to use the Context Diagrams, Use Cases, Data Flow Diagrams, Data Tables and a fully normalized Logical Data Model to define data requirements. The seminar is broken into two parts: logical data modeling skills and how to conduct facilitated data modeling sessions with supporting meeting agendas, scripts and templates. The seminar provides practical hands on training using case studies to learn how to build the logical data model and conduct data requirements gathering with the business community.

Each participant receives a Seminar Handbook with agendas, scripts, templates and solution set for building the models and conducting data requirements meetings.

Objectives:

The objectives of the seminar are to:

- Provide an understanding of the data modeling techniques, principles, terminology and concepts
- Provide practical group exercises for interpreting and building the logical data model
- Supply sample agendas, scripts and templates describing how to capture the deliverables throughout Global Definition and System Specification
- Simulate the modeling process by giving each seminar participant the opportunity to build the different business models and be critiqued by the instructor

Who Should Attend:

Those who will find this of value are: Business Analysts, Data Analysts, Database Administrators, Systems Analysts, Technical Leads, Requirements Architects, Subject Matter Experts, Quality Assurance, System Architects and Developers.

Curriculum & Schedule:

Session 1 (1:00 – 5:00 pm Eastern Time)

Class Introduction

Introduction to Logical Data Modeling

- Definition of Logical Data Modeling
- Benefits of Data Modeling
- Why data modeling is important to the technical team?
- Roles and Responsibilities
- Effective Techniques for Data Modeling

Reading a Logical Data Model

- Entity types, attribute types, relationships and business rules
- Entity type key migration
- Critical features of a fully refined logical data model
- **Exercises- How to read a logical data model**

Building the Logical Data Model

- Stage 1- Project Initiation
- Stage 2- Entity Type Definition
 - Identifying and defining entity types
 - **Exercise- Entity type definition**
- Stage 3- Relationship Type Definition
 - Identifying and defining relationships
 - Relationship matrices
 - Entity-level diagrams
 - **Exercise- Relationship type definition**
- Stage 4- Key Attribute Type Definition
 - Defining key attributes
 - Refining relationships
 - Identifying key attributes
 - **Exercise- Key attribute type definition**
- Stage 5- Non-Key Attribute Type Definition
 - Identifying and defining non-key-attributes
 - Producing a fully refined normalized logical data model
 - **Exercise- Non-key attribute type definition**

Session 2 (1:00 – 5:00 pm Eastern Time)

Building the Logical Data Model (continued)

Techniques for Capturing Data Requirements

- Context Diagrams (scoping the data requirements)
 - Identifying functions, external objects and information views
 - Agendas, scripts, templates and facilitation techniques
 - **Exercise- building a context diagram**
 - Agendas, scripts, templates and facilitation techniques for requirements meetings and focus groups
- Data Flow Diagrams (defining the data requirements)

- Identifying external objects, data stores and information views
- Agendas, scripts, templates and facilitation techniques
- **Exercise-building the data flow diagrams using the context diagrams**

- Matrices
 - Creating the process to entity type matrix
 - Agendas, scripts, templates and facilitation techniques
 - **Exercise- building a process to entity type matrix**

- Logical Data Modeling Requirements Session
 - Requirements session techniques
 - Storyboarding
 - Business Models
 - Matrices
 - Tables
 - Agendas, scripts and templates for conducting a logical data modeling requirements session

Session 3 (1:00 – 5:00 pm Eastern Time)

Data Requirements Gathering Session Simulation

This simulation demonstrates how data modeling fits into the entire life cycle of a project and how the data techniques taught in class build on each other. The students facilitate a technique using the agendas learned in the class. The data requirements gathering techniques used for the simulation will be the Context Diagram and/or Use Case Model, Data Flow Diagram, Logical Data Model, and Data Tables. In addition, each student will document to demonstrate an understanding of the documentation process. Each student is provided with feedback from the instructor and is given a written evaluation.

Closure

Author/Instructor:

Joy E. Matthews is the cofounder and Vice President of Training and Consulting Services for Pierson Applications Development, Inc. She is an Information Systems Specialist with expertise in implementing Rapid Application Development and Joint Application Development using many development tools. She is accomplished in business modeling and facilitation techniques. She has participated in all phases of Information Engineering systems development and Total Quality Management projects. She has successfully completed Business Process Re-engineering, Information Strategy Planning, Business Area Analysis, Functional Area Analysis and Business System Design projects for a number of organizations and is a certified facilitator. She is the author of the JAD Facilitation & Implementation Seminar, Process Modeling Skills and Data Modeling Skills Workshops. Joy also worked as a Principal Consultant at GE Consulting Services. Prior to working with General Electric, Ms. Matthews implemented and managed the JAD Department at Sony Corporation. Ms. Matthews was previously Vice President of Management and Product Development for Donovan Data Systems where she directed the development and implementation of software systems for Coca-Cola, Kraft, Heublein, AT&T and several major advertising agencies. She supported these clients as an instructor, analyst and project manager. She developed and conducted technical training programs for system installations and new product releases. Joy has a M.S. from C.W. Post College, Long Island University.