Decision Modeling Essentials

2 Days | Virtual and Face-to-Face

Rapidly adapting to change is at the heart of business agility. Many organizations struggle to keep up with the pace of change because they are unable to quickly alter the way that decisions are made. Business rules are often highly complex, poorly understood, and inconsistently applied. They may be buried deep down in legacy systems, with the source code sometimes being the only documentation detailing how critical business decisions are made. Not only does this inhibit business success, but it may also leave the organization exposed to legal, regulatory, and compliance issues.

This course teaches techniques for decomposing business policies, rules, and related information into a reusable library of business logic. Participants will learn to distinguish between business logic and process flow and will be able to improve and simplify process models by isolating complex business logic. Several well-defined visual approaches to representing business logic are covered, along with techniques for reviewing models to ensure that the logic is complete, correct, and unambiguous. Participants will practice using elicitation and facilitation techniques to draw out relevant business logic throughout the course.

Emphasis is placed on developing decision models for more complex logic. The representation techniques taught are consistent with the Object Management Group's *Decision Model and Notation*™ standard.

Concepts and principles are reinforced through examples and exercises. The course culminates in a workshop where students develop a business rule model for a case study or their own project.

Learning Objectives

- Learn about the relationship between business decisions and business rules
- Simplify business process models by creating "decision-aware" process models that separate decision-making from other process flow
- Draw out business logic using relevant elicitation and facilitation techniques
- Analyze and visually represent business rule logic using a variety of visualization approaches:
  - Decision trees
  - Flowcharts
  - Decision tables
  - Decision models
- Understand when and how to use various business rule models
- Decompose and represent complex business decisions using a decision model
- Learn to develop specialized views of decision models to accommodate rule variations
- Validate business rule models to ensure complete, correct, and unambiguous rule representation
- Manage business logic to facilitate re-use

Intended Audience

This course is designed for business analysts, business stakeholders, business stewards, data stewards, project managers, product owners, product managers, system and enterprise architects involved with elicitation, management, and/or automation of business rules and logic.

Prerequisites

Students should understand the concepts of workflow modeling.

Learning Topics

Topic
Introduction
• Understand the relationship between business decisions and business rules
• Discuss the importance of business rules in an organization
Identifying and Isolating Business Rules
• Learn to distinguish between business processes and business decisions
• Understand how to simplify a process model by isolating embedded rules
• **Exercise: Create a simplified "decision-aware" process model**
Documenting Simpler Decisions

• Learn techniques for documenting a decision where the sequence of activities is important
    ○ Flowchart
    ○ Decision tree

• **Exercise: Document a decision using flowcharts and decision trees**

• Understand the format for a decision table that contains non-overlapping rules (a "unique" decision table):
    ○ How a decision is visually represented in rows and columns
    ○ Discerning conditions (inputs) and conclusions (outputs)
    ○ Following industry-standard decision modeling syntax to construct rules
    ○ Eliminating the ambiguity associated with "OR" and "OTHERWISE"

• Supporting business decision documentation with a glossary of terms
• Supplementing decision tables with messages that provide users with context for the rules
• **Exercise: Construct a decision table by analyzing existing documents and eliciting additional information needed**
• **Exercise: Dealing with OR and OTHERWISE**
• Identify gaps and inconsistencies in decision tables
• **Exercise: Trouble-shoot decision tables that have been improperly documented**

Expanding Decision Tables into Decision Models

- Understand how to graphically represent complex decisions by creating inferential relationships between decision tables
- Learn the principles that guide proper construction of decision models
- Determine when to use a decision model for representing business rules
- **Exercise: Build a decision model using a top-down decomposition approach**
- **Exercise: Review decision models to ensure they comply with construction principles**
- Explore the use of decision model "views" to represent rule variations in larger models

Business Rules and Agile

- Discuss the relationship between business rules and user stories
- Identify the benefits of using decision models in agile environments
- Optional Exercise: Transform a decision table into Given-When-Then format

Alternate Table Formats

- Understand how to represent tables in cross-tab format
- Explore the pros and cons of using multiple conclusions in a decision table
- Learn about decision tables that contain overlapping rules (non-unique decision tables):
  - Describe how and when to use non-unique "single hit" tables
  - Describe how and when to use non-unique "multiple hit" tables
- **Exercise: Develop a non-unique single hit decision table**
- **Exercise: Develop a multiple hit decision table**

Business Logic Management

- Understand the value of capturing business logic models for re-use
- Discuss options for long-term storage and management

Workshop

- Using a case study or the student's own project:
  - Identify the business decision(s) that are being made
  - Develop a decision-aware process model to provide context for the decision
  - Draft a decision model or other business rule artifacts to detail the business rules used to make the business decision(s)

Course Summary

- Course retrospective
- Develop an Action Plan detailing how each student will apply the course concepts