

Business Modeling using UML and BPMN

A business model is an abstraction of how a business functions. It models the goals, organization, processes, objects, and events of a business. A business model can tell us how a business functions today or how we plan for it to function in the future. We do business modeling to analyze a business and mold it to meet our business goals. Alternatively, we model pertinent areas of the business to inform a systems development project about the business processes, business objects, and business rules to be automated. This course teaches how to create business models using the Unified Modeling Language (UML) and Business Process Modeling Notation (BPMN).

Objectives:

Upon completion of this course, the student will be able to:

- < Write a Business Vision document defining the business strategy and goals of the business.
- < Model business processes and business rules using UML business use case diagrams and business use cases.
- < Model workflow in business processes using UML activity diagrams.
- < Model workflow in business processes using BPMN process diagrams.
- < Model business objects using UML class diagrams.
- < Model the states of business objects using UML state machine diagrams.

Audience:

This course is designed for the business process analysts and business designers who perform business modeling. This course is also of benefit to project managers, systems analysts, and other project roles that are recipients of the artifacts produced.

Prerequisites

None

Duration:

3 days

Outline:

1. Business modeling defined

- Define the business modeling process
- Business modeling strategies
- Key business modeling artifacts
 - Target organization assessment
 - Business vision
 - Business architecture document
 - Business use-case model
 - Business analysis model
- Essential business concepts
 - Goals
 - Processes
 - Resources
 - Rules
- Explore business model perspectives most pertinent to systems development
 - Business vision view
 - Business process view
 - Business structure view
 - Business behavior view
- Lab: Business modeling jeopardy: Teams of students compete to demonstrate knowledge learned

2. Business vision view

- Elements of a business vision
- Strategy definition
 - TOWS matrix
 - Vision statement
- Goal modeling
- Lab: Interview to gather strategy and goal information

3. Business process view

- Business use case modeling
- Business use case diagram

- Lab: Identify and diagram business processes on a business use case diagram
- Modeling a business process with UML activity diagrams
- Lab: Diagram a business process with an activity diagram
- Modeling a business process with BPMN process diagrams
- Business use case specification
- Lab: Write a business use case

4. Business structure view

- Business organization modeling
- Business object modeling
 - Identifying business objects
 - Business object modeling with UML class diagrams
 - Classes
 - Attributes
 - Association relationships
 - Generalization relationships
- Lab: Model business objects on a class diagram

5. Business behavior view

- Using UML state models to model business object states
 - States
 - Transitions
 - Events
 - Activities
 - Actions
 - Guards
 - Constraints
- Lab: Modeling a business object's states

6. Specifying business rules

- Defining business rules

- How business rules are used
- Types of business rules
 - Derivations
 - Constraints
 - Existence

7. Exploring business patterns

- Define business patterns
- Explore representative patterns