Introduction to WebSphere Business Modeler
Course Summary

Description
This course will integrate a combination of instructor-led discussions and interactive workshops to illustrate the use of the modeling abilities within WebSphere Modeler. This course will focus on; role of the integration server, role of different integration patterns, WBI toolset implementations, demonstrate process modeling abilities, process simulation execution, performing model analysis, reporting capabilities and versioning. This course will utilize a variety of different case studies and practical tutorials to demonstrate the abilities of the WBI Modeler to support business process modeling

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

- Introduction to concepts and capabilities of Business Process Modeling
- Understand the concepts of business process modeling
- Illustrate the role of the IBM WBI Modeler toolset
- Depict the different types of business integration patterns: Business, Integration, Application and Runtime
- Discuss the role of eCommerce integration patterns
- Depict the abilities of the Modeler toolset and illustrate the various model elements
- Demonstrate the methods for building effective process models
- Create process models using connectors, repositories, services and tasks
- Illustrate advanced Model Elements
- Perform simulation for all of our designed business processes using tokens and interrupts
- Illustrate use of WBI analysis tools for static, dynamic, profile and model analysis
- Depict the various reporting functions within the modeling tool
- Illustrate the versioning of modeling projects

Topics

- WebSphere Business Integration Overview
- Introduction to Business Process Modeling
- Modeling Integration Patterns
- WBI Toolset
- Using WebSphere Business Modeler
- Model Elements
- Process modeling
- Controlling BPEL process flow
- Getting and transforming data
- Invoke adapters from a BPEL process
- Human Workflow
- Error handling
- Advanced Model Elements
- Advanced Process modeling
- Process simulation
- Performing Model Analysis
- Report Processing

Audience
This course is designed for Java or OO developers, web page designers and other professionals that will be designing and modeling large scale applications using WebSphere Business Modeler.

Prerequisites
Students should have a basic understanding of application development. Exposure to an object-oriented programming language is desirable.

Duration
Four days

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Introduction to WebSphere Business Modeler
Course Outline

I. WebSphere Business Integration Overview
- A. N-tier architecture
- B. Model-View-Controller
- C. WebSphere BI products
  1. WBI Server
  2. WBI InterChange Server
  3. WebSphere MQ Workflow
  4. WBI Message Broker
  5. WBI Adapters
  6. WBI Modeler
  7. WBI Monitor
- D. Web Server
- E. WebSphere Application Server
- F. Standalone vs. Network Deployment administration
- G. J2EE platform and APIs (JMS, JNDI, JDBC, etc)
- H. J2EE packaging
- I. Application lifecycle

II. Introduction to Business Process Modeling
- A. Defining BPM
- B. Benefits of BPM
- C. Introduction to Service Oriented architecture
- D. Integrating BPM into SOA

III. Modeling Integration Patterns
- A. Defining eBusiness Integration Patterns
  1. Business
  2. Integration
  3. Application
  4. Runtime
- B. Business patterns
  1. Self Service
  2. Collaboration
  3. Information aggregation
  4. Extended Enterprise
- C. Integration Patterns
  1. Process
  2. Application
  3. Information

IV. WBI Toolset
- A. Illustrating WebSphere Business Modeler
- B. Eclipse-based environment
- C. Dominant capabilities
- D. Available implementations:
  1. Basic
  2. Advanced
  3. Publishing Server
- E. Components
  1. WebSphere Integration Developer
  2. WebSphere Process Server

V. Using WebSphere Business Modeler
- A. Project organization
  1. Projects
  2. Catalogs
  3. Business groups
- B. Creating a process
- C. Exporting and importing
- D. Basics of simulation and analysis

VI. Model Elements
- A. Defining model elements?
- B. Using Data catalogs
- C. Business Items
- D. Role of Notifications
- E. Use of Notification templates

VII. Process modeling
- A. Business modeling modes
- B. Process diagram
  1. Tasks
  2. Services
  3. Repositories
  4. Connector
- C. Specify input and output data
- D. Conditional components
  1. Forks
  2. Merge
  3. Loops

VIII. Controlling BPEL process flow
- A. BPEL scope concept

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B. Parallel processing
C. Conditional process branching
D. Process looping
E. Overview of BPEL activities

IX. Getting and transforming data
A. Creating process variables
B. Add transformations (XSLT) to a process
C. XSLT process mapper
D. Process mapper advanced features (if, foreach, choose, function set)
E. Using XPath to get information
F. Testing transformations

X. Invoke adapters from a BPEL process
A. Why adapters?
B. Adapter architecture (JCA)
C. Adapter Integration in Oracle BPEL
D. Invoking Database adapter
E. Using Siebel adapter

XI. Human Workflow
A. Human workflow requirements
B. Human workflow patterns
C. Human workflow security (XML file, Database, LDAP)
D. Create/View a task
E. Task Routing
F. Features of the worklist
G. Notification services

XII. Error handling
A. Fault handler scope
B. Catching faults
C. Handling timeout conditions with Pick and On-alarm
D. Compensation handlers
E. Automatic failure retry

XIII. Advanced Model Elements
A. Resources
B. Resource catalogs
C. Roles
D. Timetables
E. Costs
F. Modeling organizations
G. Working with expressions
H. Adding colors

XIV. Advanced Process modeling
A. Components
1. Map
2. Observer
3. Timer
4. Classifiers
B. Specify cost and revenue
C. Measures
1. Input criteria
2. Precondition
3. Correlation
4. Output criteria
5. Post condition
D. Require roles
E. Specify resources
1. Individual resources
2. Bulk resources
F. Specify organizational unit
G. Specify location
H. Specify classifier value
I. Swimlane layout
J. Process validation

XV. Process simulation
A. Process simulation
B. Simulation components
1. Tokens
2. Interrupts
3. Attributes

XVI. Performing Model Analysis
A. Using model analysis
B. Analysis templates
1. Static analysis
2. Model analysis
3. Profile analysis
4. Dynamic analysis

XVII. Report Processing
A. Query feature
B. Report designer and using templates
C. Documentation reports
D. Dynamic analysis reports
E. Static analysis reports
F. Printing and exporting reports

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