



BPEL Orchestration Roadmap

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[Example Description]

- A simple travel agency proposes to customers a choose between two airlines company (West and East Airlines) and two hotels groups (BestWestern and HolidayInn).
- The business process takes in input:
 - name of the customer
 - source and destination
 - number of days and passengers
- The process of reservation asks first if Alfa has availability of a flight and, if it doesn't, to Beta. Then, it calls in parallel the hotel booking services and reserves the room in the cheaper hotel.

[1st step: Web Application]

- Creation of the web application
- Configuration of web services
 - Definition of operations parameters
 - Operations implementation
- Testing

2nd step: Orchestration Parameters

- Definition of XSD schema describing process input, output, and fault messages
- Creation of process WSDL

[3rd step: BPEL Diagram]

- Creation of BPEL diagram
 - Partner links
 - Activities
 - Control Structures
 - Variables

[4th step: Composite Application]

- Creation of a Composite Application
- Importing of business process
- Testing of the business process

[5th step: Process Enrichment]

- Travel Agency Homepage Creation
- Simplified fault handling
- Bug? Substitute the HTTPDefaultPort parameter in WSDL file – *SOAP:Address tag*
 - Retrieve it in Glassfish Startup log (default 9080)

[Exercise]

- Create 4 new Web Services for car rentals:
 - FirstRental-Roma and FirstRental-NewYork
 - Cars-Roma and Cars-NewYork
- Call in parallel the two rental companies, differentiating for destination
- Rent the cheaper car

[Suggested books]

- David Salter, and Frank Jennings. Building SOA-Based Composite Applications Using NetBeans IDE 6. *Packt Publishing*.
- Judith Hurwitz, Robin Bloor, Carol Baroudi, and Marcia Kaufman. Service Oriented Architecture for Dummies. *Wiley Publishing, inc*.
- Thomas Erl. SOA: Principles of Service Design. *Prentice Hall*.
- SOA Tutorials: <http://www.netbeans.org/kb/trails/soa.html>

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