



S|CASE

S|CASE

Web Service Composition & YouRest

Koutli Maria - CERTH

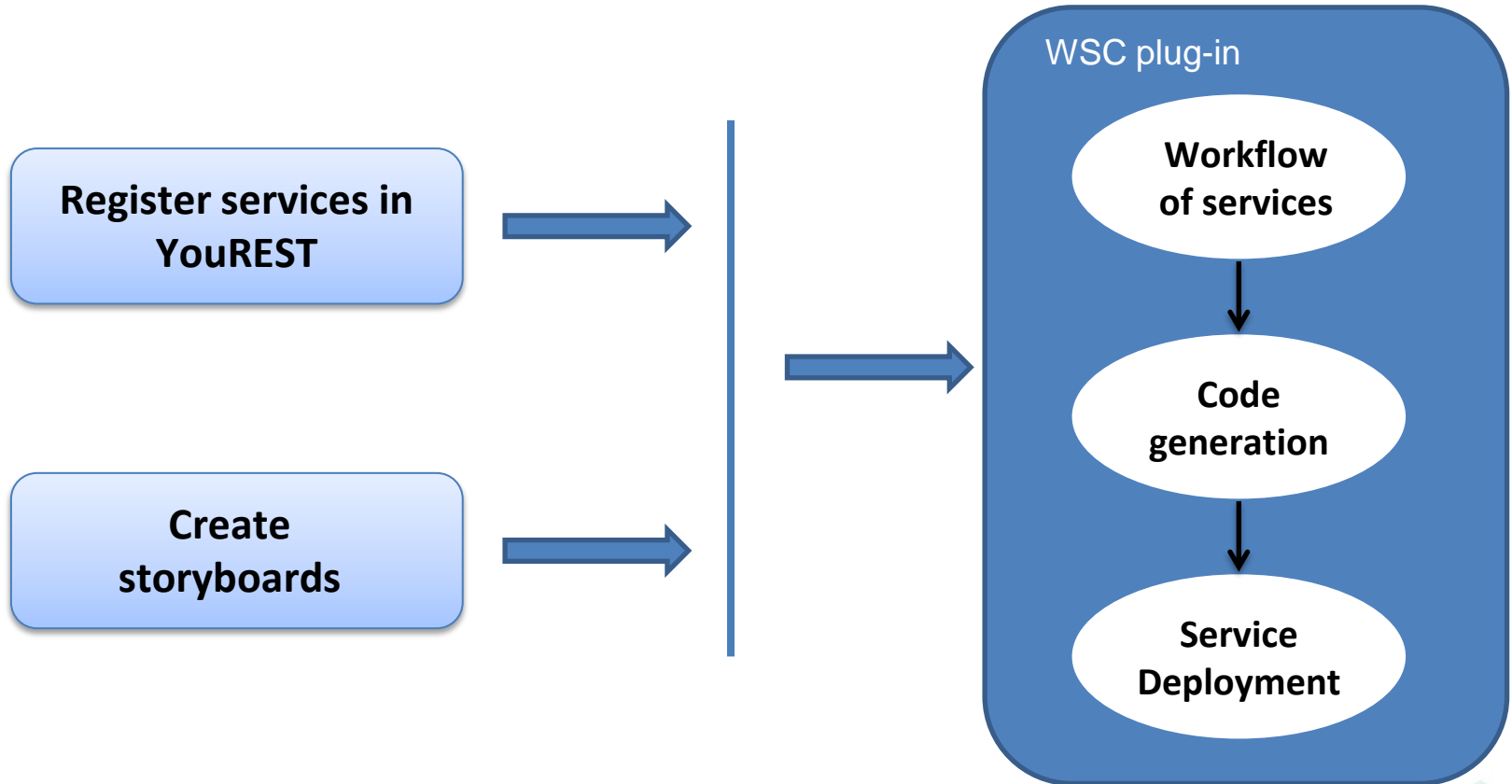


S-CASE HACKATHON

Thessaloniki, 01/06/2016

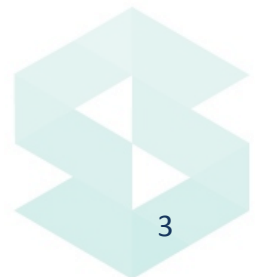


Workflow of web service composition



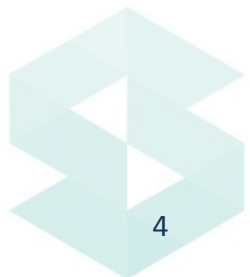
YouREST

- A web directory for registering and exposing web services.
- Contains external services registered by the user or RESTful web services produced by the S-CASE MDE and Web Service Composition plug-ins.
- Supports WSDL, WADL and RAML descriptions.



YouREST Interface

The screenshot displays the YouREST web interface. At the top, there's a header with the 'YouRest' logo and a '+ YOUREST' button. Below the header, there are tabs for 'S-CASE Services', 'Mashape Services', and 'Programmableweb Services'. A search bar with the text 'Search a web service' and a 'Search' button is present. On the left, a 'Categories' sidebar lists 'All', 'Communication', 'Leisure', 'Business', 'Transport', and 'Geographic'. The main content area shows a grid of 12 service cards, each with a title, a 'YouRest' logo, a description, and a small icon. The services include: wAPI, wAPI opportunity discovery, Google Maps Distance API, wAPI computables, GetMoviesSocial, getBooksProducts, Mailgun e-mail provider, Conversion Service, GET_similar, GET_BookDetails, GetEventsSocial, and GetFacebookFriends. Each card has a small 'p' icon at the bottom. Navigation controls for the grid are visible at the top and bottom of the main content area.



Web service registration on YouRest

- Semantic annotation of web services.
- Three-level categorization.

YouRest

Register new Web Service

Please enter a valid WSDL/WADL URL:

or upload a RAML description file:
 No file chosen

Predicted Domain

Predicted Application Domain:

Web Service Operations

Web Service Operation: Classification Score: 0.82

Inputs

WS Input Name	Ontology Concept Name	Matching Score
PostalCode	postalCode	1.0
Address	address	1.0
State	state	1.0
City	city	1.0
LicenseKey	licenseKey	1.0

Outputs

WS Output Name	Ontology Concept Name	Matching Score
Latitude	latitude	1.0
Block	time	0.0
LevelDescription	type	0.0
Tract	city	0.0
Level	stateAbbreviation	0.03
Zip	zip	1.0
Longitude	longitude	1.0
Location	state	0.08
Desc	address	0.07
Number	streetNumber	0.5

Inputs

- Address (string)
- City (string)
- State (string)
- PostalCode (string)
- LicenseKey (string)

Outputs

- GetBestMatch_V2Result (Location)
 - Latitude (string)
 - Longitude (string)
 - Zip (string)
 - Tract (string)
 - Block (string)
 - Level (string)
 - LevelDescription (string)
- Error (Err)
 - Desc (string)
 - Number (string)
 - Location (string)

Ideal Operation:

Inputs

- token (string)
- postalCode (string)
- address (streetNumber)
- accessCode (string)
- coordinates (longitude)
- zipCode (string)
- state (string)
- city (string)
- licenseKey (string)

Outputs

- latitude (double)
- time (string)
- type (string)
- city (string)
- stateAbbreviation (string)
- zip (string)
- longitude (double)
- state (string)
- address (streetNumber)
- streetNumber (int)

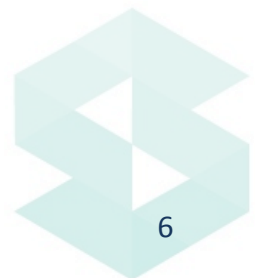
The research leading to these results has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) under grant agreement No 610717



Web Service Composition plug-in

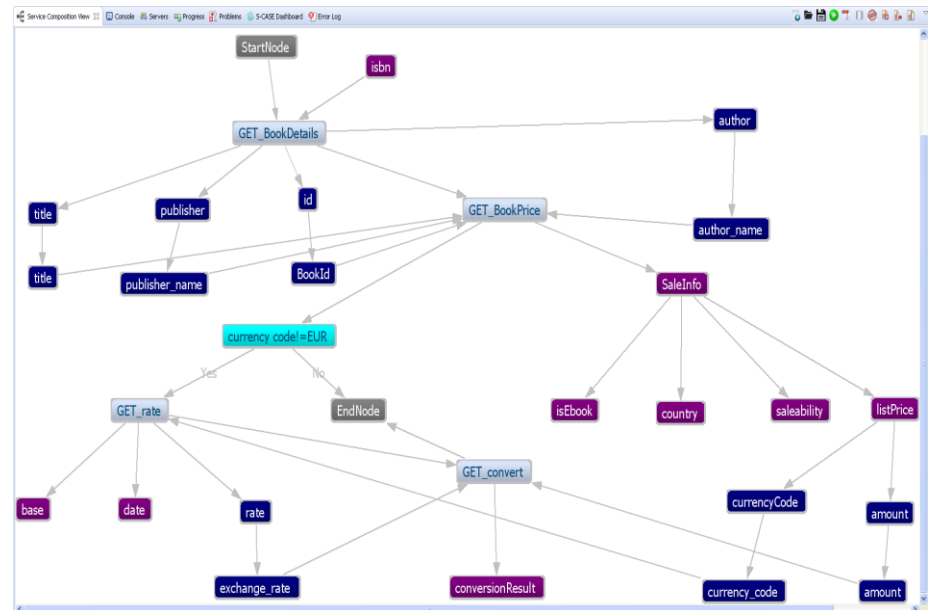
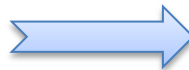
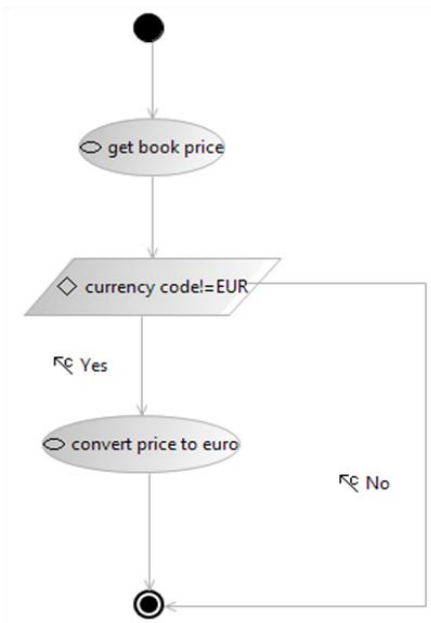
Concept:

- Match storyboard actions with YouREST services.
- Select services based on connectivity.
- Replace inputs by services.



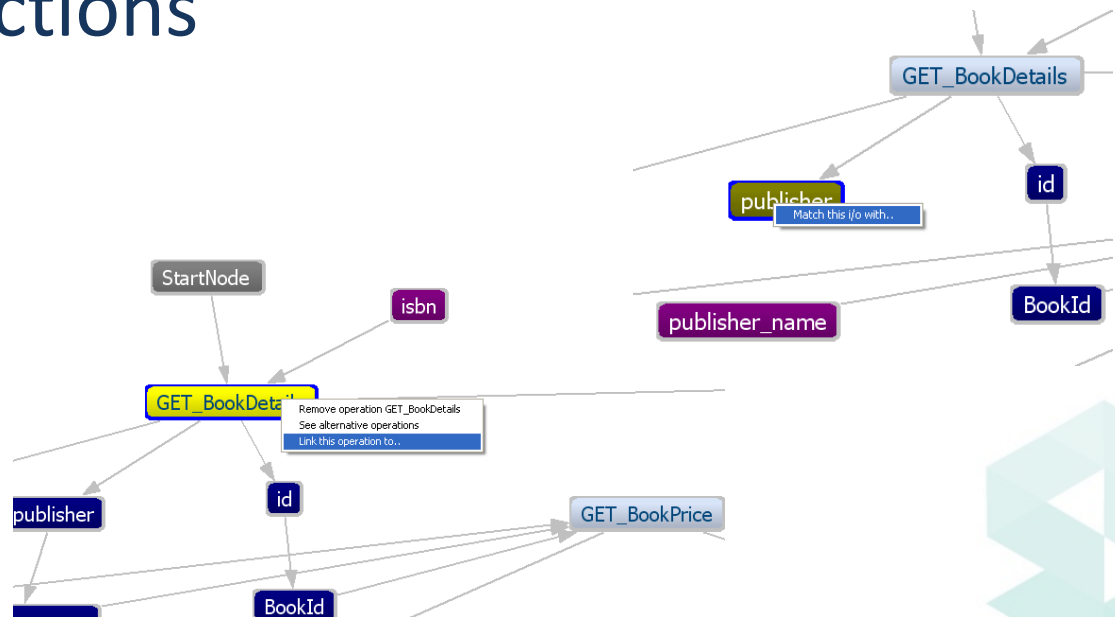
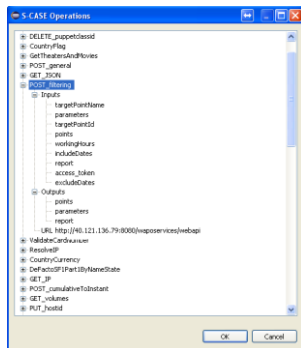
Import storyboards

Conversion of storyboard file to workflow of web services.



Manual composition

- Add operations
- Create conditions
- Create matches between input/output values.
- Create connections



Execute the workflow

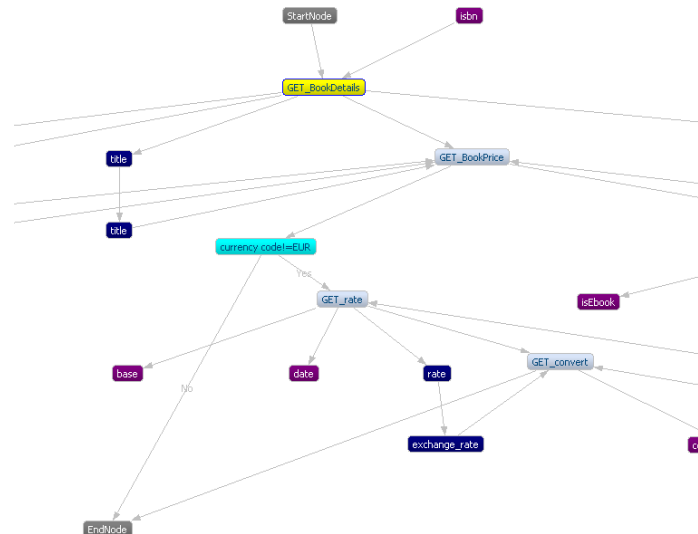
Fill input
values

Invoke
web
services

Get output
values

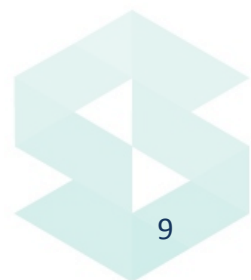
Workflow Inputs:

isbn [String]:*	0007353227
amount [double]:*	matched
exchange_rate [double]:*	matched
currency_code [String]:*	matched
title [String]:	matched
BookId [String]:*	matched
publisher_name [String]:	matched
author_name [String]:	matched



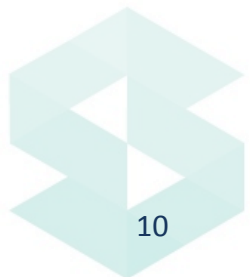
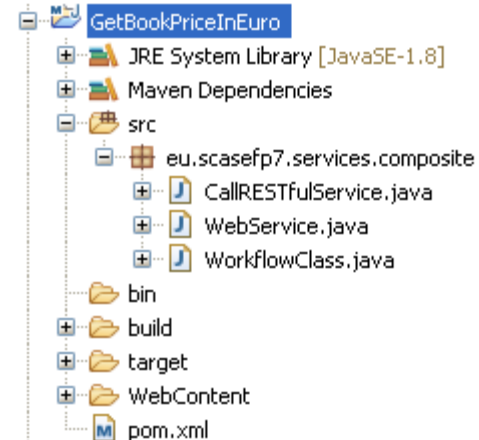
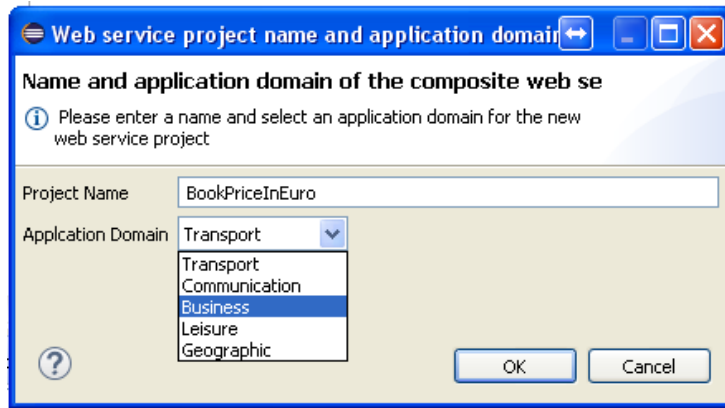
Workflow Outputs:

author [String]:*	Agatha Christie
id [String]:*	Kk-LAEHExtkC
title [String]:	An Autobiography
publisher [String]:*	HarperCollins UK
saleInfo [saleInfo]:*	
country [String]:*	GB
saleability [String]:*	FOR_SALE
isEbook [String]:*	true
listPrice [listPrice]:*	
amount [double]:*	5.49
currencyCode [String]	GBP
rate [double]:*	0.8272
date [String]:	2016-06-28
base [String]:*	EUR
conversionResult [String]:*	6.64



Generate composite web service

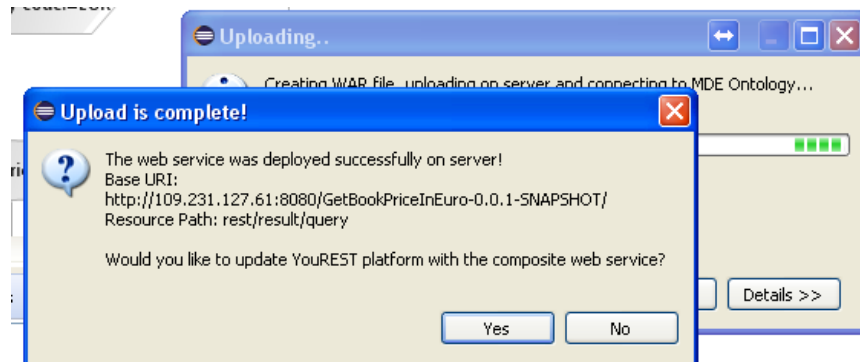
Java, Maven Dynamic web service.



Web Service Deployment



- Build project and create WAR file.
- Deploy on server.
- Register the web service in YouREST.



Thank you very much for your attention.

