2013 DCMI-AsiaPac Workshop on RDA, DC and Linked Data

Ontology Design using TBC



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Downloading TBC



TopBraid Composer Installation

Welcome to the latest release of the TopBraid Composer Installation page.

Extensive Help is provided within TopBraid Composer (all editions) for both basic and advanced topics of use. New users, e.g., during evaluation, will find the guidance provided within the Help facility to be useful for particular tasks, but also as a quick overview to become aware of and experiment with the extensive capabilities provided. A <u>Getting Started Guide</u> with hands-on exercises is also available.

Download TopBraid Composer 4.3.0 Beta

The system requirements for Composer are the same as for the Eclipse 3.7.0 platform. Java 6 (Sun/Oracle SDK) is required. The Maestro Edition includes an evaluation version of TopBraid Enterprise Vocabulary Network (EVN) 4.3.0 beta.

111

Product	Maestro Edition 💌
OS	Windows 💌
32/64-bit	64-bit 💌
Download	
-	

Installing TBC

- 1. UnZip the Download File
- 2. Move to "tbcme" Folder
- 3. Double-Click "TopBraid Composer"

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Starting TBC

- Check Your "WorkSpace"
- If you want to change, Click "Browse.."

Workspace Launcher	— X
Select a workspace TopBraid Composer ME stores your projects in a folder called a workspace. Choose a workspace folder to use for this session.	
Workspace: C:#Users#Sunny#TBCMEWorkspace -	Browse
Use this as the default and do not ask again	Cancel
TopQuadrant™	

Starting TBC

	Initial screen	
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Creating RDF/OWL File using TBC

File >New > "RDF/OWL File"

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File	Edit Navigate Search Project System	Window Help								
	New	Alt+Shift+N ▶		Project						
	Open File			RDF/OWL File						
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Creating RDF/OWL File

Setting up Base URI and Filename

- Specifying "Base URI & File Name"
- This step is required!!

(•	
	Create RDF/O This wizard cre	WL File eates a new ontology file that can be opened with TopBraid.
	<u>B</u> ase URI:	http://linkeddata.skku.edu/Library
	<u>F</u> ile name:	Library
	File type: Initial imports:	RDF/XML (.rdf) Dublin Core Elements Dublin Core Terms SKOS W3C Geo Set a default namespace in the new file
にはたらいための	?	<u>F</u> inish Cancel

A base URI is set now

TopBraid - teamwork topbraidlive org/Library rdf - To	opBraid Compose	r MF		_ D _ X
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rdfs:Resource (175)	Ontology (Overview		owl:versionInfo
 owi.ming rdf:Property (90) 	Base LIRI (Locat	ion): http://linkeddata.skku.edu/Library		rdfs:label
rdf:Statement	Default Names	bace: http://linkeddata.skku.edu/Library#	8	rdfs:seeAlso
rdfs:Class (82)	Deladic Marries	nep, / micedata.okka.cod/ cloraly*		
	 Namespace Specify the pre- 	Prefixes fixes to abbreviate the URIs of the namespaces that a	re used in this	
	model.			
	Prefix	Namespace URI	Add	
•	owl	http://www.w3.org/2002/07/owl#	Delete	
	rdfs	http://www.w3.org/1999/02/22-rdf-syntax-ns#	Clone	
	xsd	http://www.w3.org/2001/XMLSchema#		
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Defining Classes

Class Handling

Creating Subclass/Sibling Class & Deleting Class



Defining a Class



Defining a Class

• Using icons on the top right, you can continue to create other classes (Author, Publisher, Language, & Subject).



Entering Class Instances

Entering Class Instances



Entering Class Instances

3. Enter	ing a Value
1	
Create Book	×
Name of new resource: Infe	erno 🗌 Anonymous
Annotations Template	
Property	Initial Value
rdfs:label	{name}
	OK Cancel

Defining Properties

ObjectProperty Defining ObjectProperties

Domain	ObjectProperty	Range
Book	hasAuthor	Author
Author	isAuthorOf	Book
Book	hasPublisher	Publisher
Publisher	isPublisherOf	Book
Book	hasLanguage	Language
Language	isLanguageOf	Book
Book	hasSubject	Subject
Subject	isSubjectOf	Book
Publisher	hasPublisher hasAuthor	Author
isPublisherC	Of Book	isAuthorOf
hasLangua	nge	isSubjectOf
Language	isLanguageOf	t Subject

DatatypeProperty Defining DatatypeProperties

Domain	Datatype Property	Range
Book	hasISBN	xsd:string
Book	hasDescription	xsd:string



Defining Property

Defining DatatypeProperty

2. Select DatatypeProperty



Defining ObjectProperty

2. Select an ObjectProperty.



Assigning Domain & Range

Domain & Range

Assigning proper domain & range to ObjectProperty & Datatype Property

Domain	Property	Range
Book	hasAuthour	Author
Author	isAuthourOF	Book
Book	hasPublish	Publisher
Publisher	isPublishOf	Book
Book	hasLanguage	Language
Language	isLanguageOf	Book
Book	hasSubject	Subject
Subject	isSubjectOf	Book
Book	hasISBN	xsd:string
Book	hasDescription	Xsd:string

DatatypeProperty

Assigning Domain & Range to a DatatypeProperty

If you double-click the Property, the following screen comes out.

TopBraid - teamwork.topbraidlive.org/Library.rdf - TopBraid	iopBraid Composer ME
File Edit Navigate Project System Model Infe	erence Scripts Resource Window Domain & Dango
Resource	
🖹 Classes 🛛 😽 🔽 🧟 🔽 🗖 🗖	🔒 Library.rdf 🛛 🔤 👘 🔜 🖄 👘 🔜
rdfs:Resource (204)	Datatype Property Form
rdf:Property (98)	Name: hasISBN OK
rdf:Statement	- Annotations
rdfs:Class (87)	Property Axioms Image: Second Secon
	rdfs:domain ▽
	rdfs:range ▽ hasISBN
L	rdfs:subPropertyOf V
	owl:equivalentProperty
	owl:inverseOf
• • A	owl:propertyDisjointWith 🗢
🔁 Navigator 🛛 🗖 🗖	
	rdf:type ▽
🔁 evn.topbraidlive.org	• own:DatatypeProperty
sample.evn.topbraidlive.org	
i server.topbraidlive.org i teamwork.topbraidlive.org	Form Browser Graph Source Code
🗁 doc	😢 Error L 🔶 Instan 🛛 💻 Domain 🚍 Releva 🌟 SPARQL 🦃 Imports 🖓 🗖 🚼 Basket 🕅 👘
🔁 management	
j ⇒ system	[Resource] rdf:type rdfs:label rdfs:comment
x .project	◆ Abacus Publisher
Library.rdf [http://linkeddata.skku.edu/Lib VERSION	Dan_Brown Author Doubleday Books Publisher
C TopBraid	◆ Douglas_Kennedy Author
□◆	

DatatypeProperty

Assigning Domain to a DatatypeProperty



3. Select an appropriate class

💠 Add existing	
Classes Datatypes	
 rdfs:Resource owl:Thing Author Book Language owl:Nothing Publisher Subject rdf:Property rdf:Statement rdfs:Class 	
•	
	OK Cancel

DatatypeProperty

Assigning Range to a DatatypeProperty

1. Click the " \bigtriangledown " Icon		
] *Library.rdf 🛛		
Jatatype Property Form		
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Annotations		
Property Axioms		
dfs:domain ▽	Datatype Property Form	
Book	Name: hasISBN	
dfs:range 🔽	- Annotations	
dfs:subProj 🛱 Add empty row	= Property Avience	
Wieguivale B Set to xsd:boolean		
adinversed Set to xsd:date	Book	
Set to xsd:dateTime	rdfs:range ▽	
E Set to xsd:float	xsd:string	Ì
Other Pro Set to xsd:integer	rdfs:subPropertyOf ▽	
an:type S Set to xsd:string	owl:equivalentProperty 🗢	
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orm Browse 🚓 Add existing		N. NIN
Error L 🔮 Create and add nested va		
🔮 Create and add 🖌		
Bosou		
2. Select an appropriate da	a type	

ObjectProperty

Assigning Domain & Range to a DatatypeProperty

• Assigning Domain & Range to an ObjectProperty is identical to DatatypeProperty"

Object Property Form		hasAuthor
object Hoperty Form		🔲 hasLanguage
Name: hasAuthor	Ok	hasPublisher
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- Proporty Aviama		isAuthorOf
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Book	\bigtriangledown	isSubjectOf
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rdfs:subProj 译 Add empty row		hasISBN
owl:equivale 🚓 Add existing		rdfs:comment
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✓ Other Properties		
rdf:type ▽		
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ObjectProperty Setting up inverseOf



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Name: Pride_And_Prejudice	-42	Add widget for property
- Annotations	2	Send to basket
 Other Properties 	1	Edit form of resource's type
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Jane_Austen		Find on Google
hasDescription 🗢		Find on Wikipedia
hasISBN 🗢	1	Find references
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hasLanguage 🗢	0	Find on Geography View
English		Set den coordinates
hasPublisher 🗢	5	Set geo coordinates
Penguin_Books		Navigate to ontology
hasSubject 🗢	E	Open in SWP Browser
Novel		
rdf:type ▽	W	LINK to DBpedia resource
Book	×	Delete
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1. Sel	lect an instance	be a second s		
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if a match is found, click this Icon

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Re WIKIPEDIA The Free Encyclopedia Main page Contents Featured content Current events Random article Donate to Wikipedia	Create account Article Talk Search Pride and Prejudice From Wikipedia, the free encyclopedia This article is about the novel. For o see Pride and Prejudice (disambigu	unt & Log in About: Pride and Prejudice An Entity of Type : <u>WrittenWork</u> , from Named Graph : <u>http://dbpedia.org</u> , within Data Space : dbpedia.org wation). (오만과 편경》(Pride and Prejudice) 는 제인 오스틴이 쓴 소셜이다. 스무 살 때 쓴 소셜로, 처음 환성되었을 때는 제목이 '첫인상' 이었지만, 그 제목으로 한번 도출판되지 않았다. 그녀의 두번패 작품으로 1813년 최초로 출간되었으며, 영국 의 가장 위대한 명작들 중 하나로 사용받고 있다.
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owl:sameAs is employed to match it to DBPedia

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