

XML, Langage de description

Tutoriel de l'édition d'ontologie avec le logiciel Protégé

Protégé

- Un éditeur libre de réseaux sémantiques développé par l'Université de Stanford en Californie
- Téléchargeable à l'adresse :
<http://protege.stanford.edu>
- Deux versions en cours :
 - Protégé 3 : éditeur RDF/RDFS/OWL-1
 - Protégé 4 : éditeur OWL 2
 - La version utilisée pour les travaux dirigés est Protégé 3

La première vue

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled 'INDIVIDUAL EDITOR for Ontology(http://www.owl-ontologies.com/...)'. The 'Ontology URI' field contains 'http://www.owl-ontologies.com/MonChampLexical.owl'. Below this is a table with columns 'Property', 'Value', and 'Lang'. The first row shows 'rdfs:comment' in the 'Property' column. A blue callout bubble with the text 'Définit le Champ lexical créé' points to this row. The 'Default Namespace' field contains 'http://www.owl-ontologies.com/MonChampLexical.owl#'. Below that is a table for 'Namespace Prefixes' with columns 'Prefix' and 'Namespace'. The table lists several prefixes and their corresponding namespaces, including 'owl', 'protege', 'rdf', 'rdfs', and 'swrl'.

Property	Value	Lang
rdfs:comment		

Prefix	Namespace
	http://www.owl-ontologies.com/MonChampLexical.owl#
owl	http://www.w3.org/2002/07/owl#
protege	http://protege.stanford.edu/plugins/owl/protege#
rdf	http://www.w3.org/1999/02/22-rdf-syntax-ns#
rdfs	http://www.w3.org/2000/01/rdf-schema#
swrl	http://www.w3.org/2003/11/swrl#

Définit le
Champ lexical
créé

L'onglet d'édition du réseau de catégories

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled '<new> Protégé 3.4 rc2'. The menu bar includes File, Edit, Project, OWL, Reasoning, Code, Tools, Window, Collaboration, and Help. The toolbar contains various icons for file operations and editing. The interface is divided into several panels:

- SUBCLASS EXPLORER:** Shows the hierarchy of classes. The 'owl:Thing' class is selected. A blue callout box points to a button in this panel, labeled 'Bouton de création de sous catégorie (soit ici une sorte de "chose")'.
- CLASS EDITOR for owl:Thing (instance of owl:Class):** Shows the class editor for 'owl:Thing'. The 'For Class' field is set to 'http://www.w3.org/2002/07/owl#Thing'. Below this is a table with columns 'Property', 'Value', and 'Lang'. The table contains one row with 'Property' 'rdfs:comment'.
- Asserted Conditions:** Shows the asserted conditions for the class. The conditions are 'NECESSARY & SUFFICIENT' and 'NECESSARY'.
- Disjoints:** Shows the disjoints for the class.

The status bar at the bottom right indicates 'Logic View' is selected and 'Properties View' is unselected.

Annotation de catégorie (labellisation)

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "CLASS EDITOR for People (instance of owl:Class)". The "For Class" field contains the URI "http://www.owl-ontologies.com/MonChampLexical.owl#People". The "Annotations" tab is active, displaying a table with the following data:

Property	Value	Lang
rdfs:comment		
rdfs:label	Catégorie des personnes	

A blue callout bubble points to the "rdfs:label" row with the text "Création d'une catégorie, avec un label". The "Subclass Explorer" on the left shows the hierarchy: owl:Thing > People. The "Asserted Conditions" and "Disjoints" panels are empty.

Création d'une
catégorie, avec un
label

Spécialisation d'une sous-catégorie

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "CLASS EDITOR for Man (instance of owl:Class)". The "For Class" field contains the URI: `http://www.owl-ontologies.com/MonChampLexical.owl#Man`. The "Annotations" table is visible, showing the following entries:

Property	Value	Lang
<code>rdfs:comment</code>		
<code>rdfs:label</code>	Man	

A blue callout bubble points to the "Man" class in the "Subclass Explorer" on the left, which is highlighted in the "Asserted Hierarchy" view. The bubble contains the text: "Terme de désignation d'une sous-catégorie".

At the bottom right, there are radio buttons for "Logic View" (selected) and "Properties View".

Terme de désignation d'une sous-catégorie

Création d'une catégorie soeur

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "CLASS EDITOR for Woman (instance of owl:Class)". The "SUBCLASS EXPLORER" on the left shows a hierarchy: owl:Thing > People > Man > Woman. A blue callout bubble points to a small icon in the "Asserted Hierarchy" section, labeled "Bouton de création". The "CLASS EDITOR" shows the class URI: `http://www.owl-ontologies.com/MonChampLexical.owl#Woman`. Below this is a table of properties:

Property	Value	Lang
<code>rdfs:comment</code>		
<code>rdfs:label</code>	Femme	

Below the table are sections for "Asserted Conditions" and "Disjoints". At the bottom right, there are radio buttons for "Logic View" (selected) and "Properties View".

Bouton de création

Disjonction de catégories

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "CLASS EDITOR for Woman (instance of owl:Class)". The "Subclass Explorer" on the left shows a hierarchy: owl:Thing > People > Man > Woman. The "Class Editor" shows the class "Woman" with the URI "http://www.owl-ontologies.com/MonChampLexical.owl#Woman". The "Annotations" table shows the following data:

Property	Value	Lang
rdfs:comment		
rdfs:label	Femme	

The "Asserted Conditions" section shows a disjunctive relationship between "People" and "Man". The "Disjoints" section shows "Man" as a disjoint class. A blue speech bubble points to the "Disjoints" section with the text "Catégories disjointes".

File Edit Project OWL Reasoning Code Tools Window Collaboration Help

Metadata(MonChampLexical.owl) OWLClasses Properties Individuals Forms

SUBCLASS EXPLORER CLASS EDITOR for Woman (instance of owl:Class)

For Project: ●

Asserted Hierarchy

- owl:Thing
 - People
 - Man
 - Woman

For Class: Inferred View

Property	Value	Lang
rdfs:comment		
rdfs:label	Femme	

Annotations

Asserted Conditions

NECESSARY & SUFFICIENT

NECESSARY

People

Disjoints

Man

Logic View Properties View

Catégories disjointes

Autre création de catégorie principale

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "CLASS EDITOR for Place (instance of owl:Class)". The "For Class" field contains the URI: `http://www.owl-ontologies.com/MonChampLexical.owl#Place`. The "Subclass Explorer" on the left shows a hierarchy: `owl:Thing` (parent), `People` (child), `Man` (child of People), `Woman` (child of People), and `Place` (child of People). A blue callout box points to a button in the "Subclass Explorer" toolbar, which is used for creating subclasses. The "Class Editor" contains a table with the following data:

Property	Value	Lang
<code>rdfs:comment</code>		
<code>rdfs:label</code>	Lieu	

Below the table, the "Asserted Conditions" section shows a condition: `owl:Thing` with a "NECESSARY" radio button selected. The "Disjoints" section is empty. The bottom status bar shows "Logic View" selected and "Properties View" unselected.

Bouton de création de sous catégorie de "Thing"

Onglet Properties / Object : Création d'un type de lien

The screenshot shows the Protégé 3.4 rc2 interface. The 'Properties' tab is active, displaying the 'PROPERTY EDITOR for lives_in (instance of owl:ObjectProperty)'. The 'PROPERTY BROWSER' on the left shows 'lives_in' under 'Object properties'. A blue callout box points to the 'lives_in' property in the browser, with the text 'Bouton de création' (Creation button). Another larger blue callout box contains the text 'Un type de lien entre éléments de catégories est un Object property' (A type of link between elements of categories is an Object property). The main editor shows a table with columns 'Property', 'Value', and 'Lang'. The 'Property' column contains 'rdfs:comment' and 'rdfs:label', with 'rdfs:label' having the value 'habite'. Below the table, the 'Domain' is set to 'owl:Thing'. On the right, there are checkboxes for 'Functional', 'InverseFunctional', 'Symmetric', and 'Transitive', all of which are currently unchecked. An 'Inverse' section is also visible at the bottom right.

Property	Value	Lang
rdfs:comment		
rdfs:label	habite	

Domain: owl:Thing

Range: [Empty]

Functional:

InverseFunctional:

Symmetric:

Transitive:

Inverse: [Empty]

Onglet Properties / Object : Catégories source et cible de lien

The screenshot shows the Protégé 3.4 rc2 interface. The main window displays the 'Properties' tab for the property 'lives_in'. The 'Annotations' table is visible, with columns for 'Value' and 'Lang'. A dialog box titled 'Select named class(es) to add' is open, showing a tree view of classes: owl:Thing, People, and Place. The 'Place' class is selected, and its URI is displayed: `http://www.owl-ontologies.com/MonChampLexical.owl#Place`. The dialog also shows the ontology URI and location. A 'Domain' dropdown menu is set to 'People'. The 'Inverse' field is empty. Three blue callout boxes provide annotations: 'Source = domain' points to the 'Domain' dropdown; 'Cible = range' points to the selected class in the dialog; and 'Caractère de lien (fonctionnel = unique)' points to the 'Functional' checkbox.

Source = domain

Cible = range

Caractère de lien (fonctionnel = unique)

Onglet Classes : Types de liens dont une catégorie est la source

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled 'CLASS EDITOR for Man (instance of owl:Class)'. The 'For Class' field contains the URI: `http://www.owl-ontologies.com/MonChampLexical.owl#Man`. The 'Annotations' table is visible, with the following data:

Property	Value	Lang
<code>rdfs:comment</code>		
<code>rdfs:label</code>	Man	

The 'Properties and Restrictions' panel shows a property `lives_in` with the restriction '(multiple Place)'. A blue callout bubble points to the 'create' button (represented by a plus sign in a square) in the toolbar of this panel. The bubble contains the text 'Bouton de création'.

Bouton de création

Onglet Properties / Datatype : création d'attribut littéral

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "PROPERTY EDITOR for age (instance of owl:DatatypeProperty)". The "PROPERTY BROWSER" on the left shows the "age" property under "Datatype Properties". A dialog box titled "Select named class(es) to add" is open, showing a tree view with "owl:Thing" selected and "People" and "Place" as sub-items. A tooltip for "People" is visible, showing the URI "http://www.owl-ontologies.com/MonChampLexical.owl#People" and the location "main ontology [not yet saved]". The "PROPERTY EDITOR" shows a table with columns "Value" and "Lang". The "Domain" dropdown is set to "owl:Thing".

For Project: ●

Object Datatype Annotation All

Datatype Properties

age

PROPERTY EDITOR for age (instance of owl:DatatypeProperty)

For Property: <http://www.owl-ontologies.com/MonChampLexical.owl#age>

Select named class(es) to add

- owl:Thing
 - People
 - Place

<http://www.owl-ontologies.com/MonChampLexical.owl#People>
ontology: <http://www.owl-ontologies.com/MonChampLexical.owl>
location: main ontology [not yet saved]

Value Lang

Annotations

Domain

owl:Thing

Functional

OK Cancel

Onglet Properties / Datatype : création d'attribut littéral

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "PROPERTY EDITOR for age (instance of owl:DatatypeProperty, owl:FunctionalProperty)". The "For Property:" field contains the URI: `http://www.owl-ontologies.com/MonChampLexical.owl#age`. Below this, there is a table with columns "Property", "Value", and "Lang". The table contains two rows: one for `rdfs:comment` and one for `rdfs:label` with the value "age".

At the bottom of the editor, the "Domain" is set to "People" and the "Range" is set to "int". The "Functional" checkbox is checked. Below the range, there is an "Allowed values" section with a plus sign and an X icon.

A blue callout bubble points to the "Allowed values" section with the text "Type XML de littéral".

Property	Value	Lang
<code>rdfs:comment</code>		
<code>rdfs:label</code>	age	

Onglet Individual : introduction d'un individu

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "INDIVIDUAL EDITOR for Evry (instance of Place)". The "For Individual:" field contains the URI "http://www.owl-ontologies.com/MonChampLexical.owl#Evry". Below this, a table displays the instance's properties:

Property	Value	Lang
rdfs:comment	Cité du Département de l'Essonne	
rdfs:label	Evry	

Two blue callout boxes are present:

- A callout box on the left points to a small icon in the "INSTANCE BROWSER" panel, labeled "Bouton de création".
- A callout box on the right points to the "rdfs:comment" row in the table, labeled "Représentation d'une entité unique du monde réel".

Onglet Classes ; vue propriétés

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled 'CLASS EDITOR for Woman (instance of owl:Class)'. The 'For Class' field contains the URI 'http://www.owl-ontologies.com/MonChampLexical.owl#Woman'. The 'Properties and Restrictions' tab is active, displaying a table of properties and their restrictions.

Property	Value	Lang
rdfs:comment		
rdfs:label	Femme	

Below the table, the 'Properties and Restrictions' section shows the following restrictions:

- age (single int)
- lives_in (multiple Place)

A blue speech bubble with the text 'Vue propriétés' points to the 'Properties and Restrictions' section.

At the bottom of the interface, the 'Superclasses' and 'Disjoints' sections are visible. The 'Superclasses' section shows 'People' and the 'Disjoints' section shows 'Man'. The 'Logic View' and 'Properties View' radio buttons are at the bottom right, with 'Properties View' selected.

Onglet Individual : formulaire

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "INDIVIDUAL EDITOR for Paul_Dupont (instance of Man)". The "For Individual:" field contains the URI: `//www.owl-ontologies.com/MonChampLexical.owl#Paul_Dupont`. Below this, there is a table of properties and values:

Property	Value	Lang
<code>rdfs:comment</code>		
<code>rdfs:label</code>	Paul Dupont	

Below the table, there are two dynamic form fields:

- `age`: A text input field containing the value "22".
- `lives_in`: A text input field that is currently empty.

A blue speech bubble points to the `lives_in` field with the text "Formulaire dynamique".

Association d'individus selon un type de lien

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled '<new> Protégé 3.4 rc2'. The menu bar includes File, Edit, Project, OWL, Reasoning, Code, Tools, Window, Collaboration, and Help. The toolbar contains various icons for file operations and editing. The main workspace is divided into several panes:

- CLASS BROWSER:** Shows the class hierarchy for the project. The root is owl:Thing, with children People, Man (1), Woman, and Place (1).
- INSTANCE BROWSER:** Shows the asserted instances for the class Man, with Paul_Dupont listed.
- INDIVIDUAL EDITOR for Paul_Dupont (instance of Man):** Shows the individual's properties and values. The table below lists the properties and their values:

Property	Value	Lang
rdfs:comment		
rdfs:label	Paul Dupont	

Below the table, there are two property editors:

- age:** A text input field containing the value 22.
- lives_in:** A text input field with a '+' icon to its right, which is highlighted by a blue callout.

The 'Select Resources..' dialog is open, showing the 'Allowed Classes' pane with 'Place (1)' and the 'Direct Asserted Instances' pane with 'Evry'. The dialog has 'OK' and 'Cancel' buttons at the bottom.

A blue callout points to the '+' icon in the lives_in property field, with the text "Bouton de création" (Creation button).

Onglet Individual

The screenshot shows the Protégé 3.4 rc2 interface with the following components:

- CLASS BROWSER:** Shows a class hierarchy for 'owl:Thing' including 'People', 'Man (1)', 'Woman (1)', and 'Place (1)'. 'Woman (1)' is selected.
- INSTANCE BROWSER:** Shows 'Asserted Instances' for the class 'Woman', with 'Marie_Durand' listed. A small 'i' icon is next to the instance name.
- INDIVIDUAL EDITOR for Marie_Durand (instance of Woman):** Shows the URI '/www.owl-ontologies.com/MonChampLexical.owl#Marie_Durand' and a table of annotations:

Property	Value	Lang
rdfs:comment		
rdfs:label	Marie Durand	

Below the table, there are fields for 'age' (value: 20) and 'lives_in' (value: Evry).

A blue callout box labeled 'Bouton de création' points to the 'i' icon in the Instance Browser.

Onglet Property/Object

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled 'PROPERTY EDITOR for is_married_with (instance of owl:ObjectProperty, owl:SymmetricProper...'. The 'For Property' field contains the URI: `http://www.owl-ontologies.com/MonChampLexical.owl#is_married_with`. The 'Annotations' table is as follows:

Property	Value	Lang
<code>rdfs:comment</code>		
<code>rdfs:label</code>	est marié avec	

The 'Domain' and 'Range' lists both contain 'Man' and 'Woman'. The 'Symmetric' checkbox is checked, while 'Functional', 'InverseFunctional', and 'Transitive' are unchecked. The 'Inverse' field contains 'is_married_with'.

A blue callout bubble on the left contains the text: 'Une propriété symétrique à contraindre'.

Contrainte établie sur un type de lien

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "CLASS EDITOR for Man (instance of owl:Class)". The "SUBCLASS EXPLORER" on the left shows a hierarchy: owl:Thing > People > Man. The "CLASS EDITOR" shows the class "Man" with the following table:

Property	Value	Lang
rdfs:comment		
rdfs:label	Man	

Below the table, the "Properties and Restrictions" section shows a restriction on the property "lives_in":

- is_married_with (allValuesFrom Woman, maxCardinality 1)
 - Woman
 - 1
- age (single int)
- lives_in (multiple Place)

Two blue callout boxes highlight specific elements: "restrictions" points to the restriction icon in the toolbar, and "bouton" points to the restriction icon in the toolbar.

The "Superclasses" section shows "People" and "Disjoints" section shows "Woman".

At the bottom right, there are radio buttons for "Logic View" and "Properties View".

Édition de contraintes de description

The screenshot displays the Protégé 3.4 rc2 interface. The main window is titled '<new> Protégé 3.4 rc2'. The menu bar includes File, Edit, Project, OWL, Reasoning, Code, Tools, Window, Collaboration, and Help. The toolbar contains various icons for file operations and editing. The main workspace is divided into several panes:

- SUBCLASS EXPLORER:** Shows a hierarchy of classes: owl:Thing, People, Man, Woman, and Place.
- CLASS EDITOR for Woman (instance of owl:Class):** Shows the class hierarchy and the current class being edited.
- Create Restriction Dialog:** A modal dialog box for creating a restriction. It has two panes:
 - Restricted Property:** Lists 'age', 'is_married_with', and 'lives_in'.
 - Restriction:** Lists 'allValuesFrom', 'someValuesFrom', 'hasValue', 'cardinality', 'minCardinality', and 'maxCardinality'.Below the panes is a 'Filler' text area and a row of restriction operators. An error message at the bottom reads 'Error: Please enter a filler. at ""'.

Édition de contrainte de description

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled 'CLASS EDITOR for Woman (instance of owl:Class)'. A 'Create Restriction' dialog box is open, showing the following configuration:

- Restricted Property:** is_married_with
- Restriction:** allValuesFrom
- Filler:** Man

A blue speech bubble points to the dialog with the text: "Si une femme ne peut se marier qu'à un homme".

Contrainte de cardinalité

Applications Raccourcis Système <new> Protégé 3.4 rc2 09:56

File Edit Project OWL Reasoning Code Tools Window Collaboration Help

Metadata(MonChampLexical.owl) OWLClasses Properties Individuals Forms

Subclass Explorer
For Project: ●
Asserted Hierarchy
owl:Thing
People
Man
Woman
Place

Class Editor
For Class: h
p
D rdfs:comm
P rdfs:label
is_marr
D age (s
ves_in

Create Restriction
Restricted Property: age, is_married_with, lives_in
Restriction: allValuesFrom, someValuesFrom, hasValue, cardinality, minCardinality, maxCardinality
Filler: 1
OK Cancel

Si une femme ne peut se marier qu'à un seul homme à la fois

Properties and Restrictions
Value Lang
Disjoints

Superclasses: People
Disjoints: Man

Logic View Properties View

Résultat de restrictions

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "CLASS EDITOR for Woman (instance of owl:Class)". The "For Class" field contains the URI: `http://www.owl-ontologies.com/MonChampLexical.owl#Woman`. The "Annotations" table is visible:

Property	Value	Lang
<input type="checkbox"/> <code>rdfs:comment</code>		
<input type="checkbox"/> <code>rdfs:label</code>	Femme	

The "Properties and Restrictions" section shows the following restrictions for the class:

- `is_married_with` (allValuesFrom Man, maxCardinality 1)
- `age` (single int)
- `lives_in` (multiple Place)

The "Superclasses" section shows `People` as a superclass. The "Disjoints" section shows `Man` as a disjoint class.

At the bottom right, there are radio buttons for "Logic View" (selected) and "Properties View".

Onglet Forms : Édition de formulaire de saisie

Protégé 3.4 rc2

File Edit Project OWL Reasoning Code Tools Window Collaboration Help

Metadata(MonChampLexical.owl) OWLClasses Properties Individuals Forms

FORM BROWSER

For Project: ●

Forms

- owl:Thing
 - People
 - Man
 - Woman
 - Place

FORM EDITOR

For Class: ☺ Woman

Display Slot: :NAME

Selected Widget Type: SingleLiteralWidget

Property	Value	La...
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Annotations

is_married_v

lives_in

age

string

Édition graphique

Création locale d'une représentation d'individu

The screenshot displays the Protégé 3.4 rc2 interface. The main window is titled "<new> Protégé 3.4 rc2" and shows the "Individuals" tab. The "CLASS BROWSER" on the left shows a hierarchy: owl:Thing > People > Man (2). The "INSTANCE BROWSER" shows "Asserted Instances" for the class "Man", listing "Paul_Dupont" and "Lao-Tseu". The "INDIVIDUAL EDITOR for Lao-Tseu (instance of Man)" is open, showing the URI "http://www.owl-ontologies.com/MonChampLexical.owl#Lao-Tseu" and a table of properties:

Property	Value	Lang
rdfs:comment		
rdfs:label	Lao Tseu	

Below the table, there are input fields for "age", "is_married_with", and "lives_in". The "lives_in" field is set to "China". A blue callout bubble points to the "+" icon next to the "lives_in" field, with the text "Bouton de création".

The "INDIVIDUAL EDITOR for China (instance of Place)" is also open, showing the URI "http://www.owl-ontologies.com/MonChampLexical.owl#China" and a table of properties:

Property	Value	Lang
rdfs:comment		
rdfs:label	Chine	

Association d'individus

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "INDIVIDUAL EDITOR for Marie_Durand (instance of Woman)". The "For Individual" field is set to "/www.owl-ontologies.com/MonChampLexical.owl#Marie_Durand". The "Annotations" table shows:

Property	Value	Lang
rdfs:comment		
rdfs:label	Marie Durand	

Below the annotations, the "is_married_with" property is being edited. The value field is empty, and the "age" field is set to 20. A blue callout bubble points to the "is_married_with" property with the text "Mariage de Paul avec Marie".

In the foreground, a "Select Resource" dialog box is open. It shows "Allowed Classes" with "Man (2)" selected. The "Direct Asserted Instances" list contains "Lao-Tseu" and "Paul_Dupont", with "Paul_Dupont" selected.

Association symétrique

The screenshot shows the Protégé 3.4 rc2 interface with the following components:

- CLASS BROWSER:** Shows a class hierarchy starting with `owl:Thing`, containing `People` (with subclasses `Man (2)` and `Woman (1)`) and `Place (2)`.
- INSTANCE BROWSER:** Shows asserted instances for the class `Man`, including `Lao-Tseu` and `Paul_Dupont`.
- INDIVIDUAL EDITOR for Paul_Dupont (instance of Man):** Shows the following table of annotations:

Property	Value	Lang
<code>rdfs:comment</code>		
<code>rdfs:label</code>	Paul Dupont	

Below the table, there are property value editors:
 - `age`: 22
 - `is_married_with`: Marie_Durand
 - `lives_in`: Evry

A blue speech bubble labeled "automatique" points to the `is_married_with` property value editor.

Héritage multiple

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "CLASS EDITOR for People (instance of owl:Class)". The "For Class" field contains the URI: `http://www.owl-ontologies.com/MonChampLexical.owl#People`. The "Subclass Explorer" on the left shows a hierarchy: `owl:Thing` is the superclass, and `People`, `Man`, `Woman`, `Place`, and `Sujet` are subclasses. The "Properties and Restrictions" panel shows two properties: `age` (single int) and `lives_in` (multiple Place). The "Superclasses" panel shows `Sujet` and `owl:Thing` as superclasses of `People`. The "Disjoints" panel is empty. The "Annotations" table shows two annotations: `rdfs:comment` and `rdfs:label` (value: "Catégorie des personnes"). The "Logic View" and "Properties View" buttons are at the bottom right.

Property	Value	Lang
<code>rdfs:comment</code>		
<code>rdfs:label</code>	Catégorie des personnes	

Property	Restriction
<code>age</code>	(single int)
<code>lives_in</code>	(multiple Place)

Superclass
<code>Sujet</code>
<code>owl:Thing</code>

Héritage multiple (suite)

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "CLASS EDITOR for People (instance of owl:Class)". The "SUBCLASS EXPLORER" on the left shows a hierarchy: owl:Thing > People > Man > Woman. The "CLASS EDITOR" shows the class "People" with the URI "http://www.owl-ontologies.com/MonChampLexical.owl#People". Below this, there is a table of properties and their values:

Property	Value	Lang
rdfs:comment		
rdfs:label	Catégorie des personnes	

Below the table, there are sections for "Properties and Restrictions" (showing "age (single int)" and "lives_in (multiple Place)"), "Superclasses" (showing "Sujet" and "owl:Thing"), and "Disjoints". A blue callout bubble with the text "bouton" points to a small icon in the "Superclasses" section.

At the bottom right, there are radio buttons for "Logic View" and "Properties View", with "Properties View" selected.

inférences

The screenshot shows the Protégé 3.4 rc2 interface. The top menu bar includes File, Edit, Project, OWL, Reasoning, Code, Tools, Window, Collaboration, and Help. The main workspace is divided into three panes: CLASS BROWSER, INSTANCE BROWSER, and INDIVIDUAL EDITOR. The CLASS BROWSER shows a class hierarchy for 'owl:Thing' with subclasses 'People', 'Place', and 'Sujet'. The INSTANCE BROWSER shows 'Inferred Instances' for the class 'Sujet', listing 'Lao-Tseu', 'Marie_Durand', and 'Paul_Dupont'. A dialog box titled 'Pellet 1.5.2 (direct)' is open, displaying a 'Reasoner log' with the following text: 'Computing inferred types: Querying reasoner and updating Protege-OWL...', 'Computing inferred types', 'Time to update Protege-OWL = 0.0040 seconds', and 'Total time: 0.039 seconds'. A blue callout bubble points to the 'Sujet' class in the CLASS BROWSER, containing the text 'Dédution d'appartenance'.

Dédution
d'appartenance

Multiples labels

The screenshot shows the Protégé 3.4 rc2 interface. The main window is titled "CLASS EDITOR for Man (instance of owl:Class)". The "For Class" field contains the URI: `http://www.owl-ontologies.com/MonChampLexical.owl#Man`. The "Annotations" tab is active, displaying a table of annotations for the class.

Property	Value	Lang
<code>rdfs:comment</code>		
<code>rdfs:label</code>	Man	en
<code>rdfs:label</code>	Homme	fr

A blue callout box with the text "langue" has an arrow pointing to the "Lang" column of the table, highlighting the language property.

The "SUBCLASS EXPLORER" on the left shows a hierarchy: `owl:Thing` > `People` > `Man`. The "Properties and Restrictions" section shows the `is_married_with` property with a restriction on `Woman` and a cardinality of 1. The "Superclasses" section shows `People` as a superclass, and the "Disjoints" section shows `Woman` as a disjoint class.

Plug-in OWLViz

The screenshot shows the Protégé 3.4 rc2 interface with the OWLViz plugin active. The main workspace displays a class hierarchy diagram. The nodes are represented as yellow ovals: owl:Thing, Sujet, Place, People, and Woman. owl:Thing is highlighted with a blue border. The hierarchy is as follows: owl:Thing is the root, with children Sujet and Place. Sujet is a subclass of owl:Thing. People is a subclass of owl:Thing. Woman is a subclass of People. There are also purple arrows pointing from owl:Thing to Sujet and Place, and from Sujet to People. The left sidebar shows the 'CLASS BROWSER' with an 'Asserted Hierarchy' tree. The tree structure is: owl:Thing (expanded) -> People (expanded) -> Man, Woman; owl:Thing (expanded) -> Sujet (expanded) -> People (expanded) -> Man, Woman. The top toolbar shows various icons for file operations, editing, and navigation. The top menu bar includes File, Edit, Project, OWL, Reasoning, Code, Tools, Window, Collaboration, and Help. The top status bar shows the current project name '<new> Protégé 3.4 rc2' and the time '10:29'.

Plug-in Jambalaya

The screenshot shows the Protégé 3.4 rc2 interface with the Jambalaya plug-in active. The main workspace displays a class hierarchy diagram. The root node is 'owl:Thing', which has a child 'Sujet'. 'Sujet' has a child 'People'. 'People' has two children: 'Man' and 'Woman'. 'Man' has two children: 'Paul_Dupont' and 'Lao-Tseu'. 'Woman' has one child: 'Marie_Durand'. Additionally, 'owl:Thing' has a child 'Place'. 'Place' has two children: 'Evry' and 'China'. The left sidebar contains the 'CLASS BROWSER' and 'INSTANCE BROWSER'. The 'CLASS BROWSER' shows the class hierarchy for the project, with 'owl:Thing' at the top, followed by 'People', 'Place (2)', and 'Sujet'. The 'INSTANCE BROWSER' shows instances for the class 'http://www.owl-...', including 'China' and 'Evry'. The bottom status bar shows 'No Hierarchy', 'Root: owl:Thing', 'Node Labels: Above Node (fixed)', 'Arc Labels: []', and 'Navigation: Magnify'.

Plug-in Jambalaya (suite)

The screenshot displays the Protégé 3.4 rc2 interface with the Jambalaya plug-in. The main workspace shows a hierarchical class diagram for 'owl:Thing'. The diagram consists of nested boxes representing classes: 'Sujet' (outermost), 'People' (middle), 'Man' and 'Woman' (inner, under 'People'), and 'Place' (rightmost). Instances are visible within these boxes: 'Paul_Dupont' and 'Lao-Tou' under 'Man'; 'Marie_Durand' under 'Woman'; and 'Evry' under 'Place'. The left sidebar contains the 'CLASS BROWSER' and 'INSTANCE BROWSER'. The 'CLASS BROWSER' shows a class hierarchy starting with 'owl:Thing', followed by 'People', 'Place (2)', and 'Sujet'. The 'INSTANCE BROWSER' shows instances for the class 'http://www.owl-...', including 'China' and 'Evry'. The top menu bar includes 'File', 'Edit', 'Project', 'OWL', 'Reasoning', 'Code', 'Tools', 'Window', 'Collaboration', and 'Jambalaya Help'. The bottom status bar shows 'Hierarchy: has ...', 'Root: owl:Thing', 'Node Labels: On Node', 'Arc Labels: []', and 'Navigation: Magnify'.

Urbanisation de Système d'Information

Édition en OWL 2 avec Protégé version 4

Première Page : méta-données, champ lexical

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl) - [~/home/henry/ontologies/MonChampLexical/MonChampLexical.owl]

File Edit Ontologies Reasoner Tools Refactor Tabs View Window Help

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl)

Active Ontology Entities Classes Object Properties Data Properties Individuals OWLViz DL Query

Ontology Annotations Inferred Axioms

Ontology annotations:

Annotations +

OWL/XML Rendering OWL Functional Syntax Rendering

Ontology Imports General axioms RDF/XML Rendering

Imported ontologies:

Direct imports +

Indirect imports

Ontology metrics:

Metrics

Class count	0
Object property count	0
Data property count	0
Individual count	0
DL expressivity	AL

Class axioms

SubClass axioms count	0
Equivalent classes axioms count	0
Disjoint classes axioms count	0
GCI count	0
Hidden GCI Count	0

Object property axioms

Sub object property axioms count	0
Equivalent object properties axioms count	0
Inverse object properties axioms count	0
Disjoint object properties axioms count	0
Functional object property axioms count	0
Inverse functional object property axioms count	0
Transitive object property axioms count	0
Symmetric object property axioms count	0
Anti-symmetric object property axioms count	0
Reflexive object property axioms count	0
Irreflexive object property axioms count	0
Object property domain axioms count	0
Object property range axioms count	0
Object property chain subproperty axioms count	0

Annotation de l'ontologie

The screenshot displays the Protege ontology editor interface. The top menu bar includes File, Edit, Ontologies, Reasoner, Tools, Refactor, Tabs, View, Window, and Help. The main window title is "MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl)". The interface is divided into several panes:

- Active Ontology:** Shows tabs for Entities, Classes, Object Properties, Data Properties, Individuals, OWLViz, and DL Query.
- Ontology Annotations:** Contains two sections: "Ontology annotations:" and "Inferred Axioms:". Under "Ontology annotations:", there are two entries:
 - label:** "Tutoriel pour protégé 4"
 - comment:** "une ontologie pour un tutoriel"
- Ontology metrics:** A table showing various counts for the ontology.
- Imported ontologies:** Contains sections for "Ontology Imports", "General axioms", and "RDF/XML Rendering".

Metrics	
Class count	0
Object property count	0
Data property count	0
Individual count	0
DL expressivity	AL

SubClass axioms count	0
Equivalent classes axioms count	0
Disjoint classes axioms count	0
GCI count	0
Hidden GCI Count	0

Sub object property axioms count	0
Equivalent object properties axioms count	0
Inverse object properties axioms count	0
Disjoint object properties axioms count	0
Functional object property axioms count	0
Inverse functional object property axioms count	0
Transitive object property axioms count	0
Symmetric object property axioms count	0
Anti-symmetric object property axioms count	0
Reflexive object property axioms count	0
Irreflexive object property axioms count	0
Object property domain axioms count	0
Object property range axioms count	0
Object property chain subproperty axioms count	0

Vue du code sérialisé produit

The screenshot shows the Protege ontology editor interface. The top menu bar includes File, Edit, Ontologies, Reasoner, Tools, Refactor, Tabs, View, Window, and Help. The main window displays the 'MonChampLexical.owl' ontology. The 'Active Ontology' tab is selected, showing 'Ontology Annotations' and 'Inferred Axioms'. The 'Ontology annotations' panel shows two annotations: a 'label' with the value 'Tutoriel pour protégé 4' and a 'comment' with the value 'une ontologie pour un tutoriel'. The 'OWL/XML rendering' panel shows the corresponding XML code for these annotations. A blue callout bubble points to the XML code with the text 'Code fonctionnel'. The 'Ontology metrics' panel on the right shows various counts for the ontology, including Class count, Object property count, Data property count, Individual count, DL expressivity, and Class axioms count.

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl) - [/home/henry/ontologies/MonChampLexical/MonChampLexical.owl]

File Edit Ontologies Reasoner Tools Refactor Tabs View Window Help

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl)

Active Ontology Entities Classes Object Properties Data Properties Individuals OWLViz DL Query

Ontology Annotations Inferred Axioms

Ontology annotations:

Annotations +

label @ x o

"Tutoriel pour protégé 4"

comment @ x o

"une ontologie pour un tutoriel"

OWL/XML Rendering OWL Functional Syntax Rendering

Ontology Imports General axioms RDF/XML Rendering

OWL/XML rendering:

```
</Annotation>
<Annotation annotationURI="&rdfs;comment">
  <Constant
    >une ontologie pour un tutoriel</Constant>
</Annotation>
</Ontology>
```

<!-- Generated by the OWL API (version 2.2.1.1138) http://owlapi.sourceforge.net -->

Ontology metrics:

Metrics

Class count	0
Object property count	0
Data property count	0
Individual count	0
DL expressivity	AL

Class axioms

SubClass axioms count	0
Equivalent classes axioms count	0
Disjoint classes axioms count	0
Disjoint object properties axioms count	0
Functional object property axioms count	0
Inverse functional object property axioms count	0
Transitive object property axioms count	0
Symmetric object property axioms count	0
Anti-symmetric object property axioms count	0
Reflexive object property axioms count	0
Irreflexive object property axioms count	0
Object property domain axioms count	0
Object property range axioms count	0
Object property chain subproperty axioms count	0

Code fonctionnel

Vue du code RDF

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl) - [home/henry/ontologies/MonChampLexical/MonChampLexical.ov

File Edit Ontologies Reasoner Tools Refactor Tabs View Window Help

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl)

Active Ontology Entities Classes Object Properties Data Properties Individuals OWLViz DL Query

Ontology Annotations Inferred Axioms

Ontology annotations:

Annotations +

label "Tutoriel pour protégé 4"

comment "une ontologie pour un tutoriel"

OWL/XML Rendering OWL Functional Syntax Rendering

Ontology Imports General axioms RDF/XML Rendering

RDF/XML rendering:

```
xmlns:owl2xml="http://www.w3.org/2006/12/owl2-xml#"
xmlns:owl="http://www.w3.org/2002/07/owl#"
xmlns:xsd="http://www.w3.org/2001/XMLSchema#"
xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
<owl:Ontology rdf:about="">
  <rdfs:label
    >Tutoriel pour prot&#233;g&#233; 4</rdfs:label>
  <rdfs:comment
    >une ontologie pour un tutoriel</rdfs:comment>
</owl:Ontology>
</rdf:RDF>
```

Ontology metrics:

Metrics

Class count	0
Object property count	0
Data property count	0
Individual count	0
DL expressivity	AL

Class axioms

SubClass axioms count	0
Equivalent classes axioms count	0
Disjoint classes axioms count	0
GCI count	0
Hidden	0

Object

Sub ob	0
Equiva	0
Inverse obj	0
Disjoint obj	0
Disjoint obj properties axioms count	0
Functional object property axioms count	0
Inverse functional object property axioms count	0
Transitive object property axioms count	0
Symmetric object property axioms count	0
Anti-symmetric object property axioms count	0
Reflexive object property axioms count	0
Irreflexive object property axioms count	0
Object property domain axioms count	0
Object property range axioms count	0
Object property chain subproperty axioms count	0

Code RDF

Onglet Classes : Création d'une Catégorie

The screenshot shows the Protege software interface. The main window displays the 'Classes' tab for the ontology 'MonChampLexical.owl'. A dialog box titled 'Create a new OWLClass' is open, prompting the user to enter a class name. The name 'People' is entered in the text field. Below the text field, the URI is shown as 'http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl#...'. The dialog has 'OK' and 'Annuler' buttons. In the background, the 'Classes' tab shows 'owl:Thing' as the active class. The 'Class Annotations' tab is also visible, showing 'Annotations: owl:Thing'. The bottom left corner shows the 'RDF/XML render' tab with XML code for the ontology.

Onglet Classes : Annotation d'une catégorie

The screenshot displays the Protege software interface for editing an ontology. The main window shows the 'MonChampLexical.owl' file. The 'Classes' tab is active, and the 'Class Annotations' panel for the 'Woman' class is open. The 'label' property is selected, and its value is 'Femme'. The background shows the class hierarchy with 'Woman' as a subclass of 'People', and the RDF/XML rendering of the class definition.

Class Annotations: Woman

- Annotations +
- label: "Woman"

Description: Woman

- Equivalent classes +
- Superclasses +
- People
- Inferred anonymous superclasses +
- Members +
- Disjoint classes +

Class Annotations: Woman (Dialog)

- Custom annotation URIs +
- Built in annotation URIs
- backwardCompatibleWith
- comment
- deprecated
- incompatibleWith
- isDefinedBy
- label (selected)
- priorVersion
- seeAlso
- versionInfo
- Dublin Core annotation URIs
- contributor
- coverage
- creator
- date
- description
- format
- identifier
- language
- publisher

RDF/XML rendering:

```
</owl:Class>

<!-- http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl# -->

<owl:Class rdf:about="#Woman">
  <rdfs:label>Woman</rdfs:label>
  <rdfs:subClassOf rdf:resource="#People"/>
</owl:Class>
</rdf:RDF>
```

Onglet Properties

Applications Raccourcis Système MonChampLexical.owl... 11:03

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl) - [/home/henry/ontologies/MonChampLexical/MonChampLexical.owl]

File Edit Ontologies Reasoner Tools Refactor Tabs View Window Help

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl)

Active Ontology Entities Classes Object Properties Data Properties Individuals OWLViz DL Query

Object properties: Lives_in

Lives in

Annotations Object Property Usage

Annotations: Lives_in

Annotations +

label

"Lives_in"

Characteristics: Lives_in

Functional

Inverse functional

Transitive

Symmetric

Asymmetric

Reflexive

Irreflexive

Description: Lives_in

Domains (intersection) +

● People

Ranges (intersection) +

Equivalent object properties +

Super properties +

Inverse properties +

Disjoint properties +

Property chains +

Lives_in

Object restriction creator Data restriction creator

Class expression editor Asserted class hierarchy

owl:Thing

● People

● Man

● Woman

● Place

OK Annuler

Onglet Properties (suite)

The screenshot displays the 'Object Properties' tab for the 'Lives_in' property in the MonChampLexical.owl ontology. The interface is organized into several panels:

- Object properties: Lives_in:** A panel on the left showing the property name 'Lives_in'.
- Annotations: Lives_in:** A panel showing the property's label as 'Lives_in'.
- Characteristics: Lives_in:** A panel with a list of characteristics, all of which are currently unchecked:
 - Functional
 - Inverse functional
 - Transitive
 - Symmetric
 - Asymmetric
 - Reflexive
 - Irreflexive
- Description: Lives_in:** A panel showing the property's domains and ranges:
 - Domains (intersection):** Includes the class **People**.
 - Ranges (intersection):** Includes the class **Place**.
 - Other sections include 'Equivalent object properties', 'Super properties', 'Inverse properties', 'Disjoint properties', and 'Property chains', all with expandable '+' icons.

Onglet Classes : disjonction de catégories

The screenshot shows the Protege software interface for editing the ontology 'MonChampLexical.owl'. The 'Classes' tab is active, showing the class hierarchy on the left and the 'Annotations' and 'Description' panels on the right.

Class Hierarchy:

- owl:Thing
 - Place
 - People
 - Woman
 - Man

Onglet Classes : peuplement

The screenshot shows the Protege application window for 'MonChampLexical.owl'. The 'Classes' tab is active, showing the following components:

- Asserted class hierarchy:** A tree view showing 'owl:Thing' as the root, with children 'Place', 'People', 'Woman', and 'Man'. 'Woman' and 'Man' are highlighted in blue.
- Usage: Woman:** A list of uses for the 'Woman' class. It shows 'Man disjointWith Woman' and 'Woman subClassOf People' with the label 'Femme'.
- Description: Woman:** A detailed view of the 'Woman' class. It includes sections for 'Equivalent classes', 'Superclasses', 'Inferred anonymous superclasses', 'Members', and 'Disjoint classes'. The 'Members' section lists 'Jeanne_d'Arc' as a member. A blue callout bubble points to this member.
- RDF/XML rendering:** A text area showing the XML representation of the 'Woman' class, including its label 'Jeanne d & #39; Arc'.

Onglet Individual

Applications Raccourcis Système

MonChampLexical.owl...

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl) - [/home/henry/ontologies/MonChampLexical/MonChampLexical.ov

File Edit Ontologies Reasoner Tools Refactor Tabs View Window Help

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl)

Active Ontology Entities Classes Object Properties Data Properties Individuals OWLViz DL Query

Individuals Individuals By Class

Individuals: Evry

Evry
Jeanne_d' Arc

Individual Annotations Individual Usage

Annotations: Evry

Annotations +

label

"Evry"

http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl#Jeanne_d'Arc

Description: Evry

Types +

Individuals +

Property assertions: Evry

Object property assertions +

Data property assertions +

Negative object property assertions +

Negative data property assertions +

Attention : un individu est a priori une "chose", non catégorisée

Onglet Individual : catégorisation

The screenshot displays the Protege ontology editor interface. The main window shows the 'MonChampLexical.owl' ontology with the 'Individuals' tab selected. The 'Evry' individual is highlighted in the list, and its 'Individual Annotations' are shown as 'label "Evry"'. The 'Description: Evry' section is currently empty. A modal dialog box titled 'Evry' is open, showing the 'Class expression editor' with an 'Asserted class hierarchy' tree. The tree shows the following structure:

- owl:Thing
 - People
 - Man
 - Woman
 - Place

The 'Place' class is selected in the hierarchy. The dialog box also includes 'Object restriction creator' and 'Data restriction creator' tabs, and 'OK' and 'Annuler' buttons at the bottom.

Individu catégorisé

The screenshot shows the Protégé OWL editor interface. The main window displays the 'Evry' individual under the 'Individuals' tab. The 'Evry' individual is highlighted, and its classification is shown as 'Place' in the 'Description: Evry' panel. A blue callout box points to the 'Place' classification. The 'Annotations: Evry' panel shows a 'label' annotation with the value 'Evry'. The 'Property assertions: Evry' panel shows various assertion types, including 'Object property assertions', 'Data property assertions', 'Negative object property assertions', and 'Negative data property assertions'. The 'Individuals: Evry' panel lists 'Evry' and 'Jeanne_d' Arc' as individuals. The 'Active Ontology' is 'MonChampLexical.owl'.

Vue depuis l'onglet Classes

The screenshot shows the Protégé OWL editor interface. The main window title is "MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl)". The menu bar includes "File", "Edit", "Ontologies", "Reasoner", "Tools", "Refactor", "Tabs", "View", "Window", and "Help". The toolbar contains navigation and editing icons. The main workspace is divided into several panes:

- Active Ontology:** "MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl)".
- Class Annotations:** Shows annotations for the selected class "Place", including a label "Lieu".
- Description:** Shows the description for the class "Place", including equivalent classes, superclasses, and members. A member "Evry" is listed.
- Class Hierarchy:** Shows the asserted class hierarchy: owl:Thing (parent), Place (child), People (parent), Woman (child), Man (child).
- RDF/XML rendering:** Shows the RDF/XML code for the class hierarchy, including the example of a "Woman" instance living in "Evry".

```
<!-- http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl -->
<owl:Class rdf:about="#Place" >
  <rdf:type rdf:resource="#owl:Thing" />
  <rdfs:label>Place</rdfs:label>
  <Lives_in rdf:resource="#Evry" />
</owl:Class>
<owl:Class rdf:about="#People" >
  <rdf:type rdf:resource="#owl:Thing" />
  <rdfs:label>People</rdfs:label>
</owl:Class>
<owl:Class rdf:about="#Woman" >
  <rdf:type rdf:resource="#owl:Thing" />
  <rdfs:label>Woman</rdfs:label>
  <Lives_in rdf:resource="#Evry" />
</owl:Class>
<owl:Class rdf:about="#Man" >
  <rdf:type rdf:resource="#owl:Thing" />
  <rdfs:label>Man</rdfs:label>
</owl:Class>
</rdf:RDF>
```

Onglet ObjectProperties

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl) - [home/henry/ontologies/MonChampLexical/MonChampLexical.owl]

File Edit Ontologies Reasoner Tools Refactor Tabs View Window Help

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl)

Active Ontology Entities Classes Object Properties Data Properties Individuals OWLViz DL Query

Object properties: is_married_with

- is_married_with
- Lives in

Annotations Object Property Usage

Annotations: is_married_with

Annotations +

label "is married with"

Characteristics: is_mar

- Functional
- Inverse functional
- Transitive
- Symmetric
- Asymmetric
- Reflexive
- Irreflexive

Description: is_married_with

Domains (intersection) +

- Man
- Woman

Ranges (intersection) +

- Woman
- Man

Equivalent object properties +

Super properties +

Inverse properties +

Disjoint properties +

Héritage multiple

The screenshot displays the Protege interface for the ontology `MonChampLexical.owl`. The main view shows the **Asserted class hierarchy** for the class `People`. The hierarchy is as follows:

- `owl:Thing` (Superclass)
 - `People` (Subclass)
 - `Subject` (Subclass)
 - `People` (Subclass)
 - `Place` (Subclass)

The `People` class has the following properties:

- Annotations:** `label` with the value `"Personne"`.
- Description:** `Equivalent classes` (empty), `Superclasses` (`Subject` and `owl:Thing`).
- Inferred anonymous superclasses:** (empty).
- Members:** (empty).
- Disjoint classes:** (empty).

The **RDF/XML rendering** pane shows the following XML snippet:

```
</Woman>

<!-- http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl# -->

<owl:Thing rdf:about="#Paul_Durand">
  <rdf:type rdf:resource="#Man"/>
  <rdfs:label>Paul Durand</rdfs:label>
</owl:Thing>
</rdf:RDF>
```

Vue OWLViz

The screenshot displays the OWLViz interface for the ontology `MonChampLexical.owl`. The interface is divided into several panels:

- Active Ontology:** Shows the current ontology and navigation buttons.
- Class Annotations / Class Usage / OWLViz:** The main visualization area showing a class hierarchy. The `People` class is highlighted with a blue box. It is a subclass of `owl:Thing` (indicated by a green arrow) and `Subject` (indicated by a grey arrow). `People` has two subclasses: `Woman` and `Man` (indicated by purple arrows).
- Asserted class hierarchy / Inferred class hierarchy:** A tree view showing the class hierarchy. The `owl:Thing` class is expanded to show its subclasses: `People`, `Subject`, `Place`, and `owl:Thing` (repeated).
- RDF/XML rendering:** A text area showing the RDF/XML code for the `Man` class. The code is as follows:

```
</Woman>

<!-- http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl#Man -->
<owl:Thing rdf:about="#Paul_Durand">
  <rdf:type rdf:resource="#Man"/>
  <rdfs:label>Paul Durand</rdfs:label>
</owl:Thing>
</rdf:RDF>
```
- Description: People:** A panel showing the description of the `People` class. It includes sections for **Equivalent classes**, **Superclasses** (listing `Subject` and `owl:Thing`), **Inferred anonymous superclasses**, and **Members**.

Onglet Datatype Properties

The screenshot displays the Protege interface for configuring the 'age' data property. The main window shows the 'Data Properties' tab with the 'age' property selected. The 'Annotations' tab is active, showing two labels: 'OWLDataProperty_000000000000000000012' and 'age'. The 'Characteristics' tab shows the 'Functional' checkbox checked. The 'Description' tab is empty. A class hierarchy dialog is also visible in the foreground, showing a tree structure starting with 'owl:Thing' and including 'People', 'Man', 'Woman', 'Place', and 'Subject'.

Type XSD d'attribut

The screenshot shows the Protégé web interface for editing the 'age' data property in the MonChampLexical.owl ontology. The main window displays the 'Data properties: age' section with the following annotations:

- label**: "OWLDataProperty_000000000000000000012"
- label**: "age"

The 'Characteristics: age' section shows the 'Functional' checkbox checked. The 'Description: age' section shows the domain 'People' selected. A dialog box titled 'age' is open, showing a list of XSD datatypes for selection. The 'xsd:int' datatype is currently selected.

Dialog Box: age

- Datatypes** (selected):
 - xsd:IDREF
 - xsd:IDREFS
 - xsd:NCName
 - xsd:NMTOKEN
 - xsd:NOTATION
 - xsd:Name
 - xsd:QName
 - xsd:anySimpleType
 - xsd:anyType
 - xsd:anyURI
 - xsd:base64Binary
 - xsd:boolean
 - xsd:byte
 - xsd:date
 - xsd:dateTime
 - xsd:decimal
 - xsd:double
 - xsd:duration
 - xsd:float
 - xsd:gDay
 - xsd:gMonth
 - xsd:gMonthYear
 - xsd:gYear
 - xsd:gYearMonth
 - xsd:hexBinary
 - xsd:int**
 - xsd:integer
 - xsd:language
 - xsd:long
 - xsd:negativeInteger
 - xsd:nonNegativeInteger
- Data range expression**

Buttons: OK, Annuler

Affectation de valeur d'attribut

The screenshot shows the Protégé OWL editor interface. The main window displays the 'MonChampLexical.owl' ontology. The 'Individuals' tab is active, showing a list of individuals: Evry, Jeanne_d'Arc, Marie_Dupont, and Paul_Durand. The 'Paul_Durand' individual is selected. A dialog box titled 'Paul_Durand' is open, showing the 'Data Property' 'age' with a value of '28'. The 'Type' dropdown is empty, and the 'Lang' dropdown is set to 'fr'. The 'OK' button is highlighted. In the background, the 'Annotations' tab for 'Paul_Durand' shows a 'label' annotation with the value '" Paul Durand"'. The 'Property assertions' tab for 'Paul_Durand' shows 'Data property assertions' with a plus sign to add more assertions.

Choix d'une association

The screenshot shows the Protégé interface with the 'MonChampLexical.owl' ontology open. The 'Individuals' tab is active, showing a list of individuals: Evry, Jeanne_d'Arc, Marie_Dupont, and Paul_Durand. The 'Paul_Durand' individual is selected. A dialog box titled 'Paul_Durand' is open, showing the configuration for the 'Lives_in' property. The dialog has two panes: the left pane shows the property 'Lives_in' and the right pane shows a list of individuals: Evry, Jeanne_d'Arc, Marie_Dupont, and Paul_Durand. The 'Marie_Dupont' individual is highlighted in the list. Below the list are 'OK' and 'Annuler' buttons. In the background, the 'Property assertions' pane for 'Paul_Durand' is visible, showing an assertion for 'age' with the value '28'.

Attention, à ce niveau Protégé ne teste plus si range et domain sont licites

Onglet Individus

Applications Raccourcis Système MonChampLexical.owl... 11:27

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl) - [home/henry/ontologies/MonChampLexical/MonChampLexical.owl]

File Edit Ontologies Reasoner Tools Refactor Tabs View Window Help

MonChampLexical.owl (http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl)

Active Ontology Entities Classes Object Properties Data Properties Individuals OWLViz DL Query

Individuals Individuals By Class

Individuals: Paul_Durand

- Evry
- Jeanne_d'Arc
- Marie_Dupont
- Paul_Durand

Individual Annotations Individual Usage

Annotations: Paul_Durand

Annotations +

label "Paul Durand"

Description: Paul_Durand

Types +

- Man

Same individuals +

Different individuals +

Property assertions: Paul_Durand

Object property assertions +

- is_married_with Marie_Dupont

Data property assertions +

- age "28"

Negative object property assertions +

Negative data property assertions +

http://www.semanticweb.org/ontologies/2010/0/MonChampLexical.owl#Paul_Durand

À suivre, le complément ultérieur de ce tutoriel
avec les spécificités de OWL 2

Fin du Module