SemanticNetworkToOWLConverter

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Contents

Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Chapter 2

Class Index

2.1 Class List

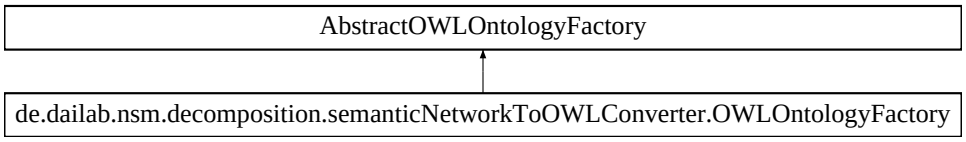
Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 3

Class Documentation

3.1 de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.OWLOntology↩ Factory Class Reference

Inheritance diagram for de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.OWLOntologyFactory:



Public Member Functions

- **OWLOntologyFactory** (OWLOntology owlOntology) throws OWLOntologyCreationException

Protected Member Functions

- OWLAxiom **addProperty** (OWLProperty property, OWLIndividual idv)
- OWLAxiom **addRelation** (OWLRelation relation)

The documentation for this class was generated from the following file:

- src/main/java/de/dailab/nsm/decomposition/semanticNetworkToOWLConverter/OWLOntologyFactory.java

3.2 de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.OWLOntology↩ FactoryTest Class Reference

Public Member Functions

- void **init** () throws OWLOntologyCreationException
- void **testAddConcept** ()
- void **testAddConceptWithProperties** ()
- void **testAddConceptWithRelations** ()
- void **testAddCylicConcepts** ()

The documentation for this class was generated from the following file:

- src/test/java/de/dailab/nsm/decomposition/semanticNetworkToOWLConverter/OWLOntologyFactoryTest.↩ java

3.3 de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.OWLOntology↩ TestDataProvider Class Reference

Static Protected Member Functions

- static Collection< OWLProperty > **getTestProperties** ()
- static OWLConcept **getDefaultConcept** (String conceptName, String type)
- static Collection< OWLRelation > **getTestRelations** (String entity1, String entity2, String entity3)
- static OWLOntology **getTestOntology** (AbstractOWLOntologyFactory factory) throws IOException, OWL↩ OntologyStorageException, OWLOntologyCreationException

Static Protected Attributes

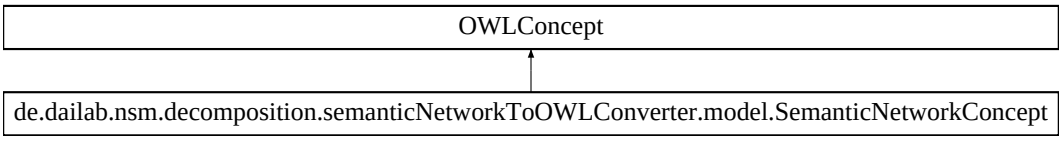
- static final String **TEMP_DATA_PREFIX** = "temp"
- static final String **TEMP_DATA_SUFFIX** = ".owl"
- static final String **CONCEPT1** = "concept1"
- static final String **CONCEPT2** = "concept2"
- static final String **CONCEPT3** = "concept3"
- static final Long **DEFAULT_ID** = 1L
- static final String **OBJECT_TYPE** = "object"
- static final String **FISH_TYPE** = "fish"
- static final String **TREE_TYPE** = "tree"
- static final String **ANIMAL_TYPE** = "animal"
- static final String **DEER_TYPE** = "deer"
- static final String **IS_NEXT_TO_RELATION_TYPE** = "is_next_to"
- static final String **SYNONYMY_TPYE** = "synonymy"
- static final String **ANTONYMY_TYPE** = "antonymy"
- static final String **HYPONYMY_TYPE** = "hyponymy"
- static final String **TEST_RELATION_1** = "testRelation1"
- static final String **TEST_RELATION_2** = "testRelation2"
- static final String **TEST_RELATION_3** = "testRelation3"

The documentation for this class was generated from the following file:

- src/test/java/de/dailab/nsm/decomposition/semanticNetworkToOWLConverter/OWLOntologyTestData↩ Provider.java

3.4 de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.model.Semantic↩ NetworkConcept Class Reference

Inheritance diagram for de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.model.Semantic↩ NetworkConcept:



Public Member Functions

- **SemanticNetworkConcept** (Long id, String name, String type, Collection< OWLProperty > properties, Collection< OWLRelation > relations)
- String **getName** ()
- Collection< OWLProperty > **getProperties** ()
- Collection< OWLRelation > **getRelations** ()
- String **getType** ()
- Long **getId** ()
- void **addProperties** (Collection< OWLProperty > properties)
- void **addRelations** (Collection< OWLRelation > relations)

3.4.1 Detailed Description

A concept of a semantic network. It's a possible node type in the graph. A concept is the only mutable entity for the translation because a removal of a concept is more complicated than a change (unless for relations or properties).

The documentation for this class was generated from the following file:

- src/main/java/de/dailab/nsm/decomposition/semanticNetworkToOWLConverter/model/SemanticNetwork↩
Concept.java

3.5 de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.SemanticNetwork↩ ConversionIntegrationTest Class Reference

Public Member Functions

- void **init** () throws OWLOntologyCreationException
- void **createSemanticNetworkTest** ()
- void **semanticNetworkToOntologyTest** () throws OWLOntologyStorageException, OWLOntologyCreation↩
Exception, IOException

Static Public Attributes

- static final String **WORD_TO_COMPOSE** = "bird"

3.5.1 Detailed Description

Integration test. Decomposes a word, creates a semanticNetwork out of it and translates it to owl.

Choose a word for [WORD_TO_COMPOSE] (that exists in one of the configured sources of the Decomposition) to test.

The documentation for this class was generated from the following file:

- src/test/java/de/dailab/nsm/decomposition/semanticNetworkToOWLConverter/SemanticNetworkConversion↩
IntegrationTest.java

3.6 de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.SemanticNetwork↩ ConversionPerformanceTest Class Reference

Public Member Functions

- void **wordToOWLOntologyPerformanceTest** () throws OWLOntologyCreationException

Static Public Attributes

- static final String [ ] **WORDS_TO_COMPOSE**

3.6.1 Member Data Documentation

3.6.1.1 WORDS_TO_COMPOSE

```
final String [ ] de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.SemanticNetwork↩
ConversionPerformanceTest.WORDS_TO_COMPOSE  [static]
```

Initial value:

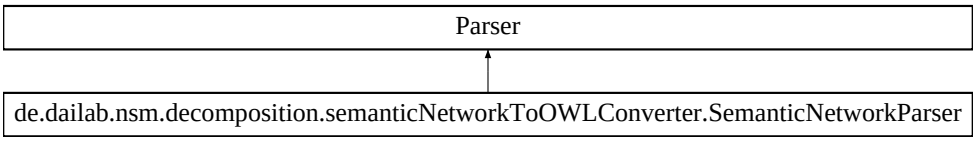
```
= { "bird", "human", "egg",
        "use", "computer", "leaf", "science", "hedgehog", "letter",
        "fish stick", "black", "sky", "tall", "imagination", "song", "apple", "meaning", "gravity", "god",
        "bee" }
```

The documentation for this class was generated from the following file:

- src/test/java/de/dailab/nsm/decomposition/semanticNetworkToOWLConverter/SemanticNetworkConversion↩ PerformanceTest.java

3.7 de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.SemanticNetwork↩ Parser Class Reference

Inheritance diagram for de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.SemanticNetwork↩ Parser:



Public Member Functions

- Collection< OWLConcept > parse (Graph< Concept, WeightedEdge > graph)

3.7.1 Member Function Documentation

3.7.1.1 parse()

```
Collection<OWLConcept> de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.Semantic↩
NetworkParser.parse (
            Graph< Concept, WeightedEdge > graph )
```

Parses a given graph to a Collection of OWLConcepts. The nodes needn't to be connected to the rest of the graph. It first creates concepts and adds properties and relations afterwards to prevent infinite loops.

Parameters

graph	The graph to parse.

Returns

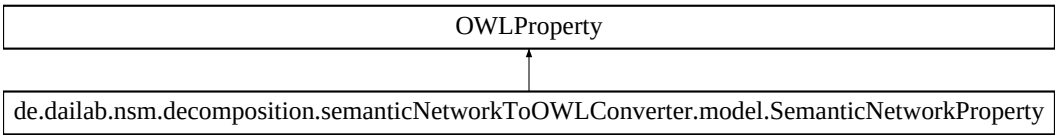
Collection of OWLConcepts created from graph vertexes.

The documentation for this class was generated from the following file:

- src/main/java/de/dailab/nsm/decomposition/semanticNetworkToOWLConverter/SemanticNetworkParser.java

3.8 de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.model.SemanticNetworkProperty Class Reference

Inheritance diagram for de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.model.SemanticNetworkProperty:



Public Member Functions

- **SemanticNetworkProperty** (String value, OWL2Datatype type)
- String **getValueAsString** ()
- OWL2Datatype **getType** ()

3.8.1 Detailed Description

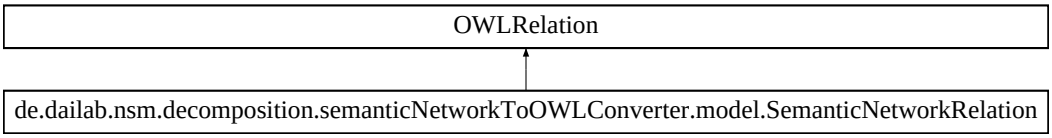
A property of a semantic network entity.

The documentation for this class was generated from the following file:

- src/main/java/de/dailab/nsm/decomposition/semanticNetworkToOWLConverter/model/SemanticNetworkProperty.java

3.9 de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.model.SemanticNetworkRelation Class Reference

Inheritance diagram for de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.model.SemanticNetworkRelation:



Public Member Functions

- **SemanticNetworkRelation** (String name, OWLConcept source, OWLConcept target, OWLRelationType type)
- OWLConcept **getSource** ()
- OWLConcept **getTarget** ()
- OWLRelationType **getType** ()
- String **getName** ()

3.9.1 Detailed Description

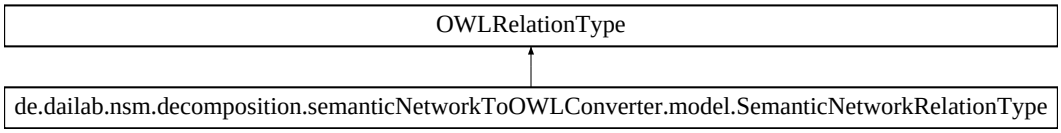
A relation in a semantic network.

The documentation for this class was generated from the following file:

- src/main/java/de/dailab/nsm/decomposition/semanticNetworkToOWLConverter/model/SemanticNetwork↩ Relation.java

3.10 de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.model.Semantic↩ NetworkRelationType Enum Reference

Inheritance diagram for de.dailab.nsm.decomposition.semanticNetworkToOWLConverter.model.Semantic↩ NetworkRelationType:



Public Member Functions

- String **getName** ()

Public Attributes

- **DECOMPOSITION** =("decomposition")
- **DEFINITION** =("definition")
- **HYPERNYM** =("hypernym")
- **HYPONYM** =("hyponym")
- **MERONYM** =("meronym")
- **ANTONYM** =("antonym")
- **ALT_ANTONYM** =("alternativeAntonym")
- **SYNONYM** =("synonym")
- **ALT_SYNONYM** =("alternativeSynonym")
- **DERIVATION** =("derivation")
- **FEATURE** =("feature")

3.10.1 Detailed Description

All available relation types in the semantic net.

The documentation for this enum was generated from the following file:

- src/main/java/de/dailab/nsm/decomposition/semanticNetworkToOWLConverter/model/SemanticNetwork↩ RelationType.java

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