

A1. RDF/RDFS Language Reference

RDF Node

▪ rdfs:Resource	<i>the generic class of identified concept</i>
rdf:type	[rdfs:Resource → rdfs:Class] <i>membership</i>
rdfs:label	[rdfs:Resource → rdfs:Literal] <i>annotation</i>
rdfs:comment	[rdfs:Resource → rdfs:Literal] <i>annotation</i>
rdfs:seeAlso	[rdfs:Resource → rdfs:Resource] <i>annotation</i>
rdfs:isDefinedBy	[rdfs:Resource → rdfs:Resource] <i>annotation</i>
rdf:value	[rdfs:Resource → rdfs:Resource] <i>complex values</i>

▪ rdfs:Literal	<i>the generic class of literal values</i>
▪ rdf:XMLLiteral	<i>the class of typed literals (c.f. XMLSchema)</i>

Class

▪ rdfs:Class	<i>the class of rdf classes</i>
rdfs:subClassOf	[rdfs:Class → rdfs:Class] <i>subset relation</i>

Property

▪ rdf:Property	<i>the class of properties(i.e. binary relations)</i>
rdfs:subPropertyOf	[rdf:Property → rdf:Property]
rdfs:domain	[rdf:Property → rdfs:Class]
rdfs:range	[rdf:Property → rdfs:Class]

Containers

▪ rdfs:Container	<i>the generic superclass of rdf resource containers</i>
rdfs:member	[rdfs:Resource → rdfs:Resource] <i>membership</i>
rdf: 1, rdf 2, ...	Sub-properties of rdfs:member
▪ rdf:Alt	<i>container of alternatives</i>
▪ rdf:Bag	<i>unordered container</i>
▪ rdf:Seq	<i>ordered container</i>
▪ rdfs:ContainerMembershipProperty	<i>all sub-properties of rdfs:member</i>

List

▪ rdf:List	<i>the class of RDF Lists</i>
rdf:first	[rdf:List → rdfs:Resource] <i>car</i>
rdf:rest	[rdf:List → rdfs:List] <i>cdr</i>
▪ rdf:nil	an instance of RDF:List representing the empty list

Datatype

▪ rdfs:Datatype	<i>the class of datatypes</i>
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RDF Reification

▪ rdf:Statement	<i>the class of RDF statements</i>
rdf:subject	[rdf:Statement → rdfs:Resource]
rdf:predicate	[rdf:Statement → rdfs:Resource]
rdf:object	[rdf:Statement → rdfs:Resource]

Supported XML datatypes

xsd:decimal	xsd:negativeInteger	xsd:anyURI	xsd:date	xsd:string
xsd:double	xsd:positiveInteger	xsd:base64Binary	xsd:dateTime	xsd:normalizedString
xsd:float	xsd:nonPositiveInteger	xsd:boolean	xsd:time	xsd:token
xsd:int	xsd:nonNegativeInteger	xsd:byte	xsd:gYearMonth	xsd:language
xsd:integer	xsd:unsignedLong	xsd:hexBinary	xsd:gYear	xsd:NMTOKEN
xsd:long	xsd:unsignedInt	xsd:unsignedByte	xsd:gMonthDay	xsd:Name
xsd:short	xsd:unsignedShort		xsd:gDay	xsd:NCName
			xsd:gMonth	

A2. OWL Language Reference

Classes

▪ owl:Class	<i>all OWL classes, a sub-class of rdfs:Class</i>
owl:equivalentClass	[owl:Class → owl:Class]
owl:disjointWith *	[owl:Class → owl:Class]
owl:oneOf *	[rdfs:Class → rdf:List]
owl:intersectionOf -	[owl:Class → rdf:List]
owl:unionOf *	[owl:Class → rdf:List]
owl:complementOf *	[owl:Class → owl:Class]

NOTE:: * means only supported in OWL DL/FULL. - means supported in OWL Lite with restrictions

▪ owl:Restriction	
owl:onProperty	[owl:Restriction → rdf:Property]
owl:allValuesFrom	[owl:Restriction → rdfs:Class]
owl:someValuesFrom	[owl:Restriction → rdfs:Class]
owl:hasValue *	[owl:Restriction →] <i>no range constraint</i>
owl:cardinality -	[owl:Restriction → xsd:nonNegativeInteger]
owl:maxCardinality -	[owl:Restriction → xsd:nonNegativeInteger]
owl:minCardinality -	[owl:Restriction → xsd:nonNegativeInteger]

▪ owl:DataRange *	sets of data values, range of data-valued property
▪ owl:DeprecatedClass	<i>version control</i>

Properties

▪ owl:DatatypeProperty	<i>range is instance of rdfs:Datatype</i>
▪ owl:ObjectProperty	<i>range is instance of owl:Class</i>
owl:inverseOf	[owl:ObjectProperty → owl:ObjectProperty]
▪ owl:OntologyProperty	<i>domain/range are owl:Ontology</i>
▪ owl:AnnotationProperty	<i>range is rdfs:Literal</i>
▪ owl:FunctionalProperty	$(s,p,o1), (s,p,o2) => sameAs(o1, o2)$
▪ owl:InverseFunctionalProperty	$(s1,p,o), (s2,p,o) => sameAs(s1, s2)$
▪ owl:SymmetricProperty	$(s,p,o) => (o,p,s)$
▪ owl:TransitiveProperty	$(a,p,b), (b,p,c) => (a,p,c)$
▪ owl:DeprecatedProperty	<i>version control</i>
owl:equivalentProperty	[rdf:Property → rdf:Property]

Special classes

▪ owl:Thing	<i>all OWL individuals</i>
owl:differentFrom	[owl:Thing → owl:Thing]
owl:sameAs	[owl:Thing → owl:Thing]
▪ owl:Nothing	<i>the complement of owl:Thing</i>
▪ owl:AllDifferent	<i>OWL built-in</i>
owl:distinctMembers	[owl:AllDifferent → rdf:List] <i>OWL built-in</i>

Ontology

▪ owl:Ontology	<i>ontology description</i>
owl:backwardCompatibleWith	[owl:Ontology → owl:Ontology]
owl:imports	[owl:Ontology → owl:Ontology]
owl:incompatibleWith	[owl:Ontology → owl:Ontology]
owl:priorVersion	[owl:Ontology → owl:Ontology]
owl:versionInfo	[→] <i>no domain or range constraint</i>

A3. Popular Namespaces and Terms

prefix	URI and popular classes/properties
rdf	http://www.w3.org/1999/02/22-rdf-syntax-ns# <ul style="list-style-type: none"> Property Seq List type first rest
rdfs	http://www.w3.org/2000/01/rdf-schema# <ul style="list-style-type: none"> Resource Class seeAlso label subClassOf subPropertyOf
owl	http://www.w3.org/2002/07/owl# <ul style="list-style-type: none"> Class Restriction ObjectProperty DatatypeProperty Ontology Thing onProperty imports equivalentClass equivalentProperty sameAs
admin	http://webns.net/mvcb/ <ul style="list-style-type: none"> generatorAgent
cc	http://web.resource.org/cc/ <ul style="list-style-type: none"> Agent License license
daml	http://www.daml.org/2001/03/daml+oil#
dc	http://purl.org/dc/elements/1.1/ <ul style="list-style-type: none"> date creator language subject description title source
dcterms	http://purl.org/dc/terms/ <ul style="list-style-type: none"> created issued
foaf	http://xmlns.com/foaf/0.1/ <ul style="list-style-type: none"> Agent Person Document Image mbox_sha1sum name homepage mbox knows nick depiction firstName surname interest
geo	http://www.w3.org/2003/01/geo/wgs84_pos# <ul style="list-style-type: none"> Point lat long
rss	http://purl.org/rss/1.0/ <ul style="list-style-type: none"> channel image item items description link title
ruml	http://www.w3.org/2003/11/rulem#
service	http://www.daml.org/services/owl-s/1.1/Service.owl# <ul style="list-style-type: none"> ServiceModel ServiceProfile ServiceGrounding presents describedBy supports
swrl	http://www.w3.org/2003/11/swrl#
wn	http://xmlns.com/wordnet/1.6/

