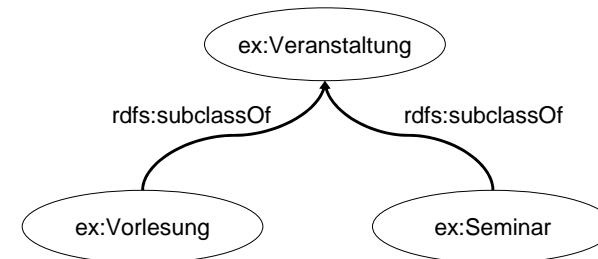
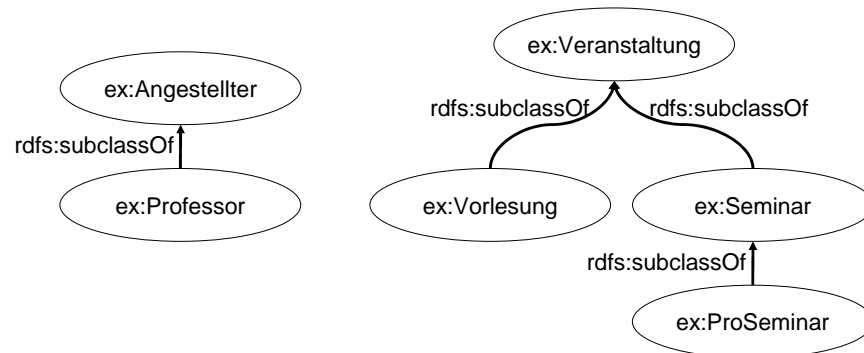


RDF Schema

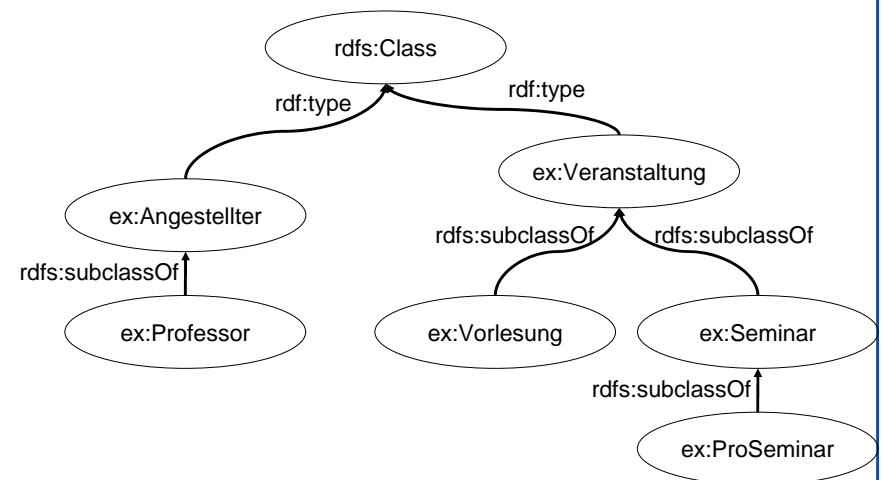
ex:Seminar rdfs:subClassOf ex:Veranstaltung
ex:Proseminar rdfs:subClassOf ex:Seminar
ex:Vorlesung rdfs:subClassOf ex:Veranstaltung



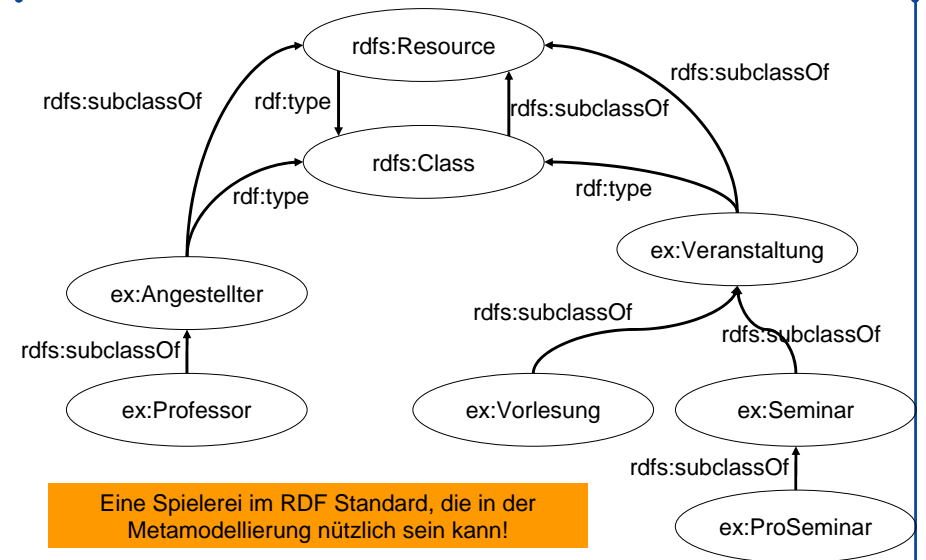
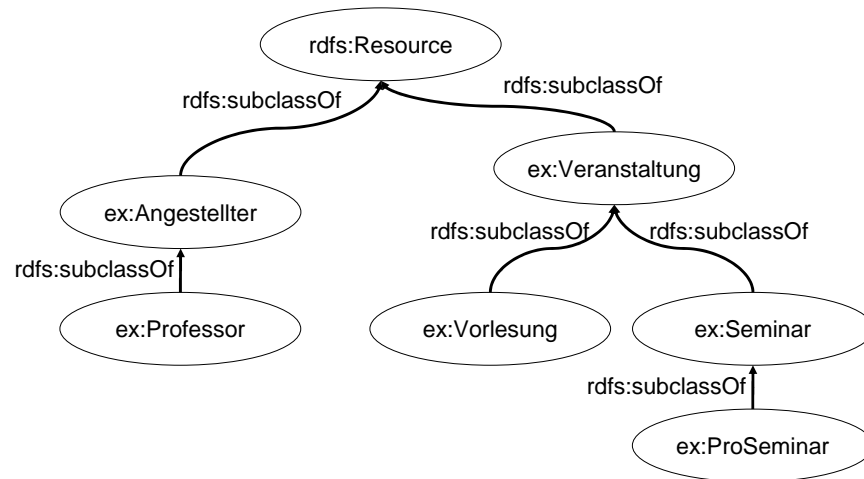
ex:Seminar rdfs:subClassOf ex:Veranstaltung
ex:Proseminar rdfs:subClassOf ex:Seminar
ex:Vorlesung rdfs:subClassOf ex:Veranstaltung
ex:Professor rdfs:subClassOf ex:Angestellter



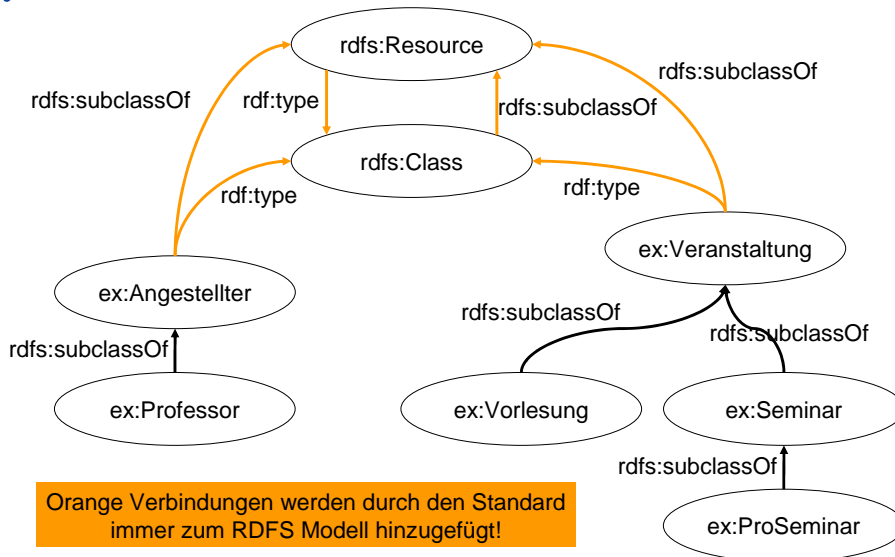
Alle Klassen sind Instanzen von rdfs:Class



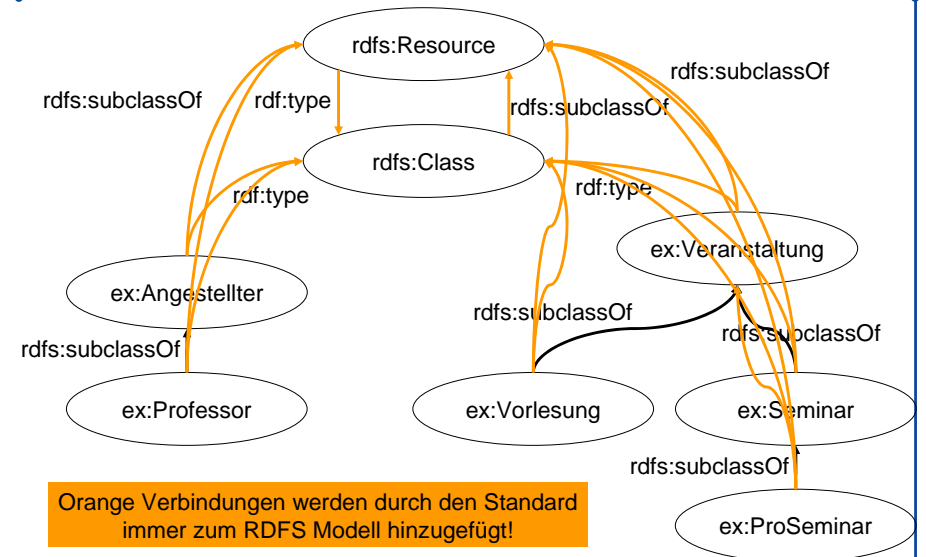
Alle Klassen sind Subklassen von rdfs:Resource



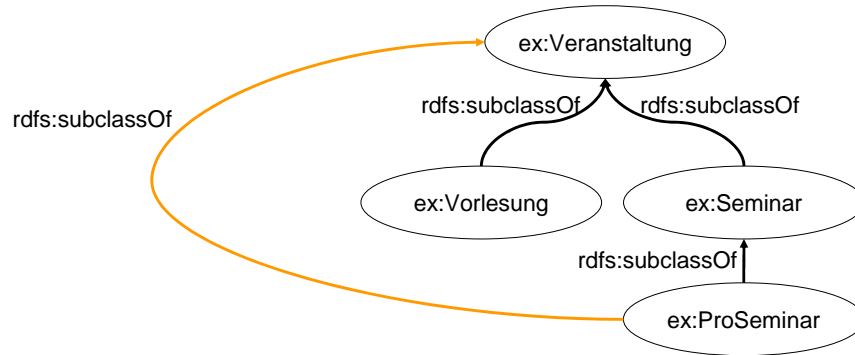
Eine Spielerei im RDF Standard, die in der Metamodellierung nützlich sein kann!



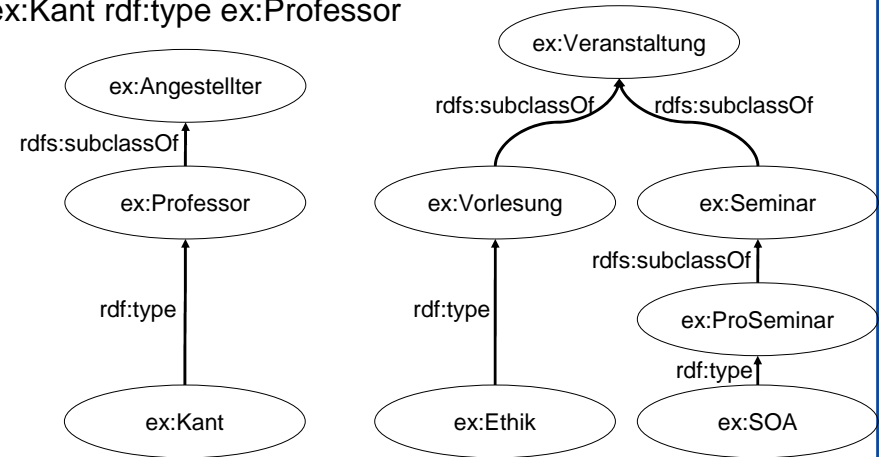
Orange Verbindungen werden durch den Standard immer zum RDFS Modell hinzugefügt!



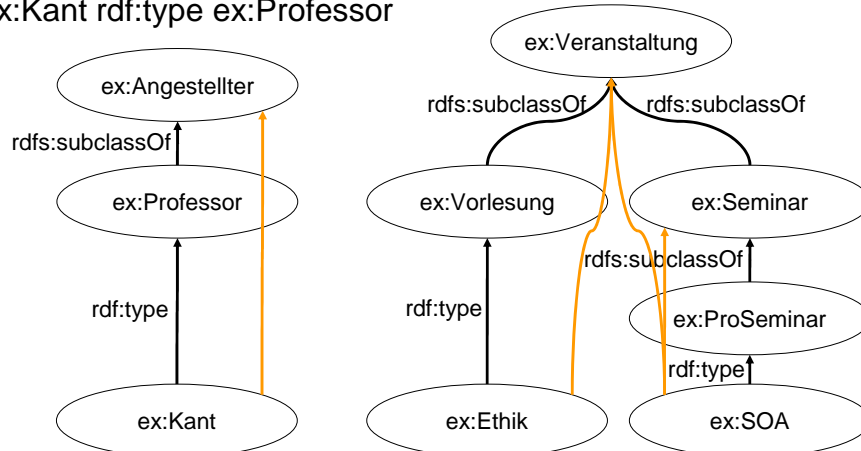
Orange Verbindungen werden durch den Standard immer zum RDFS Modell hinzugefügt!



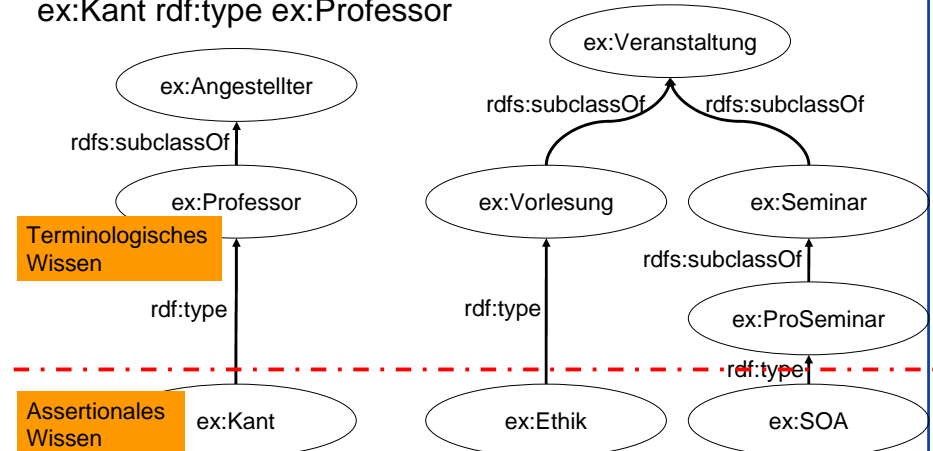
ex:Ethik rdf:type ex:Vorlesung
 ex:SOA rdf:type ex:Seminar
 ex:Kant rdf:type ex:Professor

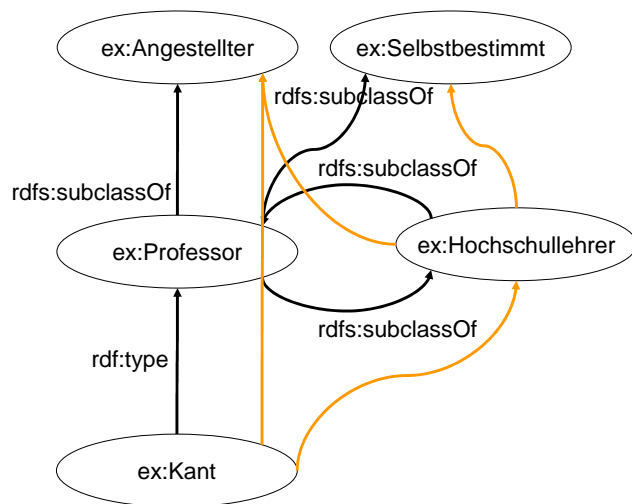
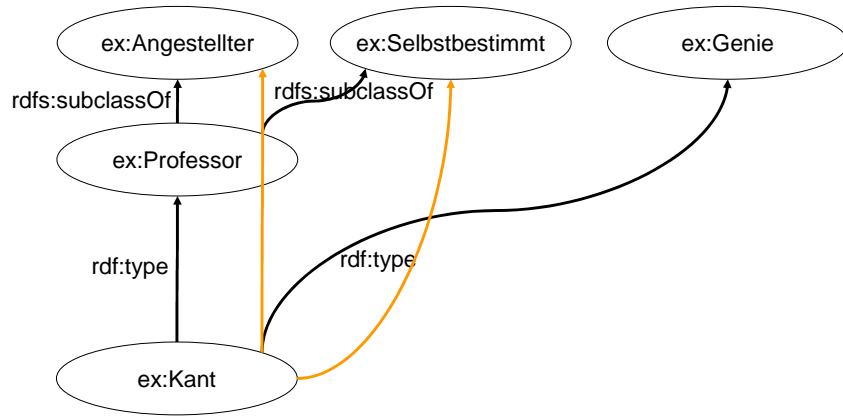


ex:Ethik rdf:type ex:Vorlesung
 ex:SOA rdf:type ex:Seminar
 ex:Kant rdf:type ex:Professor



ex:Ethik rdf:type ex:Vorlesung
 ex:SOA rdf:type ex:Seminar
 ex:Kant rdf:type ex:Professor





```
<?xml version="1.0" encoding="utf-8"?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
  xml:base="http://example.org"
  xmlns:ex="http://example.org/">

  <rdfs:Class rdf:about="Proseminar">
    <rdfs:subClassOf rdf:resource="Seminar">
      <rdfs:subClassOf rdf:resource="Veranstaltung"/>
    </rdfs:subClassOf>
  </rdfs:Class>

  <rdfs:Class rdf:about="Vorlesung">
    <rdfs:subClassOf>Veranstaltung</rdfs:subClassOf>
    <rdfs:label>Meine Lieblingsveranstaltung</rdfs:label>
    <rdfs:comment>Das ist ein Kommentar</rdfs:comment>
  </rdfs:Class>

  <ex:Vorlesung rdf:ID="Ethik"/>
  <ex:Seminar rdf:ID="SOA">
    <ex:gehaltenVon>Staab</ex:gehaltenVon>
    <ex:gehaltenVon>Grimm</ex:gehaltenVon>
  </ex:Seminar>
</rdf:RDF>
```



Properties

<is web>

ex:gelesenVon
rdfs:domain ex:Vorlesung;
rdfs:range ex:Professor;
rdf:type rdfs:Property.

ex:Ethik ex:gelesenVon ex:Kant.



ex:Ethik rdf:type ex:Vorlesung.

Properties

<is web>

ex:gelesenVon
rdfs:domain ex:Vorlesung;
rdfs:range ex:Professor;
rdf:type rdfs:Property.

ex:gelesenVon
rdfs:domain ex:Buch.

ex:Ethik ex:gelesenVon ex:Kant.



ex:Ethik rdf:type ex:Vorlesung.



ex:Ethik rdf:type ex:Buch.

Properties

<is web>

http://neu.org

neu:gelesenVon
rdfs:domain ex1:Professor;
rdfs:range ex2:Vorlesung;
rdf:type rdfs:Property.

Nicht objekt-orientiert!

http://example1.org

ex1:Professor rdf:type rdfs:Class.

http://example2.org

ex2:Vorlesung rdf:type rdfs:Class.

Sub-Properties

<is web>

ex:gelesenVon
rdfs:domain ex:Vorlesung;
rdfs:range ex:Professor;
rdf:type rdfs:Property.

ex:gelesenVon
rdfs:domain ex:Buch.

ex:Ethik ex:gelesenVon ex:Kant.



ex:Ethik rdf:type ex:Vorlesung.



ex:Ethik rdf:type ex:Buch.

UND, kein ODER!

Vokabulare

- RDF namespace URI reference (oder namespace name):
<http://www.w3.org/1999/02/22-rdf-syntax-ns#>
- Class names
 - ♦ Seq
 - ♦ Bag
 - ♦ Alt
 - ♦ Statement
 - ♦ Property
 - ♦ XMLLiteral
 - ♦ List
- Property names
 - ♦ subject
 - ♦ predicate
 - ♦ object
 - ♦ type
 - ♦ value
 - ♦ first
 - ♦ rest
 - ♦ $_n$
wobei n ein Integerwert groesser 0 ist
- Resource names
 - ♦ nil

RDFS Vokabular

- rdfs:Class (rdf:Property)
- rdfs:Resource
- rdfs:Container
- rdfs:Datatype
- rdfs:Literal (rdf/XMLLiteral)

- rdfs:domain
- rdfs:range
- rdfs:subClassOf
- rdfs:subPropertyOf
- rdfs:label rdfs:comment
- rdfs:member
- rdfs:ContainerMembershipProperty

Weit verbreitete RDF Schemata

- Dublin Core

- RSS 1.0

- FOAF

- SWRC

- “Title”: the name given to the resource
- “Creator”: the person or organization primarily responsible for the resource
- “Subject”: what the resource is about
- “Description”: a description of the content
- “Publisher”: the person or organization responsible for making the resource available
- “Contributor”: someone who has provided content to the resource other than the creator
- “Date”: date of creation or publication

- “Type”: type of resource, such as home page, technical report, novel, photograph...
- “Format”: data format of the resource
- “Identifier”: URL, ISBN number, ...
- “Source”: another resource that this resource is derived from
- “Language”: the language of the content
- “Relation”: another resource and its relationship to this one
- “Coverage”: the portion of time or space described by this resource (atlases, histories, etc.)

- “Rights”: the intellectual property rights adhering to this resource, or a pointer to them

- Erfinde keine neuen Klassen oder Properties, wenn existierende das Problem bereits modellieren
- Referenz auf einzelne Klassen oder Properties oder Instanzen ist kein Problem
- Semantic Web Modellierung ist nicht UML mit neuer Syntax, sondern primär ein Ansatz, um Modellierungen zu vernetzen – die konkrete Syntax ist dabei zweitrangig!