

Logical Modeling

The Web Ontology Language (OWL)

Research Seminar, SoSe 2017

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`https://ddl1.inf.tu-dresden.de/web/Logical_Modeling_\(SS2017\)`

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Web Ontology Language

OWL 2

What is an Ontology?

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Precise Descriptive Statements?

- ▶ Avoid misunderstandings in (human) communication
- ▶ Ensure software behaves in a uniform and predictable way
- ▶ Establish software interoperability

Web Ontology Language

OWL 2 – Basic Notions

OWL 2 is a knowledge representation language, designed to *formulate*, *exchange* and *reason* with knowledge about a domain of interest.

Web Ontology Language

OWL 2 – Basic Notions

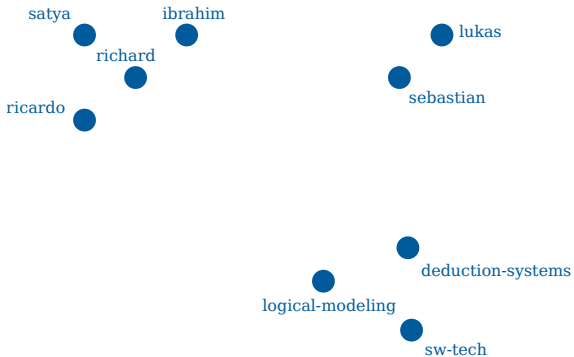
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Basic Building Blocks

- ▶ Entities: elements to refer to *real world* objects
~> Classes, Properties and Individuals
- ▶ Expressions: combinations of entities to form complex descriptions
~> Using logical constructors, e.g. Female **and** Professor
- ▶ Axioms: the basic statements an OWL ontology expresses
~> A Lecturer is someone who teaches a Course

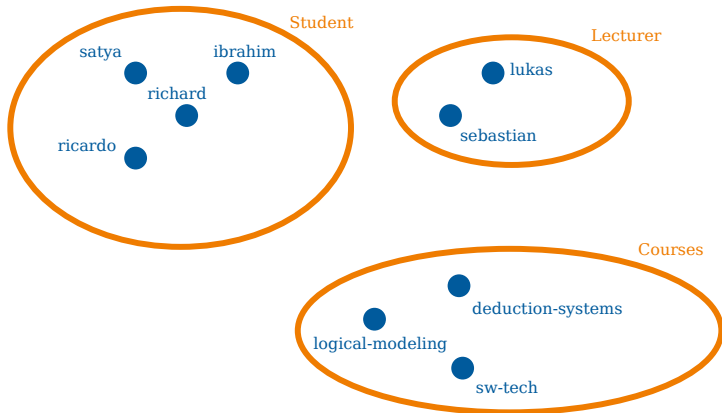
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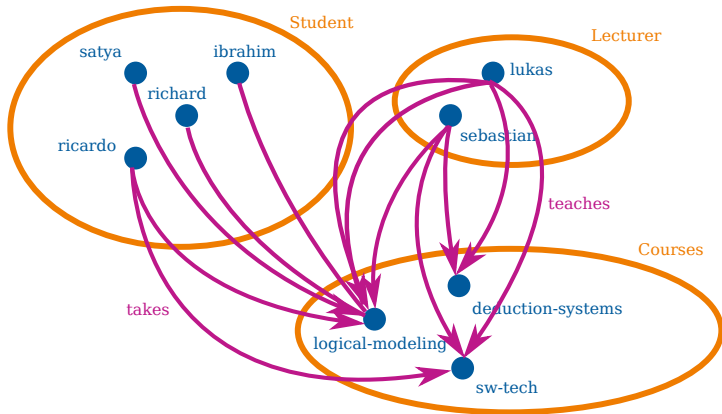
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