Foundational Concepts
In
Semantic Modeling

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Foreword

This tutorial contains exercises that challenge you to apply the concepts discussed. It is strongly suggested that you engage with these exercises by working them out before looking at solutions, rather than just peruse the provided solutions.

Solutions are provided in SADL syntax and SADL is an available environment in which to work out your solutions. You may install SADL by following these instructions:

http://semanticapplicationdesignlanguage.github.io/sadl/InstallSadlIde.html

Objective

Semantics is about meaning. Our objective is to build models which have meaning to a computer as well as to a human.

***Build models that have meaning
shared between people and machines.***

Index: Content Available as Slides (🖼) or Video (▶)

- Introduction ▶

- Part 1: Basic Set Theory: Pillar of Semantic Modeling 🖼 ▶

- Part 2: Logic: the Second Pillar of Semantic Modeling 🖼 ▶

- Part 3: The Web Ontology Language (OWL) 🖼

  1) Introduction to the Web Ontology Language (OWL): URIs, namespaces, and predicates ▶
  2) More about classes, properties, and property restrictions in OWL ▶
  3) Modularity in OWL ▶
  4) Queries ▶
  5) Entailments, Rules, and Reasoning ▶

Links

- OWL:

  - https://www.w3.org/OWL/

- SADL Documentation:

  - http://semanticapplicationdesignlanguage.github.io/sadl/

- SADL Installation Instructions:

  - http://semanticapplicationdesignlanguage.github.io/sadl/InstallSadlIde.html