

Introduction to the Semantic Web

Worksheet 10: Ontology Design Patterns (ODP)

Deadline: July 17, 2023, 20:00; **Discussion:** July 21, 2023, 10:00

OTTR Website: <https://ottr.xyz>

WebLutra: <https://weblutra.ottr.xyz>

QUDT Ontology:

<https://qudt.org/2.1/vocab/unit>,

<https://qudt.org/2.1/vocab/quantitykind>

Task 1 (max. points: 40)

In the lecture, we have learned about the *Quantities & Units* ODP. Please use this template to describe the amount of lemonade that fits into a "Maßkrug". Please use two different Units to describe the same *Quantity*.

Task 2 (overall max. points: 60)

You can imagine that such a large amount of lemonade is not healthy. Therefore, there are usually smaller glasses of lemonade you can buy at a restaurant or at a festival. Therefore, it is desirable to describe these smaller glasses in our ontology, too. We have learned of OTTR templates that can make our lives easier in this regard.

Task 2.1 (max. points: 40)

Please use OTTR templates to generalize from the "Maßkrug" ontology from **Task 1**, s.t. other glasses can be described, too.

Make sure that the created ontology still follows the *Quantities & Units* ODP and apply as many OTTR features as possible (as far as they are somehow useful).

Task 2.2 (max. points: 20)

Use your OTTR templates to create an ontology about "Maßkrug", "halbes Maß" (half of a "Maßkrug"), and a regular water glass (usually around 200ml). Please submit the template instances (signatures + values), as well as the created ontology (ttl + visualization, e.g. by RDF Grapher (<https://www.1df.fi/service/rdf-grapher>)).

Verify your results with **WebLutra**: <https://weblutra.ottr.xyz>!