

Foundations of Linked Data

Bonus Tasks

Task 3: Data Mapping

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This is the third out of the three bonus tasks. All bonus tasks are voluntary. To pass this task, the correct solutions must be submitted until **July 14, 2024, 23:59h**. Students who pass all three tasks in time are awarded a 0.3 / 0.4 grade improvement in the final exam of the course.

Administrative Information

Following the inverted classroom principle, if you have problems or further questions, please post these into the forum on StudOn. That way your colleagues can also contribute to and benefit from the answers.

3 Task: Description and Objective

In the final task, you will map your data with given vocabularies (property mapping), and map entities.

If you want, you can edit your .htaccess file to restrict the access to the requests folder.

3.1 Object Consolidation

In the first bonus task, you have created RDF triples using your own URIs. Now, you must create a mapping between your classes, properties and instances with wide-spread vocabularies and WikiData as a knowledge base. In doing that, we can combine all the player graphs to one connected knowledge base. To complete this subtask, you must create a file "mapping.ttl" and save it to your paul instance. You must search for fitting entities on WikiData like the NBA¹. The code snippet below contains all the prefixes you will need and some mapping examples.

¹<https://www.wikidata.org/entity/Q155223>

```

@prefix :      <./fld.ttl#> .
@prefix foaf:  <http://xmlns.com/foaf/0.1/> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdf:   <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix rdfs:  <http://www.w3.org/2000/01/rdf-schema#> .
@prefix unit:  <http://qudt.org/vocab/unit/> .
@prefix wd:    <http://www.wikidata.org/entity/> .

## Map Instances
:lal          owl:sameAs      wd:Q121783 .
:cm           owl:sameAs      unit:CentiM .

## Map properties
:name         rdfs:subPropertyOf foaf:name .
:plays_for    rdfs:subPropertyOf wd:P54 .
:value        rdfs:subPropertyOf rdf:value .

```

Remark: Properties in WikiData start with P, while instances and classes start with Q.

If you want, you can edit your .htaccess file to restrict the access to your mapping.ttl file.

Key Takeaways of this Task

At the end of this task, you should be aware of the challenges of data integration both on schema- and on instance-level.