

— Engineering Web and Data-intensive Systems - Winter Term 2019/20 —
Assignment 5.

From: Jan 30 2020

To: Feb 06 2020

1 Serializing to XML and JSON

Given the objects in the solution of assignment 04 (OLAT example data as a graph), this time, you're asked to create documents in XML and JSON, respectively. The serialized files shall contain all objects and links of the example data¹.

Tasks & Deliverables:

a) Essay Question:

Please discuss general strategies for a mapping from object-oriented schemas (classes and associations) and instances (objects and links) to XML and JSON formats.

Try to formulate rules that can be applied to arbitrary object models.

Apply those rules in the subsequent tasks.

Submit as PDF. We expect around 500 words (1 page of text).

b) XML Document

Create a well-formed XML document that contains all the data items and the links between them. The links should use the id-idref mechanism wherever possible.

Optionally, you may provide an XML DTD defining the structure of your document. To ease validation, the DTD can be integrated to the document rather than in a separate file.

DTDs are a deprecated part of the standard, but still provide a light-weight means to define a coarse schema. When you have time left, you might also try to write an XSD.

c) JSON Document

Create a well-formed JSON document that contains all the data items and the links between them.

Optionally, you may provide a JSON Schema.

General Instructions:

- Please submit your solutions in the solutions/assignment05 group folder
- Make sure to include your group's name in the file names, e.g. as a prefix. For group *alpha*, you could use a name like `alpha-olat-data.xml`.

¹This means that you must serialize the nodes and edges of the resulting graph, not the Cypher code! Nodes and edges form an instance of the OLAT domain model (see solution to assignment 03).

- Please try to validate your files using online validation services for XML and/or JSON.
- Please be prepared to discuss your solution in your next exercise slot!
- It's better to have all the members in the discussion, and it's possible for the members to do that in different exercise slots.

Solution:

Notes:

Already asked:

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