Social Computing (SS 2018)

Exercise 2

Hand in until May 14, 2018, 14:15 via the L^{2}P-learning room

Please hand in a single PDF file including solutions for all tasks. Group submissions of 2-3 students are allowed. Please do not hand in alone. The sample solution will be discussed in the exercise class.

**Task 2.1 (Internet of Things)**   (7 Points)

a) Please explain three possible quality of service requirements in a publish-subscribe scenario.

b) Please model the following scenario with a MQTT broker:

   Windmills in an offshore wind farm in the North Sea are providing their current output every 5 minutes. A client should be able to query output values for all windmills for the computation of the total output. Annotate your model with message types and possible topic names.

Task 2.2 (Data Models for Social Software)   (10 Points)

Please have a look at the following meta-model for social software:
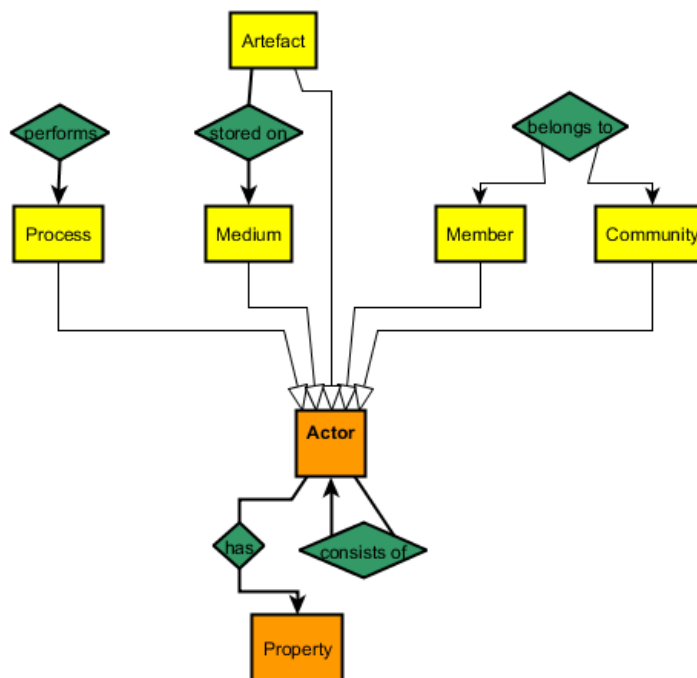
a) Model a watcher that persists expiring Instagram stories. Explicitly state which of your entities are Processes, Media, Members or Communities and provide the interaction graph.

b) Please provide an ER-diagram for the Instagram story watcher.

Task 2.3 (Web Application Interfaces for Social Software) (8 Points)

a) Please model the entities as resources and provide a RESTful API for the Instagram story watcher.

b) Please provide status codes for at least one successful response with example data, and list meaningful error messages.