Master Thesis Description, status: assigned , language: EN

A Visual UML Editor for QDAcity

Summary

QDAcity is a web application for conducting Qualitative Data Analysis (QDA) of text data. A key artifact derived from this analysis is a code system, a hierarchically structured set of labels (codes). We want to transform parts of the code system into a formal domain model. To this end, codes can be attributed with meta data according to a configurable code system meta model. The goal of this thesis is to implement a visual editor for QDAcity that can display parts of the code system as a domain model.

Changes made to the model in the visual editor shall be mirrored with changes in the code sytem and vice versa.

Work Results

- Preparation
    - App Engine development [1]
    - Investigate drawing / editor libraries with permissive licenses.
        - Hot contender is mxGraph[2]
- Implementation
    - Visual editor capable of displaying and editing a domain model based on a codesystem
        - UML class diagrams
        - State charts or BPMN diagrams
    - Mapping from codesystem to domain model
    - Built on the QDAcity technology stack
        - Java 7 + JDO + Google Datastore backend
        - JS + React.js frontend.
        - Frontend and backend will communicate through a REST API built on Google Endpoints.
- Description of solution in written thesis

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[1] Sanderson, D. (2015). *Programming Google App Engine with Java: Build & Run Scalable Java Applications on Google's Infrastructure*. " O'Reilly Media, Inc.".

[2] *https://github.com/jgraph/mxgraph*

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