Research Methods in Informatics
Project

Systematic Literature Review plan and initial results

1. **Goal and scope**
   The goal of this assignment is to define the plan of the Systematic Literature Review for a selected research project and execute the plan up to the initial data extraction. Complete data extraction is not required. The first step is to decide on what answers and where to search for. The question(s) must be explicitly stated and keywords must be extracted from the questions(s). The keywords should include synonyms. Search strings should join these keywords with ORs and ANDs. Literature databases depend on the project topic, but it is required to **use at least 3 databases**. Criteria should be clear and verifiable. It is recommended to extract 3 research data sets at most in one SLR. SLR process should involve at least one team member in the execution and one team member in the verification of each step. Tools should include literature managers and spreadsheet.

2. **Expected products**
   - Systematic Literature Review Report – **proposed** table of contents below
   - Papers collected in a literature manager tool
   - Initial extracted data

Systematic Literature Review Report

1. **Research project**
   1.1. Title
   1.2. Supervisor
   1.3. Goals and short description

2. **Systematic Literature Review plan**
   2.1. Goals and questions *(goals of SLR and initial research questions to try to answer with SLR)*
   2.2. Keywords *(keywords to search for, with synonyms)*
   2.3. Search strings *(fragment and final search strings, possible customizations for each database)*
   2.4. Literature databases *(scientific literature databases selected for SLR search)*
   2.5. Inclusion criteria *(publication year, type, language, scope etc. of articles to include in SLR results)*
   2.6. Exclusion criteria *(any criteria that eliminate the articles from SLR results e.g. lack of industrial validation, empirical results etc.)*
   2.7. Quality criteria *(research method, sample size, research data etc. of articles to evaluate and qualify for data extraction)*
   2.8. Data extraction *(what research data will be extracted from selected articles)*
   2.9. SLR process *(process steps, assignments to team members – execution, verification, tools to use)*

3. **Systematic Literature Review results**
   3.1. Results in numbers *(number of articles in each SLR phase from each database)*
   3.2. Articles selected for data extraction *(list of articles from search results qualifying for data extraction according to inclusion, exclusion and quality criteria)*
   3.3. Snowballed articles *(additional articles found with snowballing technique)*
   3.4. Article statistics *(charts, histograms of publication year, journal title, topic etc.)*
   3.5. Initial extracted data *(initial set of research data extracted from SLR literature)*

4. **Conclusions**
   4.1. SLR process *(conclusions and lessons learnt about the SLR process executed)*
   4.2. SLR results *(conclusions and lessons learnt about the results achieved with SLR)*

5. **Literature** *(list of literature used in the report, articles from SLR)*