

Empirical Software Engineering

Report 5: Final Report

(20 Points)

In the end of this course, you are responsible to complete your **individual** final report by either writing a methodological essay about empirical software engineering (Option 1) or working out the research design of an original empirical study (Option 2) by applying the empirical research method(s) learned and referring the exemplar studies presented. The novelty of your thinking and discussion would be an important factor for assessing your report. The title of your report has to present the option you take and the topic discussed in your report.

DEADLINE: 12:00am on (Monday) June 27, 2022

Your final report should be no more than 10 pages (including the cover page):

Option 1: Methodological Essay

In the essay, you either discuss all the empirical research methods learned in this course together, or focus on a particular empirical method or one specific aspect/issue (e.g., triangulation or validity) across multiple methods. The discussion in the essay has to be originally based on your own understanding, experience, readings, research, and thinking. The motivations for why the method(s) or aspect(s) are chosen for discussion have to be elaborated. You also need to provide examples (from the published studies if needed) to illustrate and support your points in the discussion.

Option 2: Research Design

Following the process and characteristics of empirical research methods, you describe the design of your original empirical study on one specific topic or questions in software engineering or computer science. The design may employ merely one concrete method or mix multiple methods together. The report must include necessary components of a research design or protocol, i.e. the background, motivation, research question(s) or hypotheses, data collection, analysis methods and so on, in which you show the strategies applied to secure the quality of your study, e.g., how the potential bias can be avoided or minimized. Although it is not required that you execute the design and complete the intended study in this course, the feasibility of the design will be evaluated in marking.

Assignment Deliverable:

The assignment deliverable should be submitted INDIVIDUALLY by the deadline. Each deliverable contains a cover page that clearly states the report number, the option taken, the title of the report, your name and student ID.