Project Plan

Definition – 01.10.13 - 13.10.13

The goal of this phase is to define the project extent. This includes

- Define the title of the student research project
- Define the objective of the project
- Create a project plan
- *Create a paper summarizing the objectives and the possible outcome of the project. The created one page paper has to be accepted by Prof. Heinrich Braun and Daniel Lindner*

Environment – 13.10.13 - 20.10.13

Create "walking skeleton" that implements the validation one rule of the Object Calisthenics.

Setup all necessary tools for prototypical development:

- Working version control with repository
- Create eclipse project skeleton
- Start an eclipse instance with an installed plugin

With this version it is possible to:

- Open an arbitrary Java project with Eclipse
- Run the build in validation Plugin to validate Object Calisthenics
- See an information in the terminal or a minimalistic UI indication for violations of the rule

Show working skeleton to Daniel Lindner.

Research – 20.10.13 – 03.11.13

Research about the Object Calisthenics. Find information about their history and purpose. Find background information. Who created them, why, what was the purpose.

Get all necessary references from libraries and from the internet.

Read these papers and create mind maps and cues and keywords. Get a general overview about what the books and papers are about. Prepare books and papers for "describe" phase.

Structure - 03.11.13 – 17.11.13

Prepare latex template.

Create a first table of contents of the research paper. Write short descriptions for each chapter. What's the purpose of the chapter which questions does it pose or answer?

Show table of contents to Daniel Lindner

Describe - 17.11.13 – 01.12.13 and 13.01.14 – 26.01.14

Describe every rule step by step.

- Explain the rules
- Give an good and a bad example for every rule
- Purpose of the rules
- Describe researched patterns and ideas behind the rule with the resources found out in the previous “Research” step.
- Summarize the rule’s purpose

Give a priority of the rules:

- Which rule is the most important one?
- Prioritize the rules based on their outcome with the given description and example

Show Rule description to Daniel Lindner

Analysis - 26.01.14 – 02.03.14

Analyze every rule. Find out:

- Similarities of the rules?
- Difficulty of implementing a validator for the rule
- Categorize the rules in groups if possible
- Describe the validation steps to check for every rule
- Prioritize the rules based on how hard it is to implement them
- Try to extract a general rule describing how a tool can validate the rule

The outcome of these steps is a feasibility analysis for tool support for every rule.

Show analysis chapters to Daniel Lindner

Prototype 1 - 02.03.14 – 23.03.14

The next step is to implement three of the rules in a prototypical implementation. In this implementation there’s only information if the rule was violated or not. This information can be simple terminal output.

Connect Analysis and Description Chapter – 23.03.14 – 30.03.14

Refine report by ensuring a good relation between the results in the “Description” and the “Analysis” in each chapter. Ensure structure of the description and analysis sections for each rule.

Update “affidavit”

Show updated text to Daniel Lindner

Prototype 2 - 30.03.14 – 13.04.14

This second prototype does not add more rules to validate but adds a simple User Interface with simple indication like markers in the editor and a list of validated rules.

Describe the prototype implementation short and crisp in the report.

Describe used tools and environment. Describe representation of data structures that enable AST analysis. What was the challenge? What is the architecture and how is it implemented. Keep this chapter short and simple, the prototype just proves that it is possible to validate the rules as found out in the “Analysis” chapter. Describe the implementation of the validation for some rules to give an implementation example.

Show prototype description chapter to Daniel Lindner

Conclusion - 13.04.14 – 20.04.14

Write a conclusion for the report. Add benefits and outlook chapter.

Prototype 3 – optional - 20.04.14 – 04.05.14

This third prototype adds more rules to validate.

Project Finish - 04.05.14

Submit paper to Daniel Lindner. Get feedback from Daniel Lindner.

Official project finish: 12.05.14