**SQ Project Overview**

**Project Templates for Research Software**

Create a project template for Python and Java research software projects focusing on Software Quality based on the CookieCutter framework. Focus on aspects of this lecture (repository structure, documentation, clean code, testing, CI/CD, ...) and introduce automatisation wherever possible inside the templates. Afterwards analyse and compare the process of template generation focussing on the necessary adaptations based on the base programming language.

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Meeting: 17.12. 11 Uhr

**Cookiecutters:**

* Framework for creating projects from cookiecutters (project templates), e.g. Python package projects from Python package templates
* For our task: Create 2 project templates (Python, Java) that focus on SQ based on aspects of this lecture (repository structure, documentation, clean code, testing, CI/CD, ...) plus automatisation

**Tasks:**

**Before Meeting:**

* ~~Create GitHub Repository~~
* Add Latex Report Outline to Repo
* Add Presentation Outline to Repo
* ~~Allocate programming languages (Java/Python): Hao Java, Tim Python~~
* ~~Choose Template: Latex~~
* Get to know CookieCutter
* Revise Lecture 04
* Research existing implementations of similar templates
* ~~Create project plan with concrete dates~~
* ~~From that, create Gantt Chart~~
* ~~Create outline slides: https://docs.google.com/presentation/d/1Ihlf3J6n90KU1s8QniwweqUzrdwLGo2PauNy86KZFK0/edit?usp=sharing~~

**Java:**

* Model Java Template based on SQ aspects of lecture and include automatisation
* Build Java Template
* Test Java Template

**Python:**

* Model Python Template based on SQ aspects of lecture and include automatisation
* Build Python Template
* Test PythonTemplate

**Deliverables:**

* Write Report
  + Introduction
  + Background and Related Work
  + Method
  + Results
  + Discussion
  + Conclusion
* Make presentation

**Project Plan:**

* KW 50 (9.12.-15.12.): Project Preperation (Cookiecutter, Revise Lectures), Task Allocation, Prepare Outline
* KW 51 (16.12.-22.12.): Present Outline, Research for Template
* KW 52 (23.12.-29.12.): Research Template
* KW 1 (30.12.-5.1.): Implement Template, Start working on Report
* KW 2 (6.1.-12.1.): Implement Template
* KW 3 (13.1.-19.1.): Finish Implementation, Introduce Automatisation, Add Details
* KW 4 (20.1.-26.1.): Create Presentation
* KW 5 (27.1.-2.2.): Finish Presentation, Finish Report
* KW 6 (3.2.-9.2.): Present Project, Buffer
* KW 7 (10.2.-14.2.): Submit Report