

Final assignment for Programming Languages Seminar

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This document describes your task for the final assignment of the Programming Languages Seminar course (CS4130). Your task consists of reading a scientific paper from the literature on programming languages, implement or formalize (a part of) the contents of this paper, and give a presentation to your fellow students about your work. While reading the paper and working on the implementation or formalization, you are encouraged to look up additional material and references related to the topic.

1 Practical information

Implementation or formalization. You should create a project with your implementation or formalization of the paper you chose. This project should include instructions on how to build or run the project, as well as documentation that clearly links your implementation to the individual (sub)sections, definitions, and/or theorems of the paper.

Oral presentation. You will give a short oral presentation of 10 minutes followed by 5 minutes for questions. In this presentation, you should aim to present the paper at a level that can be understood by fellow students of this course, answering the following questions:

- What problem the paper is addressing and why it is important?
- What is the main contribution of the paper?
- How is the paper connected to other work in the field of programming languages?
- Which parts of the paper you have implemented or formalized?

Academic integrity. This is an individual project. The complete project should be the product of your own work. It should clearly reference the sources you have used and all citations should be marked as such. In case you use AI technologies to help you create the code, you should explain which tools you used and what you used them for. Any violations will be reported to the Examination Committee.

Deadline. You should upload your final implementation or formalization as a zip file to Weblab before **25 October at 23:59**.

2 Grading criteria

Your grade is determined by the following criteria:

- There is a clear and explicit correspondence between the contents of the paper and your implementation/formalization.
- The methodology used for your implementation/formalization is appropriate and justified for the goal set in the paper.
- You have sufficiently demonstrated the quality of your implementation/formalization through tests, formal proofs, or other methods.
- Your implementation/formalization is clearly structured and documented.
- The contents of your presentation are accurate and relevant.
- Your presentation is clear and at the right level for the other students of the course.
- Your presentation makes it clear how the paper and your implementation are related to other work in the research field of programming languages.

Your final grade for this assignment is calculated from the grade for your implementation/formalization (70%) and your presentation (30%) based on the following scale:

- Excellent: 9.5-10.0
- Very good: 8.5-9.0
- Good: 7.0-8.0
- Acceptable: 6.0-6.5
- Insufficient: 1.0-5.5

3 List of papers

You can find a list of papers you can choose from on Weblab. Alternatively, you can propose a paper yourself by getting approval from one of the lecturers of this course. To guarantee an even spread, each individual paper can be chosen by at most 2 students. In case a paper is chosen by two students, you In that case you should agree on how you approach the paper in a different way: implement it in a different language, focus on a different aspect of the paper, ...