

Design and implementation of the Meta Casanova 3 compiler back-end

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Introduction

- ▶ games

Research question

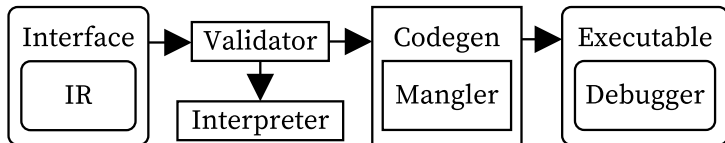
How to implement a transformation from typechecked Meta Casanova from the front-end, to executable code within the timeframe of the internship?

Requirements

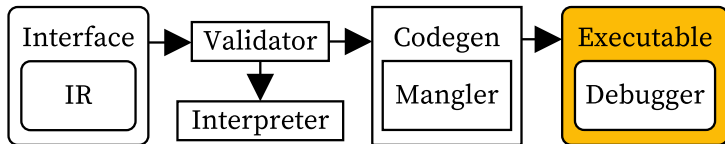
- ▶ The correctness requirement
- ▶ The .NET requirement
- ▶ The multiplatform requirement
- ▶ The performance requirement

Sub-questions

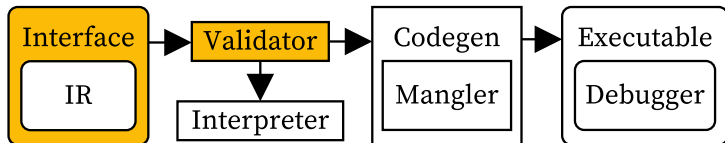
- ▶ The language question
- ▶ The interface question
- ▶ The IR question
- ▶ The codegen question
- ▶ The mangle question
- ▶ The validation question
- ▶ The debug question



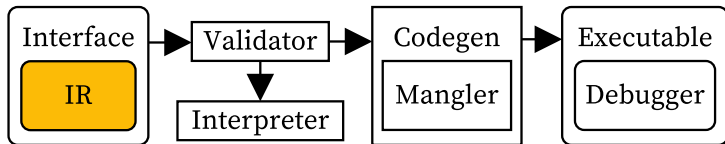
The language question



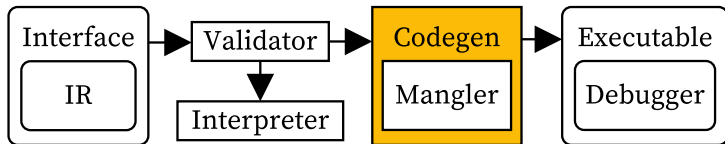
The interface question



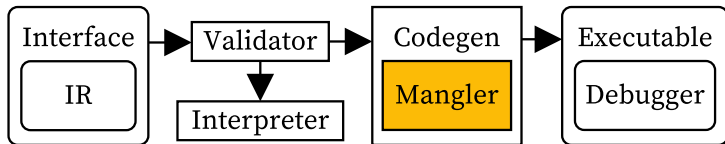
The IR question



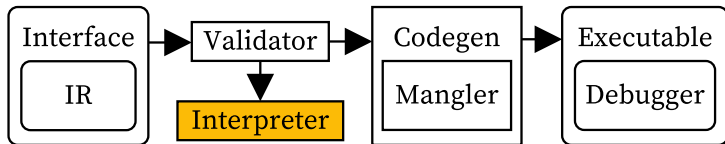
The codegen question



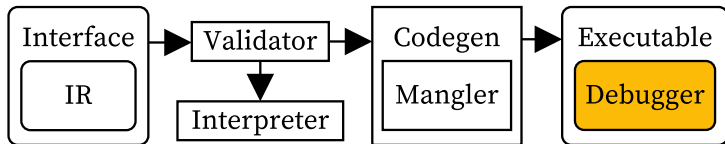
The mangle question



The validation question



The debug question



Results

- ▶ The correctness requirement
- ▶ The .NET requirement
- ▶ The multiplatform requirement
- ▶ The performance requirement

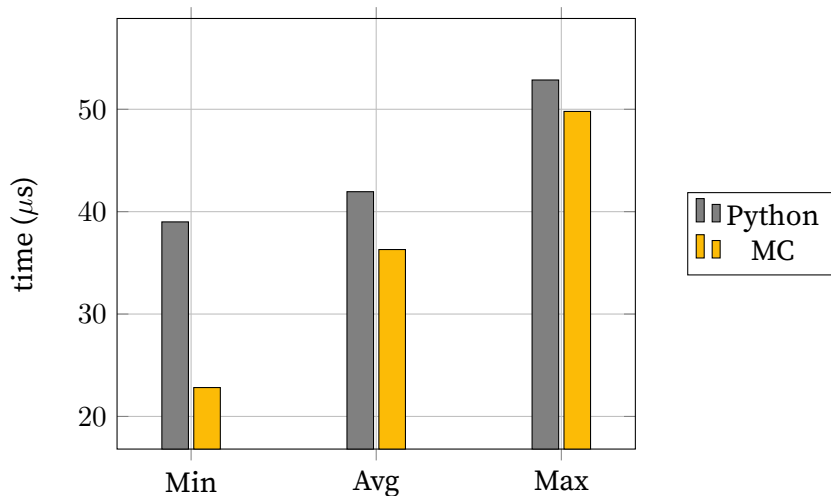
The correctness & .NET requirement

Test programs

The multiplatform requirement

Microsoft .NET Compiler for windows
Mono everywhere else

The performance requirement



Conclusion

- ▶ All requirements are met
- ▶ Working back-end within the allocated time
- ▶ Demo time!

Defence

Come at me!