# Introduction to Programming and Proving in Cedille



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#### Plan for the tutorial



⊢ CeDilLE

cedille

 $\rightarrow$  cedille<sub>core</sub>

c d ll



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⊢ CeDilLE

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c d ll



Motivation and background for Cedille

Syntax and semantics

Tooling: emacs frontend ↔ backend

Elaboration to Cedille Core

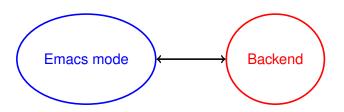
Spine-local type inference

**Future directions** 

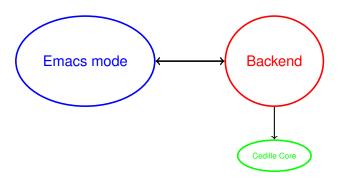


## Motivation and background for Cedille

## Architecture of Cedille



#### Architecture of Cedille



### Emacs mode (to be revised)

- Cedille has an emacs mode for editing Cedille files
- Based on a generic structured-editing mode by Carl Olson



- A span is [label, start-pos, end-pos, attributes]
- Spans communicated in JSON
- Cedille sends <u>all</u> type information, in span attributes
- Monadic style for writing the backend (type checker)