Progress report in Pen programming language

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Agenda

- Progress report
  - Code formatter
  - Documentation generator
- Next plans

Progress report

Code formatter

- Pull request: #874
- Similar to `go fmt`
  - No configuration
  - No maximum editor width

Code formatter (continued)

- The previous work
  - Prettier
  - Wadler's prettier printer
    - Written in Haskell
- AST -> Doc -> String
- Doc: IR for formatted codes
  - It represents all the possible formatted codes in one format.

Code formatter (continued)

- Rewritten once...
  - v1: AST -> String
  - v2: AST -> Doc -> String
  - 5 times faster!

Documentation generator

- Pull request: #878
- It's all about formatting codes as well.
  - But in a flipped way
  - Codes in comments v.s. comments in codes
- Reuses the same formatting logic.

Next plans

- New packages and examples with map types
  - Knapsack problem
  - Conway's game of life
  - `Json` package
  - `Flag` package

Summary

- Progress
  - Code formatter
  - Documentation generator
- Future plans
  - New packages and examples with map types