Milner

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2020

Milner

Over the past three weeks, I've been creating my own programming language, Milner

```
external puts : (Cstring) -> ()
val main : () -> Int32
fun main() =
  puts("Hello, world!");
  0i32
```

Syntax

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Semantics

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A programming language is an abstract idea

Compiler

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 - Execution is evaluation

A reference implementation is a specification for the language

How does a compiler or interpreter work?

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- Parser

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In practice, interpreters compile to a low-level *bytecode* which is then executed

Compilers aren't magical

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- ► Read file, process data, output file

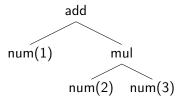
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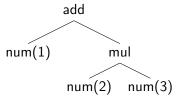
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Sedlex lexer generator and Menhir parser generator

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$$\frac{e_1:A\to B\quad e_2:A}{e_1\;e_2:B}$$

Hindley-Milner type system

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- ► LLVM = Low-Level Virtual Machine