Build Your Own
Programming Language
with JavaScript

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Every program is an interpreter.

...but some interpret other programs!

(program = data)

Google translate

Translation

[Translated Search](#)

[Translator Toolkit](#)

[Tools and Resources](#)

Translate text, webpages and documents

Enter text or a webpage URL, or [upload a document](#).

```
while (!success) tryAgain();
```

Translate from: `Detect language`

Translate into: `English`

[Translate]

Parser (syntax)

↓

Semantic analysis

↓

Code Generation
or Interpreter

Parser

Sem...

Code Ge...ion
or Interpreter

Parser generators!

OMeta-JS
Jison
PEG.js
JS/CC

Parser generators!

OMeta-JS
Jison
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Parser generators!

OMeta

:D **Jison**

PEG.js
JS/CC

First, we need
a *grammar*.

ECMA-262 5th Edition
15.12.1.2

```
JSONObject :
        {  }
        { JSONMemberList }

JSONMember :
        JSONString : JSONValue

JSONMemberList :
        JSONMember
        JSONMemberList , JSONMember

JSONArray :
        [
        [ JSONElementList ]

JSONElementList :
        JSONValue
        JSONElementList , JSONValue
```

Build the Parser

Live demo!!

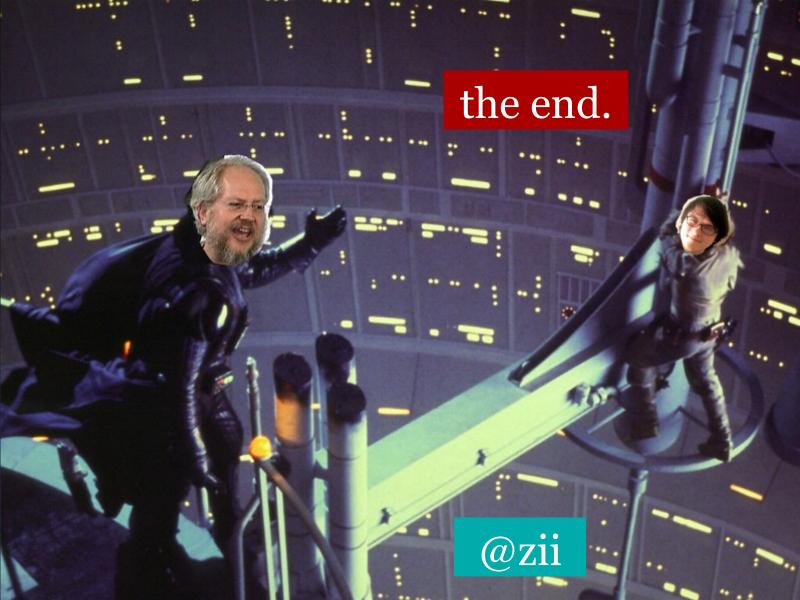(demo code generation)

Instead of codegen…

metacircular evaluator
FTW

Structure and Interpretation of Computer Programs

Second Edition

Harold Abelson and
Gerald Jay Sussman
with Julie Sussman

jsonic - a homoiconic language

the end.

@zii

Links

http://azarask.in/projects/algorithm-ink/
http://processingjs.org
http://coffeescript.org
http://jison.org
http://tinlizzie.org/ometa-js/
http://pegjs.majda.cz/
http://github.com/zaach/jsonic
http://mitpress.mit.edu/sicp/full-text/book/book.html
http://www.softwarepreservation.org/projects/LISP/book/LISP%201.5%20Programmers%20Manual.pdf