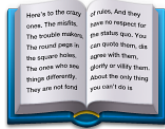


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# Intro to Emojinal or



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Lambda Lounge Chattanooga  
February 2014

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## Unicode in Programming Languages

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```
def V(b:LogicBoolean)=new LogicBoolean(this.value ||
b.value)
def  $\wedge$ (b:LogicBoolean)=new LogicBoolean(this.value &&
b.value)
def  $\rightarrow$ (b:LogicBoolean)=( $\neg$ (this)) V (this  $\wedge$  b)
object LogicBoolean {
  def  $\neg$ (a:LogicBoolean)=new LogicBoolean(!a.value)
  implicit def boolToLogicBool(x:Boolean)=new
LogicBoolean(x)
}

def expr(a:Boolean,b:Boolean,c:Boolean,d:Boolean)=
( (a  $\wedge$  b) V  $\neg$ (a  $\wedge$  c) )  $\wedge$  ((c V d)  $\wedge$   $\neg$ (b) )
```

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Deeper than semantics

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## Emojinal

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Emojinal is an emoji-only, stack-based programming language.

It transpiles to JavaScript.

It runs on node.

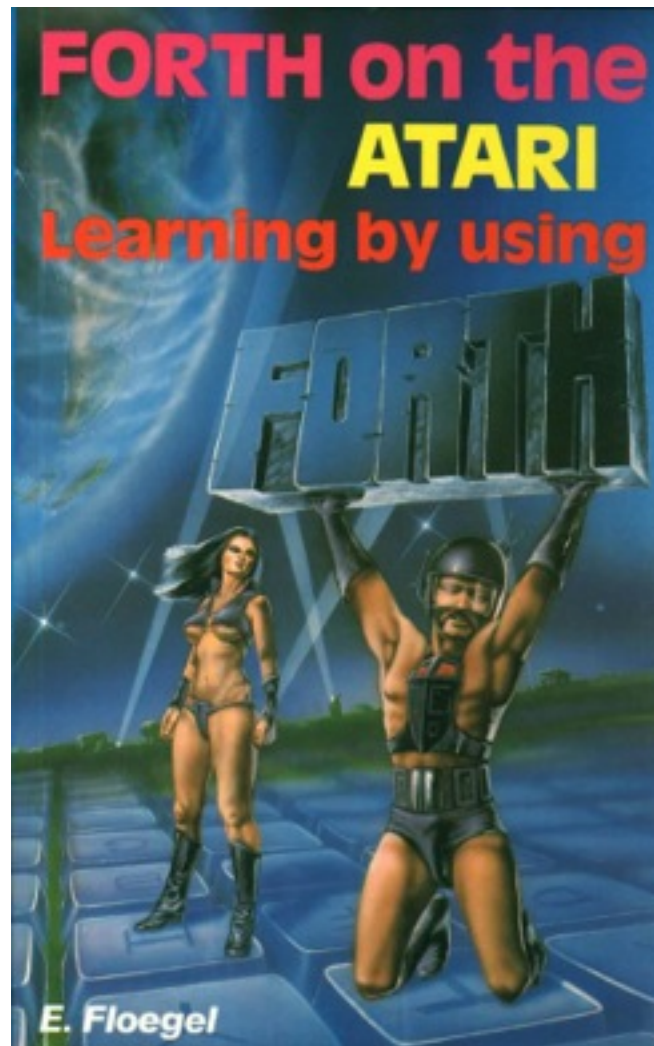
It was released in 2013.

It was created by Addie Wagenknecht & Ramsey Nasser.

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## Learn to Program

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## Hello World

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imperative pseudocode: `println("hello world");`

forth: `: HELLO ."Hello World " ;`

ascii pseudocode: `( . ":wave: :earth_americas:" )`

emojinal:       

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## Syntax

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Prefix notation.

Emoji codepoints (in the Unicode meaning) map to a stack-based pseudocode, which is parsed into JavaScript.

There are Emojinal tokens that map directly to useful JavaScript tokens.

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## Compilation

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The core compiling loop takes emoji characters,  
converts them to ASCII pseudocode,  
parses that pseudocode (using a library called PEG)  
which results in a Forth-like JavaScript language (called FJS)  
then sends the FJS code to the FJS interpreter to execute.

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## Execution

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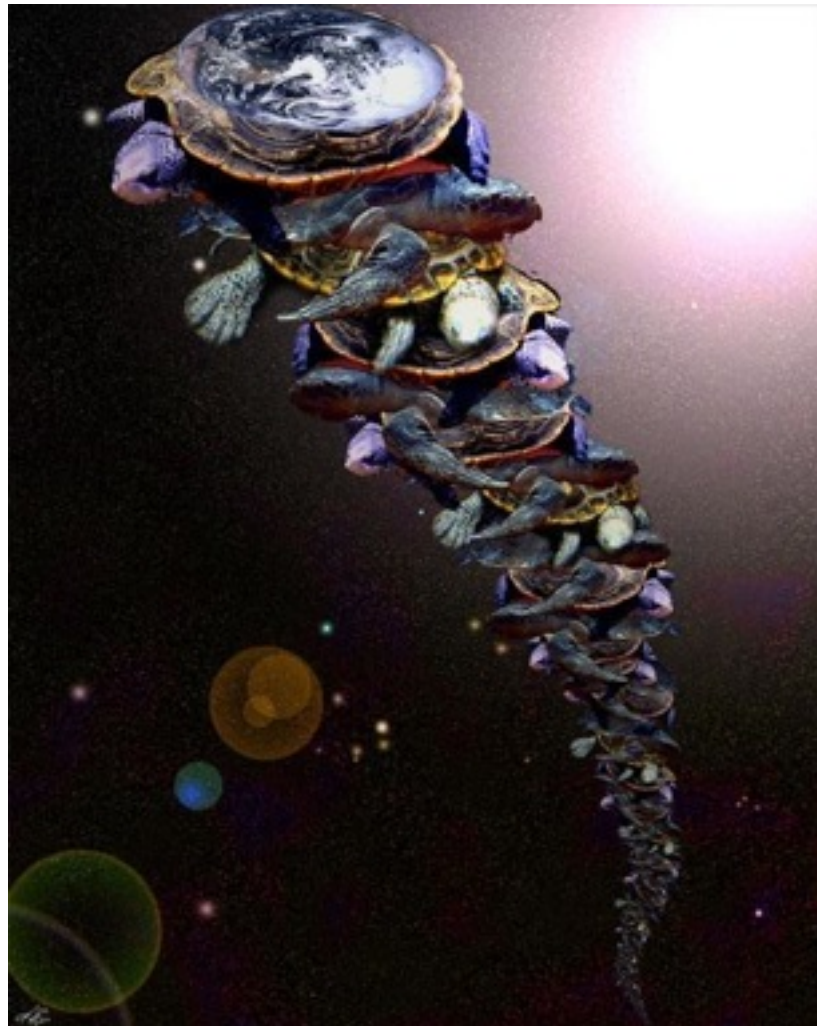
Execution is done by the FJS interpreter,  
and uses a single stack for keeping state.

FJS executes on node.js.

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JavaScript:

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## JavaScript Has a Unicode Problem

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```
>> 'I \u2661 JavaScript!'
'I ♥ JavaScript!'
```

```
>> '\u{1F4A9}' '💩'
// U+1F4A9 PILE OF POO
```

```
>> '\uD83D\uDCA9'
'💩' // U+1F4A9 PILE OF POO
```

Just be grateful we aren't talking about a programming language in Tamil:

நி

[Emojinal.herokuapp.com](https://emojinal.herokuapp.com)

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A Processing DSL in Emojinal

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## Bouncing Pile of Poo

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wandering snake line:



wandering pile of Poo:



## Emojinal: Mobile-first

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The natural environment to work with Emojinal is Safari on iOS.

Sapir-Worf hypothesis.

Culturally portable.

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