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## De cero a web con F#

# Historia

¿De donde surge F#?

#### Los ML

- [...]
- LISP
- 70's, ML Robin Milner
- [...]
- Caml, 1987
  - Caml light, 1991
  - Caml special light, 1995
  - Ocaml, 1996 (extends the core Caml language with object-oriented programming constructs.\*)
  - F# 2005

\* Wikipedia [https://en.wikipedia.org/wiki/Ocaml]

## Don Syme

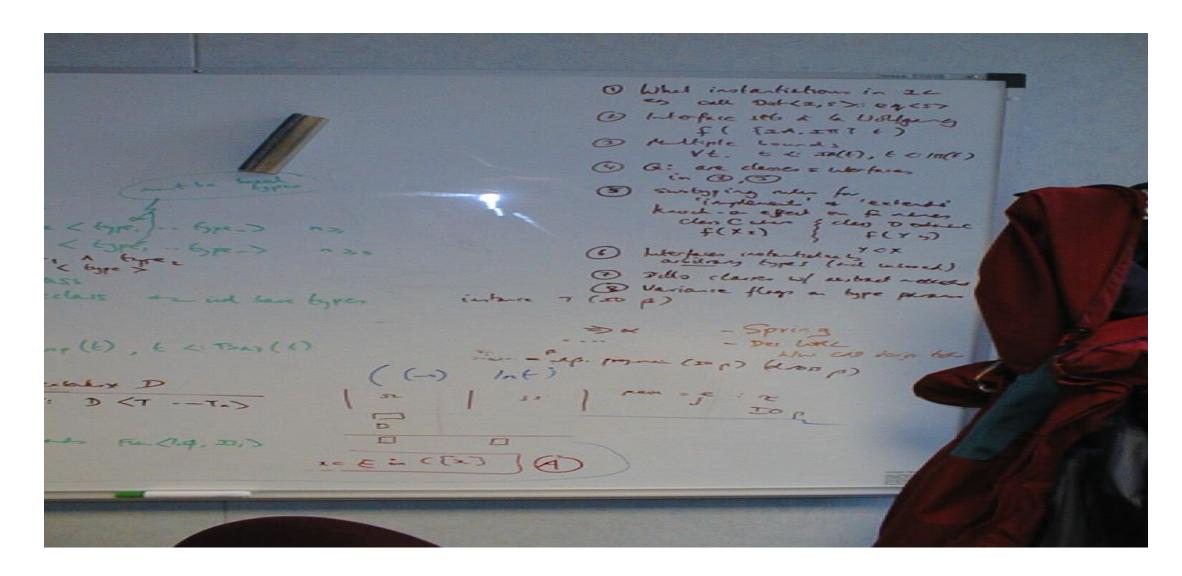


So much of what I loved about programming, was just missing from the experience of programming in Java. And that, in a sense, was a big driving motivation. And as C# 1.0 occurred, I was faced with desperate situation: that I might actually have to do all my programming in either Java or C# 1.0. And I actually had to do personally do something about this at Microsoft, either by improving to the point that it was what I wanted to use, or by working on a new language

Don Syme SPLASH 2010



#### .NET Generics,



#### F# 1.0, 2005

- Unidades de Medida 2008, Andrew Kennedy, PhD
- Type Providers 2009

F# 2.0
Incluido en Visual Studio 2010
Open source, 2010



## F# Software Foundation

Fundada por Tomas Petricek y Phillip Trelford 2012

fsharp.org

Un esfuerzo de la comunidad.

#### Mission Statement



The mission of the F# Software Foundation is to promote, protect, and advance the F# programming language, and to support and facilitate the growth of a diverse and international community of F# programmers.

F# 3.0, 2012

Visual F# y F#

#### Código en GitHub, 2015



#### F# 4.0 2016

• Totalmente community driven

F# 4.1, .NET Core

• .NET Core y herramientas

## Instalación

cross-platform

#### .NET Core

- <a href="https://github.com/dotnet/netcorecli-fsc/wiki/.NET-Core-SDK-rc4">https://github.com/dotnet/netcorecli-fsc/wiki/.NET-Core-SDK-rc4</a>
- (El 7 de marzo se libera la versión estable del SDK)
- Ya.

## Demo

Hola, mundo!

## Proyectos y Scripts

#### IDEs y Editores

- Visual Studio: Visual F#, F# Power Tools
- VS Code, Atom: Ionide

#### Ionide

http://ionide.io/



#### Ionide 🗓



Set of Atom and VS Code plugins for F# development

http://ionide.io



Krzysztof Cieślak Krzysztof-Cieslak

Hacker, Open Source contributor, makes stuff.

## Sintaxis de F#

#### Demo

Sintaxis básica – tomado de *fsharpforfunandprofit.com* 

## Características interesantes

Type Providers, Quotations, Units of Messaure, Active Patterns, Mailbox

## Demo

Características interesantes

## Desarrollo web en F#

#### La web es funcional

## Request -> Response

#### Y asíncrona

Request -> Async<Response>

#### Suave.io

Basado en Happstack, yay!

https://github.com/nicolocodev/learnhappstack

WebParts (ServerParts)



## Demo

Hola, Suave.io

#### Más herramientas

- Paket
- Fake

FAKE - F# Make

## FAKE - F# Make - A DSL for build tasks

"FAKE - F# Make" is a build automation system with capabilities which are similar to **make** and **rake**. It is using an easy domain-specific language (DSL) so that you can start using it without learning F#. If you need more than the default functionality you can either write F# or simply reference .NET assemblies.



Steffen Forkmann forki

**Paket** 

#### What is Paket?

Paket is a dependency manager for .NET and mono projects, which is designed to work well with NuGet packages and also enables referencing files directly from Git repositories or any HTTP resource. It enables precise and predictable control over what packages the projects within your application reference.

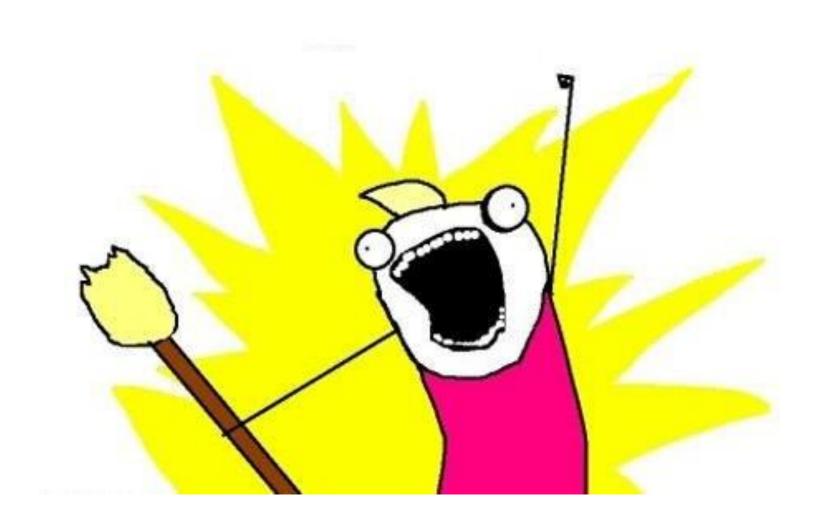
## Demo

Mejorando la experiencia de desarrollo

## Y del lado cliente?

JavaScript no me gusta y ya sé F#

## F# all the things



#### Fable

#### F# |> BABEL

The compiler that emits JavaScript you can be proud of!









#### Alfonso Garcia-Caro alfonsogarciacaro

JS/.NET developer in love with functional programming thanks to F#. Creator of Fable: F# to JS compiler.

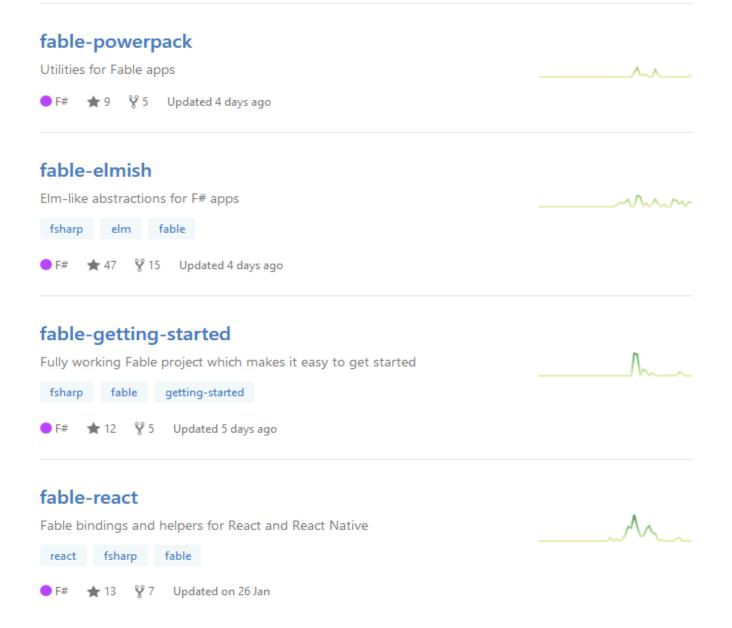
## Demo

Hola, Fable

#### Proyectos interesantes en Fable

https://github.com/fable-compiler

http://fable.io/repl.html



## Demo

Todo con todo

## Gracias

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#### Referencias

- End-to-end Functional Web Development, Tomas Petricek
- PolyConf 16: A brief history of F#, Rachel Reese
- fable-suave-scaffold