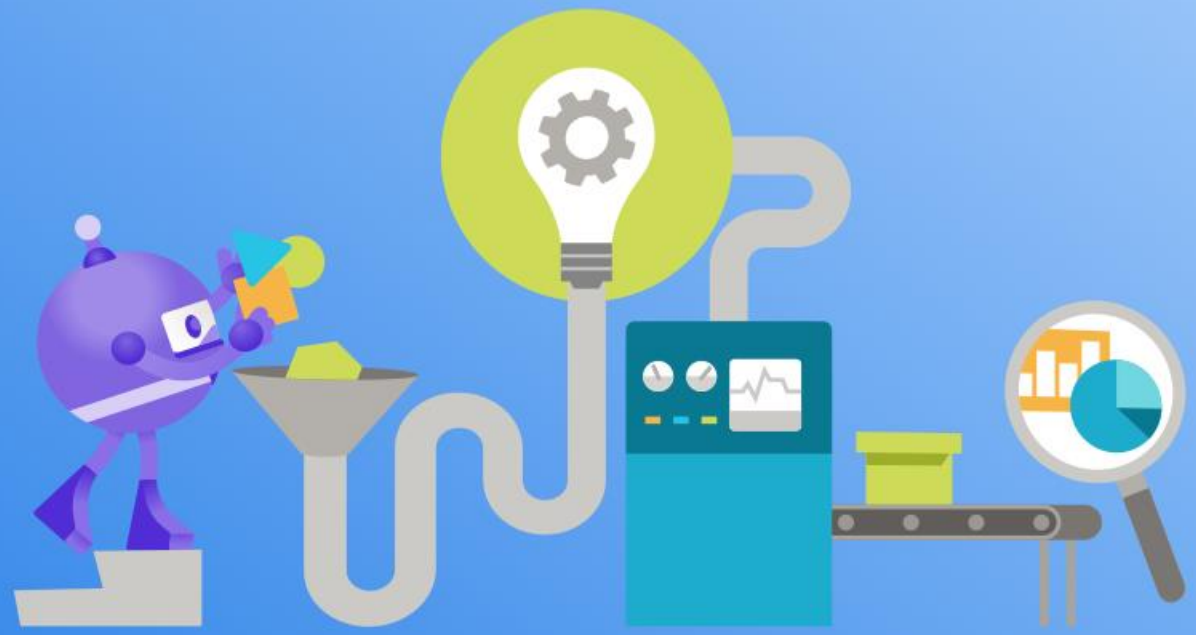


.NET Conf

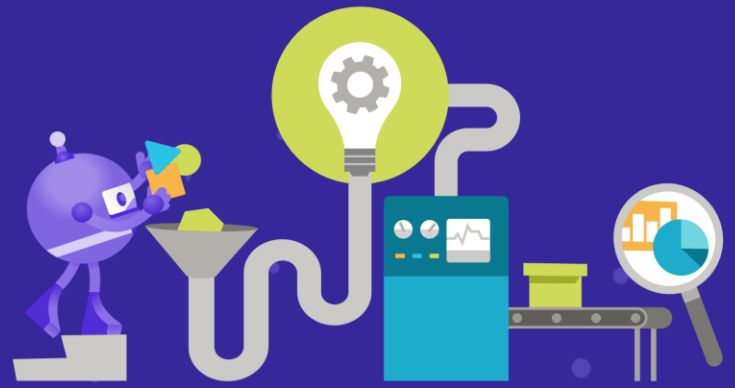
Focus on F#

July 29, 2021

focus.dotnetconf.net

Don teaches Guido F#

Don Syme & Guido van Rossum



https://github.com/dsyme/guido-learns-fsharp

Setup

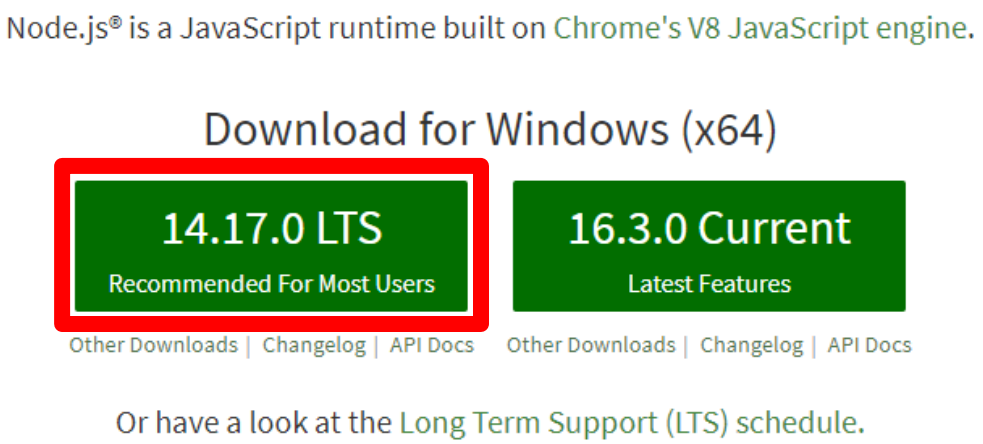
.NET SDK

https://dotnet.microsoft.com/download

Setup

Node.js and npm

https://nodejs.org/en/

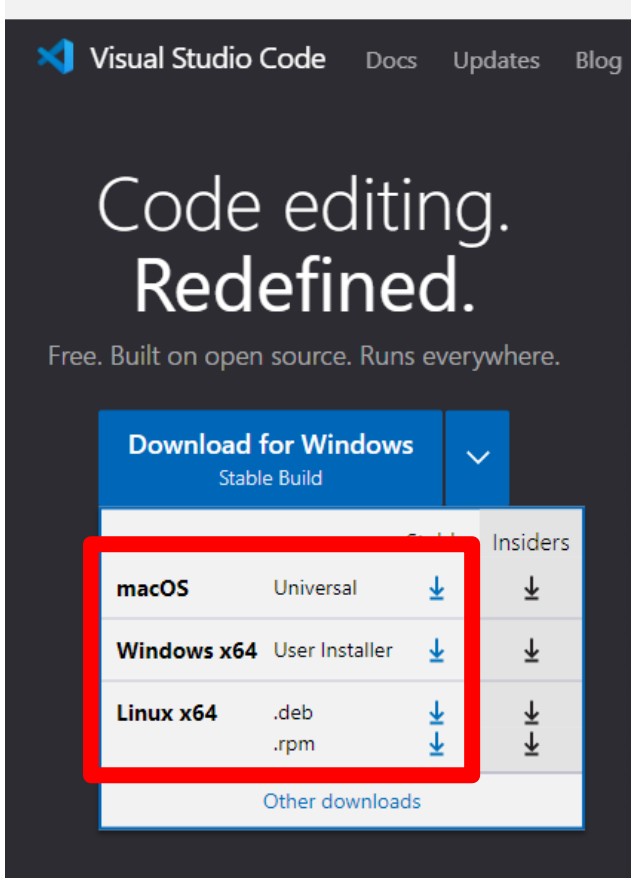


Setup

VS Code

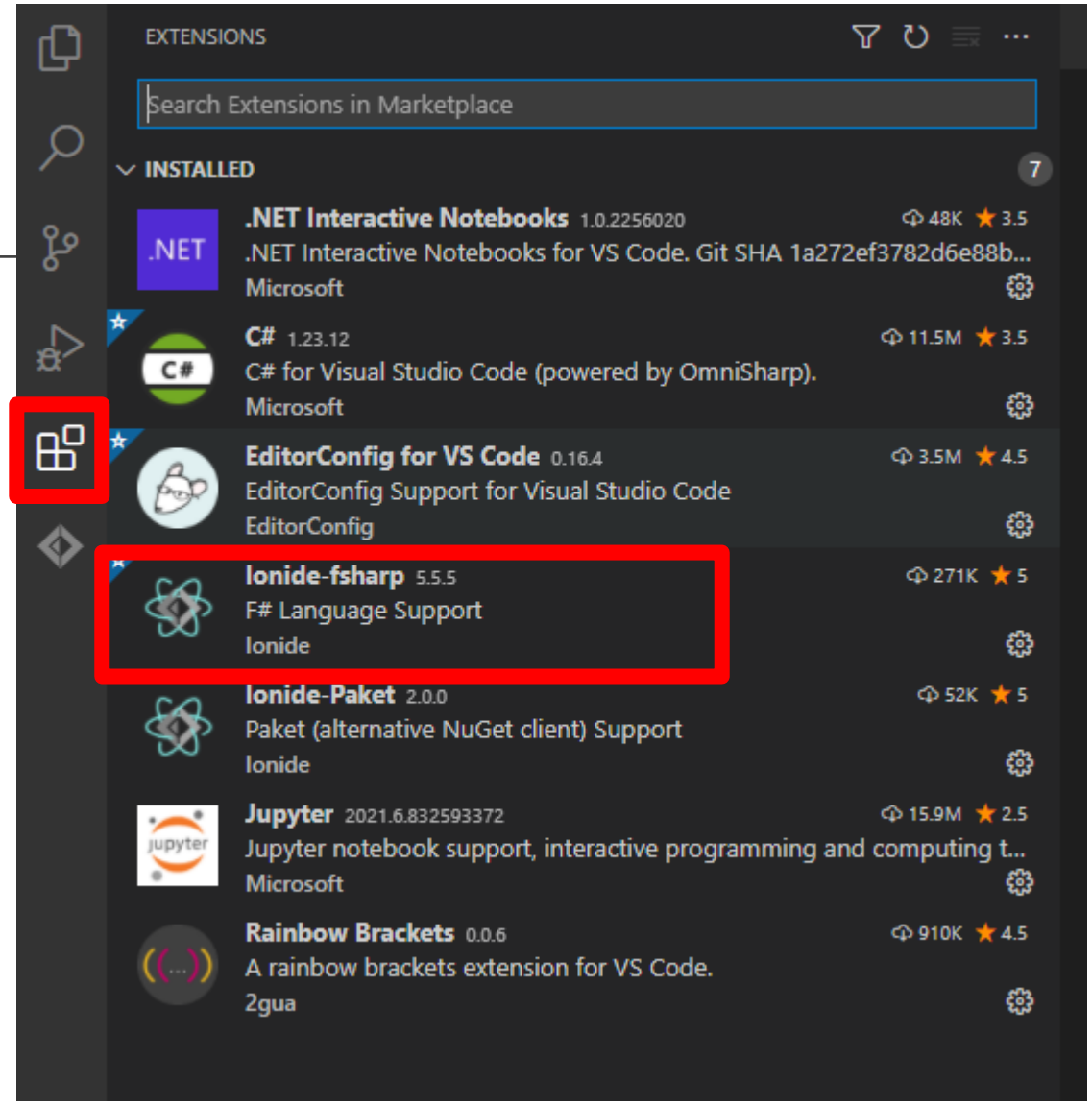
https://code.visualstudio.com/

ON LINUX, DON'T USE SNAP

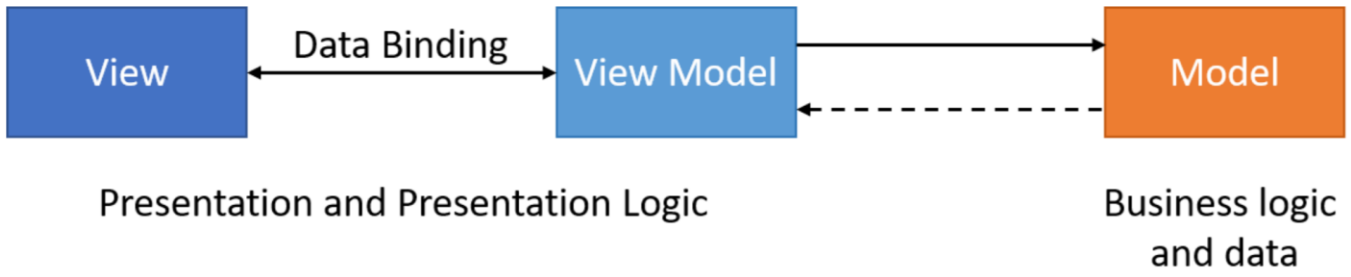


Setup - VS Code Extensions

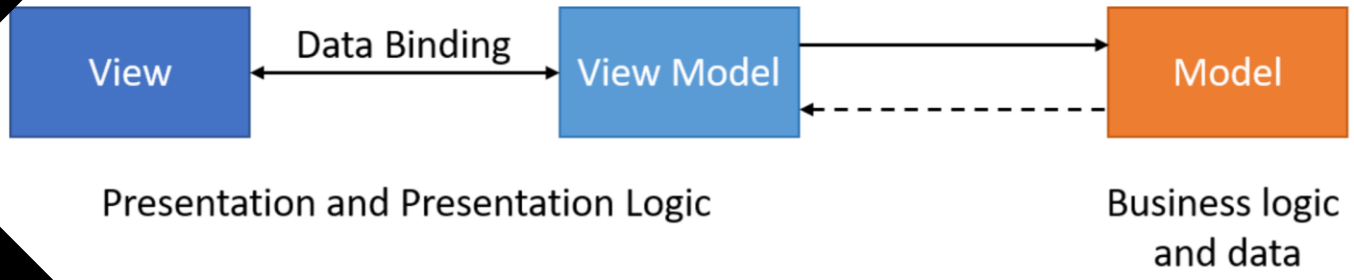
- Ionide



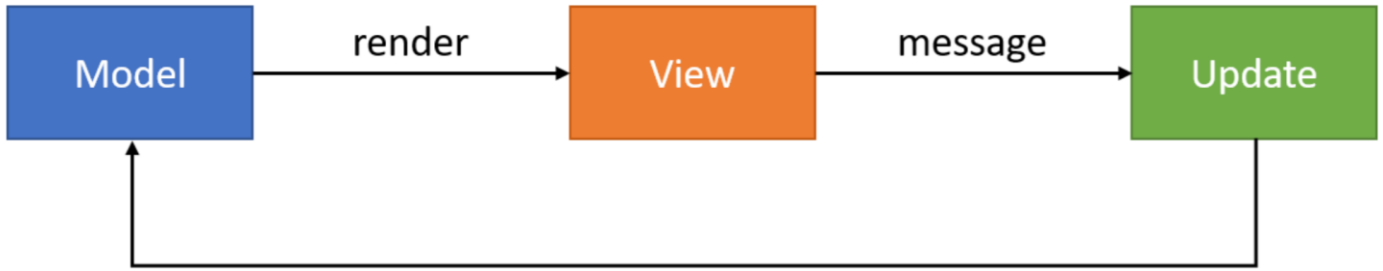
Model View View Model



Model Vie
View Mode



Model View Update



Lessons from Tasks 1.*

You've learned or seen all of the following:

1. let let let let (function definitions and values)
2. match for pattern matching and strings
3. dot notation. F# supports object programming
4. strings, including interpolated strings
5. F# is strongly typed. The IDE knew your types and checks on the fly
6. F# knows how symbols resolve: rename, goto-definition etc.

Lessons from Tasks 2.*

You've learned or seen all of the following:

1. In this app, display views are functional data
2. The view is recalculated and applied to the actual DOM
3. The functional view uses computed list expressions,
   a super-powerful form of list comprehensions
4. tuples and helper functions

Lessons from Tasks 3.*

You've learned or seen all of the following:

1. “let” and “type” all day long
2. pipelining with |>
3. record types - cheap and cheerful functional data
4. async programming for server requests
5. strongly typed string interpolation

Lessons from Tasks 4.*

You've learned or seen all of the following:

1. discriminated union types for messages in a web UI
2. pattern matching and completeness checks
3. functional objects with method/property members
4. dispatching a new message in this UI architecture

Lessons from Tasks 5.*

You've learned or seen all of the following:

1. evaluating code in the F# REPL
2. referencing a package with a strong version
3. using FSharp.Data with a sample from a REST API
4. exploring the data in preparation for adding a backend service

Thanks for joining!

Ask your questions live on Twitter #dotNETConf

Other slides

FABLE
TRY ONLINE
GET STARTED
Fable is a compiler that brings F# into the JavaScript ecosystem

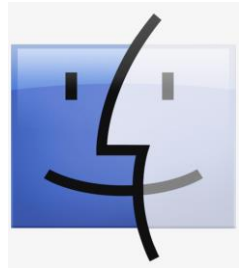
F# get started

```
dotnet new -lang F#

dotnet build
```

.NET

F# tools are part of the .NET SDK, available everywhere



F# for the backend

```
dotnet new -i "giraffe-template::*"

dotnet giraffe
```

A functional ASP.NET Core micro web framework for building rich web applications.

High perf, functional server-side programming

github.com/giraffe-fsharp/Giraffe

F# for the frontend (JS)

```
dotnet new -i "Fable.Template::*"

dotnet new fable
npm install
npm start
```

You can use F# as a JavaScript language

NOTE: WebSharper also includes an excellent JavaScript compiler for F#