



Having Fun with Visual Studio Code

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About Me

- **Status:** Married, three children
- **Locations:** Los Angeles, Dallas, Slovakia
- **Blog:** blog.tonysneed.com
- **Open Source Frameworks:**
Trackable Entities, Simple MVVM Toolkit



klient.com



wintellect.com



Global Knowledge.

globalknowledge.com

Get the Bits



[github.com](https://github.com/tonysneed) / **tonysneed** /

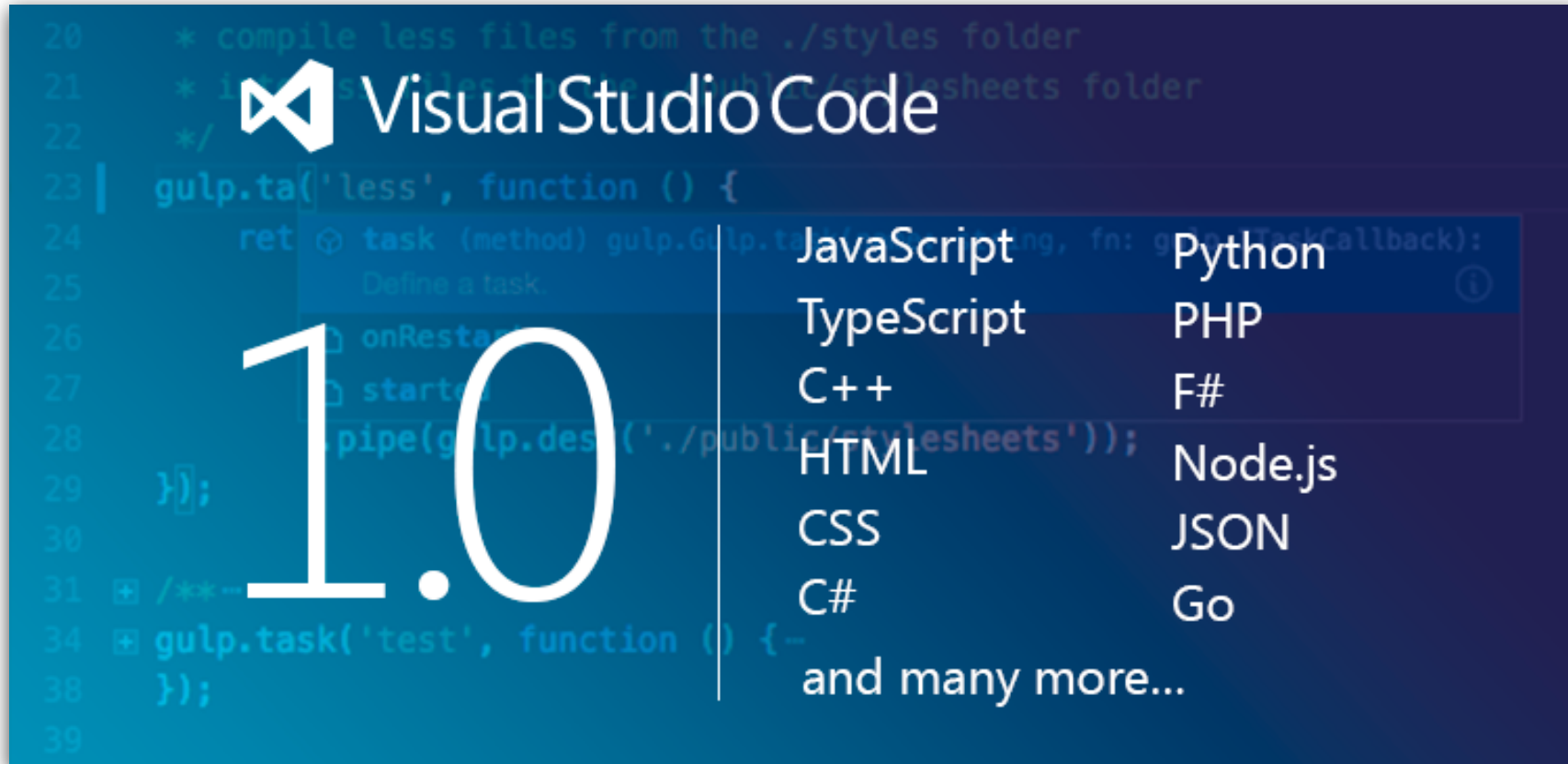
DevWeek.2016.VSCode-Fun

Agenda



- What is **Visual Studio Code**?
- Languages and **Features**
- Using the **Command Palette**
- Navigation, code **editing**, running **tasks**
- Git integration and **version control**
- Node and **C# Debugging**

There's a New Kid on the Block



What Is Visual Studio Code?



*VS Code is a
cross-platform,
code-editor centric
development tool*

VS Code Architecture

- Written in **TypeScript**
- Built on the **GitHub Electron Shell**
 - Based on **Node.js** and **Chromium**
 - Runs cross-platform on **Windows, Mac OS X, Linux**
- Leverages several **tool services**
 - TypeScript, Roslyn C# Compiler Service
 - Visual Studio debugging engine



Some Supported Languages



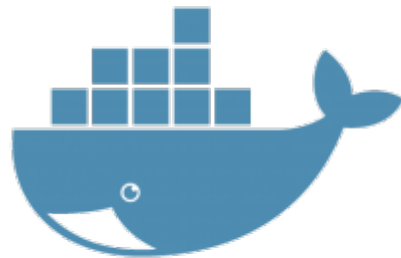
JavaScript



TypeScript



Markdown



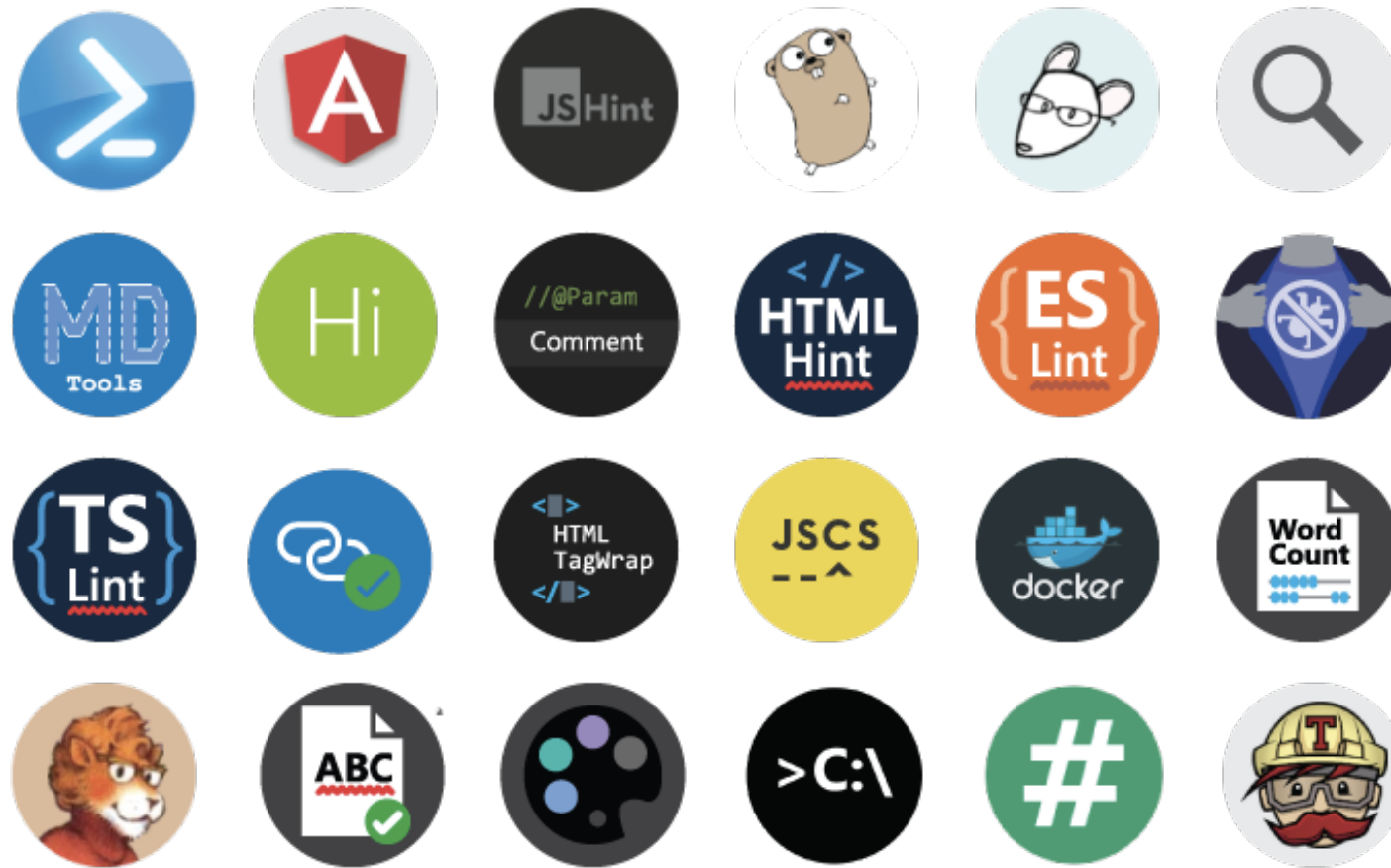
Dockerfile



HTML & CSS



Extensions for Many More ...



Why VS Code?

- Lightweight, blazing **fast**
- **Cross-platform** - Windows, OS X, Linux
- Customizable, **extensible**
- It's a *real* **code-editor**
 - Syntax highlighting
 - Bracket matching
 - Auto indent
 - Code snippets



What's Missing?



- Project and item **templates**
- Visual **designers** (XAML)
- Razor syntax highlighting
- **ReSharper-like** goodness
- Advanced **Debugging**
 - Set *next statement*
 - Debugger *visualizers*
 - *Threads* window

Folder-Based Project System

- File, Open, select a **Folder**
 - Everything in the **folder** is *included*
- Open VS Code from **command line**: `code .`
- Can also open VS Code from the **Finder** or **File Explorer**
 - Windows: installer has option to include shell command
 - Mac OS X: <http://bit.ly/mac-open-in-vscode>

File New Project = Yeoman



- Use **Yeoman** to scaffold new projects
 - Install Node: <https://nodejs.org>
 - Use **npm** to install Yeoman
 - Search: <http://yeoman.io/generators>
 - Use npm to install **generators**

```
npm install -g yo
npm install -g generator-tonysneed-vscode-typescript
cd MyCoolTypeScriptProject
yo tonyneed-vscode-typescript
```

Example: New TypeScript Project

```

Last login: Sat Jan 30 12:08:39 on ttys001
[~ $ mkdir MyCoolTypeScriptProject
[~ $ cd MyCoolTypeScriptProject
[~/MyCoolTypeScriptProject $ yo tonyneed-vscode-typescript

  _--_
  |   |
  |--(o)--|
 _--_ _--_
|  'U'  |
|  A  |
|  ~  |
|_____|
|  .  |
|_____|

Welcome to Tony Sneed's
Visual Studio Code
TypeScript generator!

? Application Name (my-cool-type-script-project) _

```

Yo Extension for VS Code

- Install Yo **extension** for VS Code
 - Create *new project* with a Yeoman generator - **star**
 - Add *new items* with a Yeoman **sub-generator**

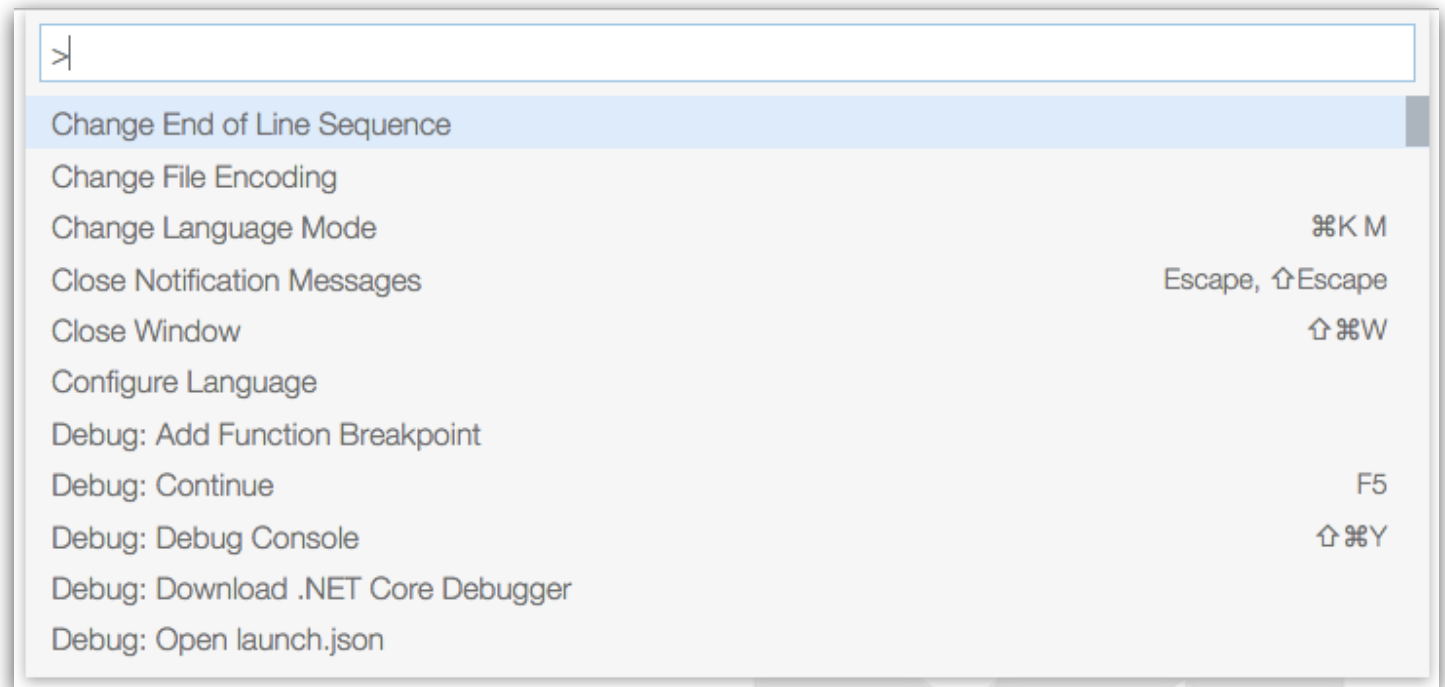
1. VS Quick Open: **Cmd + P**
2. Type: **ext install yo**
3. Open Cmd Palette: **F1**
4. Type: **yo [(sub)generator]**

Demo: Using VS Code with Yeoman



The Command Palette

- Provides quick access to **all functions** in VS Code
- **F1** or Cmd + Shift + P
- Enter command name
- *Note keyboard shortcuts!*



Navigation Basics

Open a file	Cmd + P
Cycle recent files	Ctrl + Tab (forward) Ctrl + Shift + Tab (reverse)
Go to symbol	Cmd + Shift + O
Go to line number	Ctrl + G
Go back	Ctrl + -
Go forward	Ctrl + Shift + -
Go to definition , Peek definition	F12, Alt + F12
Find all references	Shift + F12
Show & cycle errors and warnings	Cmd + Shift + M F8 (forward), Shift + F8 (reverse)

Trigger Intellisense

Trigger **intellisense**

- also works with *package/project* **JSON**

Ctrl + Space

```
greet(): string {  
    return "Hello " + this.message.;  
}
```

- search
- slice
- split
- substr
- substring (method) String.substring(start: number, end?: number): s
Returns the substring at the specified location within a String object. ⓘ
- toLocaleLowerCase
- toLocaleUpperCase

Show Parameter Info

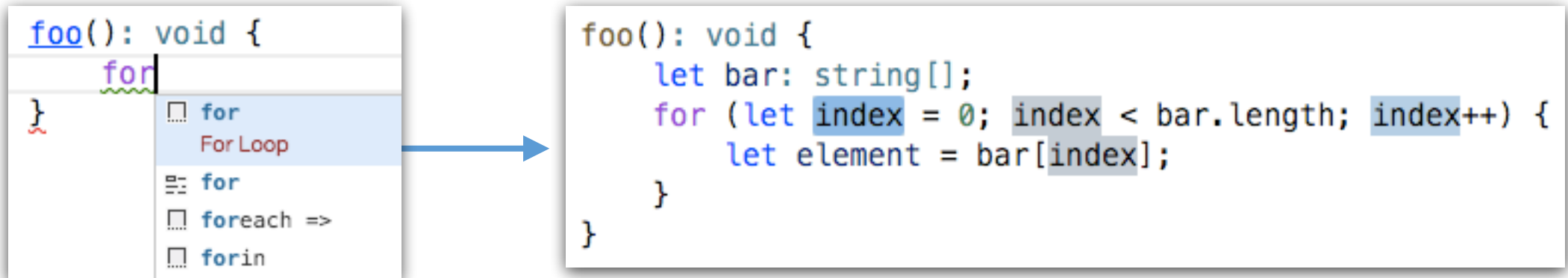
Show parameter info	Cmd + Shift + Space
Cycle through overloads	Up and down arrows

```
public class Program
{
    0 references
    public static void Main
    {
        Console.WriteLine()
    }
}
```

void Console.WriteLine(string format, object arg0, object arg1, object arg2)
^ 15 <member
v name="M:System.Console.WriteLine(System.String,System.Object,System.C

Code Snippets

- Start typing or press **Cmd + Space** to use **code snippets**
- Built-in snippets for **TypeScript, C#**
- Install other snippets as **extensions**
- *Create your own!*



Format Code, Comments, Markdown

Format code, toggle comment

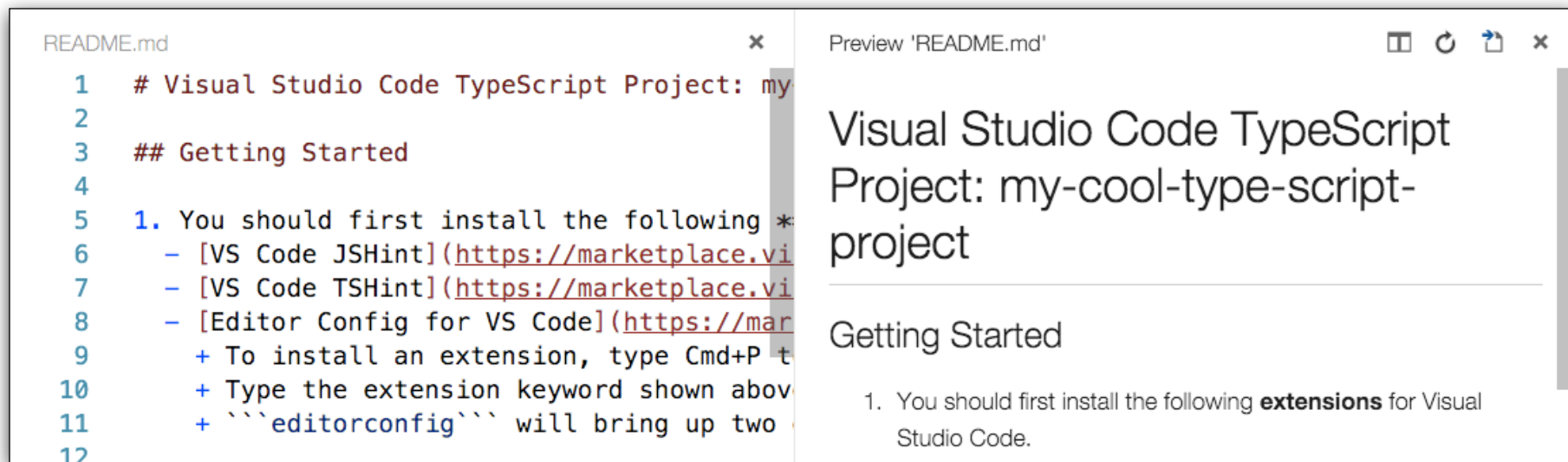
Shift + Alt + F, Cmd + /

Preview Markdown

Cmd + Shift + V

Split window, switch windows

Cmd + \, Cmd + 1, 2, 3

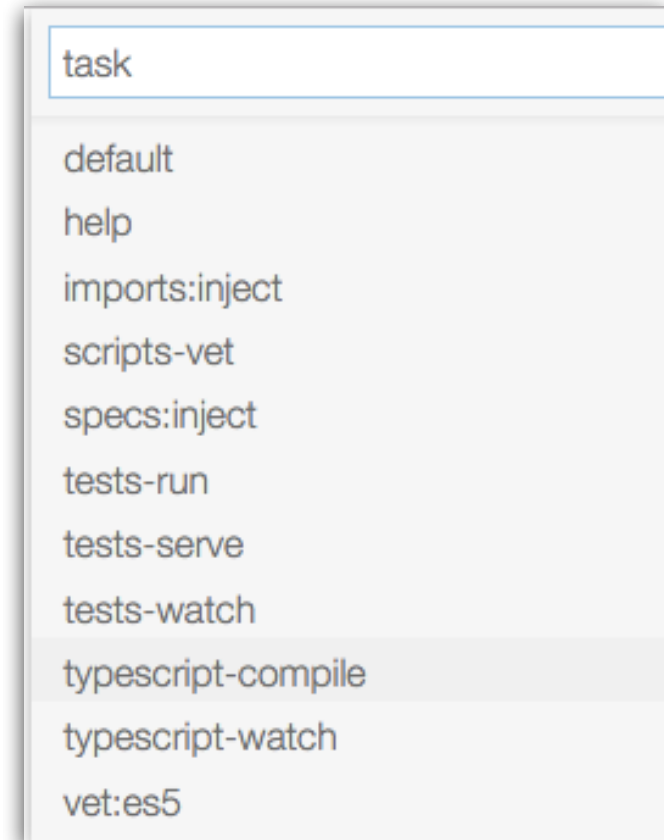


Demo: Navigation, Intellisense, Formatting



Running Tasks

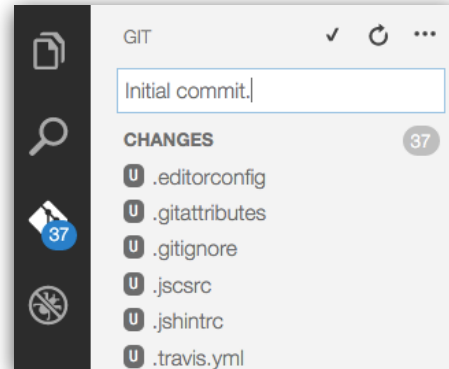
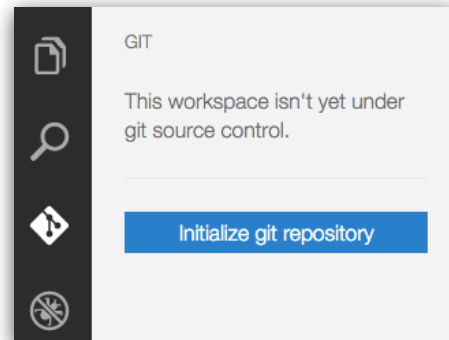
- Tasks **automate** your dev workflow
 - Examples: *compilation, linting, tests, builds*
- VS Code **auto-detects** tasks from a **Gulpfile** (also Grunt, Jake, etc)
 - Can execute some tasks in the **background** (file watches, etc)
- Config runner: **Build** and **Test** tasks
 - Cmd + B, Cmd + T



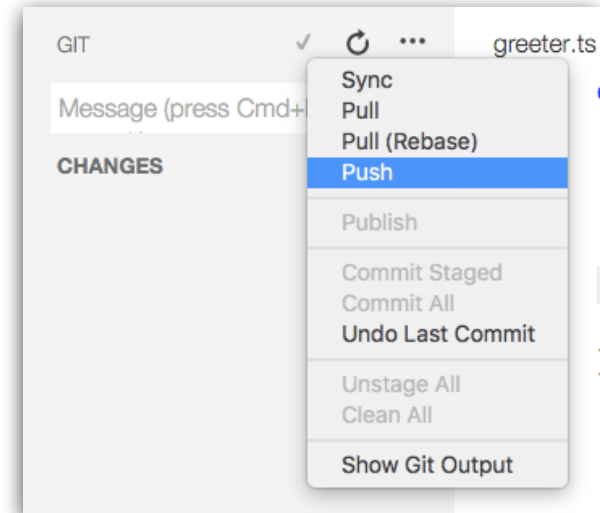
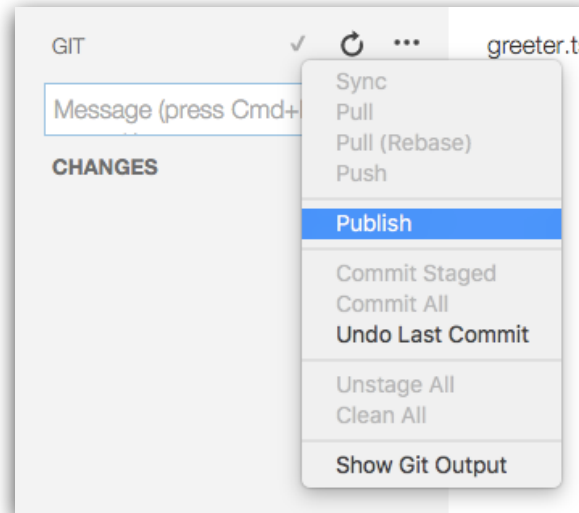
Demo: Running Tasks



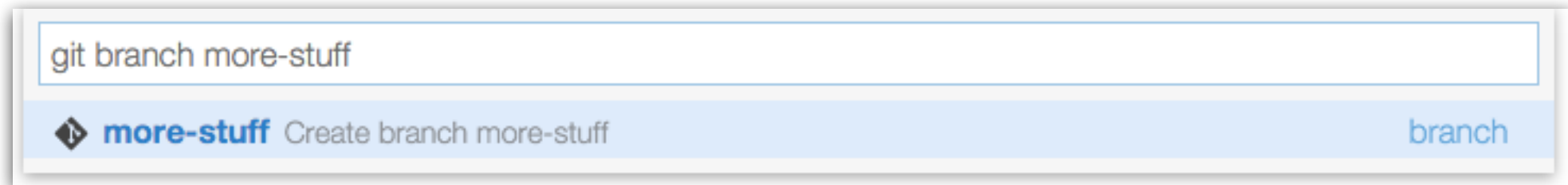
Version Control with Git



```
git remote add origin https://github.com/tonysneed/MyCoolTypeScriptProject.git
```



More Git Goodness



↑ Checkout Branch

↑ Publish Branch

Even More Git Goodness

- View **file diffs**, resolve **conflicts**

greeter.ts src/greeter - Changes on working tree

```
1 export class Greeter {  
2   constructor(public message: string) {  
3   }  
4  
5   greet(): string {  
6     return "Hello " + this.message;  
7   }  
8 }
```

```
1 export class Greeter {  
2   constructor(public message: string) {  
3   }  
4  
5   greet(): string {  
6     return "Ciao " + this.message;  
7   }  
8 }
```

Limitations

- For other Git tasks, use a *real* **Git client** or the **command line**



```
git stash
git rebase HEAD~3 -i
git log --oneline
git reset --hard a9c7080
```

Use VS Code as Your Git Editor

- Configure Git to use **VS Code** for its **text editor**

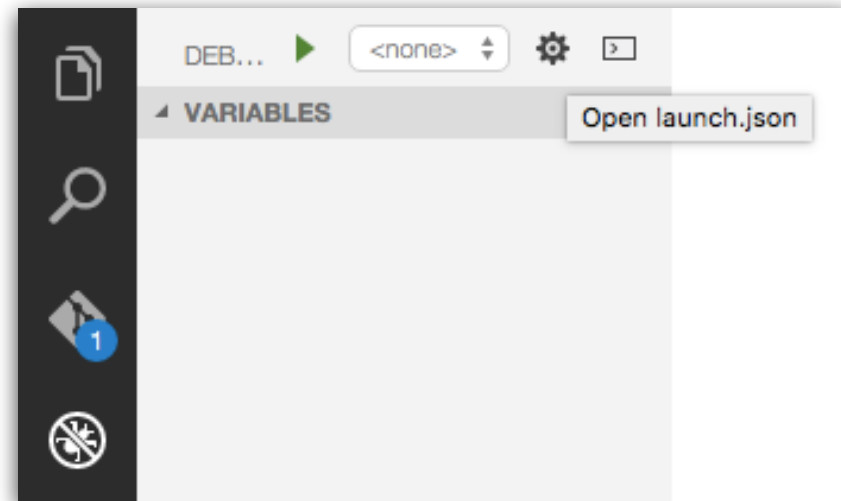
```
git config --global core.editor "code --wait"
```

- Git will then use VS Code for **interactive** *add* and *rebase*

```
git add -p  
git rebase HEAD~3 -i
```

Debugging: Getting Started

- Built-in debugging for **Node.js** (JavaScript, TypeScript, etc)
 - Debug other languages by installing an **extension**
 - **C#** debugging available for **Mono** and **.NET Core**

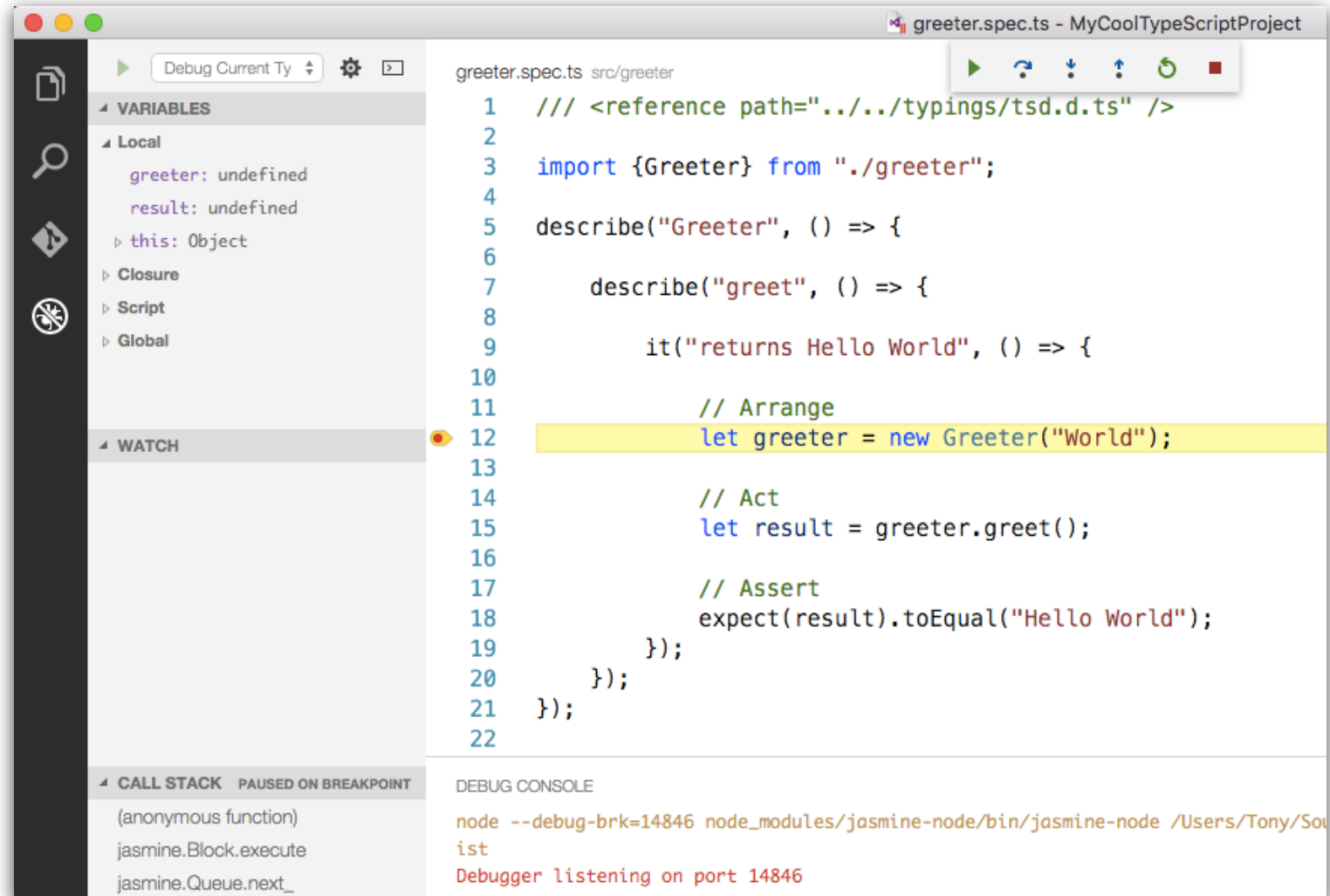


Debugging: Node - TypeScript

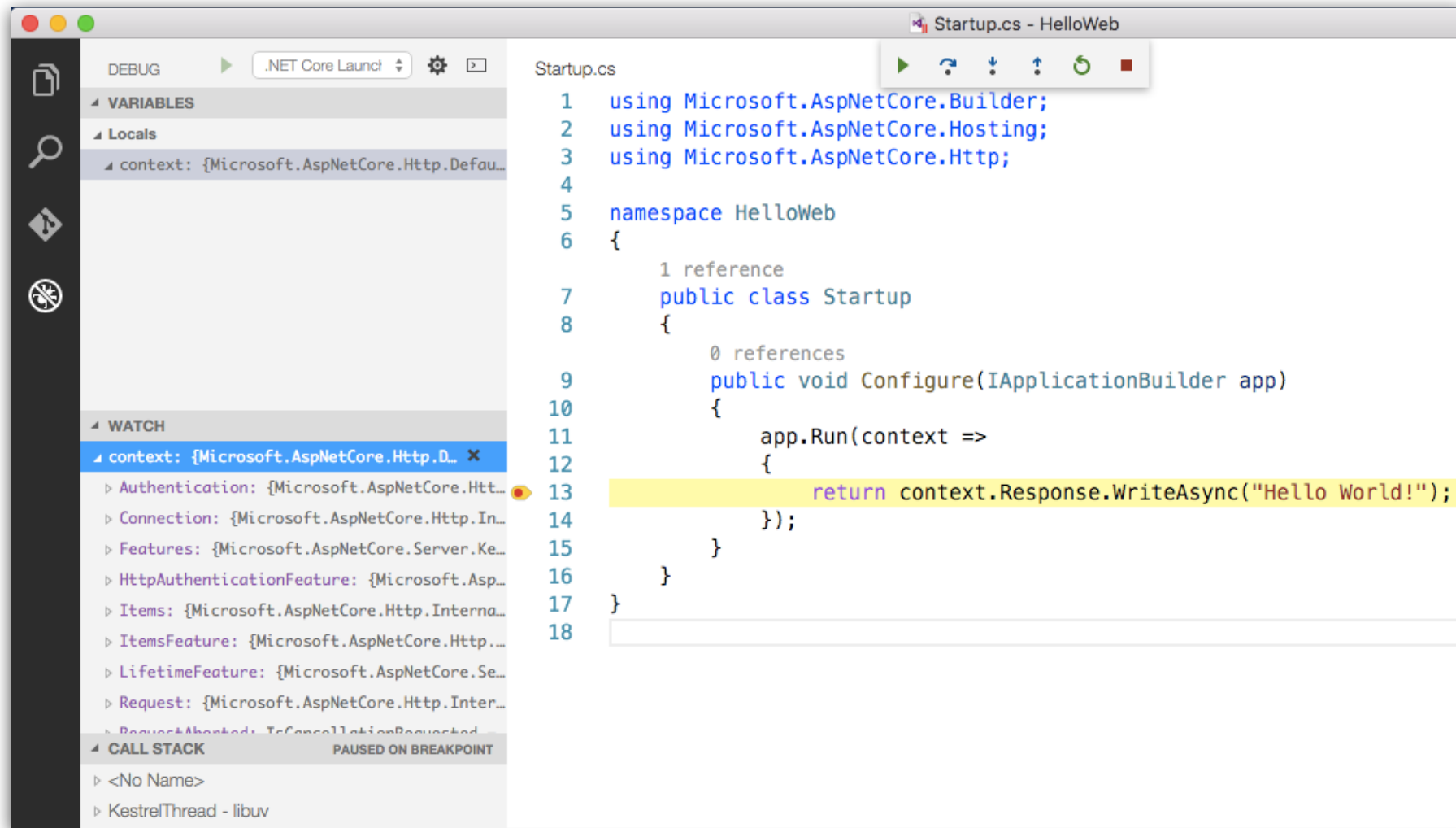
```
{  
  "compilerOptions": {  
    "module": "commonjs",  
    "target": "es5",  
    "sourceMap": true,  
    "declaration": true,  
    "removeComments": true,  
    "noImplicitAny": true,  
    "rootDir": ".",  
    "outDir": "../dist"  
  },  
  "exclude": [  
    "node_modules"  
  ]  
}
```

- Must configure **tsconfig.json**
 - Set **sourceMap** to true
 - Set rootDir, outDir

Debugging: Node - TypeScript



Debugging: C# - .NET Core



Demo: Node Debugging



Additional Resources

- VS Code **Docs**:
<http://bit.ly/vscode-docs>
- “Official” **Tips and Tricks**:
<http://bit.ly/vscode-tips>
- VS Code **eBook** from MS:
<http://bit.ly/vscode-ebook>
- VS Code **Extensions** Marketplace:
<https://marketplace.visualstudio.com/VSCode>



Questions?



Thank You!

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