

# Introduction to TypeScript

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# Questions

1. Who is familiar with TypeScript?
2. Who has used TypeScript on a project?
3. What editor(s) do you use?

# Agenda

- Language Overview (demo)
- TypeScript Overview (8 slides)
- Tooling Overview (demo)
- Wrap Up (3 slides)

# Language Overview

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# Brief History of TypeScript

- Launched in October 2012
  - Open source project managed by Microsoft
  - Team lead by Anders Hejlsberg (Turbo Pascal, Delphi, C#)
- ng-conf 2015 Announcement
  - AtScript merged into TypeScript

# What is TypeScript?

- Superset of JavaScript
- Optional type system
- Features from the future (ES6, ES7)

# Dynamic Typing

- Variable type is interpreted at runtime
- Developer can provide less information
- Bugs are often discovered at runtime
- Reliance on unit testing to improve code quality

# Static Typing

- Variable types are known at compile time
- Compiler can perform type checking
- Allows bugs to be caught early
- Less reliance on parameter checking and some types of unit testing



# Tooling

- TypeScript Playground
- Atom - <https://atom.io/packages/atom-typescript>
- Sublime Text
- WebStorm
- Visual Studio
- NEW - Visual Studio Code (Linux and Mac OS X)
- And others (like Emacs and Vi)

# Rich Tooling Support

- Static checking
- Symbol-based navigation
- Statement completion
- Code refactoring

# Why Do We Care?

- TypeScript is just a tool
  - Increased productivity = happier developers
  - Higher quality solutions = happier users
- TypeScript is not for every project
  - Particularly useful on larger projects with multiple team members

# Flow

- Flow looks interesting
  - More aggressive than TS with implicit typing
- See Jesse's presentation
  - "Flow is the JavaScript type checker I have been waiting for"



# Wrap Up

# Learn JavaScript

TypeScript is not a replacement for learning the JavaScript language and its common design patterns.

# TypeScript 1.5 Features

- Support for Destructuring
- Support for Spread Operator
- Support for ES6 Modules
- Support for for..of
- Support for Computed properties
- Support for ES7 Decorators proposal
- And more...



## Next Steps

- Slides and code on GitHub - <https://github.com/smashdevcode>

# Thanks!

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