

Introduction to TypeScript

Questions

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

Agenda

- TypeScript Overview (7 slides)
- Language Overview (demo)
- Break (5 minutes)
- Converting an Existing App (demo)
- Wrap Up (4 slides)

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

Static Typing

- Variable types are known at compile time
- Compiler can perform type checking
- Allows bugs to be caught early

Tooling

- TypeScript Playground
- Atom - <https://atom.io/packages/atom-typescript>
- Sublime Text
- WebStorm
- Visual Studio
- 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... use it, or don't
- Increased productivity = happier developers
- Higher quality solutions = happier users

Language Overview

Project Tracker App

In order to keep the focus on TypeScript, the following choices were made:

- No SPA framework
- No build process
- No unit tests
- No form validation

App Demo & Conversion

Wrap Up

Learn JavaScript

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

TypeScript 1.5 Features

- Support for Destructuring
- Support for Spread Operator
- Support for ES6 Modules
- Support for for..of
- Support for ES6 Unicode specification
- Support for Symbols
- Support for Computed properties

TypeScript 1.5 Features

- Support for tsconfig.json files
- Support for let and const on ES3/ES5
- Support for tagged string templates on ES3/ES5
- Expose a new editor interface through TS Server
- Support for ES7 Decorators proposal

Next Steps

- Slides and code on GitHub - <https://github.com/portland-typescript-meetup>
- Next Meetup meetings on May 14th and June 11th

Thanks!

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