WRITE BETTER JAVASCRIPT

TYPESCRIPT

# THE WHAT

▸ Developed by Microsoft for internal use in 2010

▸ Public release in 2012

▸ Superset of JavaScript

 ▸ All valid JS is valid TS

▸ Adds optional static typing to your JavaScript

▸ Write TS in development, ship JS to the browser/server

COMPILE TO JS

▸ Feel like JavaScript is missing something? Or it's just quirky? Or you don't want to take the time to learn it?

▸ A collection of languages or extensions that compile to JavaScript

▸ Write in a language you know

▸ Write in paradigms and patterns you're comfortable with

▸ Compile to JS to run in browser/node
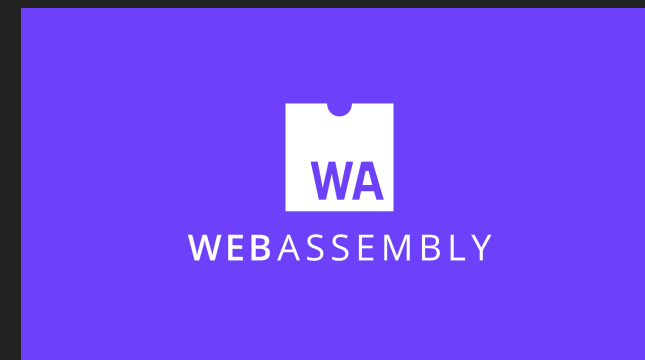
THE WHY

▸ Quick Transition

  ▸ .js -> .ts

  ▸ Optional typings = progressive adoption

▸ Rich IDE Support

  ▸ Intellisense

▸ Self Documenting

▸ Write Modern JavaScript and transpile to target version

▸ Strict typing = More bugs caught in development

GETTING STARTED

▸ Install the compiler

  ▸ yarn global add tsc || yarn add -D tsc

▸ Initialize a TypeScript project

  ▸ tsc --init

  ▸ tsconfig.json

  ▸ Compiler Options

▸ tslint vs. eslint?

EXAMPLES

▸ Built-in Types

▸ Custom Types

▸ Union Types

▸ Interfaces

3RD PARTY LIBRARIES?

▸ Generally only a concern if `noImplicitAny` is set to true

▸ Many modules will include type definitions for their export methods and variables

▸ Some you'll have to install separately

  ▸ Yarn add @types/[package-name]

ENVIRONMENTS

▸ React

　▸ New app: create-react-app my-app --typescript

　▸ Integrate: npm install typescript @types/node @types/react @types/react-
    dom @types/jest

▸ Node

　▸ npm install typescript @types/node -> node lib/index.js

　▸ npx ts-node script.ts

▸ Deno (TS adoption)

　▸ Deno will ship with the TS compiler

RESOURCES

▸ https://github.com/jashkenas/coffeescript/wiki/list-of-languages-that-compile-to-js

▸ https://medium.com/palantir/tslint-in-2019-1a144c2317a9

▸ https://www.typescriptlang.org/docs/handbook/compiler-options.html