Using Typescript

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Note

Just like many other things in this class, you are not obligated to follow this method.

We want to provide you with a new option, not an additional requirement.

So: if you and/or your group is behind on Homework 4 (due March 16), you may spend the time now to work on it if you want.

^ This may or may not apply to the Tuesday recitation, since the homework is due on that day.

What is Typescript?

A superset of Javascript. (It compiles to JS)

Something that is now cool to use.

Statically typed.

Optional.

Helpful (sometimes).

Typed by inference

```
let helloWorld = "Hello World";

//  ^ = let helloWorld: string
```

Typed Interfaces

```
const user = {

 name: "Hayes",

 id: 0,

};
```

Typed Interfaces

```
interface User {
 name: string;
 id: number;
}



const user: User = {
 name: "Hayes",
 id: 0,
};
```

Composable Types

```
type WindowStates = "open" | "closed" | "minimized";

type LockStates = "locked" | "unlocked";

type OddNumbersUnderTen = 1 | 3 | 5 | 7 | 9;
```

Type Casing

```
function wrapInArray(obj: string | string[]) {
 if (typeof obj === "string") {
   return [obj];
//           ^ = (parameter) obj: string

 } else {
   return obj;
 }
}
```

Downsides?

Requires more code (because of the types)

Requires understanding of static typing

Sometimes annoying, especially when you're trying to just bang some prototype feature out really quickly. (TBF: after a while, you get fast at writing TS)

Sometimes more difficult to integrate into a project (more setup)

Alright, let’s go

Integrate typescript into our old codebase.