

A Brief Intro to TypeScript

Qianyi Wu



The reason why TypeScript exists

- Dynamic Typing System in plain JavaScript

```
> var foo = null  
> foo.prop  
TypeError: Cannot read property 'prop' of null
```

- Thing also could work silently, you get undefined value

```
> var bar = {}  
> bar.prop  
undefined
```

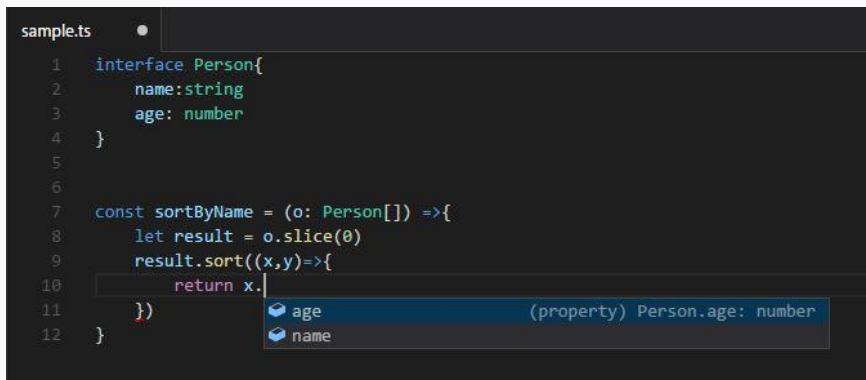
- Type coercing

```
> '3' * '4'
```


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- Limited Tool Support

What TypeScript Offers

- Static Type Check
- Tool support, most IDEs, especially Visual Studio Code
- OOP elements
- Support ES3 or later



The screenshot shows a code editor window titled 'sample.ts'. The code defines an interface 'Person' with properties 'name: string' and 'age: number'. Below the interface, a function 'sortByNames' is defined, which takes an array of 'Person' objects and returns a new array sorted by name. The function uses 'o.slice(0)' and 'result.sort((x,y)=>{' to create and sort the array. An autocomplete dropdown is visible at the end of the line 'return x.', showing two options: 'age' and 'name'. The 'age' option is highlighted, and a tooltip for '(property) Person.age: number' is shown next to it.

```
sample.ts
1 interface Person{
2   name:string
3   age: number
4 }
5
6
7 const sortByNames = (o: Person[]) =>{
8   let result = o.slice(0)
9   result.sort((x,y)=>{
10     return x.
11   })
12 }
```

age (property) Person.age: number
name

Why and Why not

Why?

- More Productivity
- More Reliable Software
- Easier to Debug
- Probably less code
- Easy to go back to Vanilla JS

Why not?

- Not very popular
- Because it is from Microsoft
- Not very popular
- Not very popular

Summarize

- Static Typing
- Tool support
- OOP elements

More Info

Official Website <https://www.typescriptlang.org/>

DefinitelyTyped <http://definitelytyped.org/>

Latest Features

<https://github.com/Microsoft/TypeScript/wiki/What's-new-in-TypeScript>