

TypeScript

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What is TypeScript?

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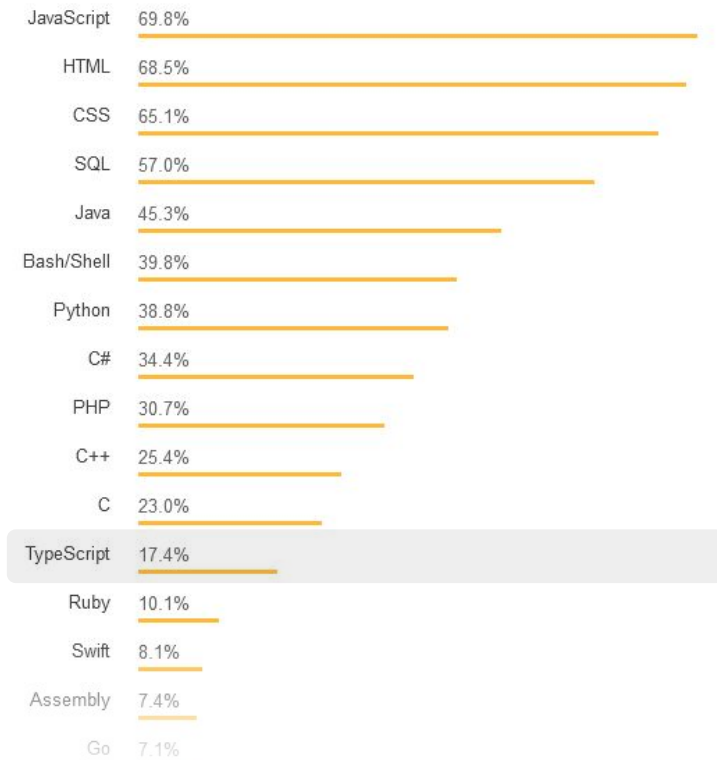
- Superset of JavaScript with:
 - Optional static **typing**
 - Classes
 - Interfaces
 - ...
- Compiles to JavaScript
- Enhanced IDE support
- Open source
- Developed by Microsoft

Who uses TypeScript?

12th

most used language

StackOverflow 2018

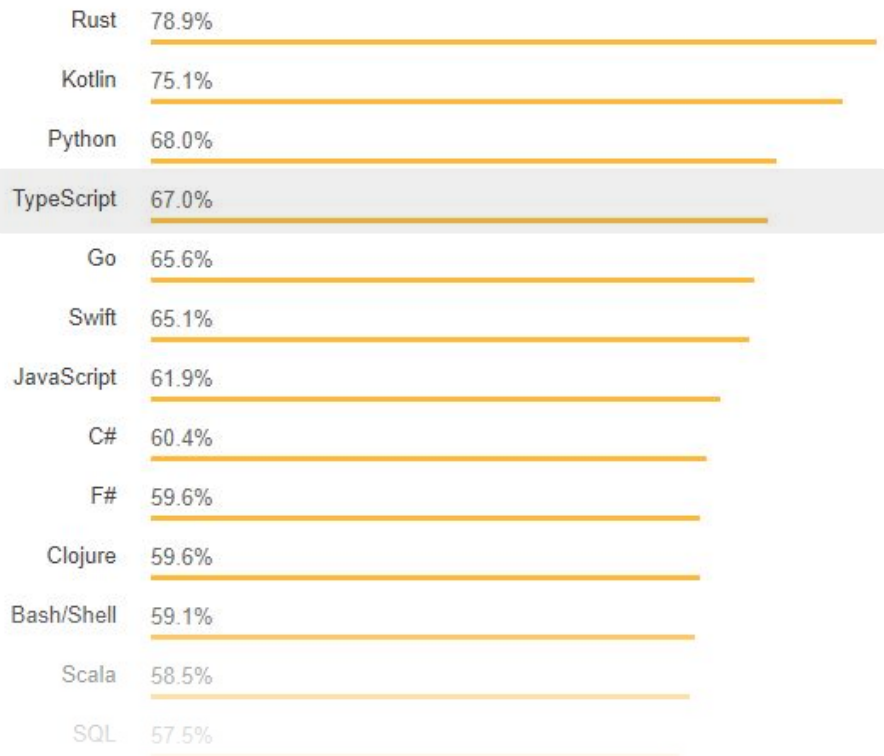


Who loves TypeScript?

4th

most loved language

StackOverflow 2018



History

2012



Anders Hejlsberg



2013



2014



New Compiler!

Let's Code!

Hello World

```
function greeter(person) {  
  return "Hello, " + person;  
}  
  
let user = "Jane User";  
  
document.body.innerHTML = greeter(user);
```

Type error

```
function greeter(person: string) {  
    return "Hello, " + person;  
}  
  
let user = [0, 1, 2];  
  
document.body.innerHTML = greeter(user);
```

error TS2345: Argument of type 'number[]' is not assignable to parameter of type 'string'.

Interfaces

```
interface Person {  
    firstName: string;  
    lastName: string;  
}  
  
function greeter(person: Person) {  
    return "Hello, " + person.firstName + " " + person.lastName;  
}  
  
let user = { firstName: "Jane", lastName: "User" };  
  
document.body.innerHTML = greeter(user);
```

Classes

```
class Student {
  fullName: string;
  constructor(public firstName: string, public middleInitial: string, public lastName: string) {
    this.fullName = firstName + " " + middleInitial + " " + lastName;
  }
}

interface Person {
  firstName: string;
  lastName: string;
}

function greeter(person : Person) {
  return "Hello, " + person.firstName + " " + person.lastName;
}

let user = new Student("Jane", "M.", "User");

document.body.innerHTML = greeter(user);
```

But... Is it worth?

Pros

- Support for newest JavaScript
- Code readability
- Fewer errors due to the compiler
- If you know JS, you can learn TS fast
- Optional static typing
- Type inference
- Richer IDE experience
- Growing community

Cons

- Libraries
- Complex
- Compilation takes time
- Small community

Summary

- On small projects, JavaScript
- On big projects, TypeScript
- Bug prevention
- Community

Questions

References

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Work distribution

PRESENTATION

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Thank You