

The background features a series of concentric circles in light gray, some solid and some dashed, creating a subtle pattern. Overlaid on this is a large, solid blue speech bubble with a pointed tail at the bottom center. The text is centered within the blue bubble.

Introduction to TypeScript:

Should we migrate to TypeScript?

Perkenalan

Nama: Kurniawan

TTL: Bangkalan, 9 Mei 1993

**Alamat: Kedungwonokerto, Prambon,
Sidoarjo**

**Aktifitas: Bekerja di salah satu startup
bernama Lumpang sebagai CTO**

**Fokus: Saat ini senang mengulik dunia
Backend dan Mobile developer**



JavaScript

A yellow square containing the letters 'JS' in a large, bold, black sans-serif font.

JS

- JavaScript is the programming language of HTML and the Web.

The Node.js logo is centered on the page. It consists of a blue speech bubble with a tail pointing downwards. Above the speech bubble is a solid blue horizontal bar. The background features a series of concentric, overlapping circles in light gray, some of which are dashed.

Node.js



- Node.js is an open source server environment.
- Node.js allows you to run JavaScript on the server.

The image features the TypeScript logo, which consists of a blue speech bubble with a small tail pointing downwards. The word "TypeScript" is written in white, sans-serif font inside the bubble. The background is white with faint, light gray concentric circles and dashed lines radiating from the center, creating a subtle pattern.

TypeScript



- is an open source programming language developed and maintained by Microsoft.
- It is a strict syntactical superset of JavaScript, and adds optional static typing to the language.
- TypeScript is a typed superset of JavaScript that compiles to plain JavaScript



Get TypeScript

Get TypeScript

Node.js

The command-line TypeScript compiler can be installed as a Node.js package.

INSTALL

```
npm install -g typescript
```

COMPILE

```
tsc helloworld.ts
```

Visual Studio



Visual Studio 2019



Visual Studio Code



Visual Studio 2017

And More...



Sublime Text



Atom



Eclipse



Emacs



WebStorm



Vim

The background features a series of concentric circles in light gray, some solid and some dashed, creating a ripple effect. A bright blue speech bubble is centered on the page, pointing downwards.

Example



```
let fullName: string;  
let age: number;
```

```
fullName = "surabaya"; // Mantap  
fullName = 123; // Error
```

```
age = 12345; // Mantul  
age = "12345"; // Error
```



surabaya.js • Following



surabaya.js Typescript Basic

Pada Typescript kita bisa menentukan tipe tertentu pada sebuah variable, variable yang sudah memiliki tipe ini tidak bisa diisi dengan sembarang data, hal ini membuat kode yang kita tulis jauh lebih aman.

[#ts](#) [#typescript](#) [#javascript](#) [#js](#)
[#surabaya](#) [#programming](#) [#coding](#)
[#nodejs](#)

16w



minehp js ato ts...? 🤔😂😂



16w 2 likes Reply



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FEBRUARY 19

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Remember that



Let's Code



Hello World



```
console.log('hello world')
```

```
const nama: string = 'surabaya js'  
const sayHello = () => {  
  console.log(`Halo ${nama}`)  
}  
sayHello()
```

var, const, let



```
const firstName = 'Thor'

var animal = 'dog'

let canFly: boolean = false

function changeAnimal(kind: string) {
  const firstName = 'Marcopolo'

  animal = kind
  if (kind === 'bird') {
    canFly = true
  }
}

changeAnimal('bird')

animal = 'cat'
```


Callback & Promise

```
// Callback
function isGenap(num: number, cb: any) {
  if (num % 2 === 0) {
    cb(true)
  } else {
    cb(false)
  }
}

isGenap(4, function(result: boolean) {
  if (result) {
    console.log('Genap')
  } else {
    console.log('Ganjil')
  }
})
```

```
// Promise
function isGanjil(num: number) {
  return new Promise(function(resolve, reject) {
    if (num % 2 !== 0) {
      resolve(true)
    } else {
      resolve(false)
    }
    reject()
  })
}

isGanjil(8).then(function(result) {
  if (result) {
    console.log('Ganjil')
  } else {
    console.log('Genap')
  }
})
.catch(function(error) {
  console.log('Gak tau')
})
```

Class

```
class Bank {
  private _balance: number
  constructor(balance: number) {
    this._balance = balance
    console.log(`constructor balance = ${this._balance}`)
  }

  public withdraw(amount: number): any {
    if (this._balance > amount) {
      this._balance -= amount
      return {
        status: true,
        message: 'Berhasil',
        data: {
          newBalance: this._balance
        }
      }
    }
    return {
      status: false,
      message: 'Gagal saldo tidak cukup'
    }
  }

  public get balance(): number {
    return this._balance
  }

  public set balance(amount: number) {
    this._balance = amount;
    console.log('balance', this._balance)
  }
}

const budi = new Bank(1000)
budi.balance = 2000
console.log('withdraw', budi.withdraw(200))
console.log('balance', budi.balance)
```

Generic



```
const identity = <T, P>(name: T, age: P): T => {  
  return name  
}
```

```
const person = identity<string, number>('Stark', 67)  
console.log(person)
```

Optional Parameter



```
const optionalParamFunc = (name: string, gender?: string, age: number = 23) => {  
  const person = {  
    name: name,  
    age: age,  
    gender: gender  
  }  
  console.log(person)  
}  
  
optionalParamFunc('parto', 'm')
```

Interface

```
interface IArgs {  
  name: string  
  age: number  
}  
  
function initPerson(args: IArgs) {  
  const person = {  
    age: args.age,  
    name: args.name  
  }  
  console.log(person)  
}  
  
const argsPerson: IArgs = {  
  age: 12,  
  name: 'parto'  
}  
initPerson(argsPerson)
```

The background features a series of concentric circles in light gray, some solid and some dashed, creating a ripple effect. In the center, there is a large blue speech bubble with a white outline. Inside the bubble, the text "Pros & Cons" is written in white. Above the bubble, there is a solid blue horizontal bar.

Pros & Cons



PROS

- Making it easier to read and debug.
- Highly productive development like static checking – FAST DEBUGGING.
- TypeScript gives us all the benefits of ES6 (ECMAScript 6)
- TypeScript code can be compiled as per ES5 and ES6 standards to support the latest browser.
- Superset of JavaScript
- Used in popular frameworks
- Typescript is just JavaScript (with some additional features)
- Portable



CONS

- Learning curve
- Type annotations everywhere in their code - Wasting time
- Produce bigger size better than origin js file (it added roughly 30% to the total code size)

Pustaka

- <https://www.w3schools.com/js/>
- <https://www.w3schools.com/nodejs/>
- <https://www.typescriptlang.org/>
- https://en.wikipedia.org/wiki/Microsoft_TypeScript
- https://www.instagram.com/p/BuEX_ZIA-T/
- <https://dzone.com/articles/what-is-typescript-and-why-use-it>
- <https://engineering.carsguide.com.au/es5-vs-es6-syntax-6c8350fa6998>