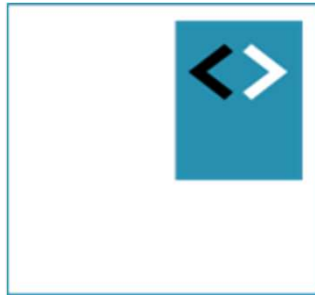


# Training TypeScript

## Short recap – day #3



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## On day #3, Sept. 26<sup>th</sup> we covered:

- Type Guards
  - `in` and `asserts` operators
- Type Queries
  - Keywords `typeof` and `keyof`
  - `<T, K extends keyof T>`

```
function getProperty<T, K extends keyof T>(obj: T, key: K) {  
    return obj[key]; // type safe way  
}  
  
const personName = getProperty(person, 'name');
```

# Cont'd

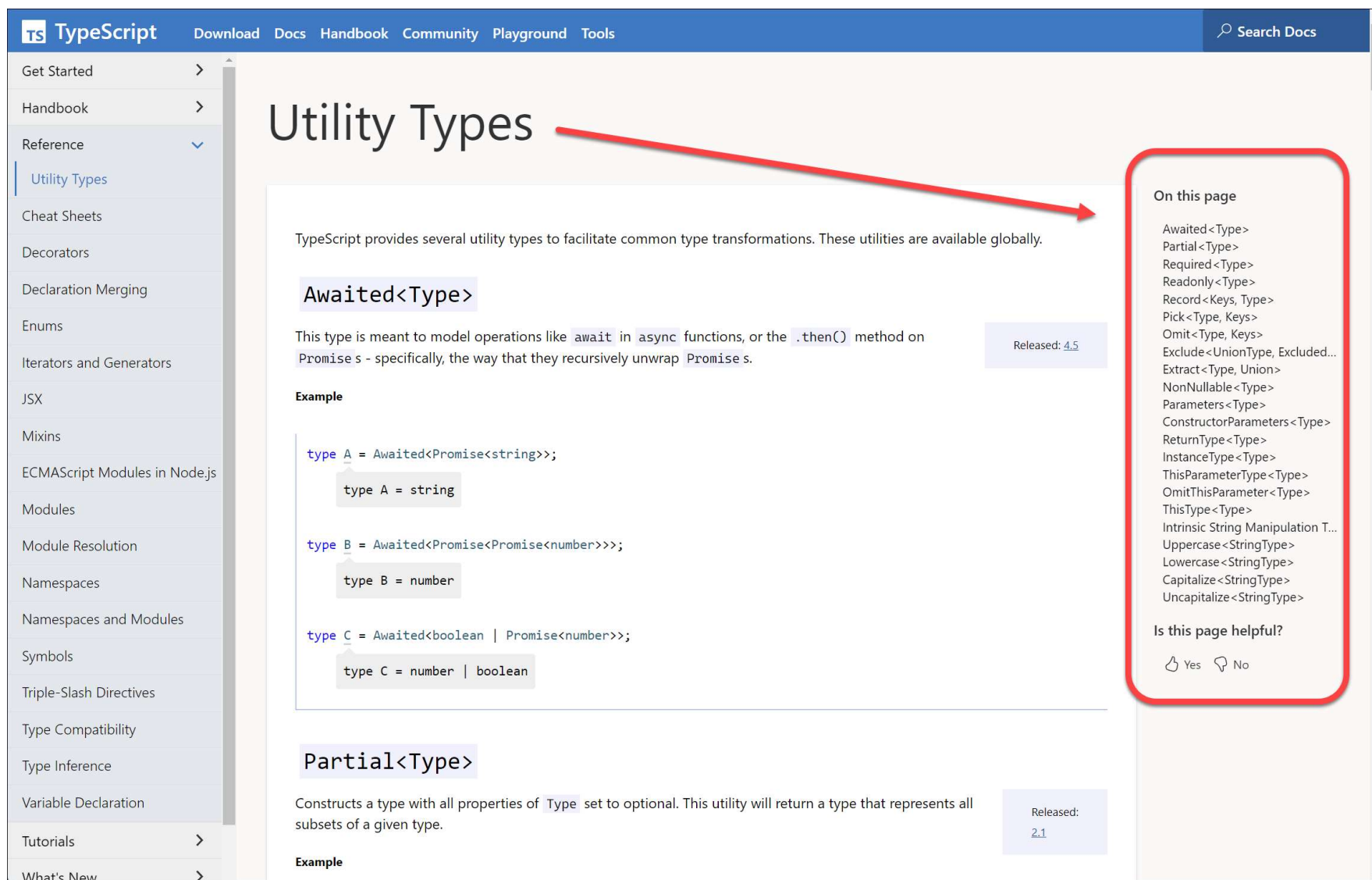
- **Mapped types:**

- `Readonly<T>`
- `Partial<T>`
- `Required<T>`
- `Extract<T, U>`
- `Pick<T, K>`
- `Record<K, T>`

- **Conditional Types**

- `type SomeType = T extends U ? TypeX : TypeY`

# There are A LOT of utility types



**Utility Types**

TypeScript provides several utility types to facilitate common type transformations. These utilities are available globally.

**Awaited<Type>**

This type is meant to model operations like `await` in `async` functions, or the `.then()` method on `Promise`s - specifically, the way that they recursively unwrap `Promise`s.

Released: 4.5

**Example**

```
type A = Awaited<Promise<string>>;
// type A = string

type B = Awaited<Promise<Promise<number>>>>;
// type B = number

type C = Awaited<boolean | Promise<number>>>;
// type C = number | boolean
```

**Partial<Type>**

Constructs a type with all properties of `Type` set to optional. This utility will return a type that represents all subsets of a given type.

Released: 2.1

**On this page**

- Awaited<Type>
- Partial<Type>
- Required<Type>
- Readonly<Type>
- Record<Keys, Type>
- Pick<Type, Keys>
- Omit<Type, Keys>
- Exclude<UnionType, Excluded...
- Extract<Type, Union>
- NonNullable<Type>
- Parameters<Type>
- ConstructorParameters<Type>
- ReturnType<Type>
- InstanceType<Type>
- ThisParameterType<Type>
- OmitThisParameter<Type>
- ThisType<Type>
- Intrinsic String Manipulation T...
- Uppercase<StringType>
- Lowercase<StringType>
- Capitalize<StringType>
- Uncapitalize<StringType>

**Is this page helpful?**

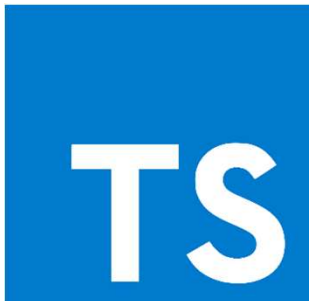
Yes No

<https://www.typescriptlang.org/docs/handbook/utility-types.html>

*Questions?*

# Today - 27 September 2022

- Short recap
- Creating **overloaded** functions
- Types in combination with **React Components**
  - And UI libraries
  - `(almost no slides)`
- Common TypeScript **mistakes**
- Goodbye...





# Contents

- Why TypeScript
- Installing TypeScript
- Keyword 'this'
- Primitive Types
- Return types, classes, interfaces and more
- TypeScript Modules & namespaces
- Generics<T> + Type constraints
- Type Guards
- Type Queries
- Mapped Types
- Interfaces vs. Types
- React + TypeScript
- Common mistakes.
- ...live coding...





## Training TypeScript

5 dagen | € 3.199 | Eerstvolgende startdatum 28 september

Bel mij

Ik wil me inschrijven

Overzicht

Inleiding

**Modulen**

Extra

Startdata & Locaties

Tarieven

Virtuele training

### Training TypeScript: Modulen

Tijdens de training TypeScript behandelen we de volgende modules:

- Kennismaken met TypeScript
  - Wat is TypeScript?
  - Hoe kan het waarde toevoegen aan JavaScript?
  - De basistermen: Interfaces, classes, etc.
  - ECMAScript en TypeScript
- Configureren van ontwikkelomgeving
  - TypeScript installeren
  - TypeScript omgeving opzetten in Microsoft Visual Studio 2015
- Gebruiken van built-in types
  - Number
  - Boolean
  - String
  - Object
  - Any
  - Void
- Type fundamentals
  - Object shaped

### Vragen? Wij helpen je graag verder!

 **0880 444 222**

(maandag t/m vrijdag tussen 9:00 en 17:30 uur)

 **Stuur mij een brochure**

 **Bel mij terug**

 **Stuur mij een vrijblijvend voorstel**

 **Ik wil me inschrijven**

### Gratis Typescript webinars en blogs

# Goals?

1. You will have a **general understanding** of the way modern web apps are created using JavaScript, TypeScript and build tools.
2. You *will* learn about the **structure and architecture** of TypeScript, compilation, and running the resulting .js in Node or in the Browser.
3. You are familiar with the **main TypeScript concepts**. You can always google the code details yourself.
4. You will have **some hands-on experience** regarding creating apps and code, pages, classes, interfaces, generics and more.

# On behalf of Eduvision,

The screenshot shows the Eduvision website with the following elements:

- Header:** Logo 'eduvision opleiding & training', search bar 'Zoeken naar: bijv. data analyse', and navigation menu: CATEGORIE, HOME, TRAININGEN, WHITEPAPERS, GRATIS WEBINARS, BLOG, OVER ON...
- Main Content:**
  - IT & TECH:** A green box with a lightbulb icon and a red button 'bekijk trainingen'.
  - TRAININGEN:** A list of training topics including Power BI, Azure Data Factory, CISSP, etc.
  - GRATIS WEBINARS:** A green box with a list of webinars: Power BI in de praktijk, Data Analyse in de praktijk, Python, Programmeren in C# / Java...
- Footer:** A section titled 'BEOORDELINGEN' with five stars and a link 'Bekijk alle beoordelingen'. It contains two testimonials from clients.