

Week 2: Intro to Typescript

We'll start by reviewing the most basic and common types you might encounter when writing TypeScript code. These will form the core building blocks of more complex types that we will construct. TypeScript has many ways to describe how functions can be called. This week we will learn about how to write types that describe functions.

Objectives

- Understand the difference between Javascript and Typescript
 - Know what the advantages are of using a strictly typed language
- Ability to work with a compiler (tsc)
- Understanding of all basic types
 - string, boolean, number, Arrays, Tuples, any, unknown, void, null and undefined, never, object
- Creating your own types
- Creating and using typed functions

Materials

Typescript basics

Follow one of the Typescript tutorials.

- [How To Use Basic Types in TypeScript | DigitalOcean](#)
- [Documentation - The Basics | TypeScript](#)
- [TypeScript Tutorial | W3C](#)
- [Introduction | Learn TypeScript](#)
- [How To Create Custom Types in TypeScript | DigitalOcean](#)
- [Creating Types | Learn TypeScript](#)

Exercises

- [Exercise v3.0 \(up to Classes\) | WC3](#)
- [Exercises 1 to 16 | Typescript-exercises](#)

Tools

- [TS Playground - An online editor for exploring TypeScript and JavaScript](#)

Assessments

[Create a new repository on Github](#) on Github hyf-digitalents-typescript-week2. Clone your new repository locally on your computer and create the following in the project folders.

- assessment1
- assessment2
- assessment3

Please submit each assessment on Github and update your instructor about the submission.

Or alternatively you can fork the starter repository

<https://github.com/HackYourFutureBelgium/typescript-week2>

Assessment 1: Not **any**one can do this

Tags: Typescript, Basic Types, Function, Object, Custom Types

Remove the usage of "any" in the provided code snippet.

Type the statements and expressions according to the instructions.

Assessment 2: Multiples Typed

Tags: Typescript, Functions, Conditionals, Basic Types

If we list all the natural numbers below 10 that are multiples of 3 or 5, we get 3, 5, 6 and 9. The sum of these multiples is 23.

Find the sum of all the multiples of 3 or 5 below 1000.

This is the same assessment as week 1 but now we solve it using Typescript.

Source: <https://projecteuler.net/problem=1>

Assessment 3: Let's get Quizzical

Tags: Typescript

You still love a good quiz, right?.

Making use of the [Trivia API](#) requests a set of questions, filter, sort them and presents them to the user.

- Fetch a set of questions from `https://the-trivia-api.com/api/questions?limit=5`
- Filter out any questions with tag "film"
- Sort them according to the difficulty
- Log the output to the user



Attention: Pay attention to your types and a type the "Question" appropriately

Sample Output:

```
Who succeeded Winston Churchill when he resigned in 1955?  
Which author wrote 'The Left Hand of Darkness'?  
Who was the first female American astronaut?
```