TypeScript Minified

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1 Introduction

This is a book from the *Minifed* series on TypeScript. It goes through the essentials very fast so that you can get up to speed with TypeScript. The theme of this book is TypeScript and Angular2.

2 Object Orientation

Interfaces and classes are heavily used in Object Oriented Programming. In this chapter we will focus on these topics.

3   Interface

- An Interface is defined using the `interface` keyword
- Interfaces are used only during compilation time to check types
- By convention, interface definitions start with an `I`, e.g. : `IPoint`
- Interfaces are used in classical object oriented programming as a design tool
- Interfaces don't contain implementations
- They provide definitions only
- When an object implements an interface, it must adhere to the contract defined by the interface
- An interface defines what properties and methods an object must implement
- If an object implements an interface, it must adhere to the contract. If it doesn't the compiler will let us know.
- Interfaces also define custom types

3.1   Basic Interface

Below is an example of an Interface that defines two properties and three methods that implementers should provide implementations for:

```typescript
interface IMyInterface {
  // some properties
  id: number;
  name: string;

  // some methods
  method(): void;
  methodWithReturnVal():number;
  sum(nums: number[]):number;
}
```

Using the interface above we can create an object that adheres to the interface:

```typescript
let myObj: IMyInterface = {
  id: 2,
```

2

```
3    name: 'some name',

4

5    method() { console.log('hello'); },
6    methodWithReturnVal () { return 2; },
7    sum(numbers) {
8      return numbers.reduce( (a,b) => { return a + b } );
9    }
10   };
```

Notice that we had to provide values to **all** the properties defined by the Interface, and the implementations for **all** the methods defined by the Interface.

And then of course you can use your object methods to perform operations:

```
1    let sum = myObj.sum([1,2,3,4,5]); // -> 15
```

3.2   Some Angular Interfaces

Angular uses interfaces all over the place. The interfaces that are used very often are the *LifeCycle Hooks*.

3.2.1   LifeCycle Interfaces

```
1    export interface OnChanges {
2      ngOnChanges(changes: {
3        [key: string]: SimpleChange
4      });
5    }

6

7    export interface OnInit {
8      ngOnInit();
9    }

10

11   export interface OnDestroy {
12     ngOnDestroy();
13   }
```

3