

TypeScript object Type

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Summary: in this tutorial, you'll learn about the TypeScript `object` type and how to write more accurate `object` type declarations.

Introduction to TypeScript object type

The TypeScript `object` type represents all values that are not in primitive types.

The following are primitive types in TypeScript:

- `number`
- `bigint`
- `string`
- `boolean`
- `null`
- `undefined`
- `symbol`

The following shows how to declare a variable that holds an object:

```
let employee: object;

employee = {
  firstName: 'John',
  lastName: 'Doe',
  age: 25,
```

```
    jobTitle: 'Web Developer'
  };

  console.log(employee);
```

Output:

```
{
  firstName: 'John',
  lastName: 'Doe',
  age: 25,
  jobTitle: 'Web Developer'
}
```

If you reassign a primitive value to the `employee` object, you'll get an error :

```
employee = "Jane";
```

Error:

```
error TS2322: Type '"Jane"' is not assignable to type 'object'.
```

The `employee` object is an `object` type with a fixed list of properties. If you attempt to access a property that doesn't exist on the `employee` object, you'll get an error:

```
console.log(employee.hireDate);
```

Error:

```
error TS2339: Property 'hireDate' does not exist on type 'object'.
```

Note that the above statement works perfectly fine in JavaScript and returns `undefined` instead.

To explicitly specify properties of the `employee` object, you first use the following syntax to declare the `employee` object:

```
let employee: {  
  firstName: string;  
  lastName: string;  
  age: number;  
  jobTitle: string;  
};
```

And then assign the `employee` object to a literal object with the described properties:

```
employee = {  
  firstName: 'John',  
  lastName: 'Doe',  
  age: 25,  
  jobTitle: 'Web Developer'  
};
```

Or you can combine both syntaxes in the same statement like this:

```
let employee: {  
  firstName: string;  
  lastName: string;  
  age: number;  
  jobTitle: string;  
} = {  
  firstName: 'John',  
  lastName: 'Doe',  
  age: 25,  
  jobTitle: 'Web Developer'  
};
```

object vs. Object

TypeScript has another type called `Object` with the letter `O` in uppercase. It's important to understand the differences between them.

- The empty type `{}` refers to an object that has no property on its own.