

### Types

String	let customerName: string= "John Doe";
Number	let price: number = 19.95;
Boolean	let shipped: boolean = false;
Date	let orderDate: Date = new Date(2017, 2, 9);
Any	let something: any = "Can be anything";
Enum	enum Color {Red, Green, Blue};
Array	let cards: string[] = ['Visa', 'MasterCard'];
Null	let orderId: number = null;
Tuple	let stateTaxRates: [string, number];
Void	function log(msg: string): void { console.log(msg); }
Const	const lives: number = 99;

### Classes

```
class OrderLogic {
    constructor( public order: IOrder) { }
    get OrderTotal(): number {
        let sum: number = 0;
        for (let orderDetail of this.o -
rder.o rde rDe tails)
            {
                sum += orderD eta il.p rice;
            }
        return sum;
    }
}
```

### Abstract Classes

```
abstract class Person {
    name: string;
    monthl ySa lary: number;
    monthl yBe nefits: number;
    abs tract calcSa lary(): number;
}
```

### Inheritance and Implementing Interfaces

```
interface IGPS {
    get Loc ation() number;
}
interface ISelfDrive extends IGPS {
    dri ve( lat itude: number, longitude: number,
elevation: number) : void;
}
class Vehicle {
    make: string;
    model: string;
    year: number;
}
class FlyingCar extends Vehicle implements
ISelfDrive {
    hasGps: boolean;
    dri ve( lat itude: number, longitude: number,
elevation: number) {
    }
    get Loc ati on(): number {
    }
}
```

### Usage

Installing TypeScript npm	npm install -g typescript
Compiling TypeScript	tsc somefile.ts
TypeScript Docs	<a href="http://TypeScriptLang.org">TypeScriptLang.org</a>
Type Definition Files	<a href="http://DefinitelyTyped.org">DefinitelyTyped.org</a>

### Scope/Modifiers

Public (default)	public firstName: string;
Protected	protected inventory: number;
Private	private outOfStock: boolean;
Read Only	readonly pi: number = 3.14159;
Static	static log(msg: string) { console.log(msg) };



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### Interfaces

```
interface IOrderDetail {
    productName: string;
    quantity: number;
    price: number;
    orderDate: Date;
    shipped: boolean;
    //Optional
    outOfStock?: boolean;
    //Method
    calculateTax: (taxRate: number) => number;
}
```

### Optional Parameters

```
class Util {
    log(msg: string, logDate?: Date) {
        if (logDate)
            console.log(logDate + ' ' + msg);
        else
            console.log(new Date() + ' ' + msg);
    }
}
```

### Rest Parameters

```
class Order {
    addOrderDetails(...orderDetails:
    IOrderDetail[]) {
    }
}
```

### Namespaces

```
namespace AcmeCorp.Logging {
    export class Logger {
        static log(msg: string) : void {
            console.log(msg);
        }
    }
}
/// <reference path="AcmeCorp.Logging.ts" />
//Alias
import logger = AcmeCorp.Logging.Logger;
namespace AcmeCorp.Online.Store {
    class OrderLogic {
        calculateOrder(): number {
            logger.log("calculating
order");
            return 0;
        }
    }
}
```



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