

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.order.orderDetails)
        {
            sum += orderDetail.price;
        }
        return sum;
    }
}
```

Abstract Classes

```
abstract class Person {
    name: string;
    monthlySalary: number;
    monthlyBenefits: number;
    abstract calculate(): number;
}
```

Inheritance and Implementing Interfaces

```
interface IGPS {
    getLocation(): number;
}
interface ISelfDrive extends IGPS {
    drive(latitude: number, longitude: number,
    elevation: number) : void;
}
class Vehicle {
    make: string;
    model: string;
    year: number;
}
class FlyingCar extends Vehicle implements
ISelfDrive {
    hasGps: boolean;
    drive(latitude: number, longitude: number,
    elevation: number) {
    }
    getLocation(): number {
    }
}
```

Usage

Installing TypeScript npm	npm install -g typescript
Compiling TypeScript	tsc somefile.ts
TypeScript Docs	TypeScriptLang.org
Type Definition Files	DefinitelyTyped.org

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.OnlineStore {
    class OrderLogic {
        calculateOrder(): number {
            logger.log("Calculating
order");

            return 0;
        }
    }
}
```



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