

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	
<pre>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; } }</pre>	

Abstract Classes	
<pre>abstract class Person { name: string; monthlySalary: number; monthlyBenefits: number; abstract calculate(): number; }</pre>	

Inheritance and Implementing Interfaces	
<pre>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 { } }</pre>	

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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