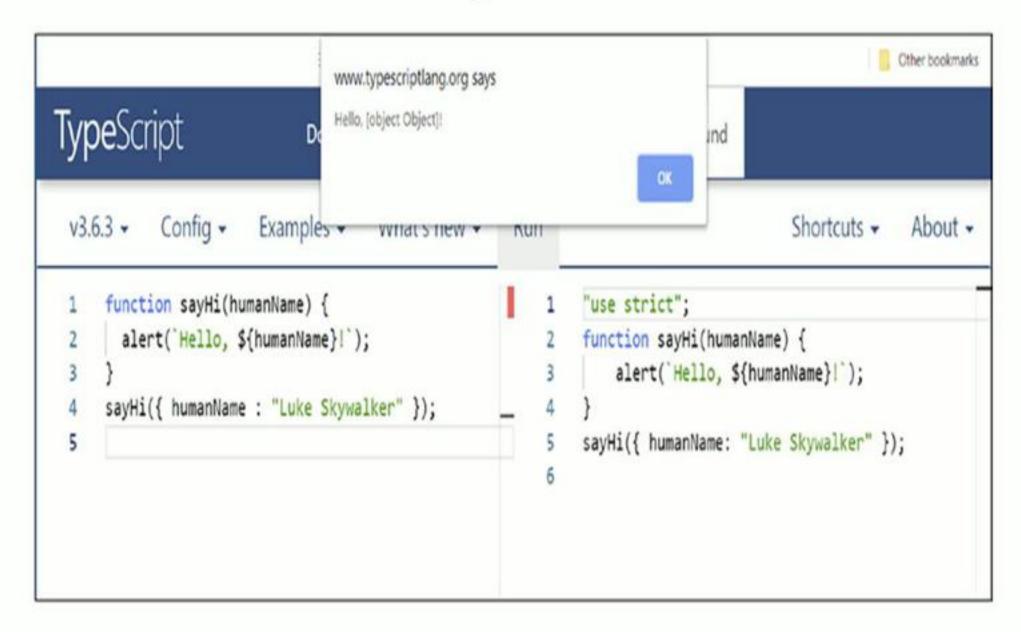


Types

- function sayHi(humanName: string) {
- You can also declare the type a function returns:
- function concatStrings(str1: string, str2: string): string { }

Example code





Types

- function sayHi(humanName: string) {
- You can also declare the type a function returns:
- function concatStrings(str1: string, str2: string): string { }

String

- const bestShowEver = "Babylon 5";
- const bestShowEver: string = "Babylon 5";

Number

- const a: number = 42;
- const b: number = 3.14;
- const a: number = 0xf00d;
- const b: number = 0o744; // Zero followed by lower-case o

Boolean

- const isThisTheBestBookEver: boolean = true;
- const isThisTheBestBookEver: boolean = 1; // Compiler error

Any

- let accountBalance;
- accountBalance = 15000;
- accountBalance = "15000";
- let food: any = "pizza";
- food = 123; // This is now okay



Arrays

- const pets = ["Belle", "Bubbles"];
 const pets: string[] = ["Belle", "Bubbles"];
- const pets: any[] = ["Belle", 42];

Tuples

- const authors = ["Frank", 46];
- const authors: [string, number] = ["Frank", 46];

Enums

- const Pizza = 0;
- const FriedChicken = 1;
- const IceCream = 2;
- enum Food { Pizza, FriedChicken, IceCream };
- let myFavoriteFood: Food.FriedChicken;
- alert(myFavoriteFood);

Function

 let myMathFunction: (num1: number, num2: number) => string; – function add(n1: number, n2: number): string { – return "" + n1 + n2; – myMathFunction = add; – function multiply(a: number, b: number): number { return a * b; myMathFunction = multiply;

Object

```
- let person = {
- firstName : "John", lastName : "Sheridan", age : 52
- };
```

- TypeScript infers the type of the object, including its properties, and this is termed an object type.
- trying to do person = { a :"John", b : "Sheridan", age : 52 } will be an error

```
– let person: {
```

- firstName: string, lastName: string, age: number
- } = {
- firstName: "John", lastName: "Sheridan", age: 52
- };

Null, Void, and Undefined

- let favoriteCar = "Camaro";
- favoriteCar = null;
- null is considered subtypes of all other types
- let myFavoriteNumber: number = null;
- let myFavoriteString: string = null;
- null is undefined
 - let favoriteCar;
 - let favoriteCar = undefined;

Block Scope

```
- function test() {
- if (true) {
- var greeting = "hello";
- }
- alert(greeting);
- }
- test();
```

Arrow Functions

```
    const test = (name) => {

alert(`Hello, ${name}`);
test("Jack");

    const addNums = (a, b) => a + b;

alert(addNums(2, 3));
const addNums = (a: number, b: number):
  number => a + b;
alert(addNums(2, 3));
```

Class

- In TypeScript, a class is similar to a class in other object-oriented programming languages like Java and C#.
- A class is a blueprint for creating objects that share the same properties and behavior.
- It defines the properties and methods of an object, and we can create instances of the class, known as objects, that have their own unique values for the properties.

```
class Person {
 // Properties
 private name: string;
 private age: number;
 // Constructor
 constructor(name: string, age: number) {
  this.name = name;
  this.age = age;
 // Methods
 sayHello() {
  console.log(`Hello, my name is ${this.name}`);
 birthday() {
  this.age++;
  console.log(`Happy birthday! Now I am ${this.age} years old.`);
```

```
class Person {
 // Properties
 private name: string;
 private age: number;
 // Constructor
 constructor(name: string, age: number) {
  this.name = name;
  this.age = age;
 // Methods
 sayHello() {
  console.log(`Hello, my name is ${this.name}`);
 birthday() {
  this.age++;
  console.log(`Happy birthday! Now I am ${this.age} years old.`);
```

