luv2code

TypeScript Variables

Basic Types

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`boolean`	true/false values
`number`	Supports integer and floating point numbers
`string`	Text data. Enclosed in single or double quotes
`any`	Supports "any" datatype assignment
Others …	See details at www.typescriptlang.org

Define Variables

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let <variableName>: <type> = <initial value>;
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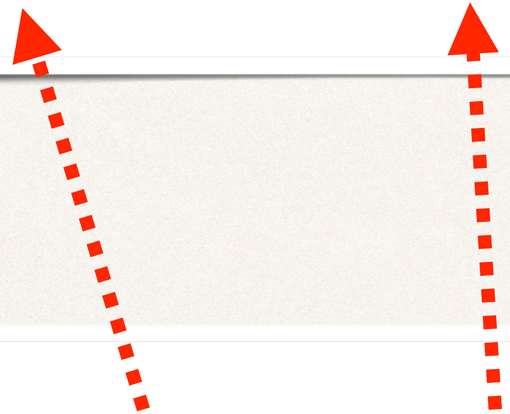

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Define Variables

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let <variableName>: <type> = <initial value>;
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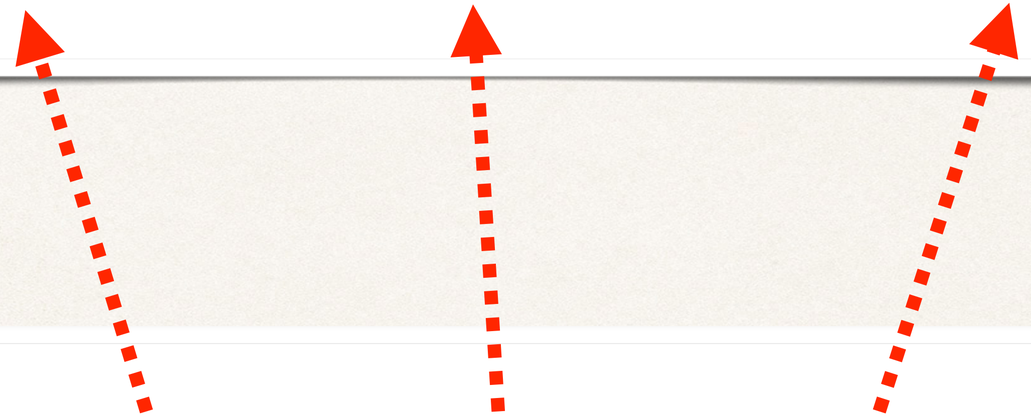

Example

```
let found: boolean = true;
```

Examples

Examples

```
let found: boolean = true;
```

Examples

`true` or `false`

```
let found: boolean = true;
```

Examples

```
let found: boolean = true;

let grade: number = 88.6;
```

Examples

```
let found: boolean = true;

let grade: number = 88.6;
```

```
73
64.5
100
```

Examples

```
let found: boolean = true;

let grade: number = 88.6;

let firstName: string = "Anup";
```

Examples

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let found: boolean = true;

let grade: number = 88.6;

let firstName: string = "Anup";

let lastName: string = 'Kumar';
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Double-quotes

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let found: boolean = true;

let grade: number = 88.6;

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```

Double-quotes

Single-quotes

TypeScript: "let" keyword

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- The JavaScript **`var`** keyword had a number of gotchas and pitfalls
  - Scoping, capturing, shadowing etc

TypeScript: "let" keyword

- We are using the new TypeScript **`let`** keyword for variable declarations
  - As opposed to using traditional JavaScript **`var`** keyword

- The JavaScript **`var`** keyword had a number of gotchas and pitfalls
  - Scoping, capturing, shadowing etc

- The new TypeScript **`let`** keyword helps to eliminate those issues

TypeScript is Strongly Typed

TypeScript is Strongly Typed

```
let found: boolean = true;
let grade: number = 88.6;
let firstName: string = "Anup";
let lastName: string = 'Kumar';


// this is okay ... we can assign to different values
```

TypeScript is Strongly Typed

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found = false;
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```

This is ok

TypeScript is Strongly Typed

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let found: boolean = true;
let grade: number = 88.6;
let firstName: string = "Anup";
let lastName: string = 'Kumar';


// this is okay ... we can assign to different values

found = false;
grade = 99;
firstName = 'Eric';
```

This is ok

TypeScript is Strongly Typed

```
let found: boolean = true;
let grade: number = 88.6;
let firstName: string = "Anup";
let lastName: string = 'Kumar';


// this is okay ... we can assign to different values

found = false;
grade = 99;
firstName = 'Eric';
lastName = 'Noh';
```

This is ok

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```
// this will generate compilation errors ...

found = 0;
grade = "A";
```

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Type mismatch

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let grade: number = 88.6;
let firstName: string = "Anup";
let lastName: string = 'Kumar';
```

```
// this will generate compilation errors ...

found = 0;
grade = "A";
firstName = false;
lastName = 2099;
```

Type mismatch

Type: any

Type: any

```
let myData: any = 50.0;
```

Type: any

```
let myData: any = 50.0;

// we can assign different values of any type
```

Type: any

```
let myData: any = 50.0;

// we can assign different values of any type

myData = false;
myData = 'Eric';
myData = 19;
```

Type: any

```
let myData: any = 50.0;

// we can assign different values of any type

myData = false;
myData = 'Eric';
myData = 19;
```

This is ok
But be careful ...
you lose type-safety

Displaying Output

File: sample-types.ts

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```
let found: boolean = true;
let grade: number = 88.6;
let firstName: string = "Anup";
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console.log(found);
console.log("The grade is " + grade);
console.log("Hi " + firstName + " " + lastName);
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```

```
true
The grade is 88.6
Hi Anup Kumar
```

Run the App

Run the App

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Compile code using: tsc

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C:\> tsc sample-types.ts
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Remember, tsc generates a .js file

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Template Strings

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let firstName: string = "Anup";
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Concatenation could become clunky for long strings

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```
let firstName: string = "Anup";
let lastName: string = 'Kumar';

console.log("Hi " + firstName + " " + lastName);
```

```
console.log(`Hi ${firstName} ${lastName}`);
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let firstName: string = "Anup";
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Use backticks: `
Reference variables with ${..}

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Use backticks: `
Reference variables with ${..}

Useful for long strings with a lot of concatenation