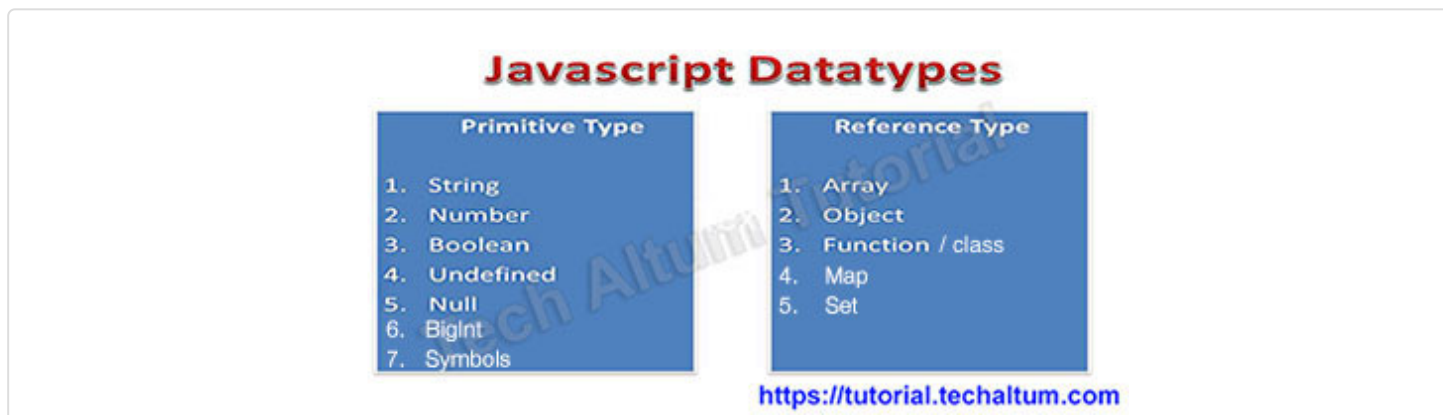


Data Types in ES6



Datatypes in javascript means the type of data stored in a variable.

As JavaScript and all scripting languages are **loosely typed**, there is no **typecast** in javascript. JS supports **dynamic typing**. We can create any type of data using a single **variable**.

var means a **variable** which can store any type of **data**. Data type of variable is not declared.

Declaring var means creating a new variable in memory with variable name after white-space. Assignment Operator (=) means assigning value to variable declared.

We can also use const and let to declared variables.

Datatypes in JavaScript

Primitive Data Types

Reference Data Types

Primitive datatypes in JavaScript

Primitive datatypes are the **basic** or **common** data types in javascript.

Like **string**, **numbers**, **boolean**, **undefined** and **null**. They are very commonly used data types.

var is used to declare primitive datatypes in javascript.

Primitive Data Type	Meaning
var x;	undefined

Primitive Data Type	Meaning
var x=undefined;	undefined
var x=null;	null type data
var x=3;	Data Type is number.
var x=3.5	Data Type is number with decimal
var x="3"	Data Type is string
var x='3'	Data Type is string
var x="HELLO"	Data Type is string
var x=true	Boolean data type
var x=false;	Boolean data type

Strings

Anything written in single or double quotes is a **string in javascript**. **Strings** are used to store name, email, city name, password etc in javascript. [JavaScript Strings](#).

```
var name="js string";
```

Numbers

JavaScript Numbers are used to perform Arithmetic Operations (+,-,*,/,%). Numbers are written without quotes. [JavaScript Numbers](#).

```
var num=20;
```

Boolean

JavaScript Boolean are true and false. Booleans are used in conditions, comparison etc.

```
var t=true;  
var f=false;
```

Undefined

JavaScript Undefined means any variable whose value is not assigned yet. Anything variable whose value is not assigned is undefined.

```
var u;  
var t=undefined;
```

Null

JavaScript null is a special object with empty value. null is used where value is defined, but still it is not there. It is also used in exception handling.

```
var u=null;
```

Reference Data Type in JAVASCRIPT

Reference are datatypes based on **primitive**. Like **Array**, **Object** and **Functions**. Everything in JavaScript is either a primitive datatype or Object. Even Arrays and Functions are objects, but they are *build-in objects*.

`var` is also used to declare reference datatypes.

Reference Data Type	Meaning
<code>let month=["Jan", "Feb", "Mar"];</code>	Array
<code>let user={ name : "ABC", age : 22 };</code>	Object
<code>var x=function(x,y){ return x+y;;};</code>	Function Expression
<code>function sum(x,y){ return x+y;;}</code>	Function Declaration
<code>var x=new Date();</code>	Date
<code>var x=/^[0-9]{6}\$/;</code>	Regex

typeof Operator

typeof operator in javascript is used to check **data type** of a variable. It can return string, number, boolean and undefined. For reference type and null, **typeof** operator will return object.

```
var x;           // undefined
var y=9;         // number
var z="Tech Altum"; // string
```

typeof(x) and typeof x will return undefined,
typeof(y) and typeof y will return number,
typeof(z) and typeof z will return string.

Given Expression	Check Data Type
var x;	<input type="button" value="Check"/>
var x=undefined;	<input type="button" value="Check"/>
var x=null;	<input type="button" value="Check"/>
var x=3;	<input type="button" value="Check"/>
var x=3.5;	<input type="button" value="Check"/>
var x="3";	<input type="button" value="Check"/>
var x='3';	<input type="button" value="Check"/>
var x="HELLO";	<input type="button" value="Check"/>
var x=true;	<input type="button" value="Check"/>
var x=false;	<input type="button" value="Check"/>
var x=function(a,b){ return a+b};	<input type="button" value="Check"/>

Given Expression	Check Data Type
<code>function add(a,b){ return a+b}</code>	<input type="button" value="Check"/>
<code>var month=["jan","feb","mar"];</code>	<input type="button" value="Check"/>
<code>var user={ name:"abc", age:22};</code>	<input type="button" value="Check"/>

1. *typeof* operator can check datatype of strings, numbers, undefined, boolean, bigint and function.
2. For Arrays, & Objects, *typeof* operator will return object.
3. *typeof(null)* will return *Object*.