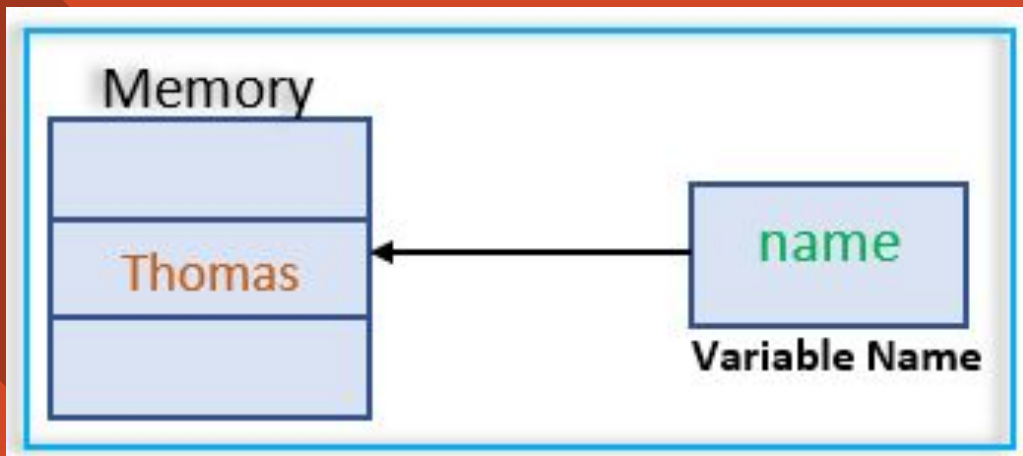# FAST-TRACK ACADEMY

JavaScript Variables and Data Types
JS Beginner

Professional Web Development Course
(HTML, CSS, BOOTSTRAP 4, SQL & JAVASCRIPT)

What are JavaScript VARIABLES?

A variable is a "named storage" for data in COMPUTER MEMORY.

We use variables to store DATA.

```
var name = "Thomas";
```


How to DECLARE a Variable

```
var name;
```

How ASSIGN and INITIALISE a Variable

```
name = "Thomas";
```
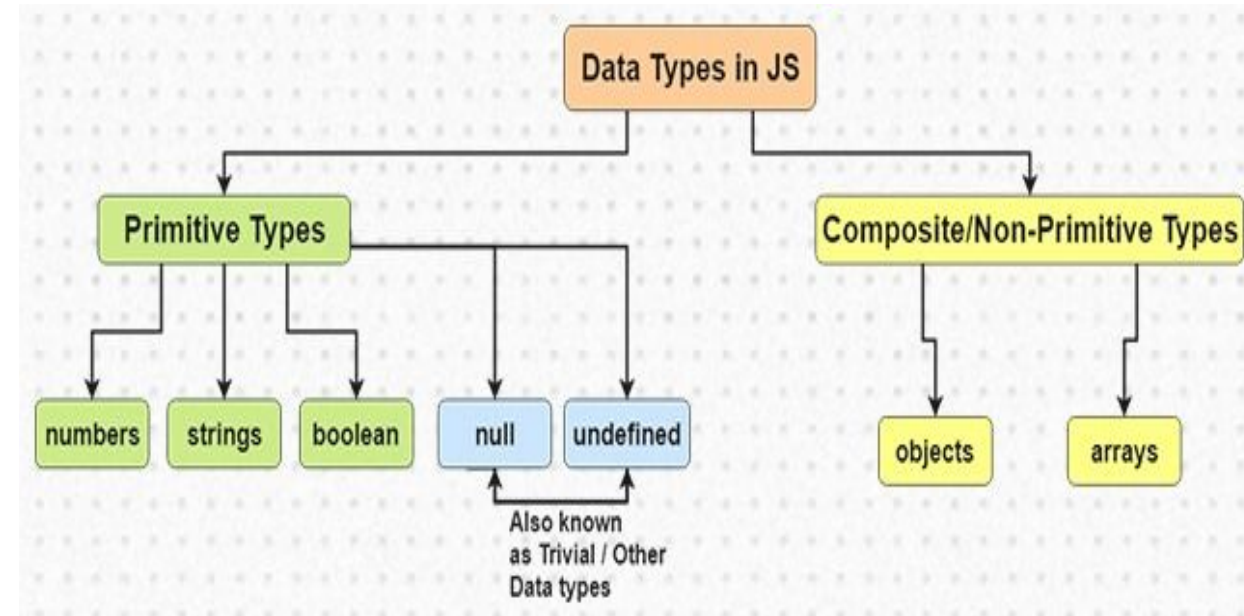
Variable Examples:-

```
var mushaar = 300;
var canshuur = 30;
var haraadiga = mushaar – canshuur;
console.log(haraadiga);
```

What JavaScript DATA TYPES?

Data Types specify what kind of data can be stored in VARIABLES.

Number Data Types example:-

```
var dada = 40;
var tiradaCaruurta = 6;
var dhirirka = 1.7;
```


String Data Type example:-

```
var magaca = "Ahmed";
var goobtaDhalashada = 'Somalia';
var shaqada = "Software Engineer";
```

JavaScript DATA TYPES:-

Boolean Data Types example:-

```javascript
var xaasle = true;
var sigaarCabe = false;
var waaMillionaire = false;
```

Array Data Types examples:-

```javascript
var wadamaBooqashada = ["China", "India", "Ethiopia"];
var saaxiibada = ["Ali", "Jamac", "Sugulle"];
var maalmahaShaqada = ["Isniin", "Talaada", "Arbaca"];
```

Object Data Type Example:-

```javascript
var qof = {
  magaca: "Ahmed",
  goobtaDhalashada: "Somalia",
  shaqada: "Software Engineer",
  dada: 40,
  tiradaCaruurta: 6,
  dhirirka: 1.7,
  xaasle: true,
  sigaarCabe: false,
  waaMillionaire: false,
  wadamaBooqashada: ["China", "India", "Ethiopia"],
  saaxiibada:  ["Ali", "Jamac", "Sugulle"],
  maalmahaShaqada: ["Isniin", "Talaada", "Arbaca"],
};
```

Naming JavaScript variables:-

- Variable names can only contain letters, digits or the symbols $ and _

- Variable names can only start with letters, $ or _

- Variable names may not contain a space
- Variable names may not be reserved words
- Variable names are case sensitive (so fish refers to a different variable to Fish)
- Make variable names concise but meaningful (so firstName and lastName rather than var1 and var2)
- Make variable names camelCase if variable name consists more than one word, use a capital letter at the start of each new word and small letter the first word (so firstName rather than firstname)

Example of good and bad variable naming:-

Good variable Naming:-

```
var firstName = "Ahmed";
var _firstName = "Ahmed";
var $firstName = "Ahmed";
var firstName1 = "Ahmed";
var first2Name = "Ahmed";
```

Bad variable naming:-

```
var firstname = "Ahmed"; // legal but not good
var FirstName = "Ahmed"; // legal but not good
var first name = "Ahmed"; // space is illegal
var FIRSTNAME = "Ahmed"; // legal but not good
var first_name = "Ahmed"; // legal but not good
var &firstName = "Ahmed"; // illegal (&)
var 2firstName = "Ahmed"; // illegal (number start)
var first-Name = "Ahmed"; // illegal (-)
```

How to check the Data Type of a variable (typeof)

- You can use the JavaScript typeof operator to find the type of a JavaScript variable.

Example of checking variable data type:-

```javascript
var magaca = "Ahmed";
console.log(typeof magaca); // string

var wadamaBooqashada = ["China", "India", "Ethiopia"];
console.log(typeof wadamaBooqashada); // Arrays are Object

var tiradaCaruurta = 6;
console.log(typeof tiradaCaruurta); // number

var xaasle = true;
console.log(typeof xaasle); // boolean

var qof = {};
console.log(typeof qof); // object

var guri;
console.log(typeof guri); // undefined
```