

### Variables

<code>let x = 10;</code>	block scope	most used
<code>const MAX = 100;</code>	constant values	
<code>var y = 10;</code>	global or function scope	old usage

### Operators

<code>let x = 10;</code>	assignment
<code>x == "Hello"</code>	comparison
<code>x === "Hello"</code>	strict comparison
<code>&amp;&amp;</code>	logical AND
<code>  </code>	logical OR
<code>!</code>	logical negation

### Data Types

<code>let num = 10;</code>	Number
<code>let str = "Hello";</code>	String
<code>let isTrue = true</code>	Boolean
<code>let arr = [1, 2, 3]</code>	Array
<code>let obj = { a:1, b:2, c:"Hello" }</code>	Object

### Array

<code>let array = ["a", "b", "c"]</code>	array definition
<code>array.length //3</code>	number of elements in array
<code>array[0] // a</code>	access first element
<code>array[n] //0=&lt;n &lt;array.length</code>	access n <sup>th</sup> element
<code>array[4] // error</code>	4 greater than length of array
<code>array[array.length - 1] // c</code>	access last element

### Comments

```
// this is a one line comment

/* this is a multiple
   lines comment
   also called block comment */
```

### Object

```
let object = {
  name: "Alice",
  age: 30
}
```

Unlike JSON, a JavaScript object does not have double quotes (") in the property name

### Object usage

<code>object.name // Alice</code>	dot notation
<code>object["name"] // Alice</code>	property access notation
<code>object.age // 30</code>	
<code>object.gender // undefined</code>	non-existent property

### try...catch...finally

```
try{
  //code might throw an error
} catch(err) {
  console.error("Error occurred",
err.message);
} finally {
  console.log("Operation completed");
}
```

try: This block contains code that might throw an exception (an error)  
 catch: This block handles the exception if an error occurs in the try block

finally: This block always executes, regardless of whether an error occurs or not

### Function

```
function greet() {
  console.log("Hello")
}
```

### function definition

### Function with parameter

```
function greet(name="Alice") {
  console.log("Hello")
}
```

parameter name with default value "Alice"

