

```
// A variable is like a container for saving informations e.g var name = "Mary Doe"
// Data type talks about the type of data being stored in a variable e.g integer(int),
// string(str), Array, Object, float etc
// Ways of declaring variables: we usually use some keywords to declare variables e.g
// var, let, const.
```

```
// var is the oldest and it could be used globally and locally
// const is used to declare things we do not intend to change
// let is usually used to declare variables locally(within a scope)
```

```
console.log("Hello World");
var name = "Mary Doe";
const fruits = ["Apple", "Orange", "Banana", "Cherry"];
console.log(name);
console.log(fruits);
```

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// Rules in choosing variable names
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1. Do not start a variable name with an integer
2. Variable names should relate to what the value holds

Camel case e.g firstNameDetails, middleName

pascal case e.g FirstName, LastName

snake case e.g last\_name, middle\_name

```
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```
// To check the variable/ data type, we use typeof
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```
const a = 5;
console.log(typeof name);
console.log(typeof a);
```

```
/*
```

Variable scope talks where a variable was initialized.

1. Local Scope: This applies to a variable that was initialized inside a function, a loop, a conditional statement or any block of code

2. Global scope: This are variables that was initialized outside of block programs

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```
const square = function () {
```

```
  console.log(a ** 2);
```

```
};
```

```
square();
```

```
// console.log(n);
```

```
// Operators are used to carry out operations on the variables
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```
/*
```

1. Arithmetic Operator: +, -, \*, /, \*\*, %

2. Assignment Operators: =, +=, -=, \*=, /=, \*\*=, %=

3. comparison Operators: ==, !=, >, <, >=, <=

4. Logical Operators: or(||) , and (&&)

\*/

```
// Arithmetic Operator
```

```
const x = 4;
```

```
const y = 3;
```

```
const z = 5;
```

```
console.log(x + y);
```

```
console.log(x - y);
```

```
console.log(x * y);
```

```
console.log(x / y);
```

```
console.log(x / 2);
```

```
console.log(x ** 2);

console.log(z % 2);

// Concatenation means using the plus sign to combine strings and variables

console.log("Happy weekend " + name);

console.log(` A very happy weekend to you ${name}`);

// Assignment Operators

var c = 4;

console.log((c += 4)); // c = c + 4

console.log(c);

console.log((c -= 2)); // c = c - 2

console.log((c *= 2)); // c = c * 2

console.log((c *= 2)); // c = c * 2

console.log((c /= 2)); // c = c / 2

console.log((c **= 2)); // c = c ** 2

console.log((c %= 2)); // c = c % 2


const checker = function (a) {

  if (a % 2 == 0) {

    console.log(`${a} is an even number`);

  } else {

    console.log(`${a} is an odd number`);

  }

};

checker(100);

// Comparison Operators ==,===,!=,>,<,>=,<=
```

```
const i = 4;
const j = "4";
const k = 2;
console.log(i === j);
console.log(typeof i);
console.log(typeof j);
console.log(i !== k);
console.log(i > k);
console.log(i < k);
console.log(i >= k);
console.log(i <= k);
// Logical Operators || , &&
console.log(i !== k || i < k);
console.log(i !== k && i < k);
console.log(false || true || false);
```

```
var f = 3;
var e = 5;
console.log(f > e || f !== e);
console.log(f < e && f !== e);
```