



Introduction to JavaScript

Class 2

Wi-Fi



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Welcome Ladies



Let's Look back at it!

In the code spot the

- ▷ Comment
- ▷ Variables
- ▷ Operators

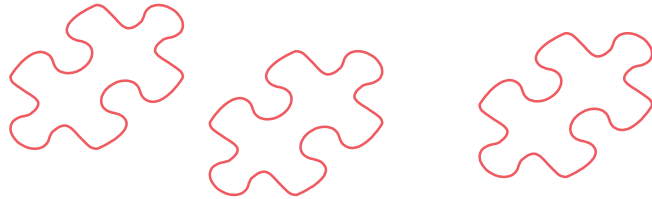
```
var billPreTip = 10;
var tipPercent = 0.15; // Can be changed

var billTip = billPreTip * tipPercent;
var receipt = 'Meal: ' + billPreTip + ' Tip: ' + billTip +
' Total: ' + (billPreTip + billTip);

console.log(receipt);
```

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Functions



*Functions are separable, reusable
pieces of code.*

Declaring Functions

- ▶ To declare (create) a function, you can give it a name, then include all the code for the function inside curly brackets **{ }**
- ▶ Functions can have multiple lines.

```
function parrotFacts() {  
  console.log('Some parrot species can live for over 80 years');  
  console.log('Kakapos are a critically endangered flightless parrot');  
}
```

Using Functions

- ▷ To invoke (use) a function, you type its name, followed by parenthesis **()**
- ▷ We'll talk about what can go inside those parenthesis in a minute! For now, leave them empty.

```
parrotFacts();
```

What's going on here?

- ▷ A function is a group of code you can reuse many times. Whenever you invoke a function by using its name, you tell the browser to run the code inside the function.
- ▷ You must declare a function before you can use it.

Let's Develop It

- ▷ Write a function that outputs a sentence. Then invoke that function later in your code.

Arguments

- ▷ Functions can accept input values, called **arguments**.

```
function callKitten(kittenName) {  
  console.log('Come here, ' + kittenName + '!');  
}  
  
callKitten('Fluffy'); // outputs 'Come here, Fluffy!'  
  
function addNumbers(a, b) {  
  console.log(a + b);  
}  
  
addNumbers(5, 7); // outputs 12  
addNumbers(9, 12); // outputs 21
```

Arguments

- ▶ You can also pass **variables** into functions. These variables do not need to have the same name as the function arguments.

```
function addOne(num) {  
  var newNumber = num + 1;  
  console.log('You now have ' + newNumber);  
}  
  
// Declare variables  
var numberOfKittens = 5;  
var numberOfPuppies = 4;  
  
// Use them in functions  
addOne(numberOfKittens);  
addOne(numberOfPuppies);
```

Let's Develop It

- ▷ Write a simple program to combine a first name and a last name inside a function. Then update the function to accept a first and last name as arguments.

Returning Values

- ▷ You can have a function give you back a value, to use later.
- ▷ **return** will immediately end a function.

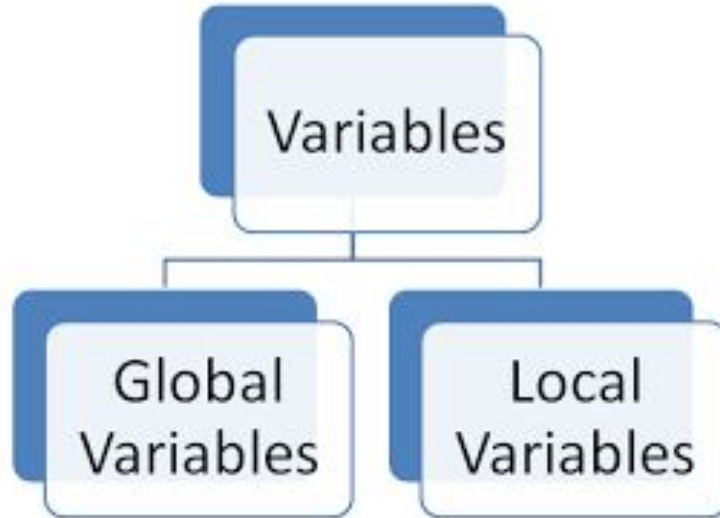
```
function square(num) {  
  return num * num;  
}  
  
console.log(square(4));           // outputs '16'  
  
var squareOfFive = square(5);    // squareOfFive equals '25'
```

Let's Develop It

- ▷ Add a return statement to your 'name' function. Use that function to set the value of a variable.

Variable Scope

- ▷ The scope of a variable determines where its value is accessible throughout your program.



Global Scope

- ▶ A variable declared outside of a function has a **global scope** and can be accessed anywhere, even inside of functions.

```
var awesomeGroup = 'Girl Develop It'; // Global scope

function whatIsAwesome() {
  console.log(awesomeGroup + ' is pretty awesome.');// Will
work
}

whatIsAwesome();
```

Local Scope

- ▶ A variable declared inside a function has a **local scope** and can only be accessed within that function.

```
function whatIsAwesome() {  
    var awesomeGroup = 'Girl Develop It';  
    Local scope  
    console.log(awesomeGroup + ' is pretty awesome.');//  
    Will work  
}  
  
whatIsAwesome();  
  
console.log(awesomeGroup + ' is pretty awesome.');// Won't  
work
```


Boolean Variables

- ▷ Boolean variables represent the logical values `true` and `false`

```
var catsAreBest = true;  
var dogsRule = false;
```

Boolean Variables

- ▶ Some values are considered **falsy** and will evaluate to **false** in a Boolean context.
- ▶ Boolean variables represent the logical values **true** and **false**

```
// the following variables will evaluate as false
var myName = '';
var numOfKids = 0;
var isMarried;      // remember a variable with no value is
                     undefined
```

null and **NaN** will also evaluate as **false**.

Everything else evaluates as **true**.



Control Flow

The if statement

- ▶ Use **if** statements to decide which lines of code to execute, based on a condition.

```
if (condition) {  
  // statements to execute  
}
```

```
var age = 30;  
if (age > 18) {  
  console.log('You are an adult');  
}
```

Comparison Operators

Example	Name	Result
<code>a == b</code>	Equal	TRUE if <code>a</code> is equal to <code>b</code> (can be different types)
<code>a === b</code>	Identical	TRUE if <code>a</code> is equal to <code>b</code> , and the same type.
<code>a != b</code>	Not equal	TRUE if <code>a</code> is not equal to <code>b</code> (can be different types).
<code>a !== b</code>	Not identical	TRUE if <code>a</code> is not equal to <code>b</code> , or they are not the same type.
<code>a < b</code>	Less than	TRUE if <code>a</code> is strictly less than <code>b</code> .
<code>a > b</code>	Greater than	TRUE if <code>a</code> is strictly greater than <code>b</code> .
<code>a <= b</code>	Less than or equal to	TRUE if <code>a</code> is less than or equal to <code>b</code> .
<code>a >= b</code>	Greater than or equal to	TRUE if <code>a</code> is greater than or equal to <code>b</code> .

**WATCH
OUT!**

- ▷ Don't mix up  and  and 



Let's Develop It

- ▷ Make a variable called "temperature". Write some code that tells you to put on a coat if it is below 50 degrees.

The if/else statement

- ▶ Use **else** to provide an alternate set of instructions.

```
var age = 30;

if (age >= 16) {
  console.log('Yay, you can drive!');
} else {
  console.log('Sorry, you have ' + (16 - age) +
    ' years until you can drive.');
```


The if/else statement

- If you have multiple conditions, you can use **else if**.

```
var age = 30;

if (age >= 35) {
  console.log('You can vote AND run for President!');
} else if (age >= 30) {
  console.log('You can vote AND run for the Senate!');
} else if (age >= 18) {
  console.log('You can vote!');
} else {
  console.log('You can\'t vote, but you can write your representatives.');
```

Let's Develop It

- ▷ Modify your "wear a coat" code for these conditions:
 1. If it's less than 50 degrees, wear a coat.
 2. If it's less than 30 degrees, wear a coat and a hat.
 3. If it's less than 0 degrees, stay inside.
 4. Otherwise, wear whatever you want.

Comparison Operators

Example	Name	Result
<code>a && b</code>	And	TRUE if both a and b are TRUE.
<code>a b</code>	Addition	TRUE if either a or b is TRUE.
<code>! a</code>	Subtraction	Difference of <code>a</code> and <code>b</code> .

Using logical operators

- ▷ You can use these operators to combine conditions.

```
var age = 30;  
var yearsAsCitizen = 30;  
  
if (age >=30 && yearsAsCitizen > 9) {  
  console.log('You can run for the Senate!');  
} else {  
  console.log('You are not eligible to run for the  
Senate');  
}
```

Let's Develop It

- ▷ Add a logical operator to your "what to wear" program.

Resources

- ▷ [JavaScript Guide](#), from the Mozilla Developers Network.
- ▷ [Code Academy](#), with interactive JavaScript lessons to help you review.



YOU DID IT!

Any questions?

