

# Web Development with HTML, CSS, and Javascript

## Set up

Install Node.js <http://nodejs.org/>

Test it with: `console.log("Hello, World!");`

Install Editor: <https://atom.io/>

1. Click on **Packages** --> **Command Palette** --> Select **Toggle**.
2. Type **Install Packages and Themes**.
3. Search for **Color picker** and then install it

gitHub repo: <https://github.com/bhou14/webdev>

## 1. Introduction

### First Page:

```
<html>
<head><title>My First Page</title></head>
<body>
<p>Helle, there</p>
</body>
</html>
```

### Add Style:

```
<style>
p {color:blue; font-family: cursive; font-size: 3.0em;}
</style>
```

### Add Script:

```
<html>
<head><title>My First Page</title>
<style>
p {color:blue; font-family: cursive; font-size: 3.0em;}
</style>
<script type="text/javascript">
  var myObj = null;
  function init(){
    myObj = document.getElementById('myobj');
    myObj.style.position= 'relative';
    myObj.style.left = '0px';
  }
  function moveRight(){
    myObj.style.left = parseInt(myObj.style.left) + 100 + 'px';
    setTimeout(moveRight, 3000);
  }
  window.onload =init;
</script>
</head>
```

```

<body>
<p id="myobj">Hello, there!</p>
<input type="button" value="Click Me" onclick="moveRight();" />
</body>
</html>

```

### Putting it together:

```

<html>
<head><title>My First Page</title>
<link rel="stylesheet" href="css/style.css">
<script src="js/app.js"></script>
</head>

<body onload="init();">
<p id="myobj">Hello, there!</p>
<input type="button" value="Click Me" onclick="moveRight();" />
</body>
</html>

```

### Common HTML Tags:

```

<h1> ... <h6> — header text
<p>           — Paragraph
<div>        — division, a block of content
<span>       — similar to div, but doesn't force a line-feed
<img>       — image
<a>         — link
<table><tr><td> — table, row, and column
<ul><li>    — list

```

### Common CSS Selectors:

Selector	Example	Description
.class	.intro	Selects all elements with class="intro"
#id	#firstname	Selects the element with id="firstname"
element	p	Selects all <p> elements
element,element	div, p	Selects all <div> elements and all <p> elements
element element	div p	Selects all <p> elements inside <div> elements
element>element	div > p	Selects all <p> elements where the parent is a <div> element
element+element	div + p	Selects all <p> elements that are placed immediately after <div> elements

## 2. Javascript Basics

### Define variables:

```
var myString = "some text";    // a string
var myInt = 12;                // a integer
var isOk = true;               // boolean
```

### JavaScript Array & Object

```
var arr = ["one", "two", "three"];
var first = arr[0];
var arr2 = new Array();
arr2[0] = "one";
arr2[1] = "two";
arr3[2] = "three";
var arr3 = new Array();
arr3.push("one");
arr3.push("two");
arr3.push("three");
```

```
var obj = {
  name: "My Object",
  value: 7,
  type: "Object Type",
  getType: function() { return this.type; }
};
console.log(obj.name);
console.log(obj["value"]);
console.log(obj.getType());
```

### Operators:

```
arithmetic: + - ++ -- * / %
assignment: = += -= *= /= %=
comparison: == === != !== > >= < <=
            && || !
```

### Conditions:

```
if(...) { ... }
else if(...) { ... }
else { ... }
```

## 3. Function

### Declare a function:

```
function myFunc(param1, param2) {
  ...
}
var myFunc = function(param1, param2) {
  var x = param1 + param2;
  return x;
}
```

**Calling a function:**

```
myFunc('this', 'that');  
var ret = myFunc('second', 'third');
```

Passing function as a parameter:

```
AnotherFunc(p1, p2, myFunc) {  
  return myFunc(p1, p2);  
}
```

## 4. Loops

```
var i = 1;  
while (i<5){  
  console.log("Iteration " + i);  
  i++;  
}
```

```
for(var i = 0; i<10; i++)  
{  
  console.log("iteration " + i);  
}
```

```
var days = ["Monday", "Tuesday", "Wednesday", "Thursday", "Friday"];  
for (var idx in days){  
  console.log("It's " + days[idx]);  
}
```

```
var days = ["Monday", "Tuesday", "Wednesday", "Thursday", "Friday"];  
for (var idx in days){  
  console.log("It's " + days[idx] );  
}
```

## 6. Node.js Server

```
var express = require('express');  
var app = express();  
  
app.use('/', express.static('./static'));  
// use('/images', express.static('../images')).  
app.listen(8088);
```

