

Main Languages for Web Development




1. HTML

Language used to define the **content & structure** of web pages


2. CSS

Language used to specify the style of web pages



Review of terms you should know by now

- HTML elements & tags
 - Opening tag; Closing tag
- Can you name 8 html tags?
- ` `; `
` `<div>`
- `<!-- demo lab -->`
- Do all tags have *opening* and *closing* tag?
 - Self-closing elements
 - ``
 - Element attributes
 - `OK Google!`



Review of terms you should know by now

- CSS *selector*
- CSS *property, value* pair
- Can you name 8 CSS *property, value* pairs?

Mini-Lab

- <http://www.wrapgenius.me>
- <http://mikekus.com>
- <http://hereistoday.com>
- <http://void.hi-res.net>



- Discuss the following with a partner:
 - What do you like about these websites? Do you find them creative/attractive?
 - Which features in these websites could be implemented using HTML & CSS? Which features do you think couldn't be implemented with HTML & CSS?

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1. HTML

Language used to define the content & structure of web pages

2. CSS

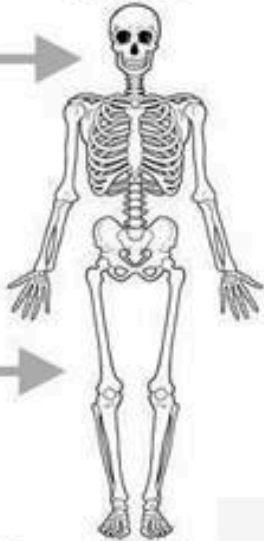
Language used to specify the style of web pages

3. JavaScript

Language used to program the behavior of web pages

HTML

HEAD



BODY



Structural Layer

HTML + CSS



← APPEARANCE

← LOOK

Presentation Layer

HTML + CSS + Javascript



Responsive,
& more stuff

Action Layer

JavaScript: *<script>*



```
<!DOCTYPE html>
<html>
<body>

<h2>What Can JavaScript Do?</h2>

<p>JavaScript can display messages in an alert window.</p>

<p>In this case JavaScript displays a simple greeting message.</p>

<script> alert('Hello from Javascript') </script>

</body>
</html>
```

JavaScript: *onclick*



```
<!DOCTYPE html>
<html>
<body>

<h2>What Can JavaScript Do?</h2>

<p>JavaScript can display messages in an alert window.</p>

<p>In this case JavaScript displays a simple greeting message.</p>

<button onclick="alert('Hello from Javascript')">GREET</button>

</body>
</html>
```


JavaScript Can Change HTML Content



- https://www.w3schools.com/js/tryit.asp?filename=tryjs_intro_lightbulb



Turn on the light

Turn off the light

JavaScript Can Change HTML Content

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>What Can JavaScript Do?</h2>
```

```
<p>JavaScript can change HTML attributes.</p>
```

```
<p>In this case JavaScript changes the src (source) attribute of an image.</p>
```

```
<button  
onclick="document.getElementById('myImage').src='pic_bulbon.gif'">
```

```
Turn on the light
```

```
</button>
```

```

```

```
<button  
onclick="document.getElementById('myImage').src='pic_bulboff.gif'">
```

```
Turn off the light
```

```
</button>
```

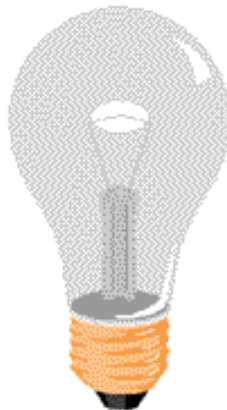
```
</body>
```

```
</html>
```

What Can JavaScript Do?

JavaScript can change HTML attributes.

In this case JavaScript changes the src (source) attribute of an image.



Turn on the light

Turn off the light

JavaScript Practice: Type 1&2 on jsfiddle and go through 3 on w3schools

1

```
<!DOCTYPE html>
<html>
<body>
<h2>What Can JavaScript Do?</h2>

<p>JavaScript can display messages
in an alert window.</p>
<p>In this case JavaScript displays
a greeting message when the page is
loaded.</p>

<script>
  alert('Hello from Javascript')
</script>
</body>
</html>
```

2

```
<!DOCTYPE html>
<html>
<body>
<h2>What Can JavaScript Do?</h2>

<p>JavaScript can display messages
in an alert window.</p>
<p>In this case JavaScript displays
a greeting message when a button is
clicked.</p>

<button onclick="alert('Hello from
Javascript')">GREET</button>
</body>
</html>
```

3

https://www.w3schools.com/js/js_intro.asp

Javascript: Variables & Conditionals



```
if (condition) {  
    block statement  
}
```

```
> var temperature = 90;  
> if (temperature > 80) {  
    window.alert ("It's pretty hot out there");  
}  
  
> temperature = 70;  
> if (temperature != 50) {  
    window.alert ("Glad it's not freezing out there")  
}  
  
> if (temperature > 50 && temperature < 85) {  
    window.alert ("It's perfect");  
}
```

Javascript: Variables & Conditionals



```
if (condition) {  
    block statement_1  
} else {  
    block statement_2  
}
```

```
var collegeGpa = 4.0;  
if (collegeGpa === 4.0) {  
    window.alert('Doing mighty fine!');  
} else {  
    window.alert("Let's hit the books!");  
}
```

```
if (collegeGpa >= 4.0) {  
    window.alert('Doing mighty fine!');  
} else if (4.0 > collegeGpa && collegeGpa > 3.0) {  
    window.alert('Not too shabby!');  
} else {  
    window.alert("Let's hit the books!");  
}
```

Javascript: For Loop

```
for (statement 1; statement 2; statement 3) {  
    code block to be executed  
}
```

```
var cars = ["BMW", "Volvo", "Saab", "Ford"];  
var i, len, text;  
for (i = 0, len = cars.length, text = ""; i < len; i++) {  
    alert(cars[i]);  
}
```

Javascript: For Loop

```
<!DOCTYPE html>
<html>
<body>

<p id="demo"></p>

<script>

var cars = ["BMW", "Volvo", "Saab", "Ford"];
var i, len, text;
for (i = 0, len = cars.length, text = ""; i < len; i++) {
    alert(cars[i]);
}

document.getElementById("demo").innerHTML = text;
</script>

</body>
</html>
```

CSS Lab: *WishList* / *BucketList*

<https://jsfiddle.net/zavalatech/cd1uuzeq/>

1. If you don't have a JSFiddle account, create one:
<https://jsfiddle.net/>
2. Go to the link in the title and fork it to make your own copy
3. Modify the HTML content to create your ***Wishlist*** or ***Bucketlist***
4. Make it look like the figure on the right (same colors & style)

Dr. Zavala's to-do list

About Me

I am Dr. Zavala. I am an Assistant Professor of Computer Science at Medgar Evers College of the City University of New York. I enjoy teaching students the many applications of Computer Science !!!

My to-do list

1. Student Advisement
2. Arrange lunch for CSSI students
3. Arrange CSSI group visit to Google NYC
4. Hot Yoga at 7PM
5. Laundry

Javascript Lab, Part 1

1. Add an **id** attribute to each **li** element in the list

1. todo1
2. todo2
3. etc.

2. Add a button inside each **li** element

1. (between the *opening* tag and the *closing tag*)

3. On the CSS section, change the background color of the buttons

4. Set the **onclick** attribute of the buttons:

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```
onclick="document.getElementById('todo1').style.textDecoration = 'line-through';"
```

Javascript Lab, Part 2

Modify your Lab on *jsfiddle*

1. Move the code from the *onClick* attribute to a Javascript function call

You will use the same function for ALL buttons and you will need to pass the button id as a parameter

```
function taskDone(id)
{
    document.getElementById(id).style.textDecoration = 'line-through';
}
```

```
onclick="taskDone('todo1')"
```

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Javascript Lab, Part 4

Modify your Lab on *jsfiddle*

1. A marked task should be unmarked when clicking the button
2. Add a ***CLEAR ALL*** button to unmarked all items in the list

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