HTML/CSS/JS

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Objective

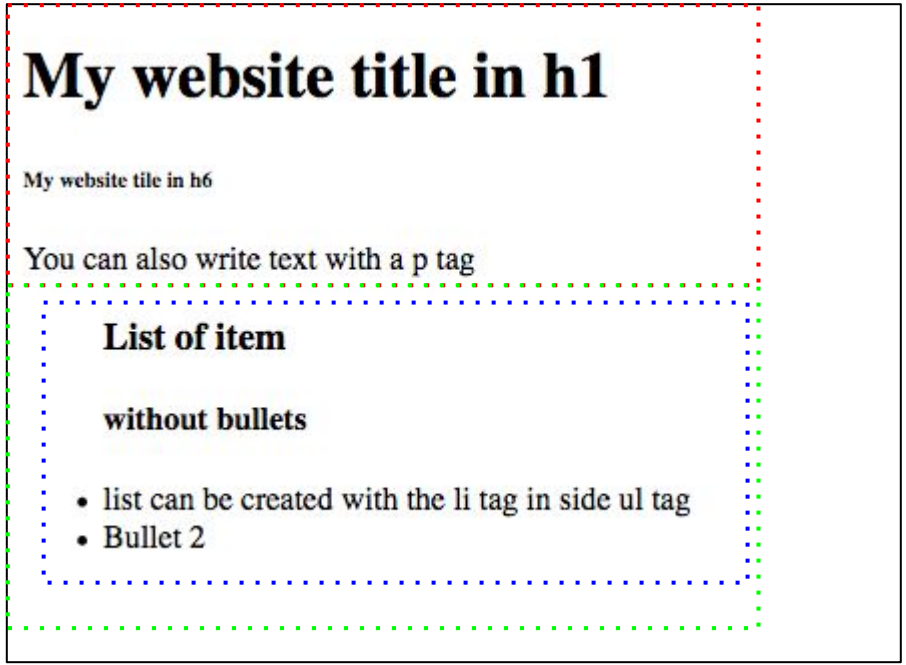
1. Learn HTML
    a. Create a HTML File
    b. Div Blocks, Text
    c. Images and Links
2. Learn CSS
    a. Create CSS file
    b. Connect CSS and HTML
    c. Syntax and Selectors
3. Javascript
    a. Variables
    b. Arrays and Loop
    c. Objects
    d. Conditionals and Functions

HTML

HTML - Hypertext Markup Language
It's code is comprised of tags some examples are div, header, body, etc.

```
<div>
    <h1>My website title in h1<h1>
    <h6>My website tile in h6</h6>
    <p>You can also write text with a p tag</p>

</div>
<div>
    <ul>

        <h3>List of item</h3>
        <h4>without bullets</h4>

        <li>list can be created with the li tag in side ul tag </li>
        <li>Bullet 2</li>

    </ul>
</div>
```

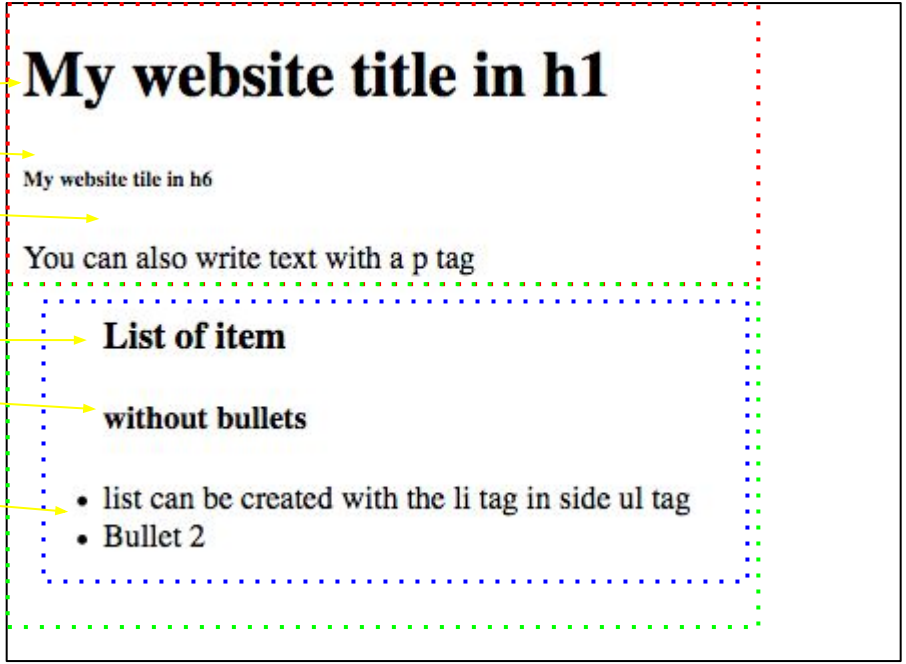
It works best to imagine each tag as its own box which you can fit and add more boxes(tags) in it



Text

1. <p>, <h1>...<h6>
   a. <p> is generally for paragraphs <h1> … <h6> are different font header sizes <h1> being the largest font and <h6> being the smallest font
2. ,
   a. for lists/bullet tables. initiates and <li> si where you put the content of that bullet
3. I
   a. Lets just target specific text and style it as you wish

```
<div>
    <h1>My website title in h1<h1>
    <h6>My website tile in h6</h6>
    <p>You can also write text with a p tag</p>

</div>
<div>
    <ul>

        <h3>List of item</h3>
        <h4>without bullets</h4>

        <li>list can be created with the li tag in side ul tag </li>
        <li>Bullet 2</li>

    </ul>
</div>
```

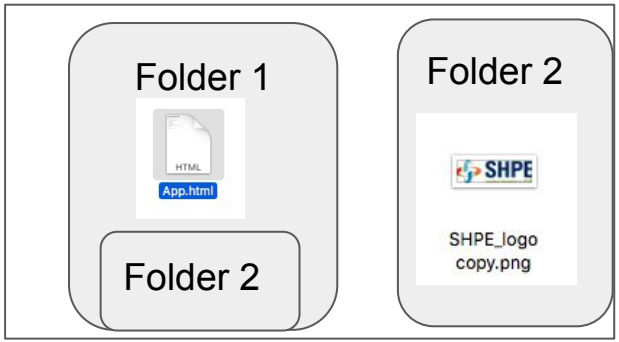


Images and link

```
<div>
    <img src="./SHPE_logo.png" alt='shpe logo'/>
    <a href="">This is a link</a>
</div>
```

Path

Example 1



Example 2

Example 3

CSS

Basic CSS

1. background-color and color
   a. *color* changes the color of text and background-color applies to the background
2. width, height, max-width, max-height
   a. sets the size of the component and can be changed in 3 ways ex: 30px, 30vh, 30%
3. Margin, padding, and border

You can use preset keywords for some colors

```
color:black;
background-color: yellow;
```

Or look up codes that give you a color want

```
background-color: #1111;
color:   #00e600;
```

```
.class-image{
    width: 100vh;
    width:100px;
    width: 100%
}
```

1. px allows for a constant size
2. % allows for a fraction of the window size so it can change as size increase

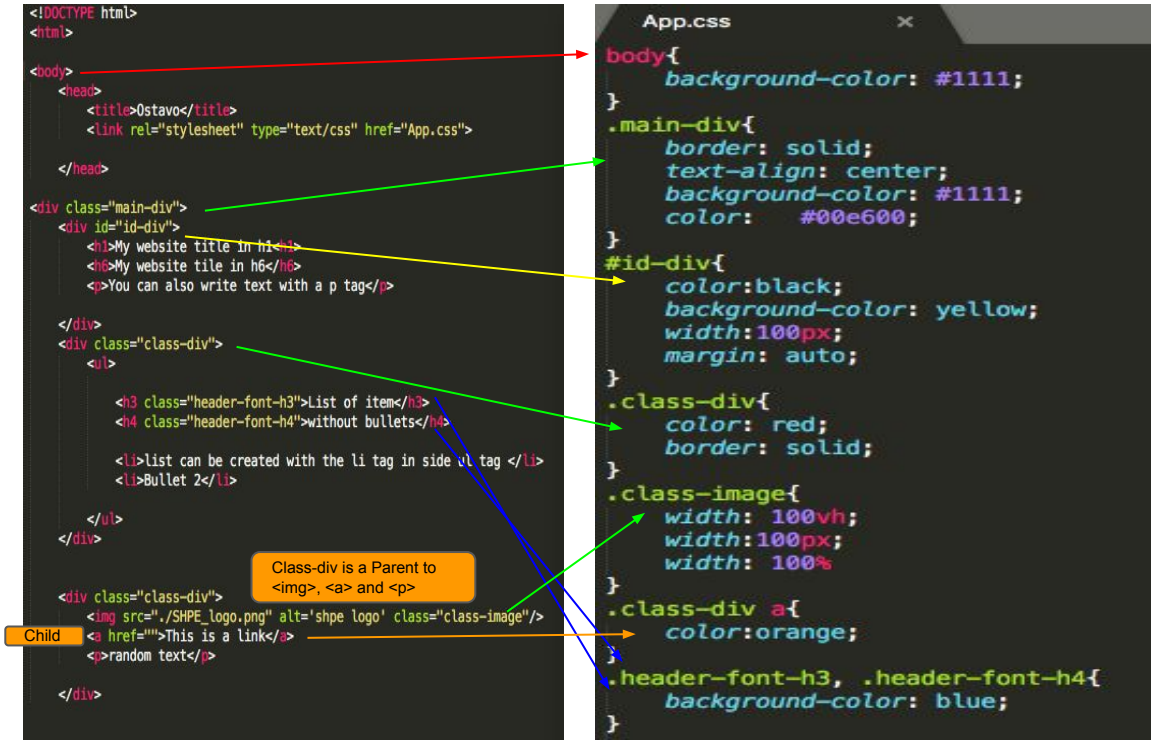
```
margin: auto;

/*Top and Bottom, Left and Right*/
margin: 10px 20px;

/*Top, Right, Bottom, Left*/
margin: 30px 5px 20px 10px;

margin-left: 10px;
margin-right: 5px;
margin-bottom: 20px;
margin-top: 30px;
```

Selectors

There are many ways to call a tag and style it

some examples:

1. Calling the element itself affects all elements of that type
2. You can add *id* and name your element to call it in css ue '#'. *id* allows for only one element to be called
3. You can add a *class* element instead which allows you to target multiple elements at once. to call use a '.'
4. You can also use a comma separator to target different elements and style them the same
5. You can specifically target child elements only by calling the parent then the child of the elements



JavaScript

Variables and Manipulating them

```
//variables
var aNumber = 5; // number
var aString = "Hello World"; // string

//bool
var isbus = false;
var isCar = true;

document.write("Variables <br>");
document.write("this is a number variable: ", aNumber,"<br>");
document.write("this is a string varaibale: ", aString,"<br>");


//Arithmetic
var x= 7;
var y =3;
var addition = x + y;
var sub = x-y;

document.write("<br>Arithmetic <br> Addition: ",addition, "<br> Subtraction: ", sub,"<br>");


//Concatenate
var concatenate= aNumber+" "+ aString;
document.write("<br>Concatenate: ",concatenate,"<br>");
```

Variables
this is a number variable: 5
this is a string varaibale: Hello World

Arithmetic
Addition: 10
Subtraction: 4

Concatenate: 5 Hello World

Arrays and Loop

```
//Arrays and Loop
document.write("<br>Arrays and Loop <br>");
var array = [1, 3, 5, true, "String",false];
console.log(array);

document.write("with a For loop<br>");
for (var i = array.length - 1; i >= 0; i--) {
    document.write( array[i]," index ",i, "<br> ");
}

document.write("with a While loop<br>");
var inc=0;
while(inc<array.length){
    document.write(array[inc], " index ", inc ,"<br> ")
    inc++
}
```

for (initial value; condition; increment){output}

while(condition){output}

Arrays and Loop
with a For loop
false index 5
String index 4
true index 3
5 index 2
3 index 1
1 index 0
with a While loop
1 index 0
3 index 1
5 index 2
true index 3
String index 4
false index 5

Object

```
//Objects
document.write("<br> Objects ");

var person = {
    age: 19,
    firstName:"Al",
    lastName:"Charlie",
    isStudent: true,
    siblings: ["cristi", "kyle"]
};

console.log(person)
document.write("<br> Object person has variables: ");
document.write("<br> Age: ",person.age," <br>");
document.write("Name: ",person.firstName," ",person.lastName, "<br>");
document.write("who are there siblings? ",person.siblings[0]," and ", person.siblings[1],"<br>");
// document.write("Are they a student?: ", person.isStudent," <br>");
```

Object are different from Arrays because they keep track of the properties that are inside the object. You can also have arrays within objects as a type of property the object has.

To call an object property:

ObjectName.objectProperty

Objects
Object person has variables:
Age: 19
Name: Al Charlie
who are there siblings? cristi and kyle

Conditionals and Functions

```
function thisFunction(){
    document.write("<br>First Function Example<br>");
    var z=3;
    if (z>5) {
        document.write(z, " is greater then 5!<br>")

    }
    else{
        document.write(z, " is not greater then 5<br>")

    }
}
function thisFunctionWithParameters(student=false){

    document.write("<br>This function is an example with parameters <br>")
    if(student){
        document.write("Yes they are a student!!<br>")
    }
    else{
        document.write("no they are not a student")
    }
}

thisFunction();
thisFunctionWithParameters(person.isStudent);
```

First Function Example
3 is not greater then 5

This function is an example with parameters
Yes they are a student!!

To use a conditional if statement:
if (condition){output}
else if(condition){output}
else{output}//default option

To declare a function:
Function functionName(parameters) {output}

To call a function:
functionName(parameters){output}

END OF PART 1