

float property

sets an element right or left, with text and other inline elements wrapped around it

Example code:

```
<style>
img {
  float: XXX;
}
</style>


<section>
  Float is a CSS positioning property which takes an element
  from its normal flow and positions it along the left or right
  side of its container. The text and other inline elements
  will then wrap around it.
</section>
```

<canvas> (canvas) tag

gives you a way to draw graphics using JavaScript on a webpage.

id Makes it easy to link each canvas to JS and CSS.

height Sets vertical height of canvas

width Sets horizontal width of canvas

Example code:

```
<style>
html{
  background-color:lightGrey;
}
#drawing{
  background-color:aliceBlue;
  border: slateGrey dashed 1px;
}
</style>

<canvas id="drawing" width="200" height="200">
  HTML5 Canvas isn't working if you see this text.
</canvas>

<script>
var draw = document.getElementById('drawing');
var rectangle = draw.getContext('2d');
rectangle.rect(25,25,50,50);
rectangle.stroke();
</script>
```

class attribute

is used to specify one or more class names that classify similar HTML elements.

It is often used in combination with CSS "class selectors" in order to style all elements with a given class name.

Example code:

```
<style>
.redText {
  color: red;
}

.blackBackground {
  background-color: black;
}
</style>

<p class="redText">Here is some red text
<p>Here is some normal text
<p class="redText blackBackground">Red text with a black
background
```

<form> (form) tag

creates a form for users to input data.

action sets where the form's data should be sent when submitted.

Example code:

```
<h1>Sign up</h1>
<form action="/some/url/signup">
  <label for="nameInput">Name</label>
  <input id="nameInput" name="name"><br>
  <label for="emailInput">Email</label>
  <input id="emailInput" name="email" type="email"><br>
  <p>
    <button>Sign up</button>
  </p>
</form>
```

 (img) tag

adds an image to a web page.

src gives the address of the image.

alt describes it to **search engines** and blind people.

title adds a **tooltip**.

height sets the height of the image.

width sets the width of the image.

Example code:

```

```

<input> (input) tag

adds an input field where the user enters data.

type sets the type of input.

value sets the text of the input.

checked pre-selects the input when the page loads.

maxlength sets the maximum number of characters that can be entered.

name sets the name and tells the form to send this input to the server when the form is submitted.

Example code:

```
<input type="radio" checked>Radio Button<br>
<input type="checkbox" checked>Checkbox<br>
<input type="color"><br>
<input type="range"><br>
<input type="time"><br>
<input type="week"><br>
<input type="month"><br>
<input type="date" name="birthday"><br>
<input type="datetime-local"><br>
<input type="hidden"><br>
<input type="search"><br>
<input type="number" value="1234"><br>
<input type="text" maxlength="2"><br>
<input type="password" value="text"><br>
<input type="button" value="Button"><br>
<input type="file"><br>
```

<progress> (progress) tag

represents the progression of a task.

Example code:

```
Downloading progress:
<progress value="32" max="100">
</progress>
```

<table> (table) tag

creates a table
tr tag creates a new row
td starts each cell
th starts each header cell
 **create cells that span more than 1 row.
colspan create cells that span more than 1 column.**

Example code:

```
<style>
table, td, th {
  border: 1px solid blue;
}
</style>

<table>
  <tr>
    <th>Header 1
    <th colspan="2">Header 2
  </tr>
  <tr>
    <td>1
    <td rowspan="2">2
  </tr>
  <tr>
    <td>3
  </table>
```

<title> (title) tag

sets the text that appears on the web browser tab, and is used in search-engine results, and when a page is added to favorites.

Example code:

```
<!doctype html>
<title>This appears in the tab</title>
```

This text appears on the page

*

multiplies numbers
E.g. 4 * 8 equals 32

Example code:

```
alert(8 * 4);

//Do * before + and -
alert(8 * 4 - 2 * 4);
```

for

Example code:

```
var total = 0;

for(var i = 1; i <= 3; i++) {
  var number = prompt('Enter number ' + i);
  total = total + Number(number);
}

alert('The total is ' + total);
```

if

Example code:

```
var age = prompt('How old are you?', '21');

if (age <= 12) {
  alert('You are a child');
} else if (age < 20) {
  alert('You are a teen');
} else if (age < 0 || age > 125) {
  alert('Invalid age');
} else {
  alert('You are an adult');
```

Math.random()

Returns a random floating point (decimal) number from 0 (inclusive) up to but not including 1, which you can scale to a desired range

Example code:

```
//Get a decimal no. from 0 up to but excluding 1
console.log(Math.random());

//Get a random no. between 0 to 99
console.log(Math.floor(Math.random() * 100));

//Get an even no. up to but not including 100
var evenNo = Math.floor((Math.random() * 50) * 2);
console.log(randomEven);

//Get a random no. from 1 to 6
var diceRoll = Math.floor(Math.random() * 6 + 1);
console.log(diceRoll);
```

Game.Button(text, xPos, yPos, [onClick])

creates a button.

text: the text to be displayed.

xPos: distance of the left side of the button from the left of the canvas.

yPos: distance of the right side of the button from the top of the canvas.

onClick(optional): function that gets run when the button is clicked.

Example code:

```
var button = new Game.Button('Click', 70, 10, changeColor);
var c = new Shape.Circle(110, 100, 20);

function changeColor() {
  c.fillColor = Color.random();
}
```

variable

A variable stores a value that can be used later and modified by the program. It's called a variable because its value can vary.

Example code:

```
#Create a variable and store the value 5 in it
number = 5

#Create a variable and store a string in it
name = "Monty Python"

#print variables
print(number)
print(name)

#Change variables
number = 10
print(number)

number += 5
print(number)

name = "Tom"
print(name)

name = input("What is your name?")
print(name)
```