Frontend development Class 01, Series 02

Frontend

CLASS 01

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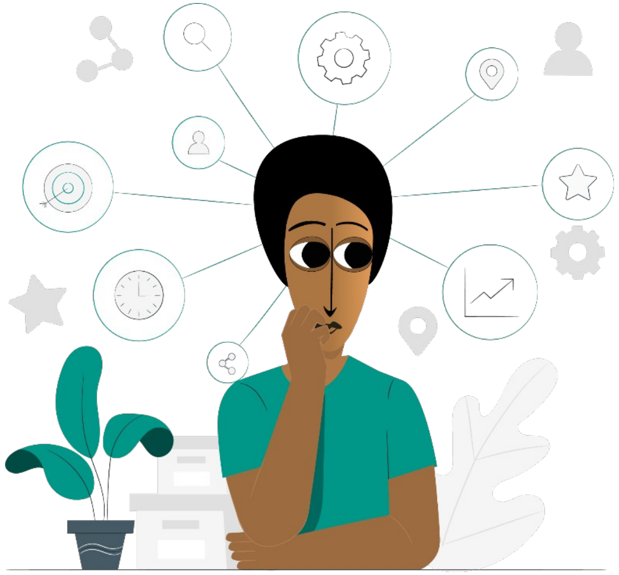
Reflection on your assignments

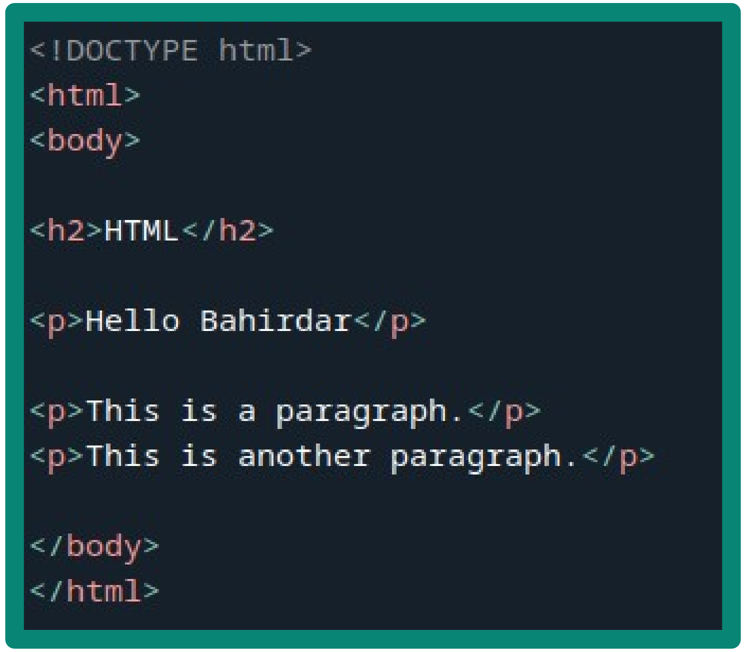


Have you had any trouble completing your assignment?

HTML, CSS and Javascript recap

HTML recap

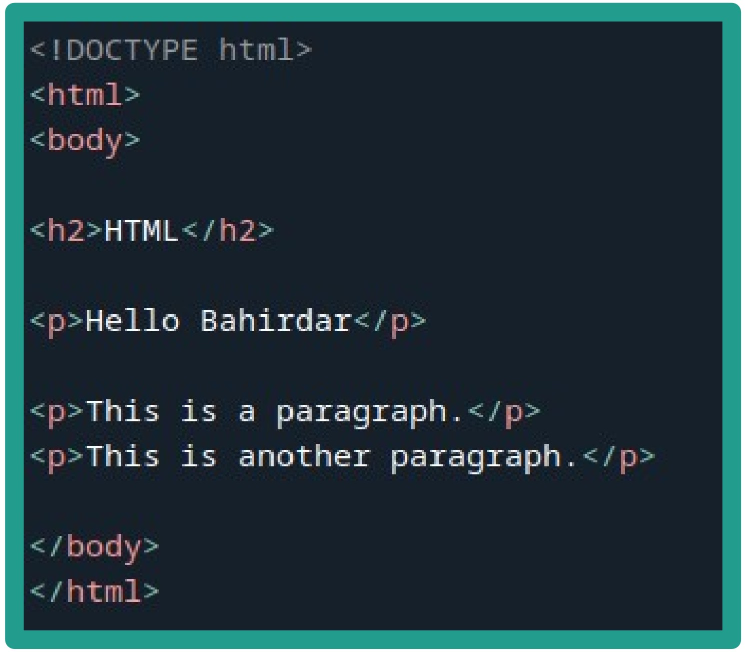
- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for Web pages
- HTML elements are the building blocks of HTML pages
- HTML elements are represented by <> tags



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

<h2>HTML</h2>

<p>Hello Bahirdar</p>

<p>This is a paragraph.</p>
<p>This is another paragraph.</p>

</body>
</html>
```

HTML recap

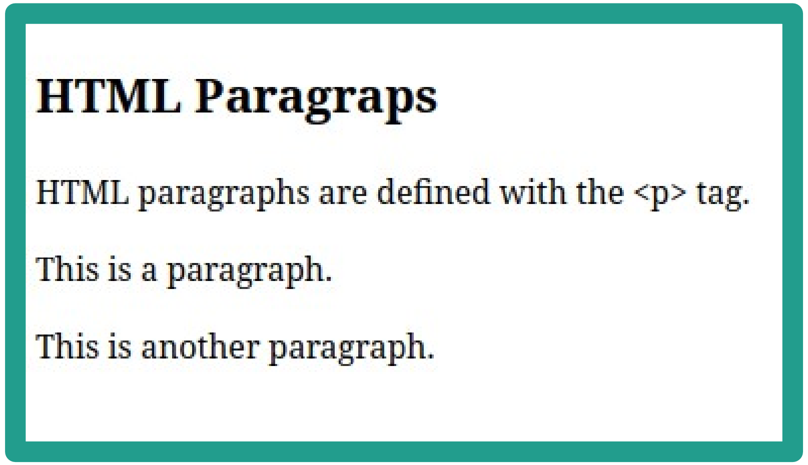
HTML



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

<h2>HTML</h2>

<p>Hello Bahirdar</p>

<p>This is a paragraph.</p>
<p>This is another paragraph.</p>

</body>
</html>
```

browser render →

OUTPUT



HTML Paragraps

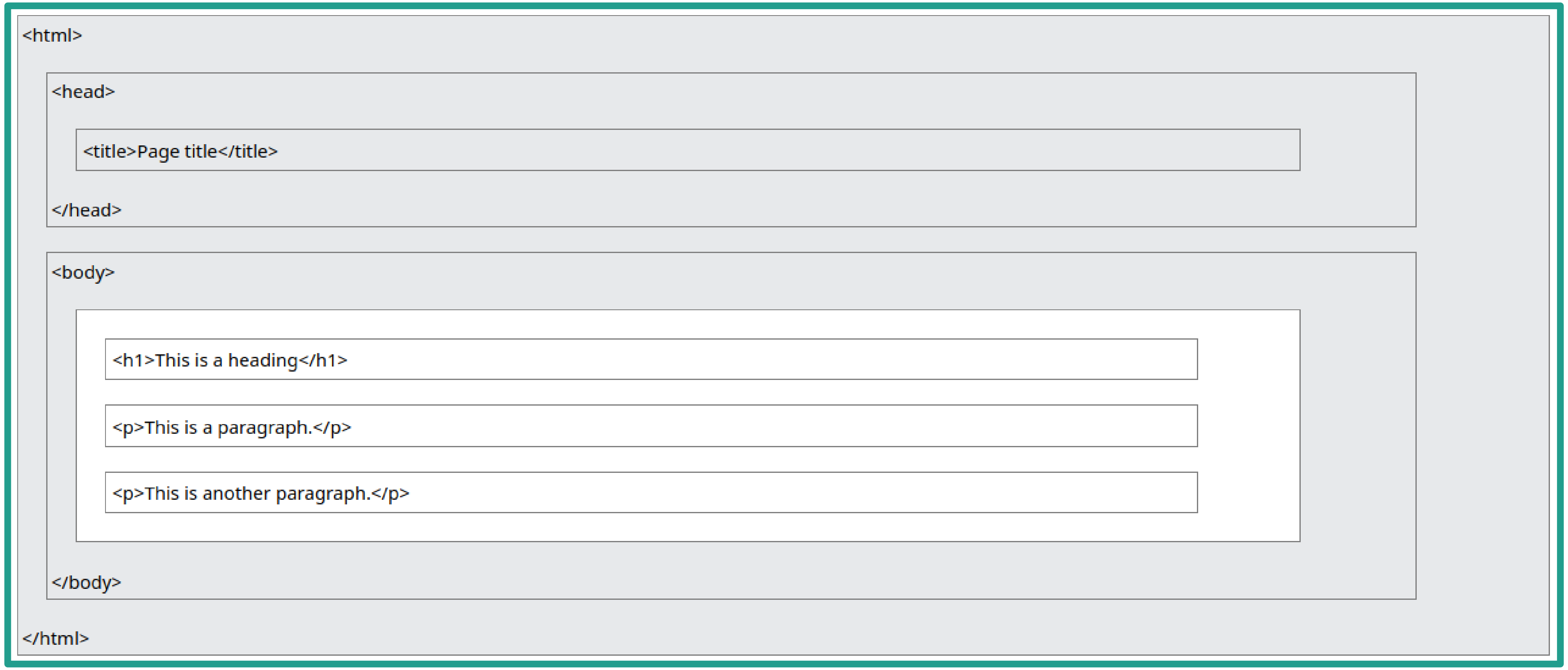
HTML paragraphs are defined with the <p> tag.

This is a paragraph.

This is another paragraph.

HTML recap

HTML page structure



```
<html>
    <head>
        <title>Page title</title>
    </head>
    <body>
            <h1>This is a heading</h1>
            <p>This is a paragraph.</p>
            <p>This is another paragraph.</p>
    </body>
</html>
```

HTML recap

HTML Element

An HTML element is defined by a start tag, some content, and an end tag.

- HTML elements can be nested
- HTML is Not Case Sensitive

```
<tagname>Content goes here...</tagname>


<h1>My First Heading</h1>

<p>My first paragraph.</p>
```

HTML recap

HTML Attributes

HTML attributes provide additional information about HTML elements.

- All HTML elements can have attributes
- Attributes provide additional information about elements
- Attributes are always specified in the start tag
- Attributes usually come in name/value pairs like:

```
<a href="https://hahu.jobs">Visit Hahujobs</a>

<img src="img_girl.jpg" width="500" height="600">

<p style="color:red;">This is a red paragraph.</p>
```

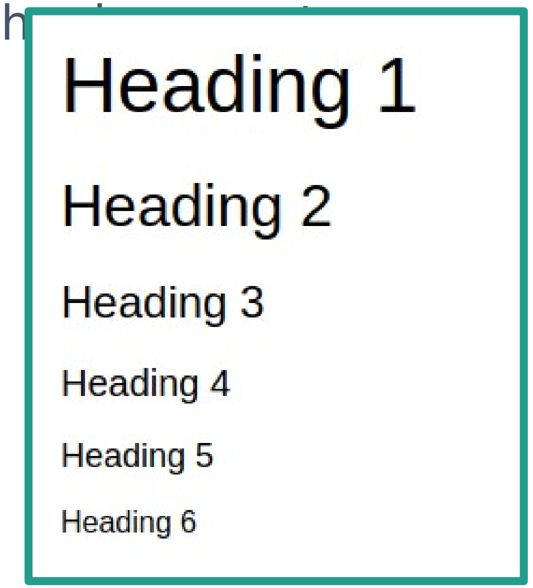
HTML recap

HTML Headings

HTML headings are titles or subtitles that you want to display on a webpage.

- Search engines use the headings to index the structure and content of your web pages.
- Users often skim a page by its headings. It is important to use headings to show th structure

```
<h1>Heading 1</h1>
<h2>Heading 2</h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 6</h6>
```



```
Heading 1
Heading 2
Heading 3
Heading 4
Heading 5
Heading 6
```

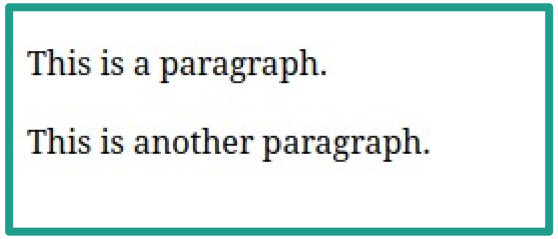
HTML recap

HTML Paragraphs

A paragraph always starts on a new line, and is usually a block of text.

- The HTML <p> element defines a paragraph.

```
<p>This is a paragraph.</p>
<p>This is another paragraph.</p>
```



This is a paragraph.

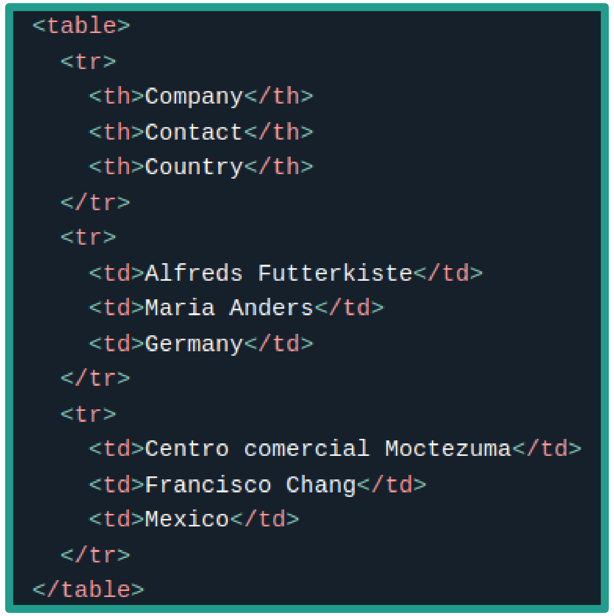
This is another paragraph.

HTML recap

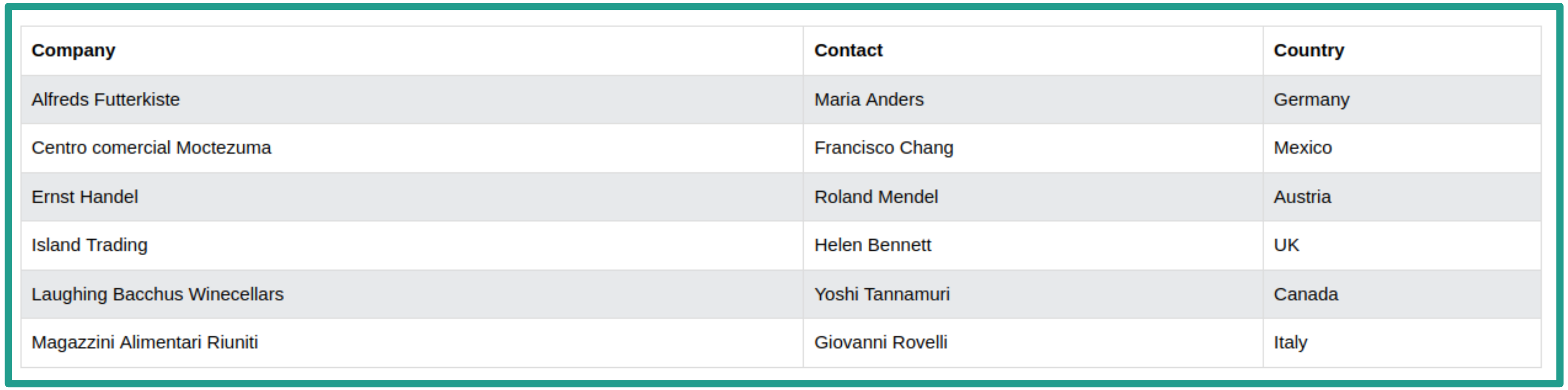
HTML Tables

HTML tables allow web developers to arrange data into rows and columns.

- Each table cell is defined by a <td> and a </td> tag.
- Each table row starts with a <tr> and end with a </tr> tag.
- Sometimes you want your cells to be headers, in those cases use the <th> tag instead of the <td> tag



```
<table>
  <tr>
    <th>Company</th>
    <th>Contact</th>
    <th>Country</th>
  </tr>
  <tr>
    <td>Alfreds Futterkiste</td>
    <td>Maria Anders</td>
    <td>Germany</td>
  </tr>
  <tr>
    <td>Centro comercial Moctezuma</td>
    <td>Francisco Chang</td>
    <td>Mexico</td>
  </tr>
</table>
```



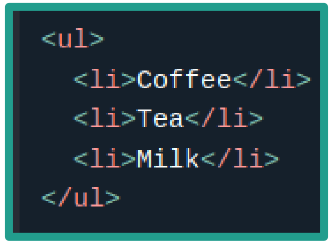
Company	Contact	Country
Alfreds Futterkiste	Maria Anders	Germany
Centro comercial Moctezuma	Francisco Chang	Mexico
Ernst Handel	Roland Mendel	Austria
Island Trading	Helen Bennett	UK
Laughing Bacchus Winecellars	Yoshi Tannamuri	Canada
Magazzini Alimentari Riuniti	Giovanni Rovelli	Italy

HTML recap

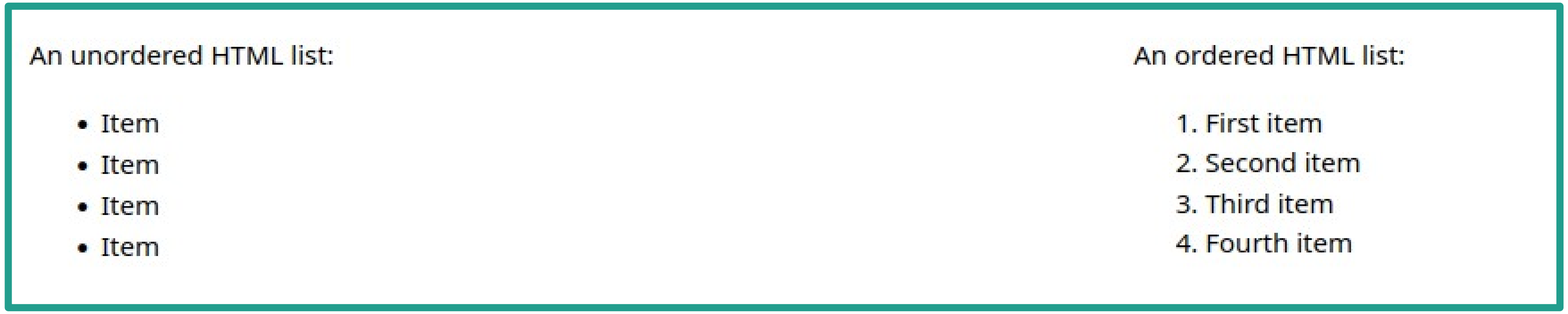
HTML Lists

HTML lists allow web developers to group a set of related items in lists.

- An unordered list starts with the <ul> tag. Each list item starts with the <li> tag.
- An ordered list starts with the <ol> tag. Each list item starts with the <li> tag.



```
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

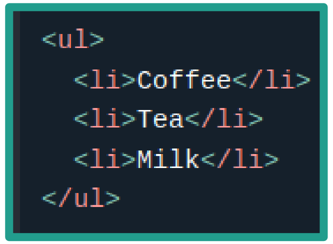


An unordered HTML list:

- Item
- Item
- Item
- Item

An ordered HTML list:

1. First item
2. Second item
3. Third item
4. Fourth item

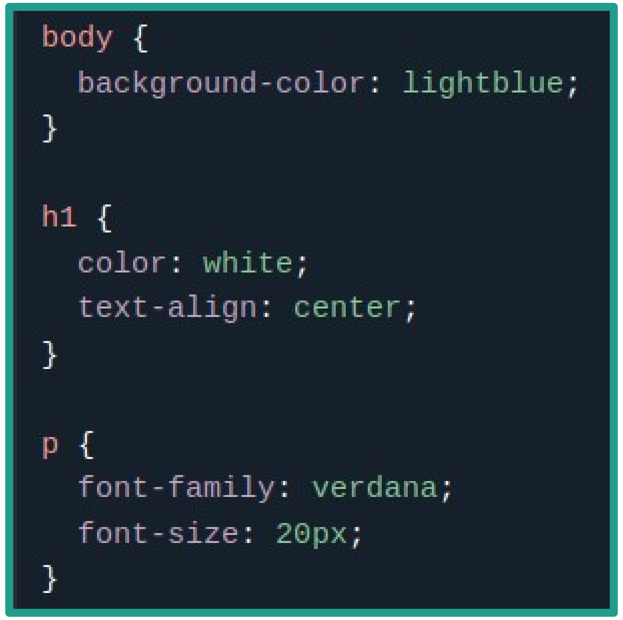


```
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

CSS recap

CSS is the language we use to style a Web page.

- CSS stands for Cascading Style Sheets
- CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- CSS saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets are stored in CSS files

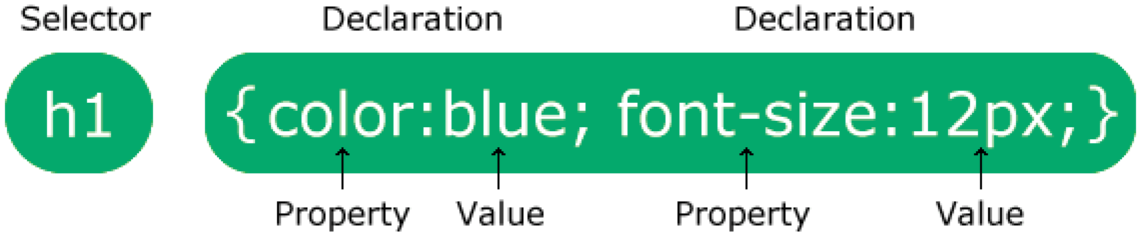


```
body {
  background-color: lightblue;
}

h1 {
  color: white;
  text-align: center;
}

p {
  font-family: verdana;
  font-size: 20px;
}
```

CSS recap

CSS Syntax

A CSS rule consists of a selector and a declaration block.



Selector

Declaration

Declaration

h1

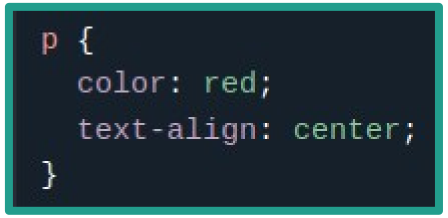
{color:blue; font-size:12px;}

Property

Value

Property

Value



```
p {
  color: red;
  text-align: center;
}
```

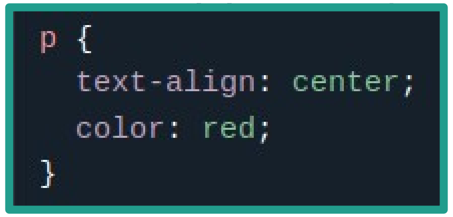
- The selector points to the HTML element you want to style.
- The declaration block contains one or more declarations separated by semicolons.
- Each declaration includes a CSS property name and a value, separated by a colon.
- Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.

CSS recap

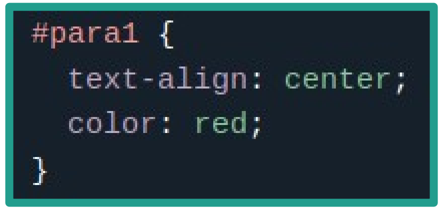
CSS Selectors

A CSS selector selects the HTML element(s) you want to style.

Simple selectors (select elements based on

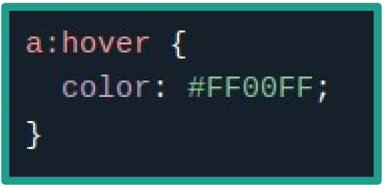


```
p {
  text-align: center;
  color: red;
}
```



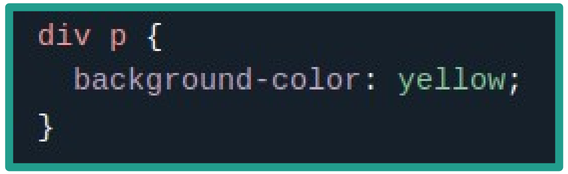
```
#para1 {
  text-align: center;
  color: red;
}
```

Pseudo-class selectors (select elements based on a ce



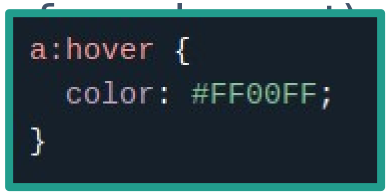
```
a:hover {
  color: #FF00FF;
}
```

Combinator selectors (select elements based on a specific relationship between them)



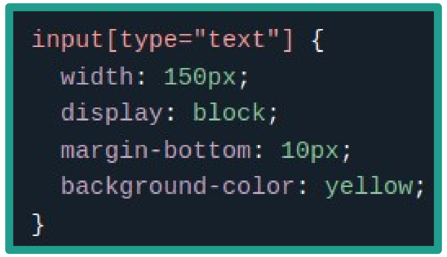
```
div p {
  background-color: yellow;
}
```

Pseudo-elements selectors (select and style a part



```
a:hover {
  color: #FF00FF;
}
```

Attribute selectors (select elements based on an attribute or attribute value)



```
input[type="text"] {
  width: 150px;
  display: block;
  margin-bottom: 10px;
  background-color: yellow;
}
```

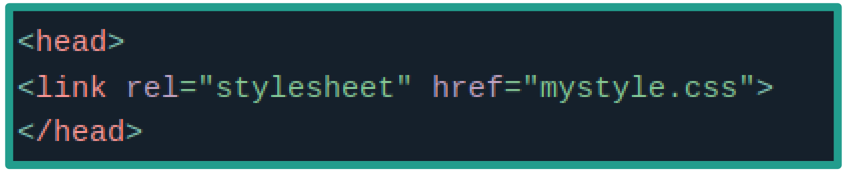
CSS recap

How To Add CSS

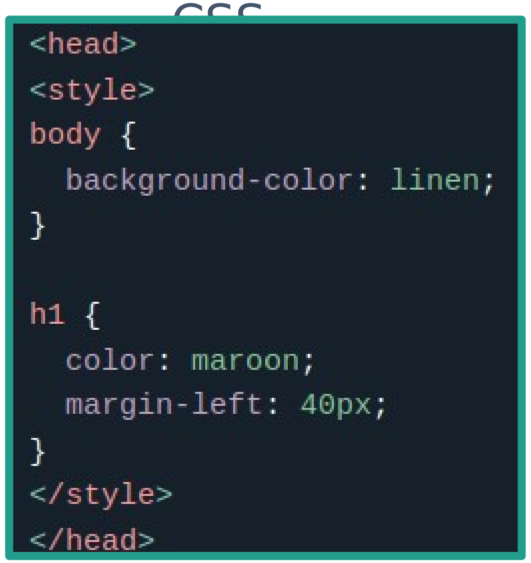
When a browser reads a style sheet, it will format the HTML document according to the information in the style sheet.

There are three ways of inserting a style sheet

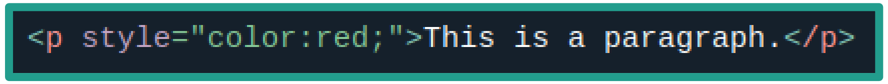
- External CSS
- Internal CSS



```
<head>
<link rel="stylesheet" href="mystyle.css">
</head>
```



```
<head>
<style>
body {
  background-color: linen;
}

h1 {
  color: maroon;
  margin-left: 40px;
}
</style>
</head>
```



```
<p style="color:red;">This is a paragraph.</p>
```

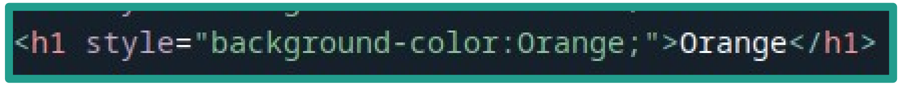
CSS recap

Colors

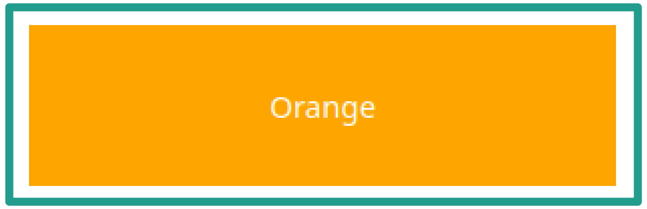
Colors are specified using predefined color names, or RGB, HEX, HSL, RGBA, HSLA values.

CSS/HTML support 140 standard color names.

CSS Background Color

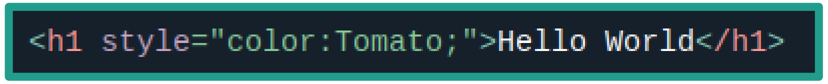


```
<h1 style="background-color:Orange;">Orange</h1>
```

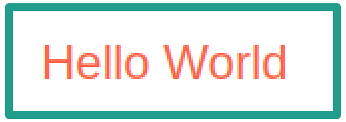


Orange

CSS Text Color



```
<h1 style="color:Tomato;">Hello World</h1>
```

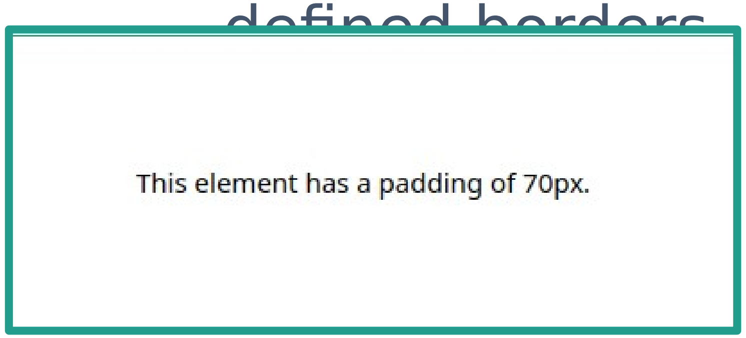


Hello World

CSS recap

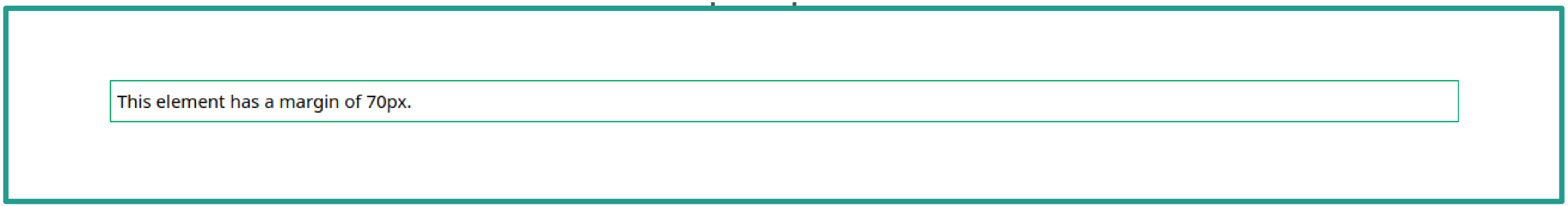
CSS Padding & Margins

Padding is used to create space around an element's content, inside of any defined borders.



This element has a padding of 70px.

Margins are used to create space around elements, outside of any defined borders.



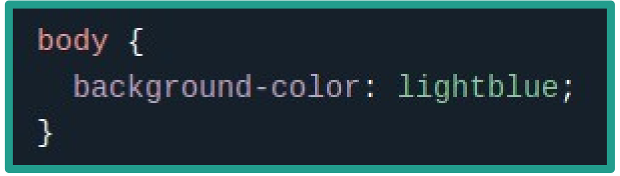
This element has a margin of 70px.

CSS recap

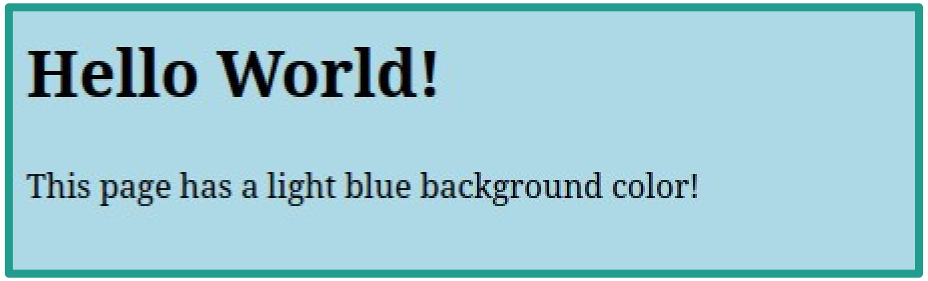
CSS Backgrounds

The CSS background properties are used to add background effects for elements.

CSS Background Color



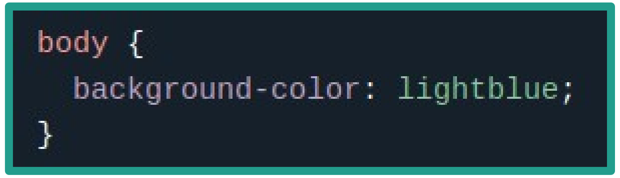
```
body {
  background-color: lightblue;
}
```



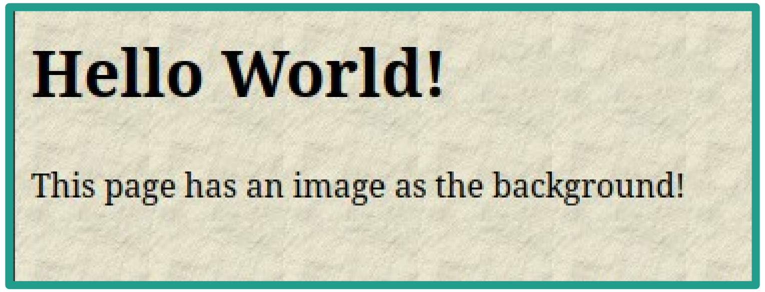
Hello World!

This page has a light blue background color!

CSS Background Image



```
body {
  background-color: lightblue;
}
```



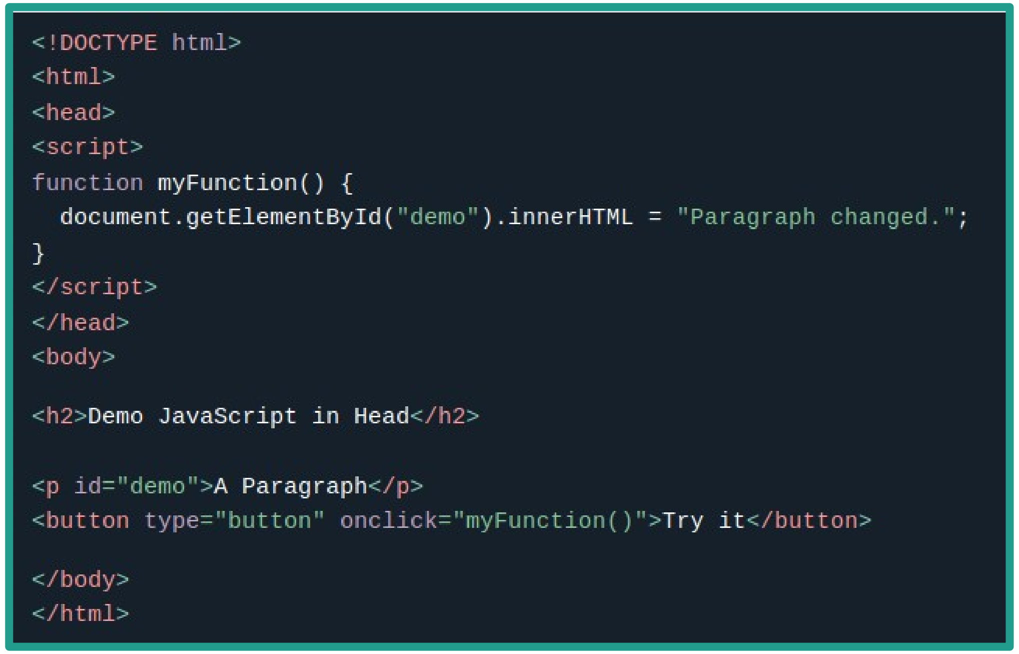
Hello World!

This page has an image as the background!

Javascript recap

JavaScript is a scripting or programming language that allows you to implement complex features on web pages

- Store useful values inside variables.
- Operations on pieces of text (known as "strings" in programming).
- Running code in response to certain events occurring on a web page.
- And much more!



```html
<!DOCTYPE html>
<html>
<head>
<script>
function myFunction() {
  document.getElementById("demo").innerHTML = "Paragraph changed.";
}
</script>
</head>
<body>

<h2>Demo JavaScript in Head</h2>

<p id="demo">A Paragraph</p>
<button type="button" onclick="myFunction()">Try it</button>

</body>
</html>
```

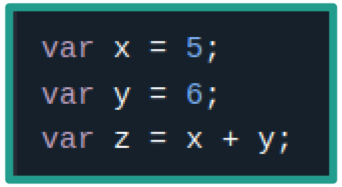
Javascript recap

Javascript Variables

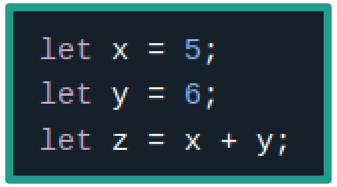
Variables are containers for storing data (storing data values).

4 Ways to Declare a JavaScript Variable

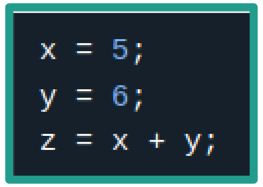
- Using var
- Using let
- Using const
- Using nothing



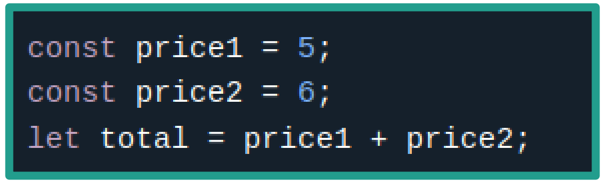
```
var x = 5;
var y = 6;
var z = x + y;
```



```
let x = 5;
let y = 6;
let z = x + y;
```



```
x = 5;
y = 6;
z = x + y;
```



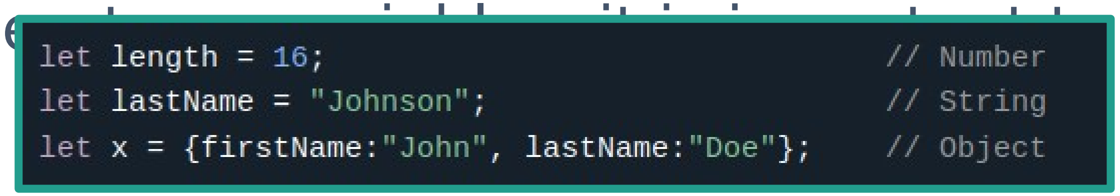
```
const price1 = 5;
const price2 = 6;
let total = price1 + price2;
```

Javascript recap

Javascript Data Types

JavaScript variables can hold different data types: numbers, strings, objects, booleans, arrays,
and undefined

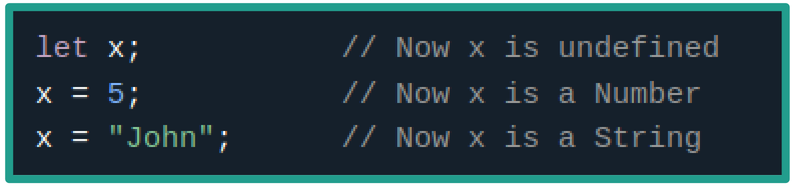
To be able to ope know something about th type.



```
let length = 16;                               // Number
let lastName = "Johnson";                      // String
let x = {firstName:"John", lastName:"Doe"};    // Object
```

JavaScript Types are Dynamic

JavaScript has dynamic types. This means that the same variable can be used to hold different data types:



```
let x;              // Now x is undefined
x = 5;              // Now x is a Number
x = "John";         // Now x is a String
```

Javascript Operators

JavaScript operators are used to assign values, compare values, perform arithmetic operations, and more.

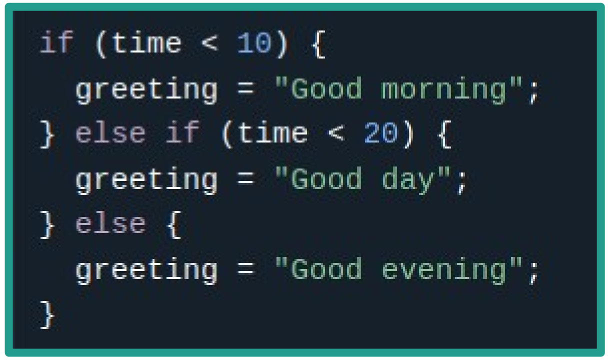
- Assignment operators (=, +=, -=, *=)
- Comparison operators (==, >, <, !=, ===)
- Arithmetic operators (+, -, *, /)
- Logical operators (&&, ||, !)
- String operators (+, +=)
- Conditional (ternary) operator (*variablename* = (*condition*) ? *value1*:*value2*)
- Bitwise operators (&,|,^,~, >>,<<) and more

Javascript recap

Javascript if/else and switch

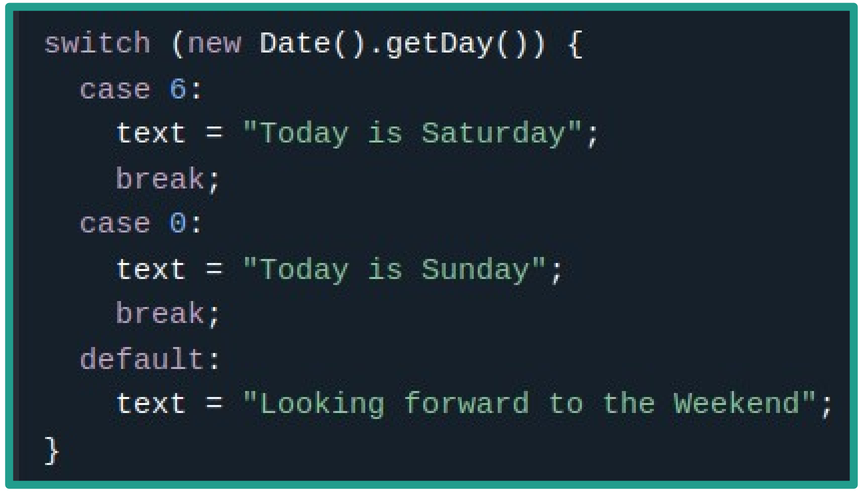
Conditional statements are used to perform different actions based on differen
conditions.
Very often when you write code, you want to perform different actions for different decisions.

if/else



```
if (time < 10) {
  greeting = "Good morning";
} else if (time < 20) {
  greeting = "Good day";
} else {
  greeting = "Good evening";
}
```

switch



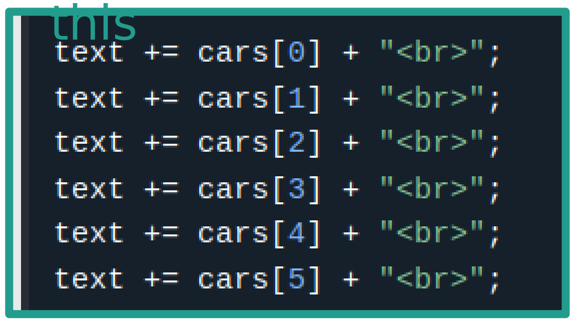
```
switch (new Date().getDay()) {
  case 6:
    text = "Today is Saturday";
    break;
  case 0:
    text = "Today is Sunday";
    break;
  default:
    text = "Looking forward to the Weekend";
}
```

Javascript recap

Javascript Loops

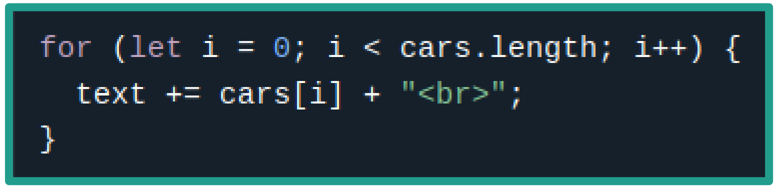
Loops can execute a block of code a number of times.
Loops are handy, if you want to run the same code over and over again, each time with a different value.

instead of writing this



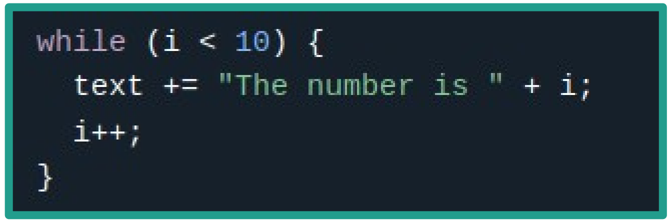
```
text += cars[0] + "<br>";
text += cars[1] + "<br>";
text += cars[2] + "<br>";
text += cars[3] + "<br>";
text += cars[4] + "<br>";
text += cars[5] + "<br>";
```

for loop



```
for (let i = 0; i < cars.length; i++) {
  text += cars[i] + "<br>";
}
```

while loop



```
while (i < 10) {
  text += "The number is " + i;
  i++;
}
```

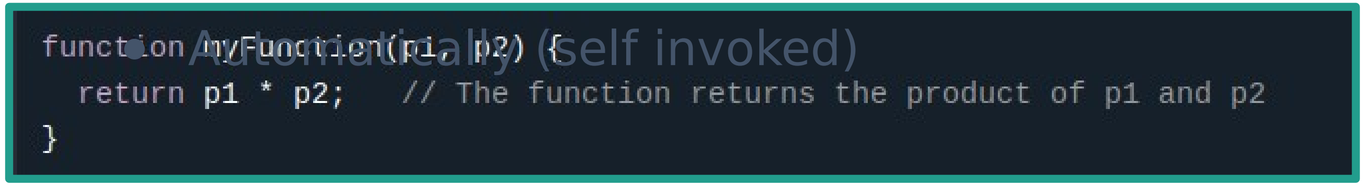
Javascript recap

Javascript Functions

A JavaScript function is a block of code designed to perform a particular task.
A JavaScript function is executed when "something" invokes it (calls it).

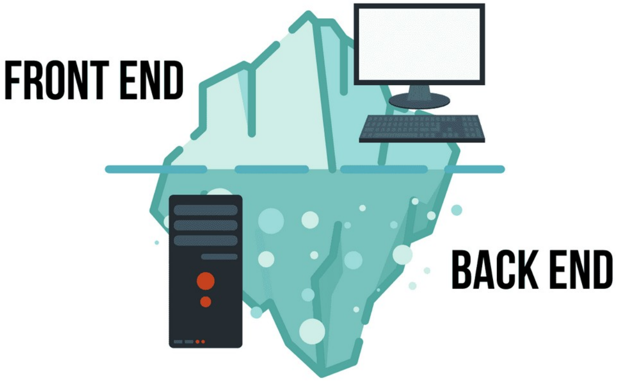
Function Invocation

- When an event occurs (when a user clicks a button)
- When it is invoked (called) from JavaScript code
- Automatically (self invoked)



```
function myFunction(p1, p2) {
  return p1 * p2;   // The function returns the product of p1 and p2
}
```

What is Frontend?



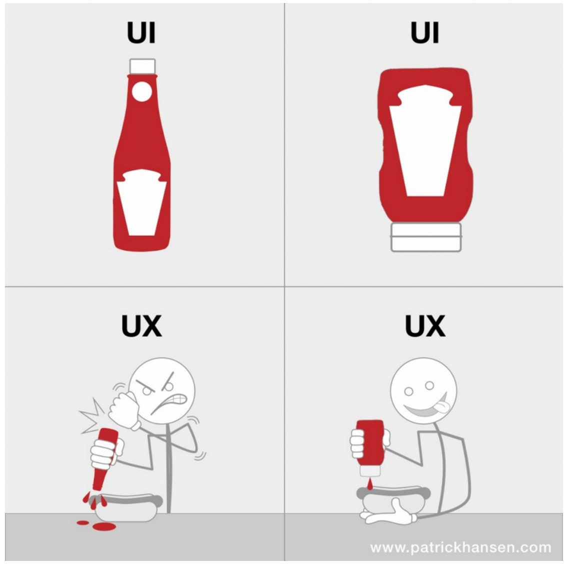
the front end is the part of the website a user or customer interacts with

The front end of a website is everything the user either sees or interacts with when they visit the website. It is responsible for the total look and feel of an online experience.

Frontend design

Frontend design

UI/UX



At the most basic level, the user interface (UI) is the series of screens, pages, and visual elements—like buttons and icons—that enable a person to interact with a product or service.

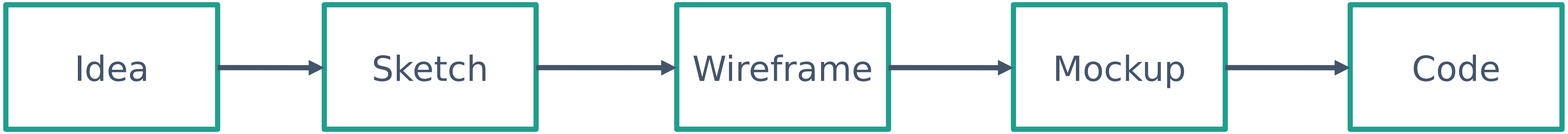
User experience (UX), on the other hand, is the internal experience that a person has as they interact with every aspect of a company’s products and services.

Wireframing and Sketching

Typically, wireframes are produced early in the design process, during the ideation phase when designers need to explore a variety of different options and select the best one.

Wireframes are great at that stage because they help designers to demonstrate how the layout should be organized without explicitly specifying the visual design of a product.

Sketching Always Comes Before Wireframing



getting a basic concept

refining the concept further

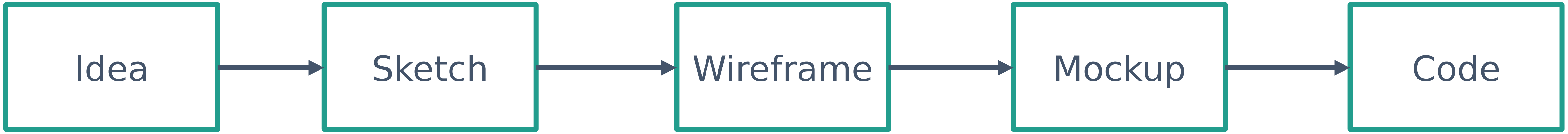
creating visual & graphics content

developing it in web browser

Frontend design

Mockup with Figma

Figma is a fantastic design tool focused on designing ui/ux interfaces and provides you with everything you need.



Idea → Sketch → Wireframe → Mockup → Code

Sketch: getting a basic concept

Wireframe: refining the concept further

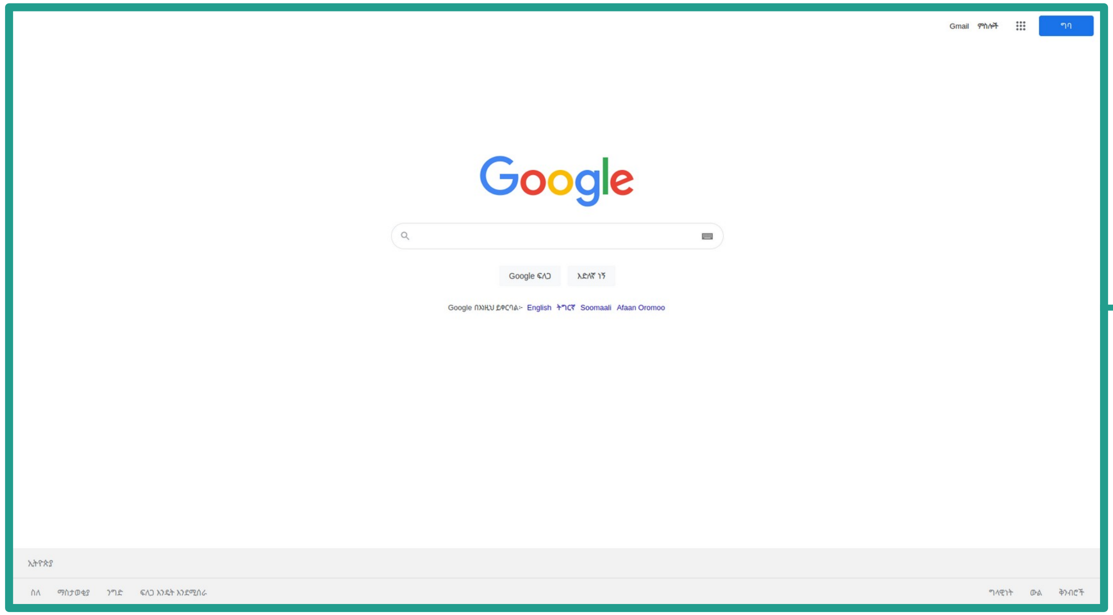
Mockup: creating visual & graphics content

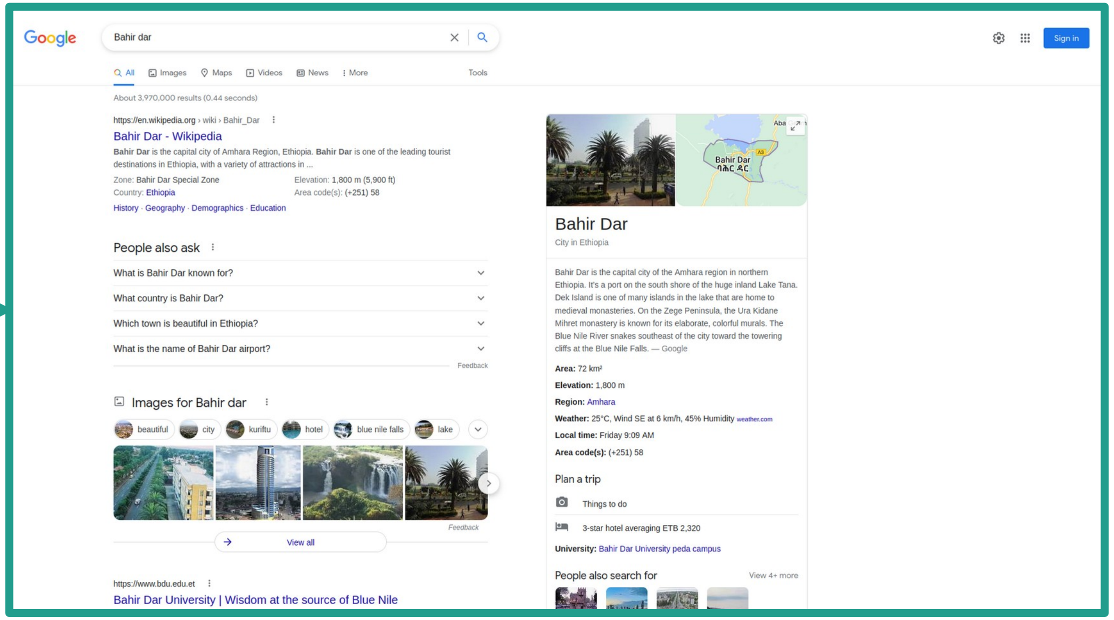
Code: developing it in web browser

Frontend design

Figma

Design two page mockup of google.com with Figma





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Bahir Dar - Wikipedia

Bahir Dar is the capital city of Amhara Region, Ethiopia. **Bahir Dar** is one of the leading tourist destinations in Ethiopia, with a variety of attractions in ...

Zone: Bahir Dar Special Zone
Country: Ethiopia
Elevation: 1,800 m (5,900 ft)
Area code(s): (+251) 58

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Bahir Dar

City in Ethiopia

Bahir Dar is the capital city of the Amhara region in northern Ethiopia. It's a port on the south shore of the huge inland Lake Tana. Dek Island is one of many islands in the lake that are home to medieval monasteries. On the Zege Peninsula, the Ura Kidane Mihret monastery is known for its elaborate, colorful murals. The Blue Nile River snakes southeast of the city toward the towering cliffs at the Blue Nile Falls. — Google

Area: 72 km²

Elevation: 1,800 m

Region: Amhara

Weather: 25°C, Wind SE at 6 km/h, 45% Humidity weather.com

Local time: Friday 9:09 AM

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