

# Displaying the Web with HTML



**Barry Luijbregts**  
Software Developer & Architect  
[@AzureBarry | www.azurebarry.com](https://www.azurebarry.com)

# Introduction

**What is HTML?**

**Where it came from**

**How you can create HTML**





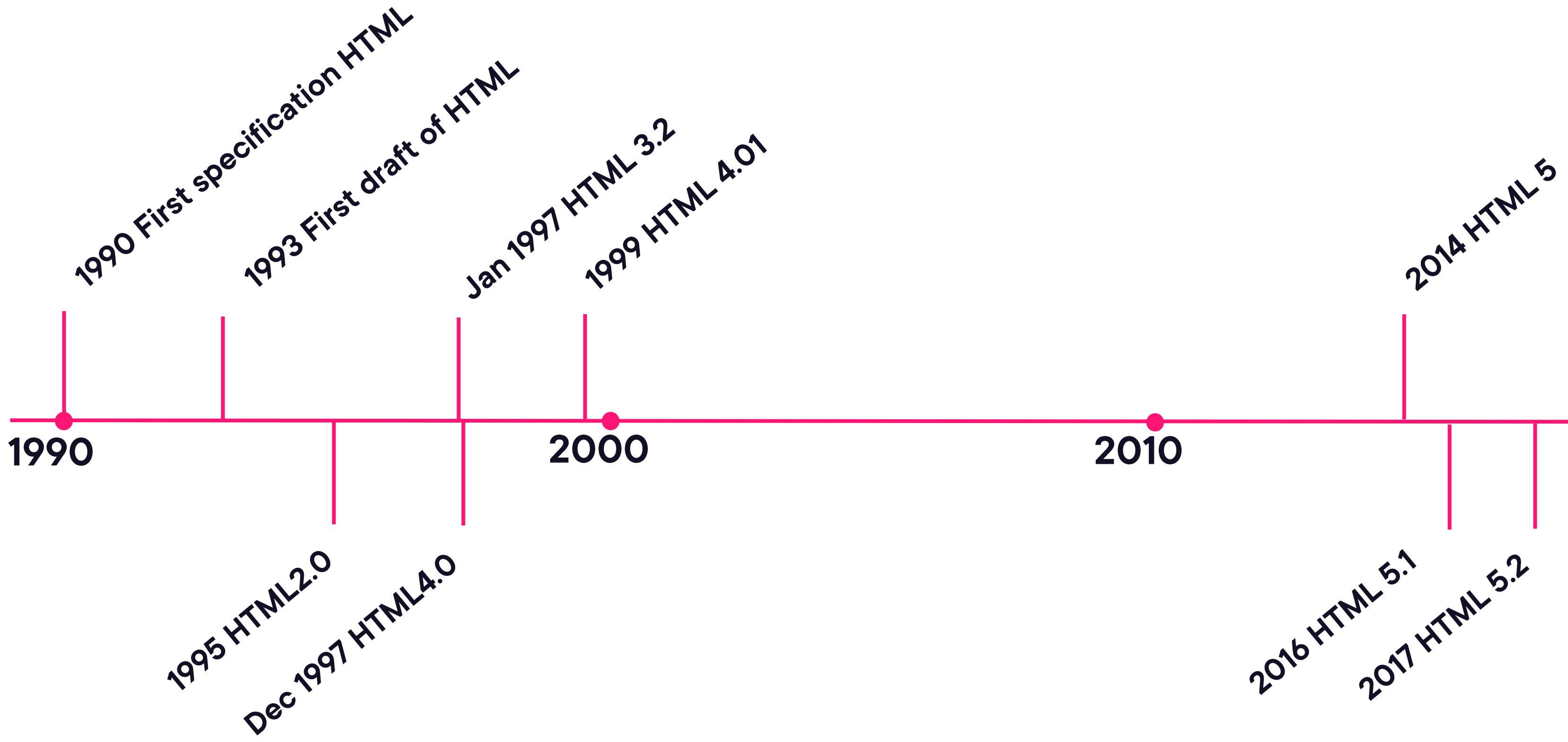
# Where Did HTML Come From?



**Hypertext Markup  
Language (HTML) is the  
standard markup language  
for creating web pages and  
web applications**



# History of HTML



# Who Manages the HTML Specification?

1990 Tim Berners-Lee

1993 Internet Engineering Task Force (IETF)

1996 World Wide Web Consortium (W3C)

2000 International Organization for Standardization (ISO)  
International Electrotechnical Commission (IEC)  
(ISO/IEC 15445:2000)

2004 Web Hypertext Application Technology Working Group (WHATWG)



# What Is HTML?



# Structure of HTML Documents

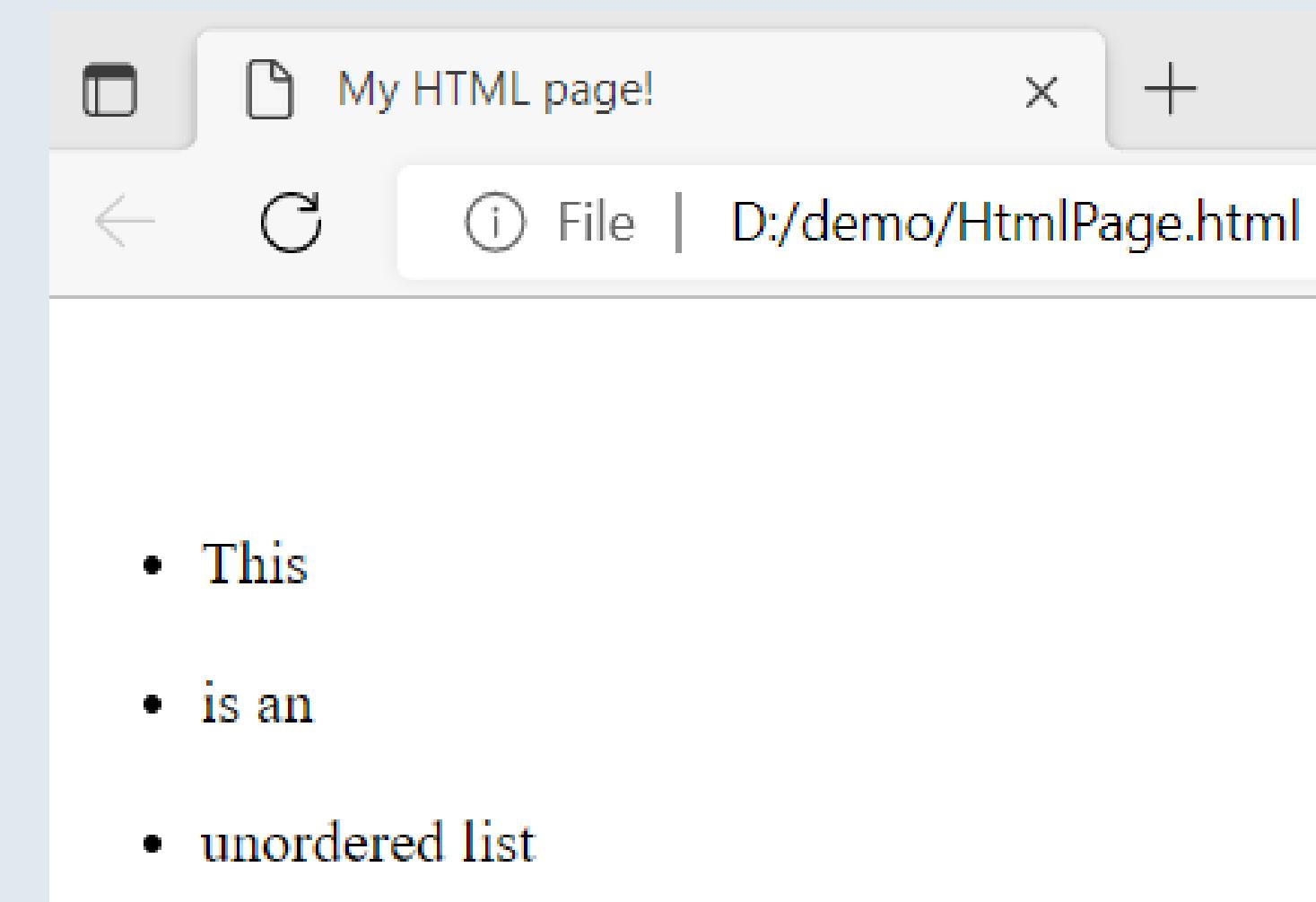
.HTM or .HTML

```
<!DOCTYPE html>
<html>
    <head>
        <!--meta information-->
    </head>
    <body>
        <!--the content of the page-->
    </body>
</html>
```



# Example of HTML

```
<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8">
        <title>My HTML page!</title>
</head>
<body>
    <div>
        <ul>
            <li>This</li>
            <li>is an</li>
            <li>unordered list</li>
        </ul>
    </div>
</body>
</html>
```



# More Expressive HTML Elements

```
<!DOCTYPE html>
<html>
  <head></head>
  <body>

    </body>
</html>
```



# More Expressive HTML Elements

```
<!DOCTYPE html>
<html>
  <head></head>
  <body>
    <header>
      <nav />
    </header>
    <main>
      <article />
      <aside />
    </main>
    <footer>
      <address />
    </footer>
  </body>
</html>
```



# More Interactive HTML Elements

```
<audio controls>
  <source src="music.mp3" type="audio/mpeg">
    Your browser does not support the audio tag.
</audio>
```

```
<canvas id="myDrawing"></canvas>
```

```
<form action="/action_page.php" method="post">
  First name: <input type="text" name="fname"><br>
  Last name: <input type="text" name="lname"><br>
  <input type="submit" value="Submit">
</form>
```

```
<video width="150" height="200" controls>
  <source src="movie.mp4" type="video/mp4">
    Your browser does not support the video tag.
</video>
```



# Browser Support of HTML Elements

<https://caniuse.com/>

Video element  - LS

Method of playing videos on webpages (without requiring a plug-in). Includes support for the following media properties:  
currentSrc, currentTime, paused, playbackRate, buffered, duration, played, seekable, ended, autoplay, loop, controls, volume & muted

Usage Global % of all users 98.5% + 0.13% = 98.64%

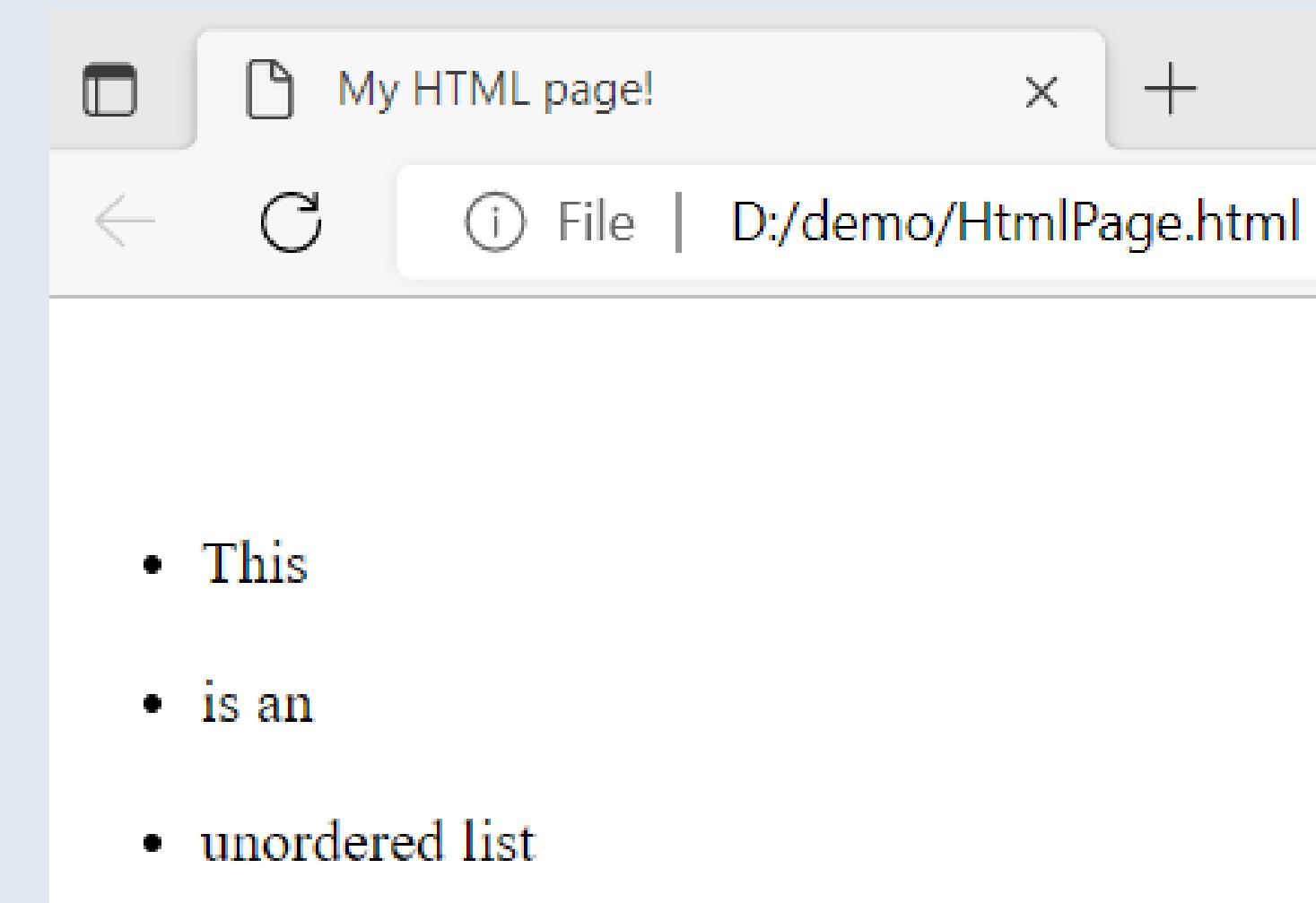
Current aligned	Usage relative	Date relative	Filtered	All	⚙️
Chrome	Edge	Safari	Firefox	Opera	IE
		3.1 - 3.2	2 - 3		
		4 - 10.1	2 <sup>1</sup> 3.5 - 19	10.1	6 - 8
4 - 106	12 - 105	3 <sup>2</sup> 11 - 16.0	20 - 105	11.5 - 90	9 - 10
107	106	3 <sup>3</sup> 16.1	106	91	11
108 - 110		3 <sup>4</sup> 16.2 - TP	107 - 108		
Chrome for Android	Safari on iOS	Samsung Internet	Opera Mini	Opera Mobile	UC Browser for Android
	3.2 - 10.3				1 2.1 - 2.2
	3 <sup>5</sup> 11 - 16.0	4 - 17.0		12 - 12.1	2.3 - 4.4.4
106	3 <sup>6</sup> 16.1	18.0	all	64	13.4
106	106	106	106	106	106
13.1	13.18	13.1	13.18	2.5	

# Working with HTML



# Example of HTML

```
<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8">
        <title>My HTML page!</title>
</head>
<body>
    <div>
        <ul>
            <li>This</li>
            <li>is an</li>
            <li>unordered list</li>
        </ul>
    </div>
</body>
</html>
```

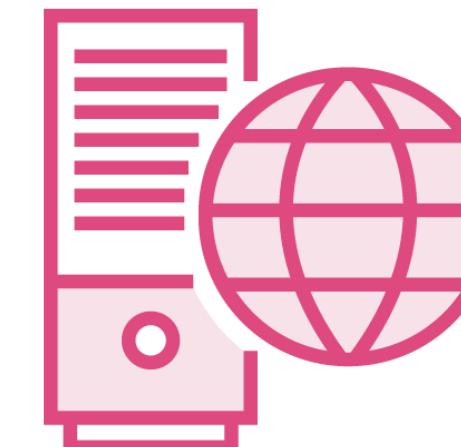


# Ingredients for the Web

Clients  
(Web browsers)



URL: <http://server.com/document1.html>



Web Server

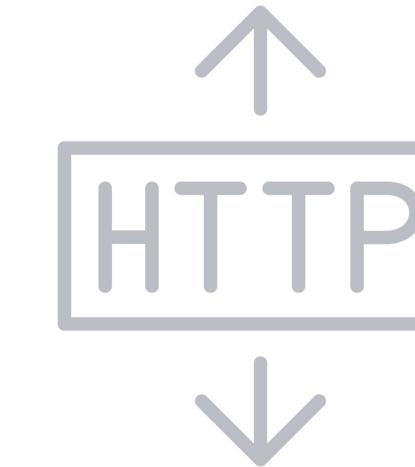


Document



# Ingredients for the Web

Clients  
(Web browsers)



URL: <http://server.com/document1.html>



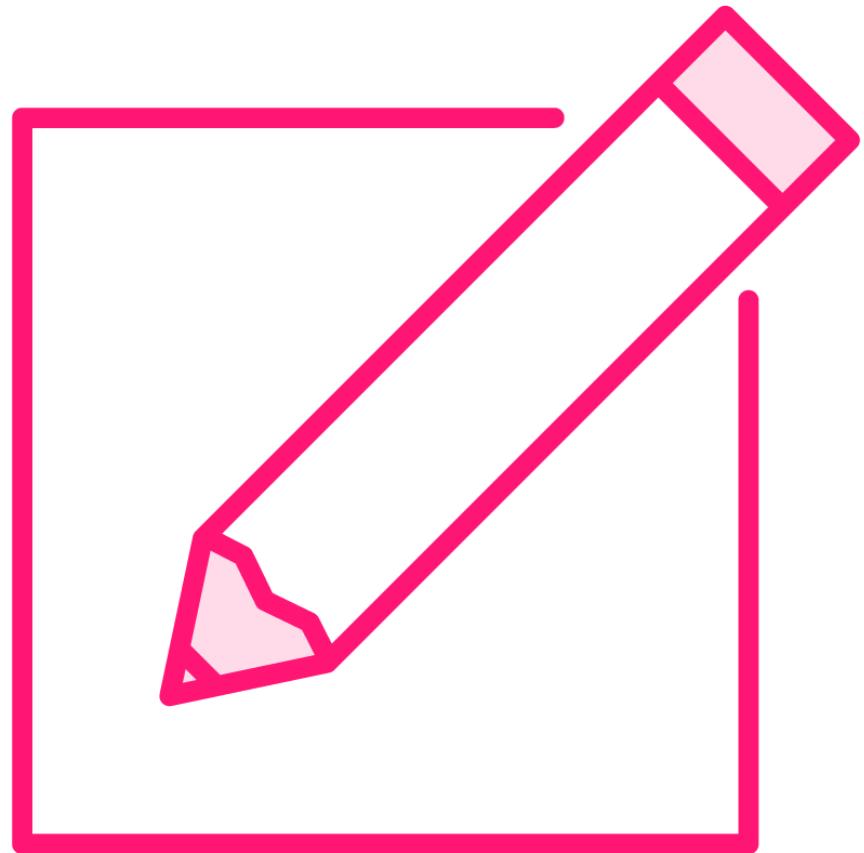
Web Server



Document

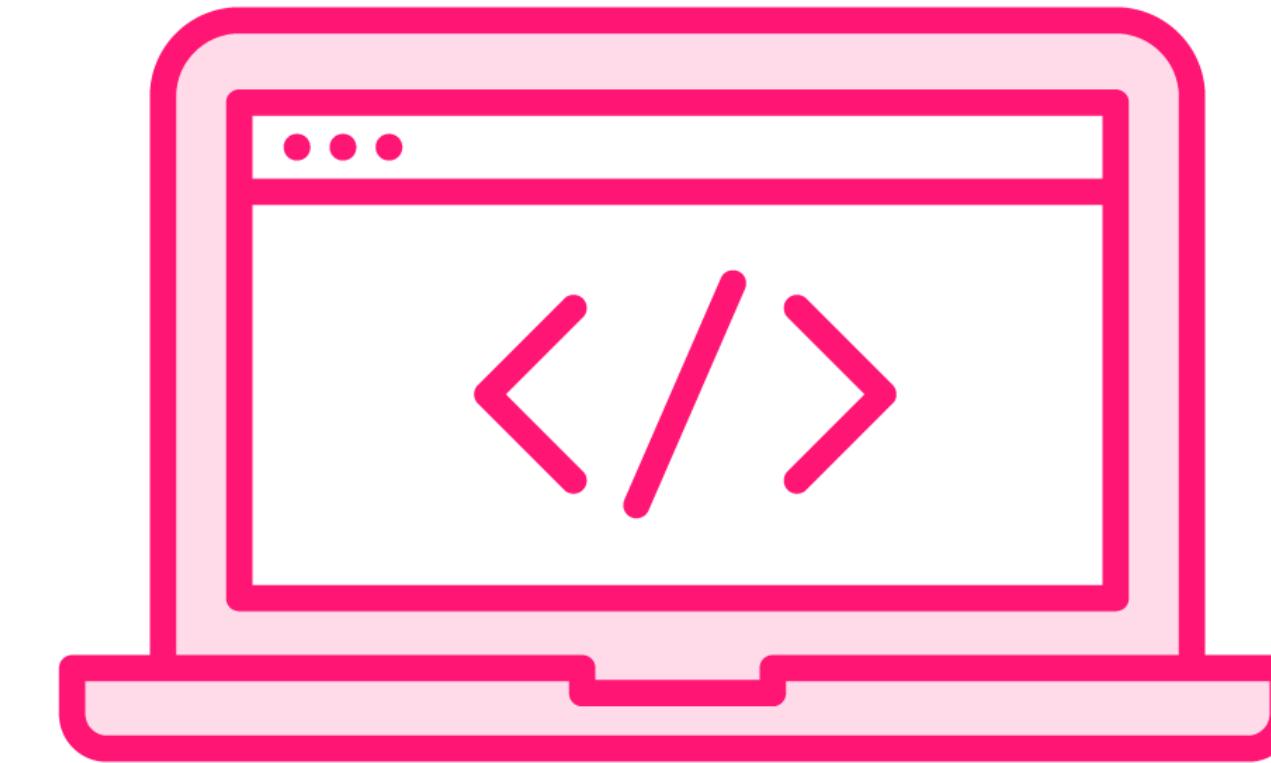


# How to Write HTML from Scratch



## Text editor

- Notepad
- Notepad++

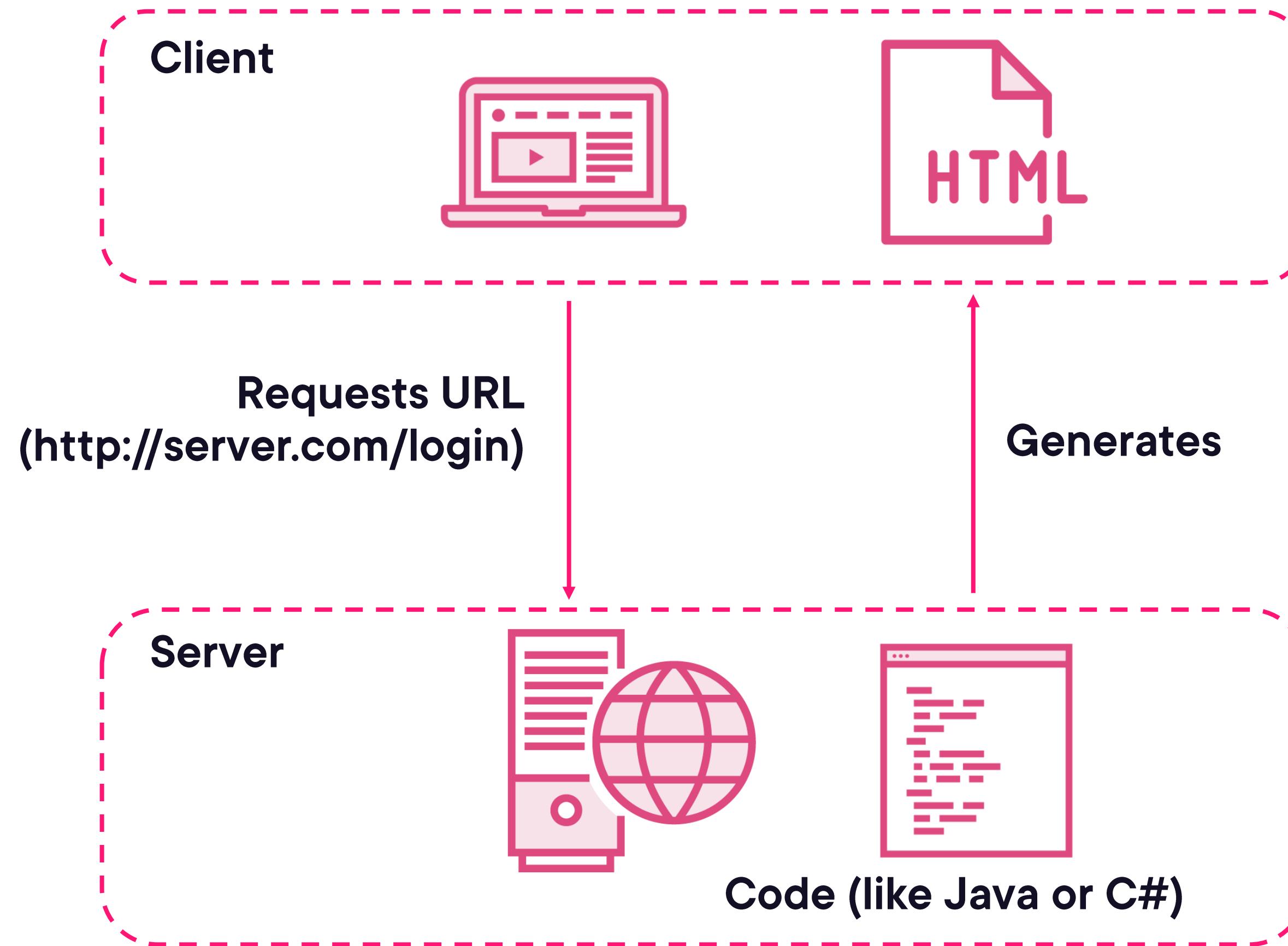


## Integrated Development Environment (IDE)

- Visual Studio
- Eclipse
- Atom



# Write HTML with a Framework



# Example of a Framework

## ASP.NET MVC

### Details.cshtml

```
@model Order
@{
    ViewData["Title"] = "Order detail";
}
<h2>Details for order with Id @Model.Id</h2>
<fieldset>
    <legend>Order</legend>
    Date: @Model.Date.LocalDateTime.ToString("d") <br />
    Total Price: $ @Model.Price.ToString() <br />
    Status: @Model.Status <br />
    @if(@Model.Id == 0)
    {
        <a href="PlaceOrder?id=@Model.Id">Place order</a>
    }
    <a href="CancelOrder?id=@Model.Id">Cancel order</a>
</fieldset>
```

### OrderController.cs

```
Public IActionResult Detail(int id)
{
    var order = _orderService.GetOrderById(id);
    return View(order);
}
```



# Frameworks for Writing HTML

PHP

Java

ASP.NET MVC

Ruby

Python

Node.js

Go

WordPress.com

Ghost.org





## Things to Remember

- HTML is the basic markup for the web**
- It is a standard of elements and attributes**
  - Interpreted by web browsers
- Developed by organizations and working groups**
  - IETF, W3C, ISO, IEC, WHATWG
- Many elements and attributes**
  - Evolving towards more interactive elements
- You can write HTML**
  - From scratch
  - With a framework that generates HTML

