

Displaying the Web with HTML



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Introduction

What is HTML?

Where it came from

How you can create HTML



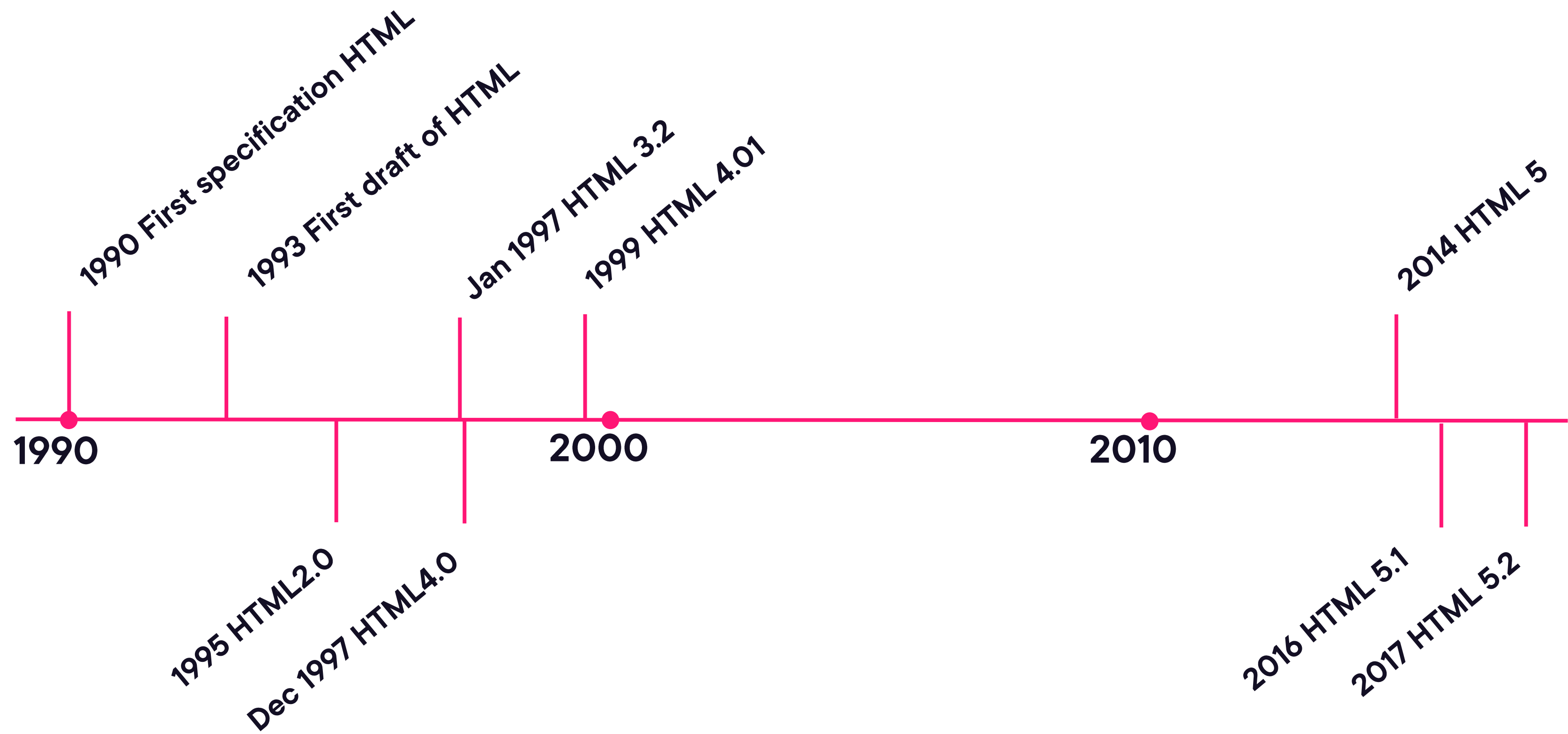
Where Did HTML Come From?



**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

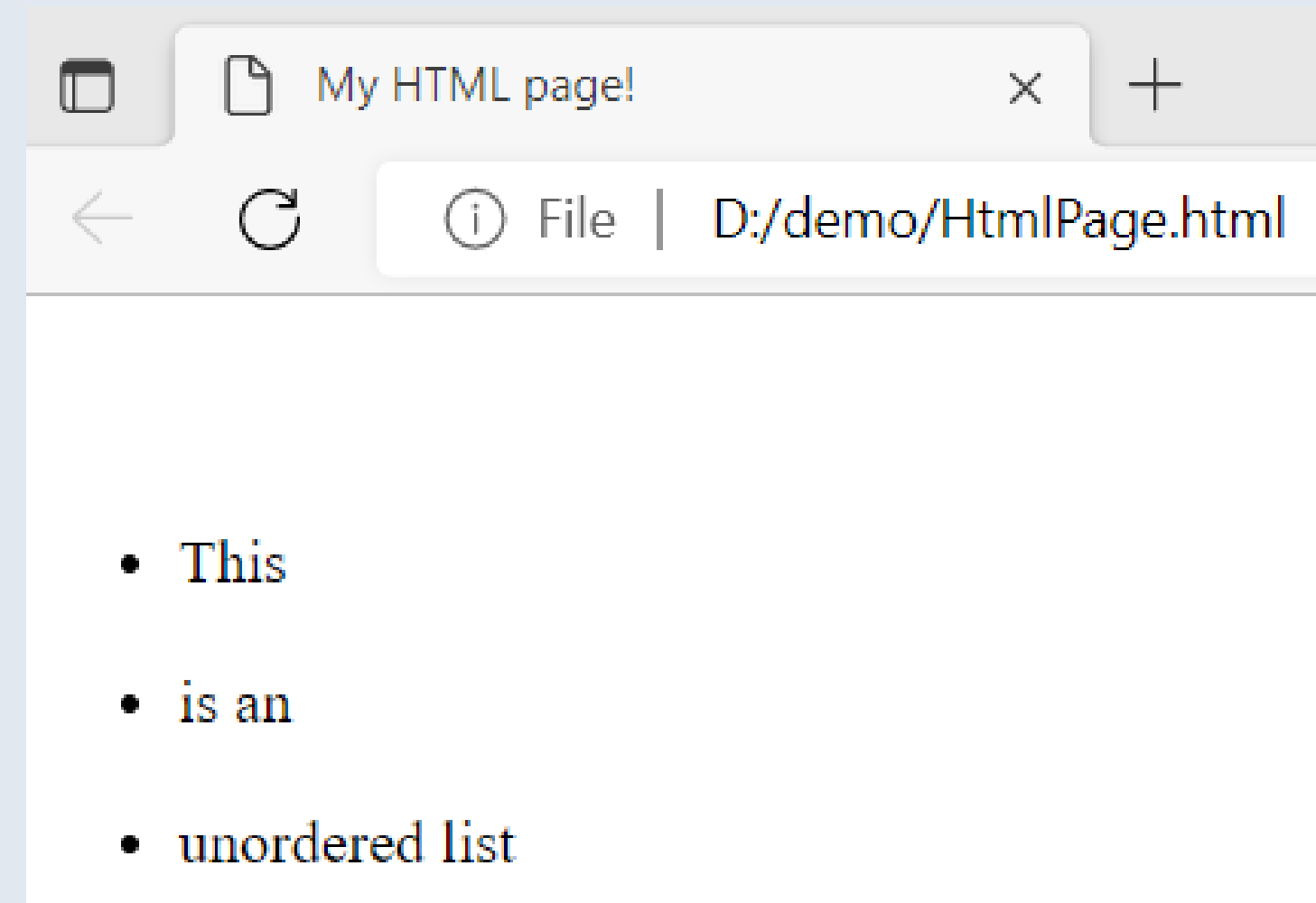
.HTM or .HTML

```
<!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

% of all users

Global

$$98.5\% + 0.13\% = 98.64\%$$

Current aligned Usage relative Date relative Filtered All 

[illegible]

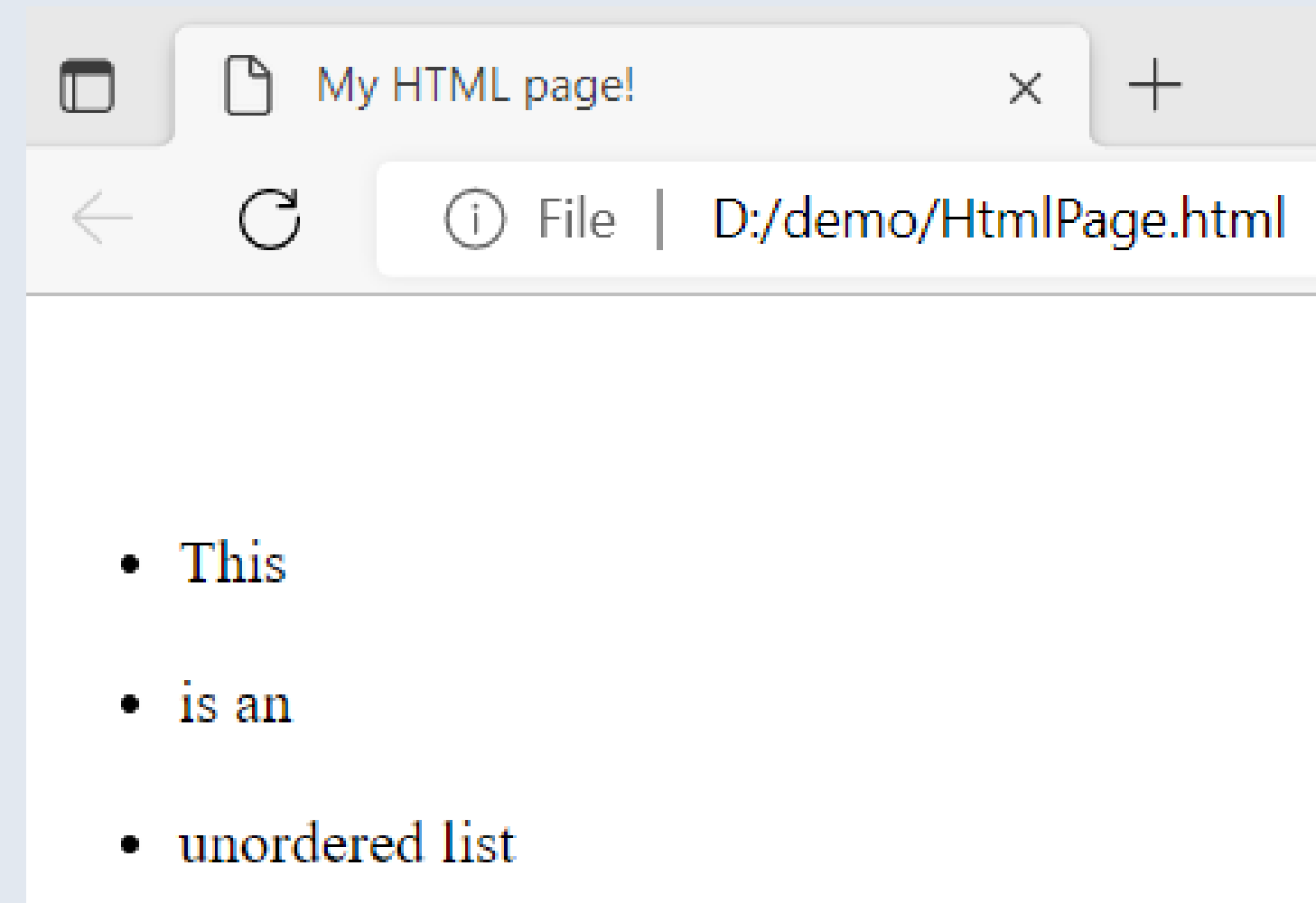


Working with HTML



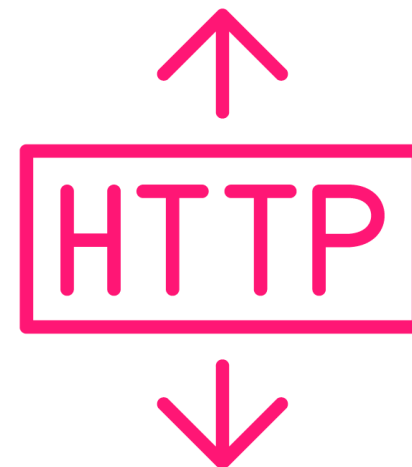
Example of HTML

```
<!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

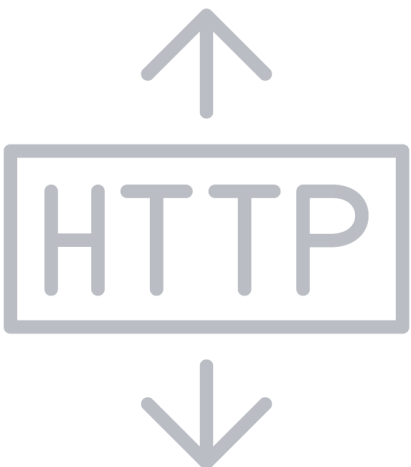


Document



Ingredients for the Web

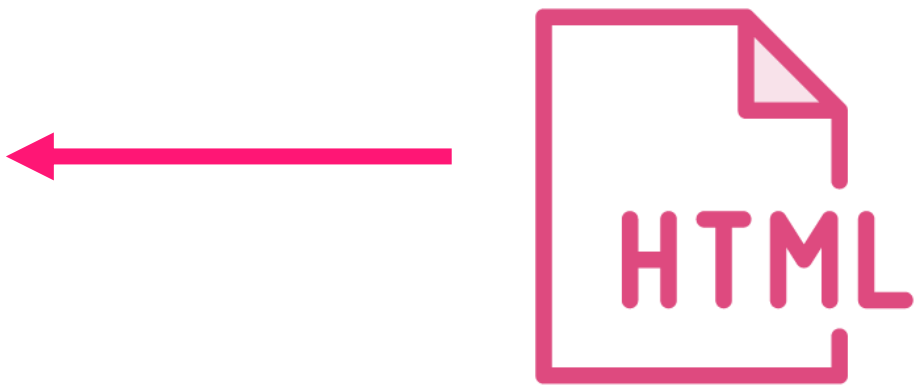
Clients
(Web browsers)



URL: `http://server.com/document1.html`



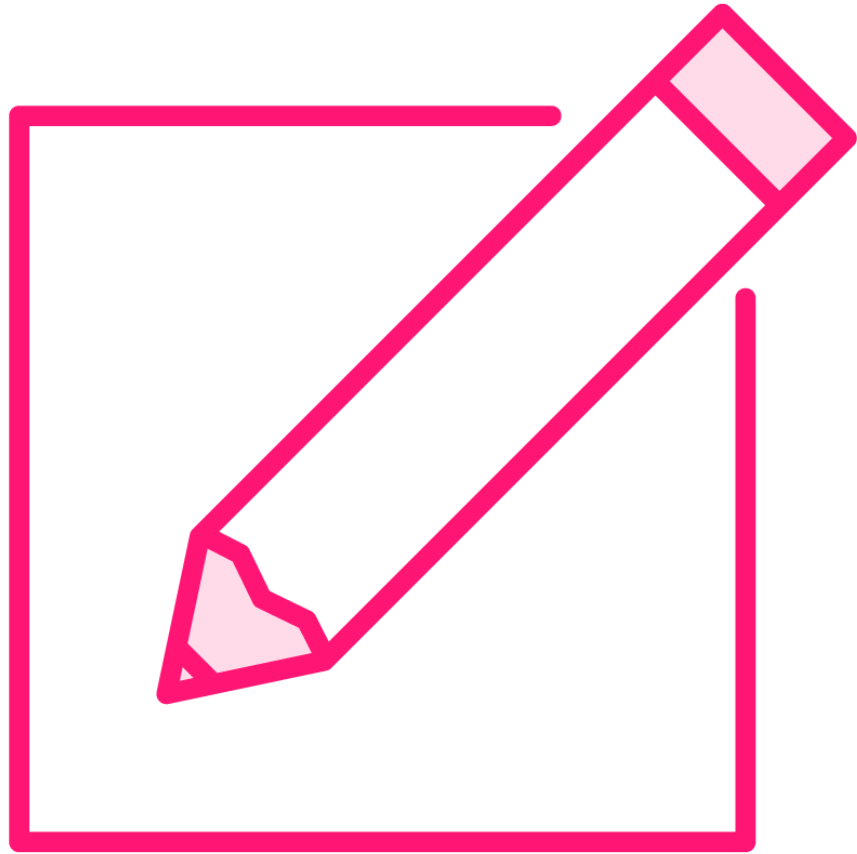
Web Server



Document

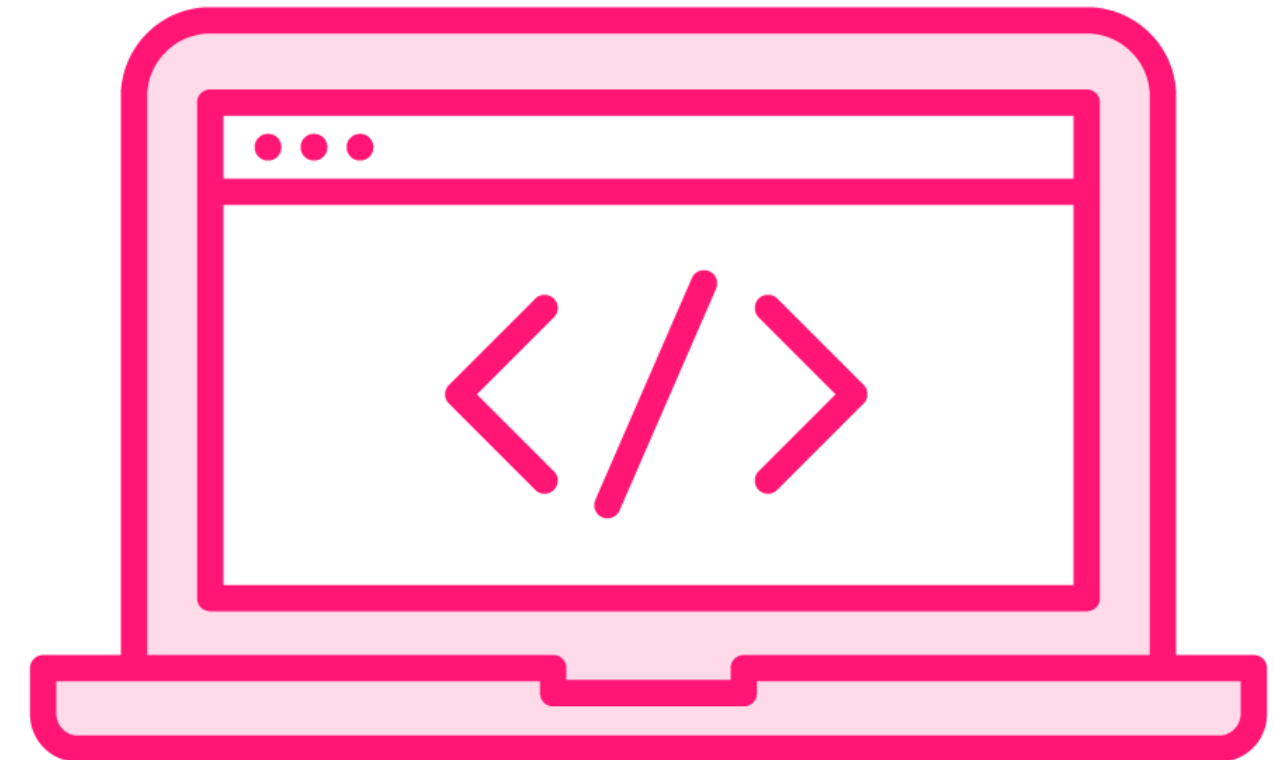


How to Write HTML from Scratch



Text editor

- Notepad
- Notepad++

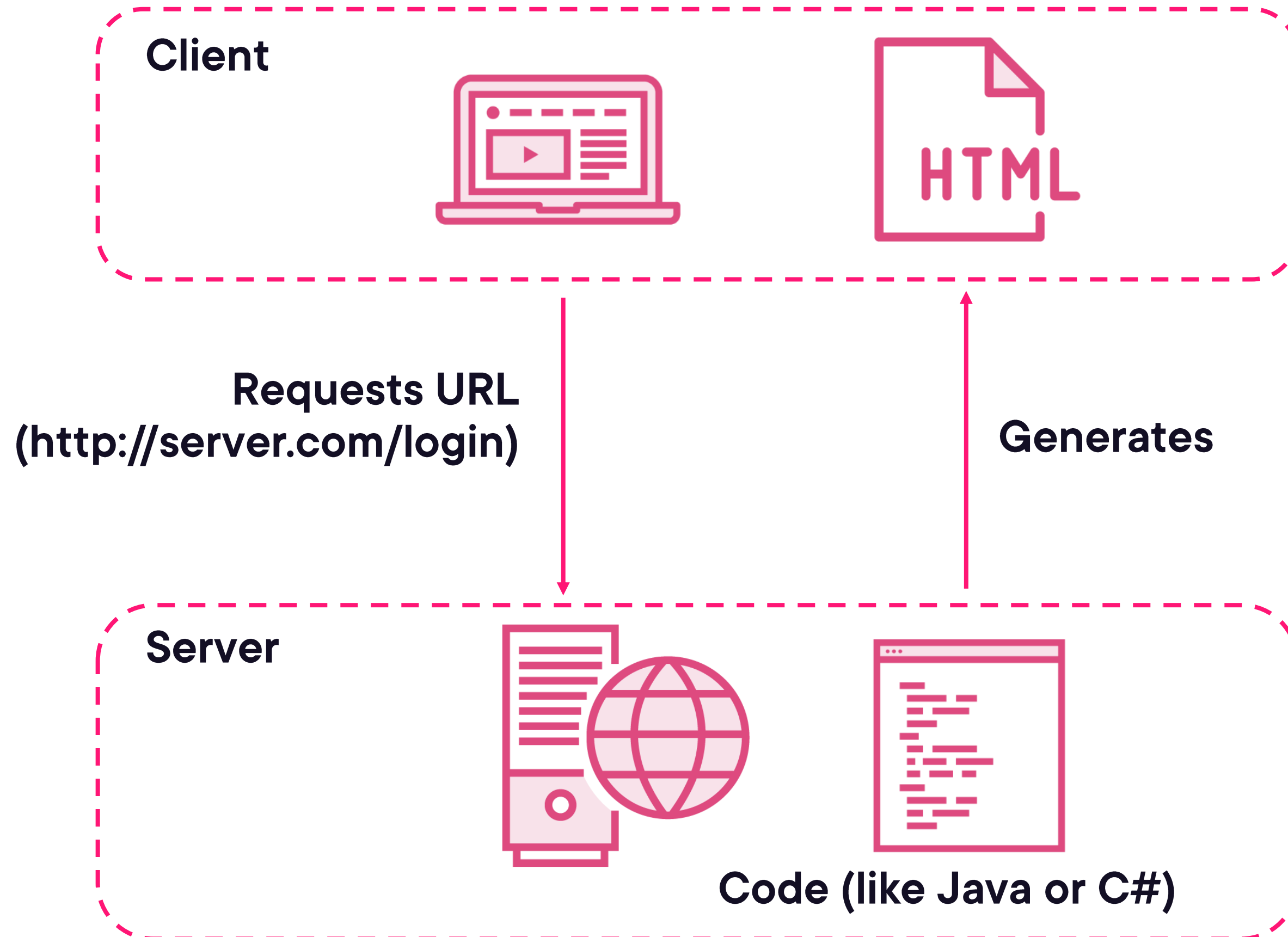


Integrated Development Environment (IDE)

- 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

