

Displaying the Web with HTML



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Introduction



What is HTML?

Where it came from

How you can create HTML



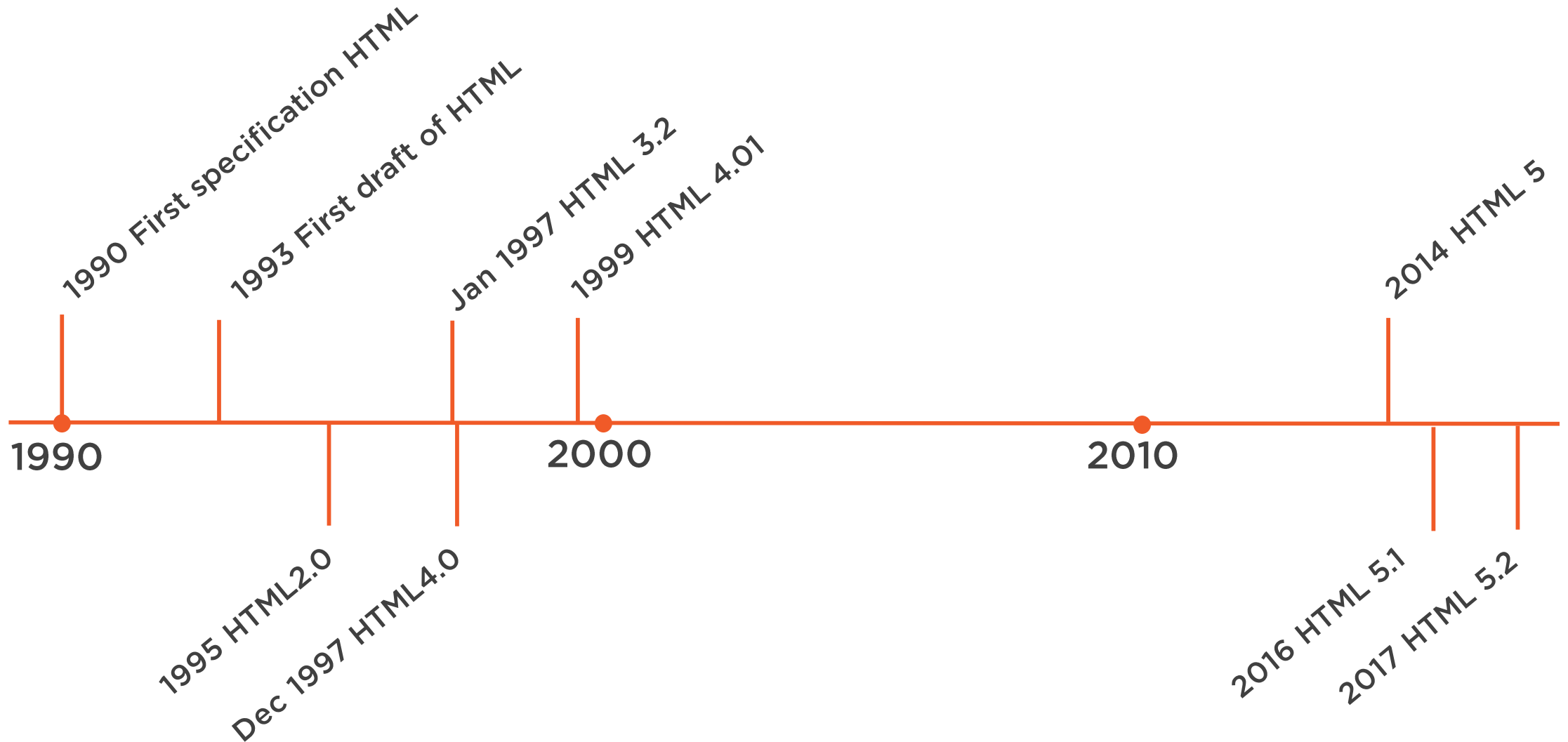
Where Did HTML Come From?



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

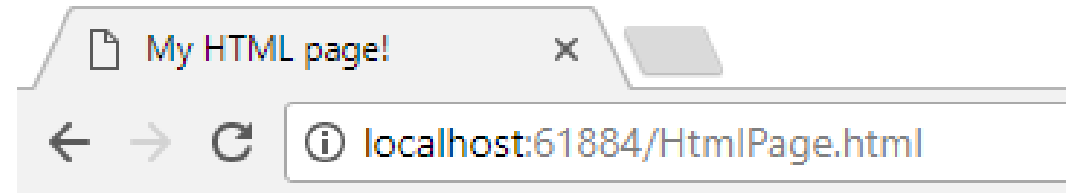
.HTM or .HTML

```
<!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>
```



- This
- is an
- unordered list

More Expressive HTML Elements

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

```
    </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

Usage

% of all users

Global

94.81% + 0.13% = 94.94%

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`

Current aligned Usage relative Date relative Show all

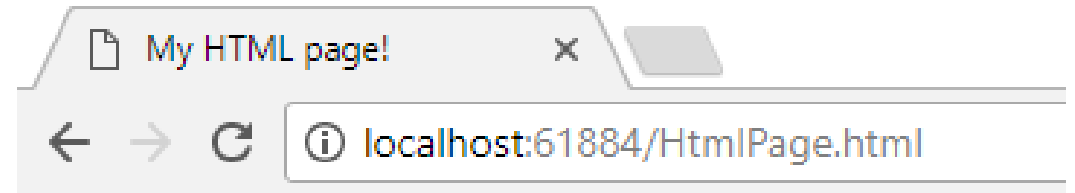
IE	Edge [*]	Firefox	Chrome	Safari	iOS Safari [*]	Opera Mini [*]	Chrome for Android	UC Browser for Android	Samsung Internet
			49						
			62		10.2				
		57	63		10.3				4
11	16	58	64	^B 11	^B 11.2	all	64	11.8	6.2
	17	59	65	^B 11.1	^B 11.3				
		60	66	^B TP					
		61	67						

Working with HTML



Example of HTML

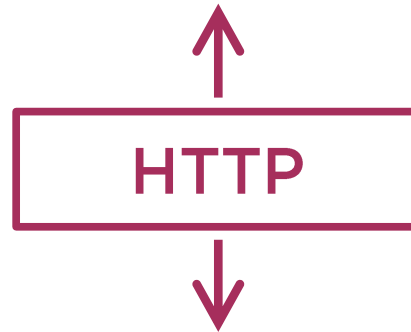
```
<!DOCTYPE html>
<html>
<head>
  <meta charset="utf-8" />
  <title>My HTML page!</title>
</head>
<body>
  <div>
    <ul>
      <li>This</li>
      <li>is an</li>
      <li>unordered list</li>
    </ul>
  </div>
</body>
</html>
```



- This
- is an
- unordered list

Ingredients for the Web

Clients
(Web browsers)



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



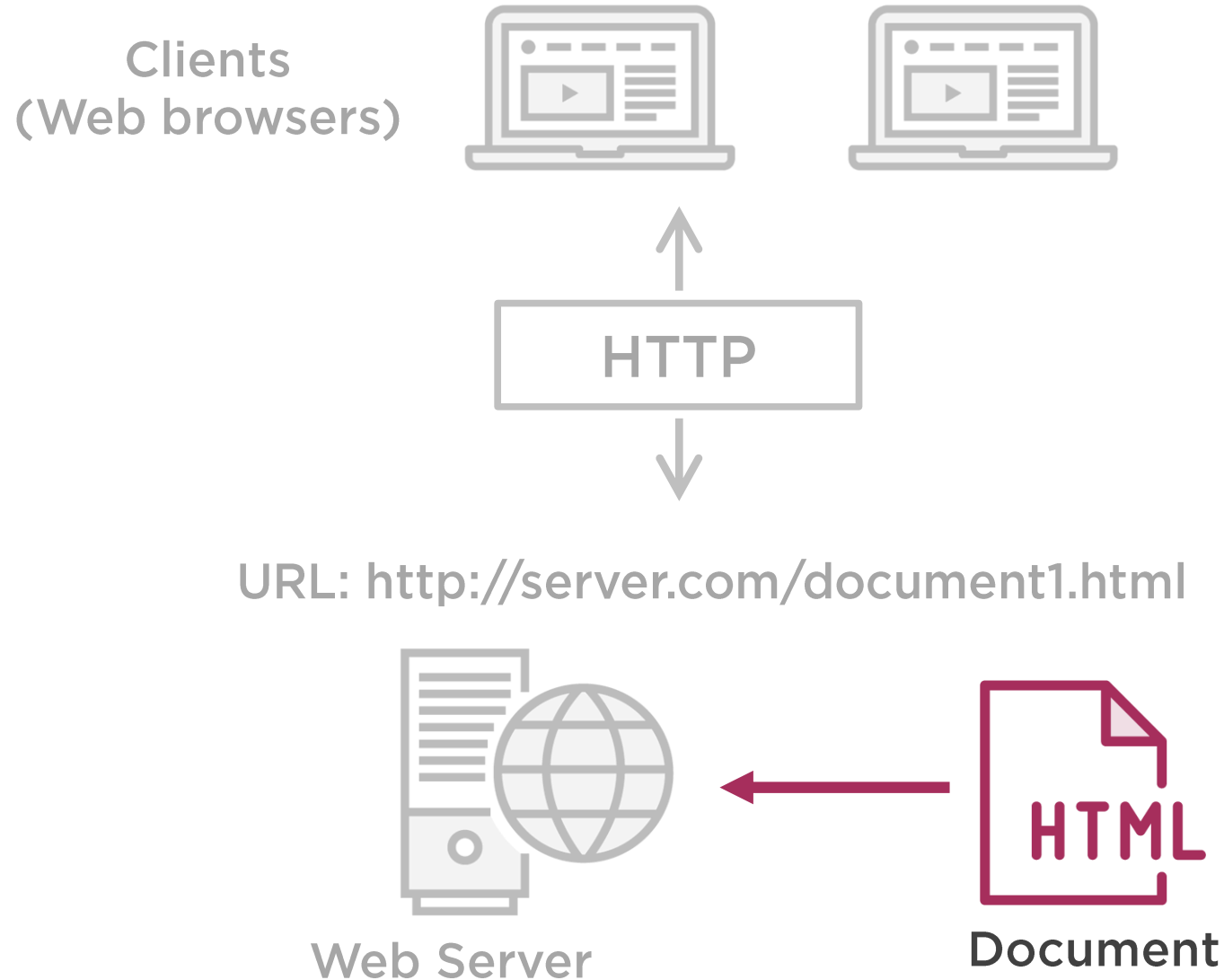
Web Server



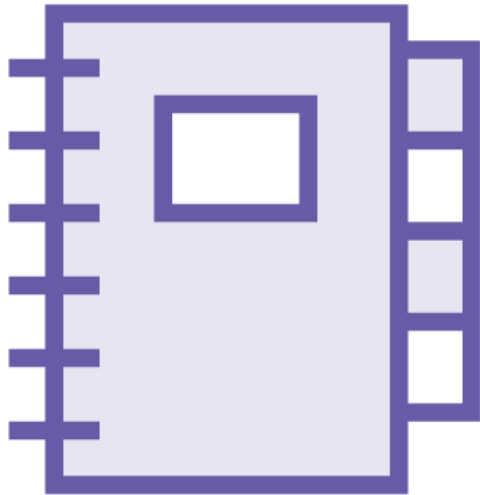
Document



Ingredients for the Web



How to Write HTML from Scratch



Text editor

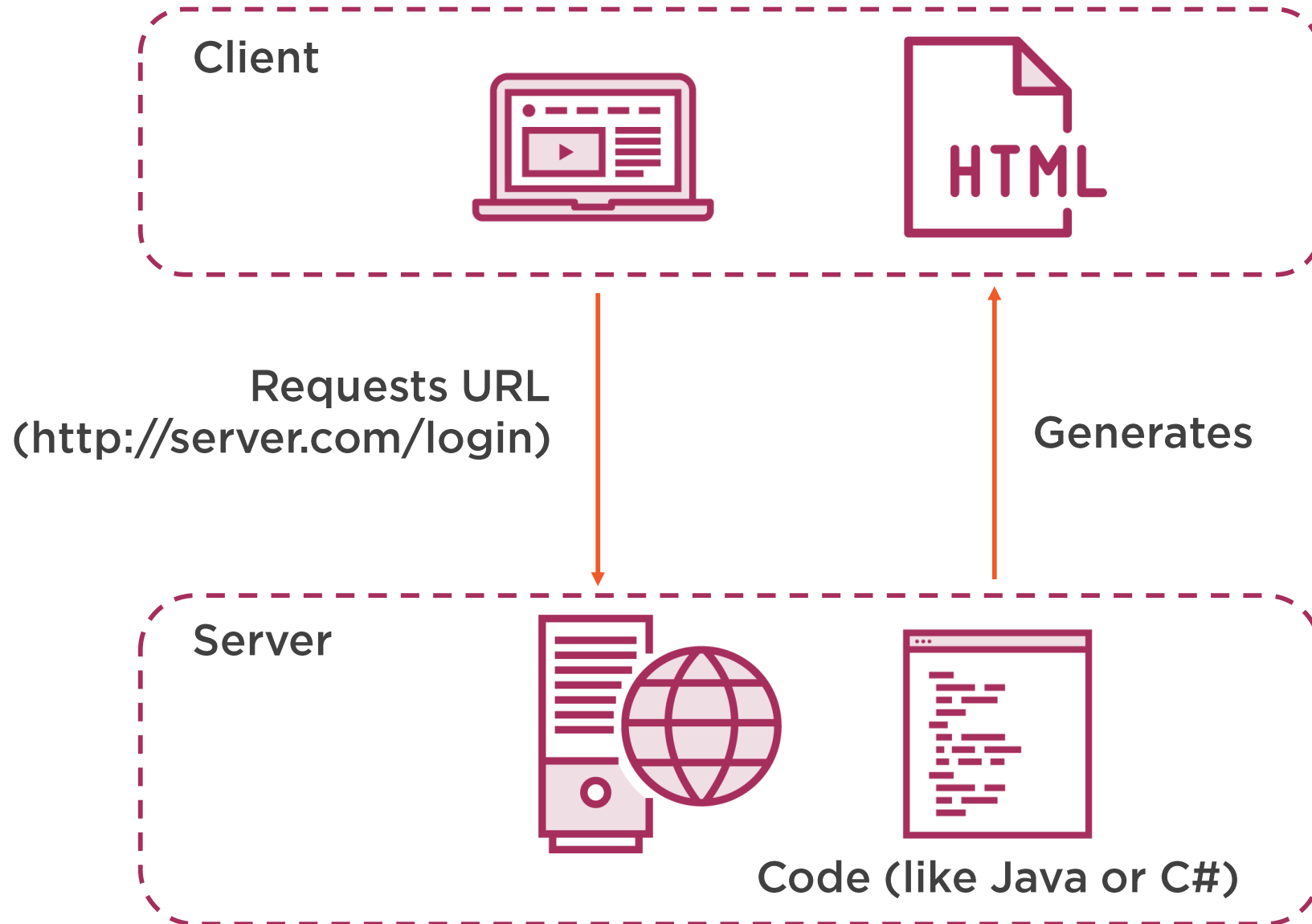
- Notepad
- Notepad++



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><br />
    }
    <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

