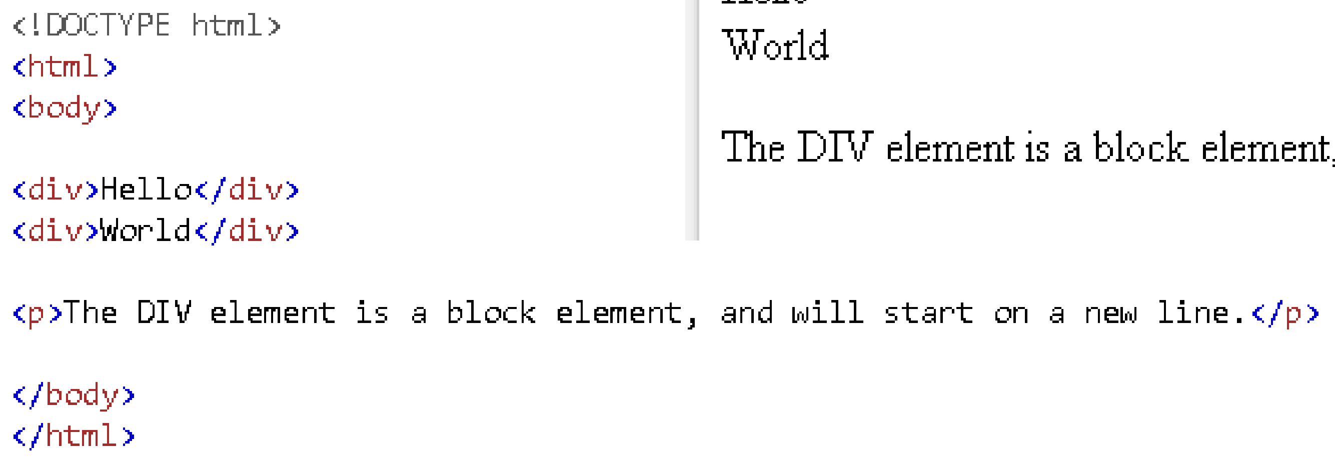
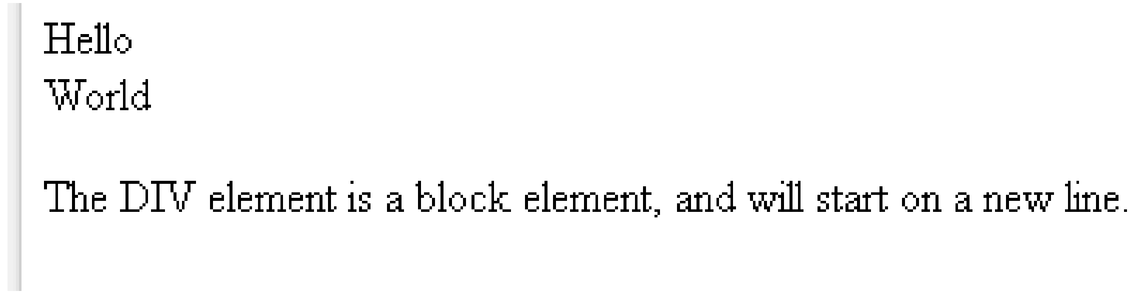
HTML Block and Inline Elements

<div> element

- A block-level element always starts on a new line and takes up the full width available (stretches out to the left and right as far as it can).
  - The <div> element is often used as a container for other HTML elements.
  - The <div> element has no required attributes, but style, class and id are common.
  - When used together with CSS, the <div> element can be used to style blocks of content



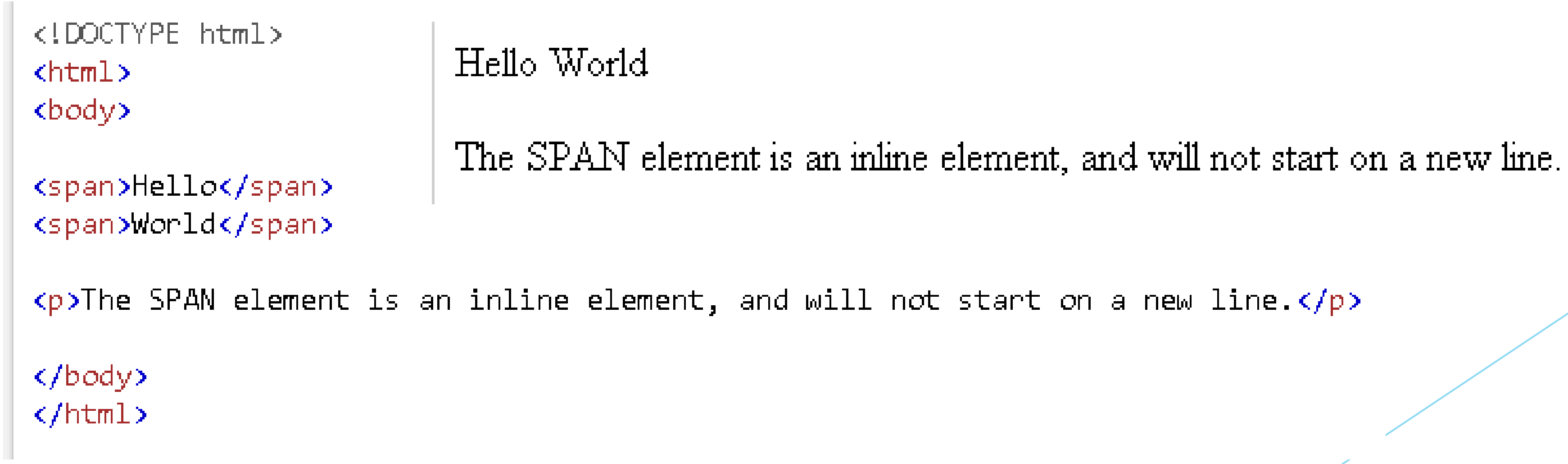
```
<!DOCTYPE html>
<html>
<body>

<div>Hello</div>
<div>World</div>

<p>The DIV element is a block element, and will start on a new line.</p>

</body>
</html>
```



```
Hello
World

The DIV element is a block element, and will start on a new line.
```

<span> element

- An inline element does not start on a new line and only takes up as much width as necessary.
- This is an inline <span> element inside a paragraph.
  - The <span> element is often used as a container for some text.
  - The <span> element has no required attributes, but style, class and id are common.
  - When used together with CSS, the <span> element can be used to style parts of the text



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

<span>Hello</span>
<span>World</span>

<p>The SPAN element is an inline element, and will not start on a new line.</p>

</body>
</html>
```

```
Hello World

The SPAN element is an inline element, and will not start on a new line.
```

block-level and inline elements

Block level elements in HTML:

`<address>`	`<article>`	`<aside>`	`<blockquote>`	`<canvas>`	`<dd>`	`<div>`
`<dl>`	`<dt>`	`<fieldset>`	`<figcaption>`	`<figure>`	`<footer>`	`<form>`
`<h1>-<h6>`	`<header>`	`<hr>`	`<li>`	`<main>`	`<nav>`	`<noscript>`
`<ol>`	`<p>`	`<pre>`	`<section>`	`<table>`	`<tfoot>`	`<ul>`
`<video>`						

Inline elements in HTML:

`<a>`	`<abbr>`	`<acronym>`	`<b>`	`<bdo>`	`<big>`	`<br>`
`<button>`	`<cite>`	`<code>`	`<dfn>`	`<em>`	`<i>`	`<img>`
`<input>`	`<kbd>`	`<label>`	`<map>`	`<object>`	`<output>`	`<q>`
`<samp>`	`<script>`	`<select>`	`<small>`	`<span>`	`<strong>`	`<sub>`
`<sup>`	`<textarea>`	`<time>`	`<tt>`	`<var>`		

HTML Iframes

Iframe Syntax

- An HTML iframe is defined with the <iframe> tag:
- <iframe src="URL"></iframe>

Iframe - Set Height and Width

Iframe - Remove the Border

Iframe - Target for a Link

```
<iframe src="url" title="description"></iframe>
```

```
<a href="https://www2.kickassanime.rs/" target="icon"><img src="kickass.png"
style="width: 150px; position: absolute; margin-left: 100px; height: 150px;"></a>
```

```
<iframe src="iframe.html" name="icon" style="height: 680px; width: 65%; margin-left: 20%;"></iframe>
```

MY SAMPLE iFRAME

Coca Cola

STARBUCKS

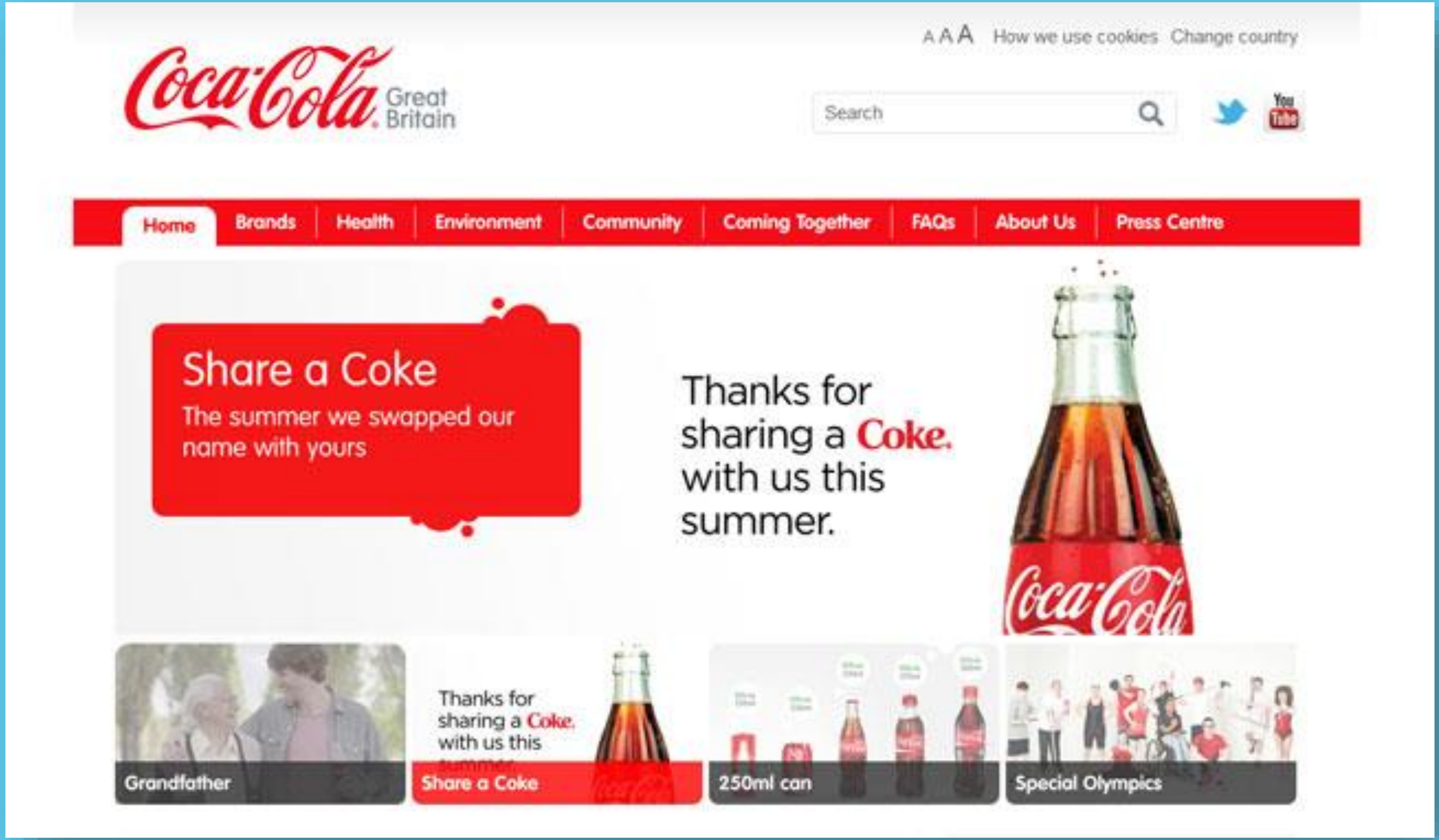
PEPSI

MY SAMPLE iFRAME

Coca Cola

STARBUCKS

PEPSI

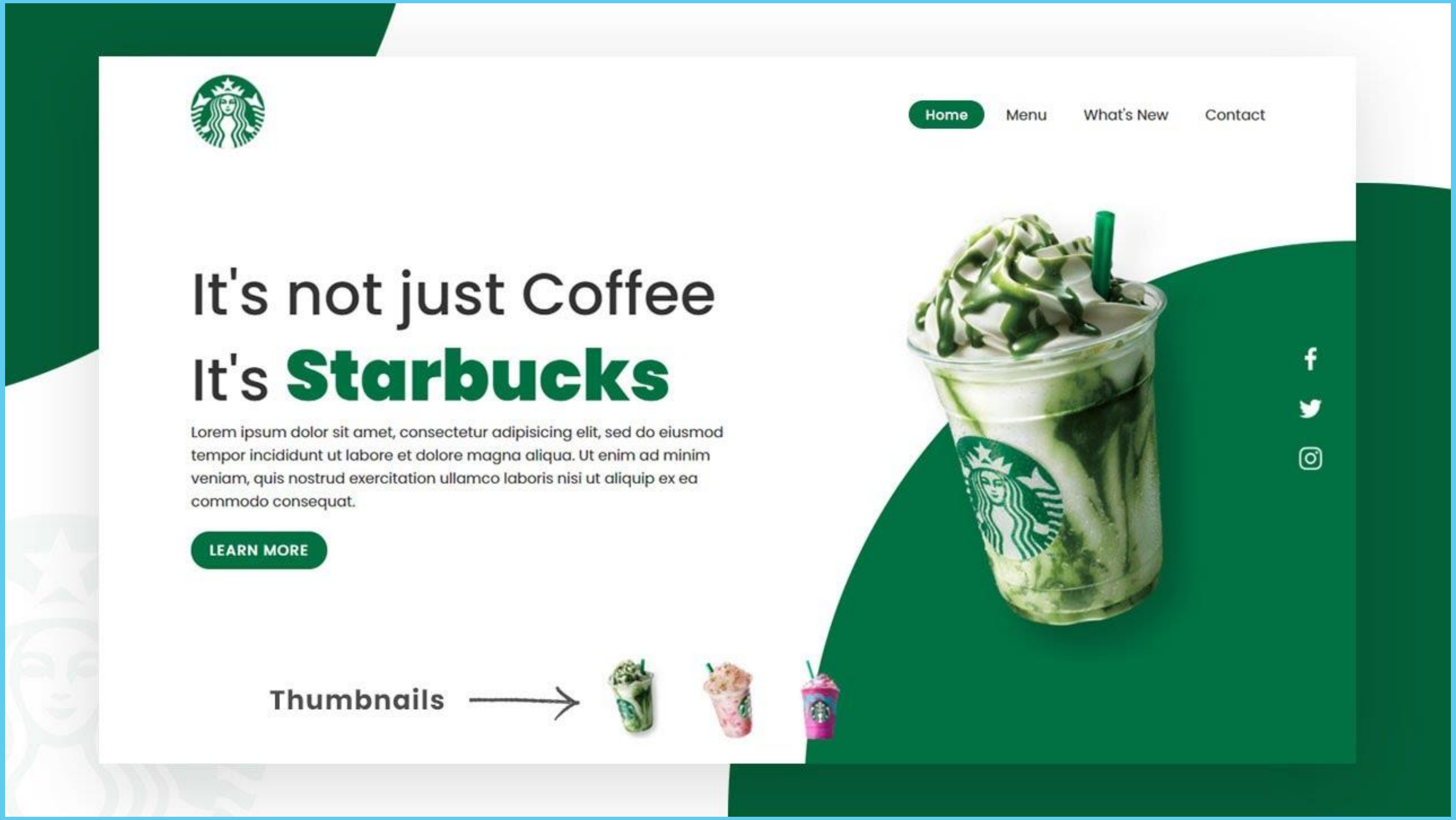


MY SAMPLE iFRAME

Coca Cola

STARBUCKS

PEPSI



Home Menu What's New Contact

It's not just Coffee

It's **Starbucks**

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

LEARN MORE

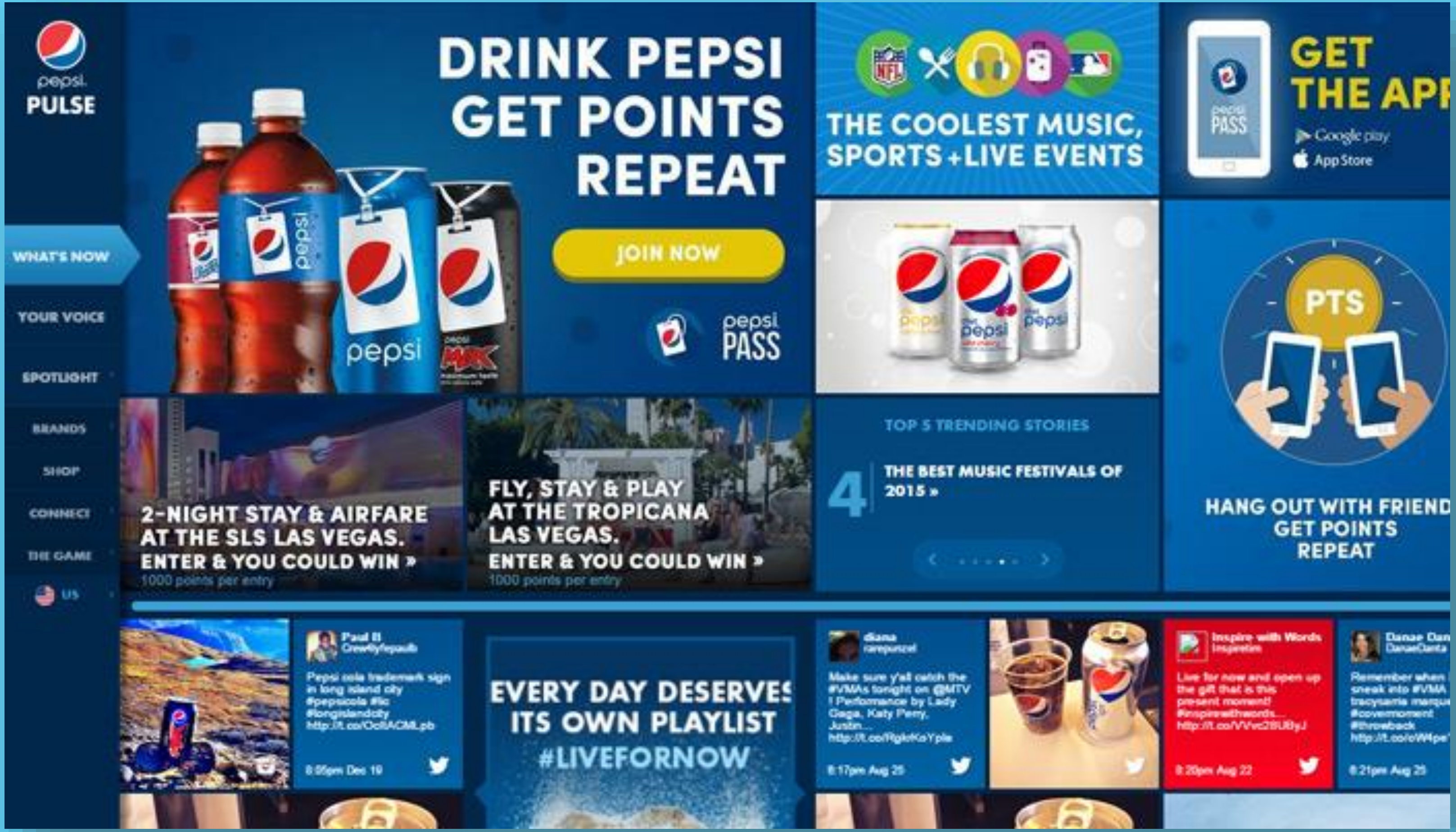
Thumbnails

MY SAMPLE iFRAME

Coca Cola

STARBUCKS

PEPSI



DRINK PEPSI GET POINTS REPEAT

THE COOLEST MUSIC, SPORTS + LIVE EVENTS

TOP 5 TRENDING STORIES

4 THE BEST MUSIC FESTIVALS OF 2015 »

HANG OUT WITH FRIENDS GET POINTS REPEAT

2-NIGHT STAY & AIRFARE AT THE SLS LAS VEGAS. ENTER & YOU COULD WIN »
1000 points per entry

FLY, STAY & PLAY AT THE TROPICANA LAS VEGAS. ENTER & YOU COULD WIN »
1000 points per entry

Paul II Crew4lyfepaulb
Pepsi cola trademark sign in long island city #pepsicola #lic #longislandcity http://t.co/OoRACMLpb
8:05pm Dec 19

EVERY DAY DESERVES ITS OWN PLAYLIST #LIVEFORNOW

diana rarepunzel
Make sure y'all catch the #VMAs tonight on @MTV ! Performance by Lady Gaga, Katy Perry, Justin... http://t.co/RgktKoYpla
8:17pm Aug 25

Inspire with Words Inspirebn
Live for now and open up the gift that is this present moment! #inspirewithwords... http://t.co/VVvc28UByJ
8:20pm Aug 22

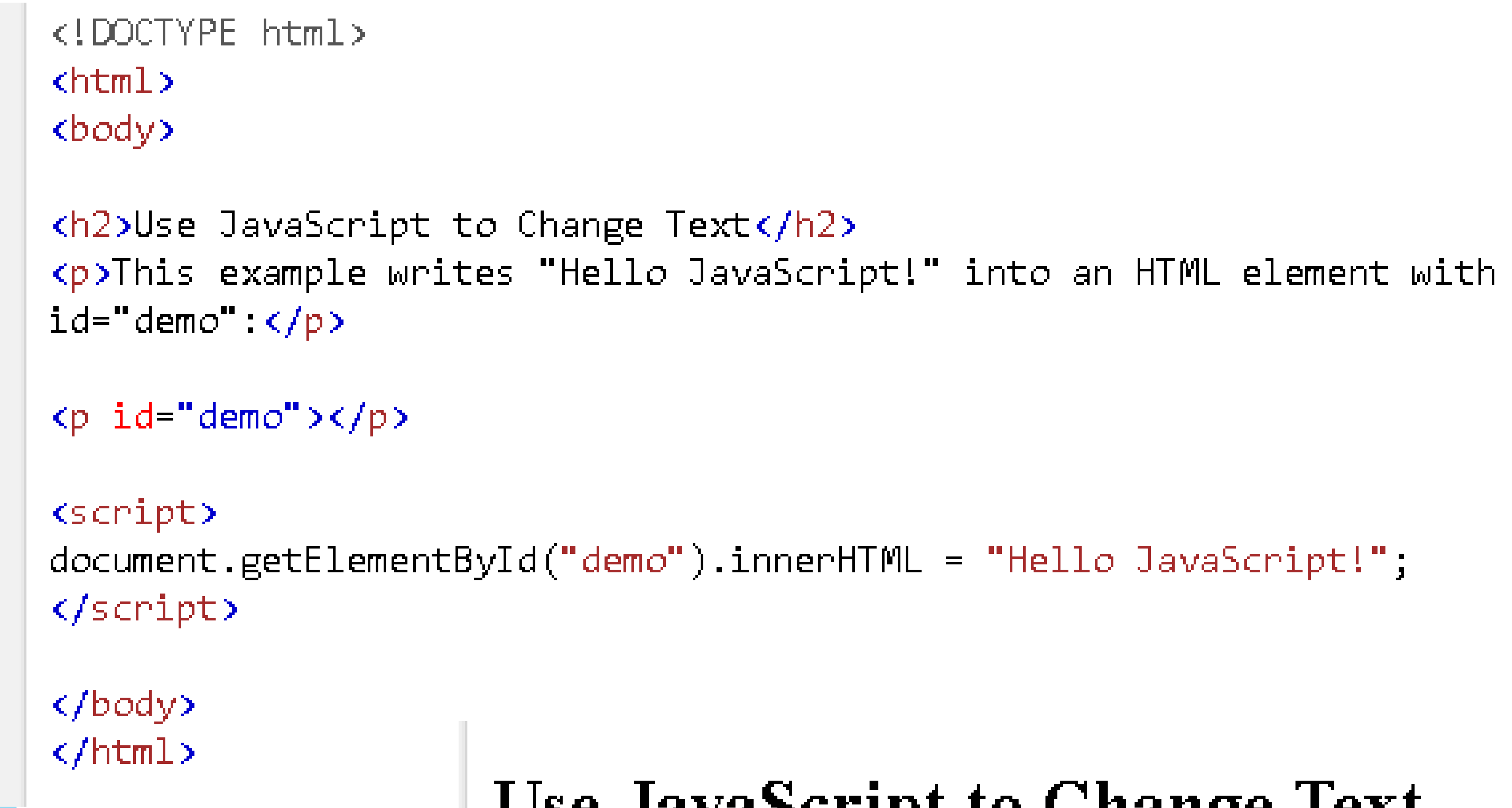
Danae Dan DanaeDanta
Remember when sneak into #VMA tracysamie marque #covermoment #throwback http://t.co/oW4pe
8:21pm Aug 25

HTML JavaScript

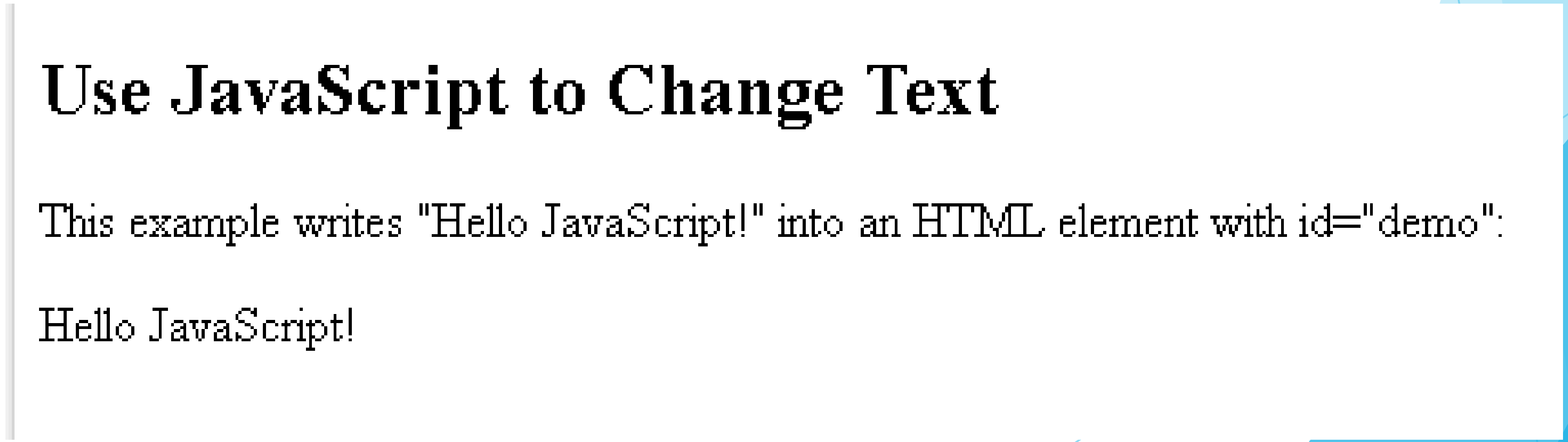
JavaScript makes HTML pages more dynamic and interactive.

The HTML <script> Tag

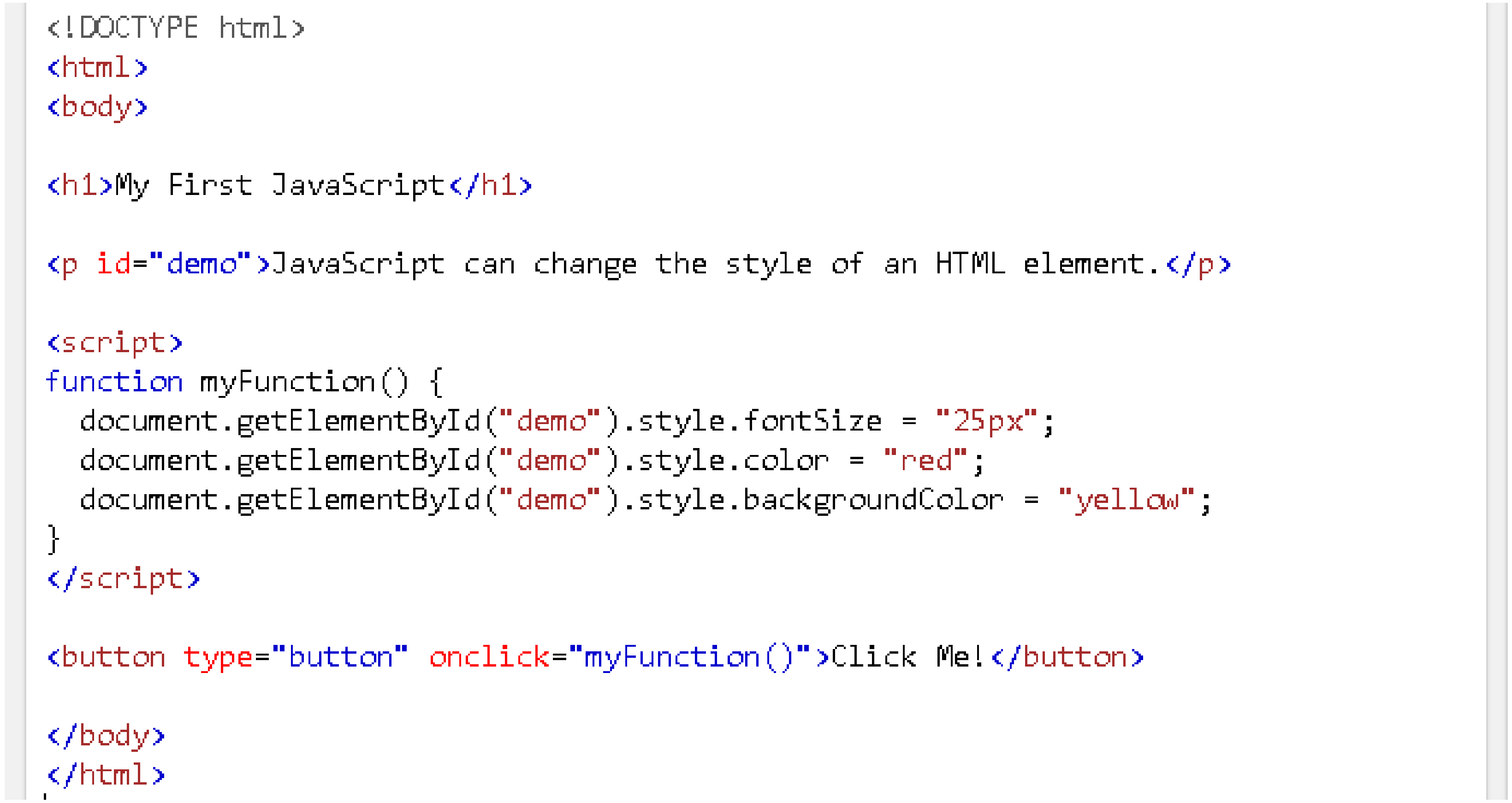
- The <script> tag is used to define a client-side script (JavaScript).
- The <script> element either contains scripting statements, or it points to an external script file through the src attribute.
- Common uses for JavaScript are image manipulation, form validation, and dynamic changes of content.
- To select an HTML element, JavaScript very often uses the document.getElementById() method.
- This JavaScript example writes "Hello JavaScript!" into an HTML element with id="demo":



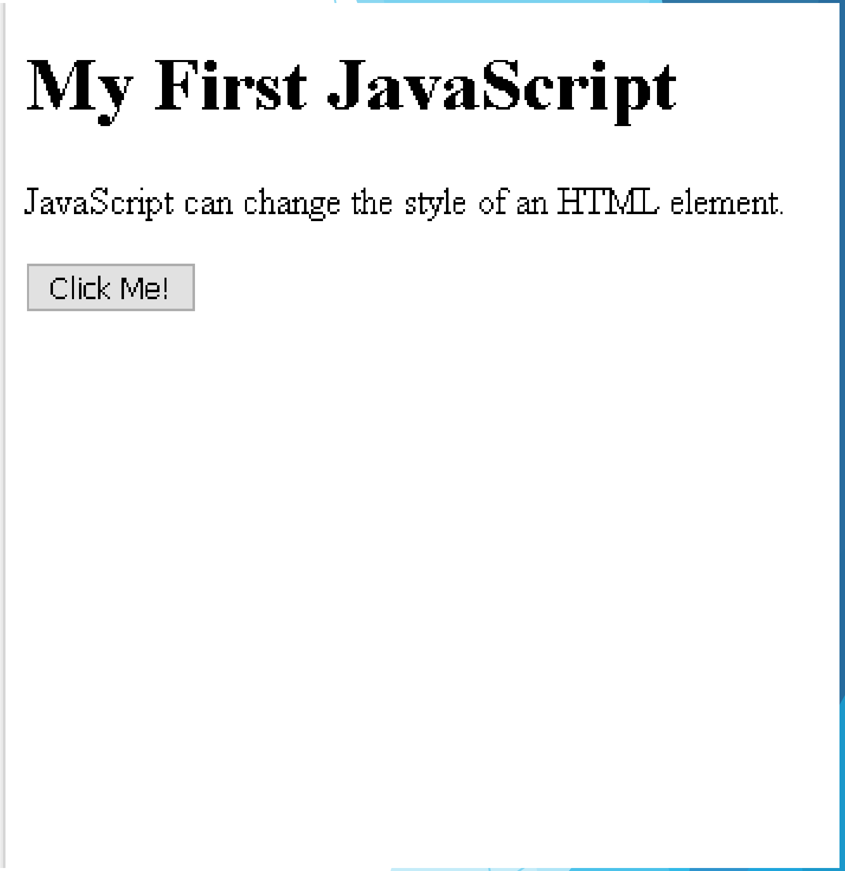
```html
<!DOCTYPE html>
<html>
<body>

<h2>Use JavaScript to Change Text</h2>
<p>This example writes "Hello JavaScript!" into an HTML element with
id="demo":</p>

<p id="demo"></p>

<script>
document.getElementById("demo").innerHTML = "Hello JavaScript!";
</script>

</body>
</html>
```



```
Use JavaScript to Change Text

This example writes "Hello JavaScript!" into an HTML element with id="demo":

Hello JavaScript!
```

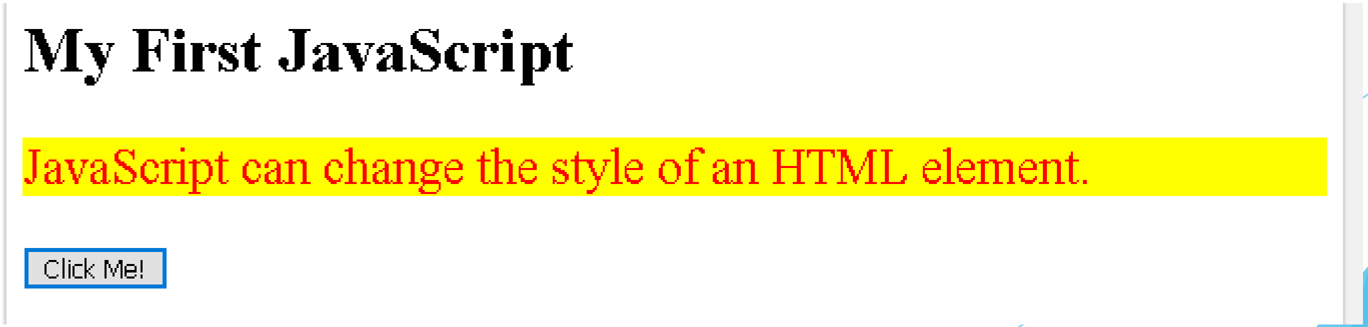


```
<!DOCTYPE html>
<html>
<body>

<h1>My First JavaScript</h1>

<p id="demo">JavaScript can change the style of an HTML element.</p>

<script>
function myFunction() {
  document.getElementById("demo").style.fontSize = "25px";
  document.getElementById("demo").style.color = "red";
  document.getElementById("demo").style.backgroundColor = "yellow";
}
</script>

<button type="button" onclick="myFunction()">Click Me!</button>

</body>
</html>
```



My First JavaScript

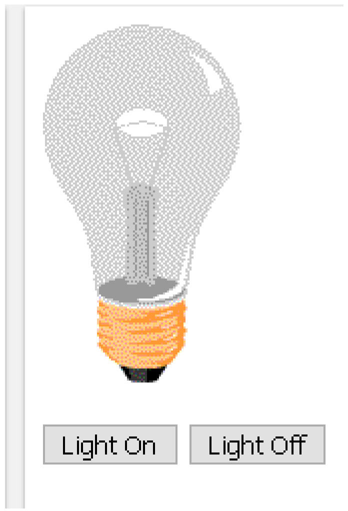
JavaScript can change the style of an HTML element.

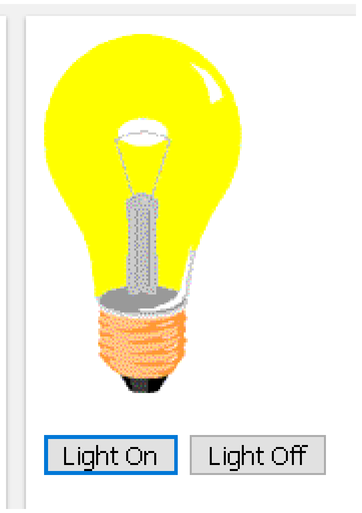


My First JavaScript

JavaScript can change the style of an HTML element.

```
<!DOCTYPE html>
<html>
<body>
<script>
function light(sw) {
  var pic;
  if (sw == 0) {
    pic = "pic_bulboff.gif"
  } else {
    pic = "pic_bulbon.gif"
  }
  document.getElementById('myImage').src = pic;
}
</script>

<img id="myImage" src="pic_bulboff.gif" width="100" height="180">

<p>
<button type="button" onclick="light(1)">Light On</button>
<button type="button" onclick="light(0)">Light Off</button>
</p>

</body>
</html>
```





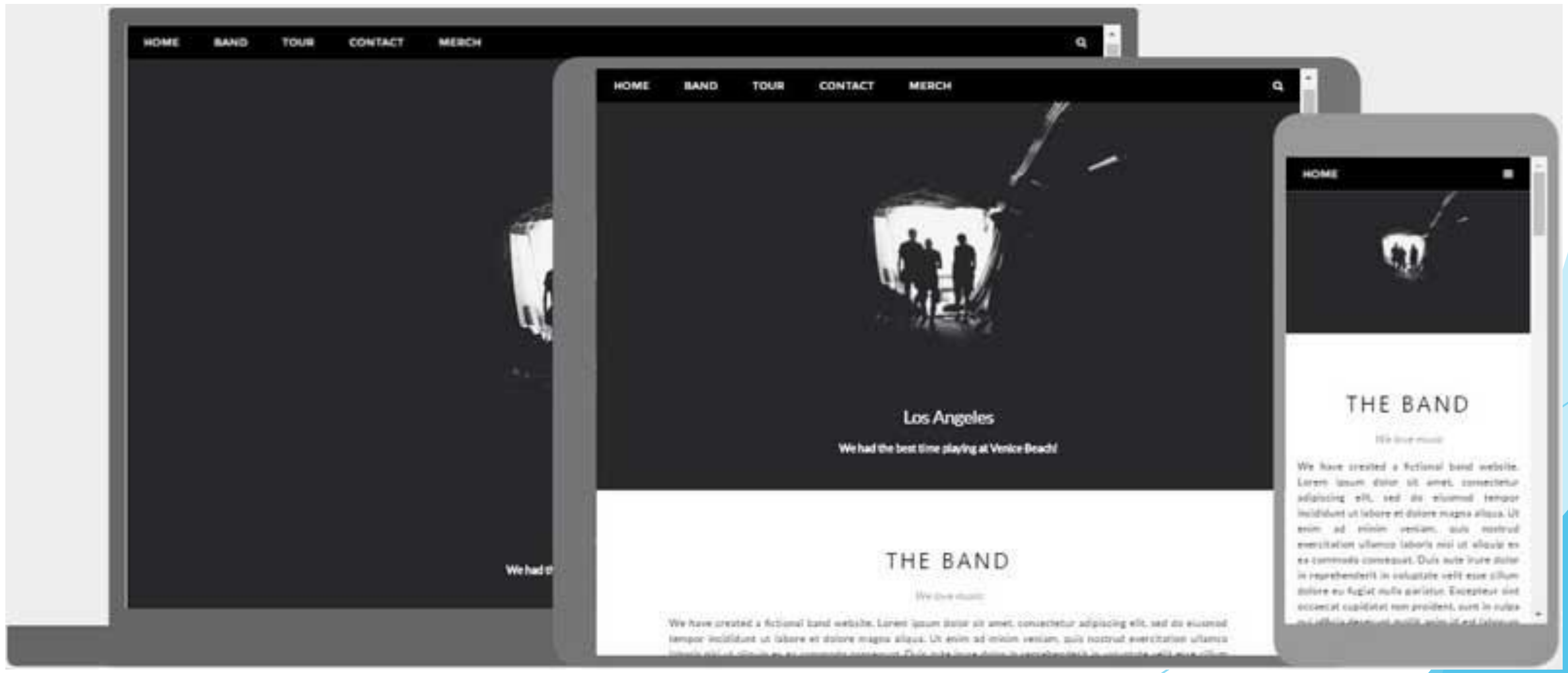
HTML Responsive Web Design

Responsive Web Design is about using HTML and CSS to automatically resize, hide, shrink, or enlarge, a website, to make it look good on all devices (desktops, tablets, and phones):

Setting The Viewport

When making responsive web pages, add the following <meta> element in all your web pages:

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```



Responsive Images

Responsive images are images that scale nicely to fit any browser size.

Using the width Property

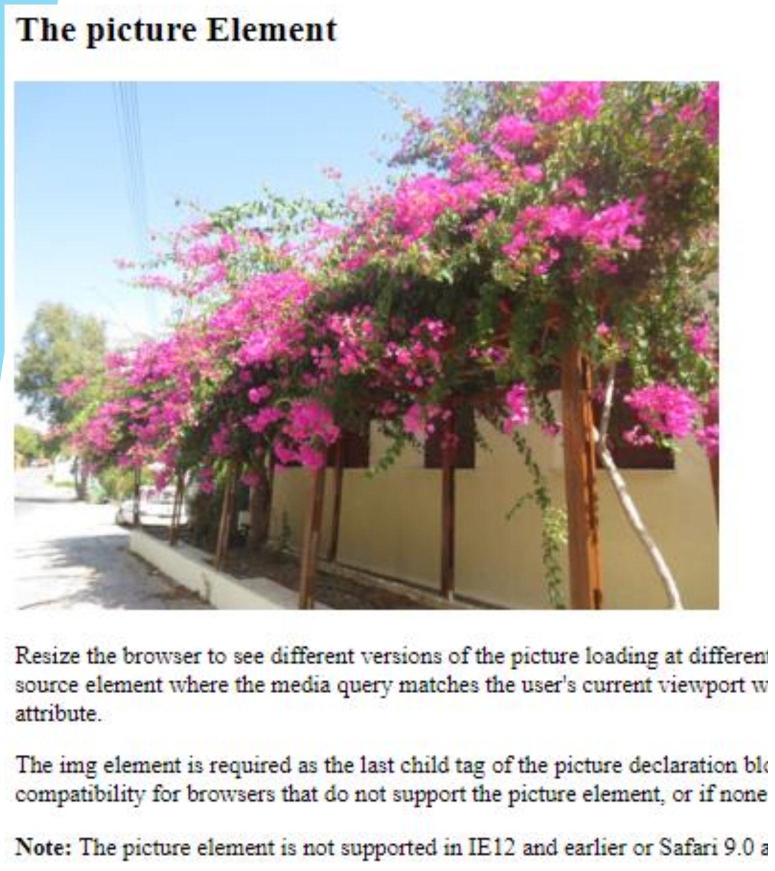
If the CSS width property is set to 100%, the image will be responsive and scale up and down:

```
<img src="img_girl.jpg" style="width:100%;">
```

Using the max-width Property

If the max-width property is set to 100%, the image will scale down if it has to, but never scale up to be larger than its original size:

The <picture> Element

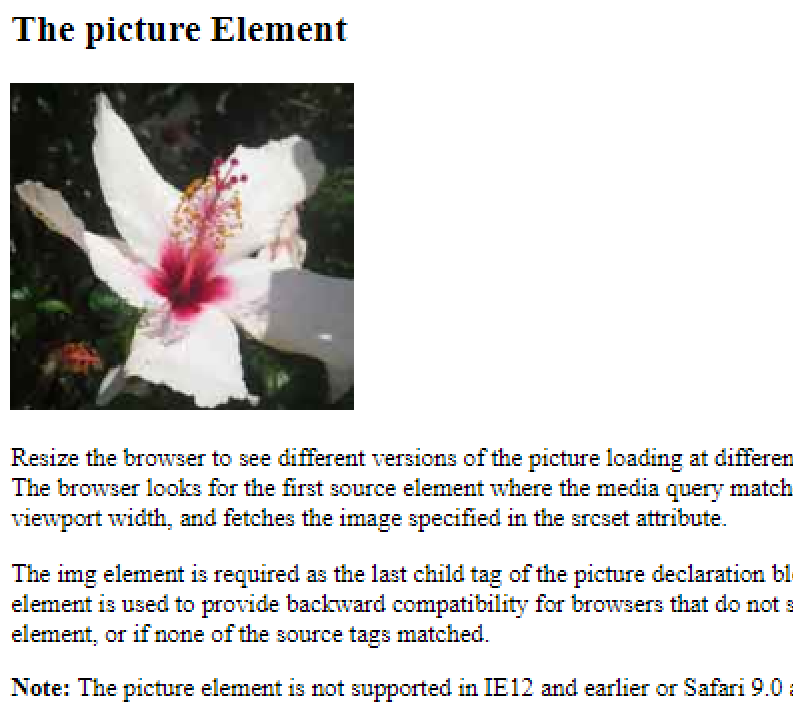


The picture Element

Resize the browser to see different versions of the picture loading at differen
source element where the media query matches the user's current viewport w
attribute.

The img element is required as the last child tag of the picture declaration bl
compatibility for browsers that do not support the picture element, or if none

Note: The picture element is not supported in IE12 and earlier or Safari 9.0 a

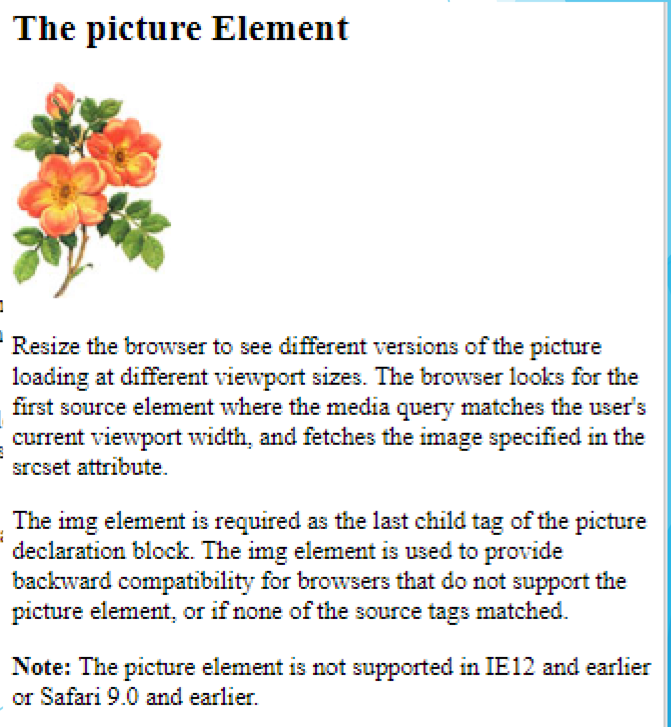


The picture Element

Resize the browser to see different versions of the picture loading at differen
The browser looks for the first source element where the media query match
viewport width, and fetches the image specified in the srcset attribute.

The img element is required as the last child tag of the picture declaration bl
element is used to provide backward compatibility for browsers that do not s
element, or if none of the source tags matched.

Note: The picture element is not supported in IE12 and earlier or Safari 9.0



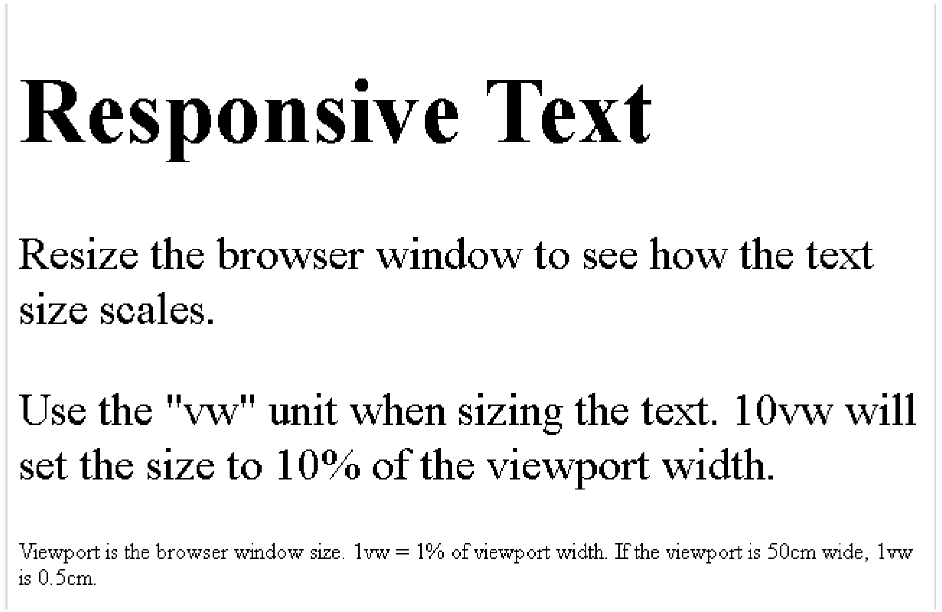
The picture Element

Resize the browser to see different versions of the picture loading at different viewport sizes. The browser looks for the first source element where the media query matches the user's current viewport width, and fetches the image specified in the srcset attribute.

The img element is required as the last child tag of the picture declaration block. The img element is used to provide backward compatibility for browsers that do not support the picture element, or if none of the source tags matched.

Note: The picture element is not supported in IE12 and earlier or Safari 9.0 and earlier.

```
<!DOCTYPE html>
<html>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<body>

<h1 style="font-size:10vw;">Responsive Text</h1>

<p style="font-size:5vw;">Resize the browser window to see how the text size
scales.</p>

<p style="font-size:5vw;">Use the "vw" unit when sizing the text. 10vw will set the
size to 10% of the viewport width.</p>

<p>Viewport is the browser window size. 1vw = 1% of viewport width. If the viewport
is 50cm wide, 1vw is 0.5cm.</p>

</body>
</html>
```

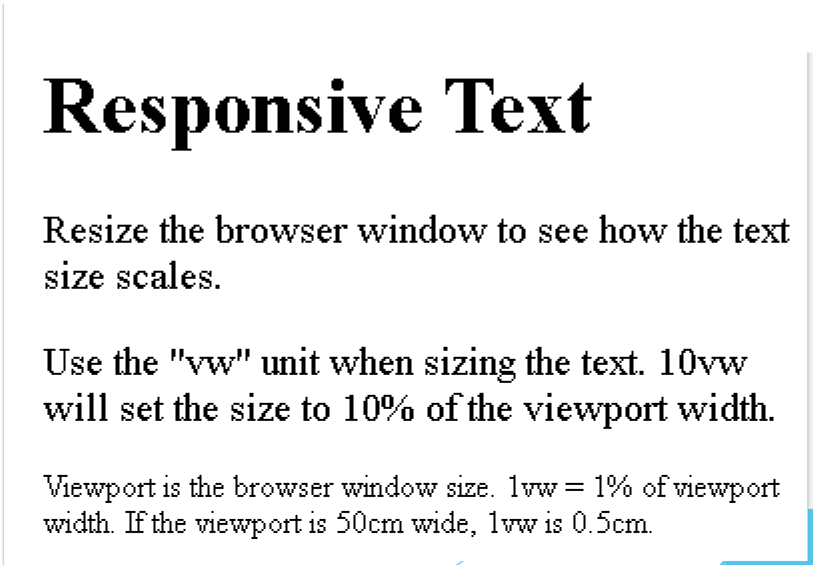


Responsive Text

Resize the browser window to see how the text size scales.

Use the "vw" unit when sizing the text. 10vw will set the size to 10% of the viewport width.

Viewport is the browser window size. 1vw = 1% of viewport width. If the viewport is 50cm wide, 1vw is 0.5cm.

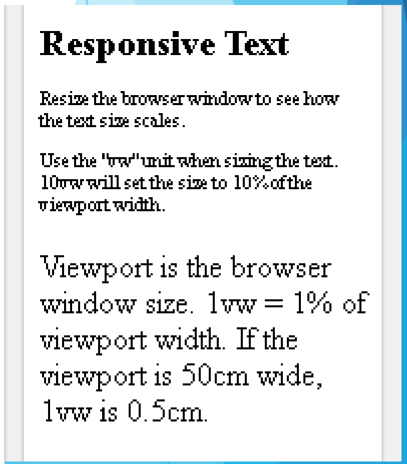


Responsive Text

Resize the browser window to see how the text size scales.

Use the "vw" unit when sizing the text. 10vw will set the size to 10% of the viewport width.

Viewport is the browser window size. 1vw = 1% of viewport width. If the viewport is 50cm wide, 1vw is 0.5cm.



Responsive Text

Resize the browser window to see how the text size scales.

Use the "vw" unit when sizing the text. 10vw will set the size to 10% of the viewport width.

Viewport is the browser window size. 1vw = 1% of viewport width. If the viewport is 50cm wide, 1vw is 0.5cm.

HTML Forms

Form elements are different types of input elements, like text fields, checkboxes, radio buttons, submit buttons, and more.

HTML Input Types

Input Type	Definition
<input type="button">	a clickable button
<input type="checkbox">	a Checkbox
<input type="color">	a color picker(#00000000)
<input type="date">	a date picker, includes year, month, and day
<input type="datetime-local">	resulting value includes the year, month, day and time
<input type="email">	a field for an e-mail address
<input type="file">	a file-select field and a "Browse" button for file uploads
<input type="hidden">	a **hidden** input field
<input type="image">	an image as a submit button
<input type="month">	a month and year control.

HTML Input Types

Input Type	Definition
<input type="number">	a field for entering a number
<input type="password">	a password field (characters are masked)
<input type="radio">	a radio button
<input type="range">	a control for entering a number whose exact value is not important (like a slider control). Default **range** is 0 to 100
<input type="reset">	a reset button which resets all **form** values to its initial values
<input type="search">	a text field for entering a search string.
<input type="submit">	a submit button which submits all **form** values to a **form**-handler
<input type="tel">	a field for entering a telephone number.
<input type="url">	a field for entering a URL. The input value is automatically validated before the form can be submitted.

GET vs POST

FEATURES	GET Method	POST Method
Operation	Used to retrieve information from the server.	Used to create or update a resource.
Data Location	Appends data to the URL, visible to all.	Includes data in the request body, not displayed in the URL
Idempotency	Idempotent; the same request can be repeated with no further changes	No-idempotent; repeating the same request can lead to different results.
Data Size	Limited by the URL length; less data can be sent	No limitations on data size; suitable for large amounts of data.
Caching	Can be cached.	Not cached by default
Security	Less secure as data is exposed in the URL	More secure; data is concealed within the request body.
Use Case	Ideal for searching and retrieving data	Ideal for transaction and updating data

Example GET vs POST

GET request for retrieving user details:

```
ET /api/users/12345 HTTP/1.1
Host: www.example.com
```

POST request for creating a new user:

```
POST /api/users HTTP/1.1
Host: www.example.com
Content-Type: application/json


{
"name": "Jane Doe",
"email": "jane.doe@example.com"
}
```

When to use GET vs POST

- Use GET for actions that retrieve data without side effects.
- Use POST for actions that change server state, such as creating or updating resources.
- Never use GET to transmit sensitive data.

Choosing between GET and POST is fundamental for web service design, ensuring actions are performed correctly while optimizing for security and efficiency.

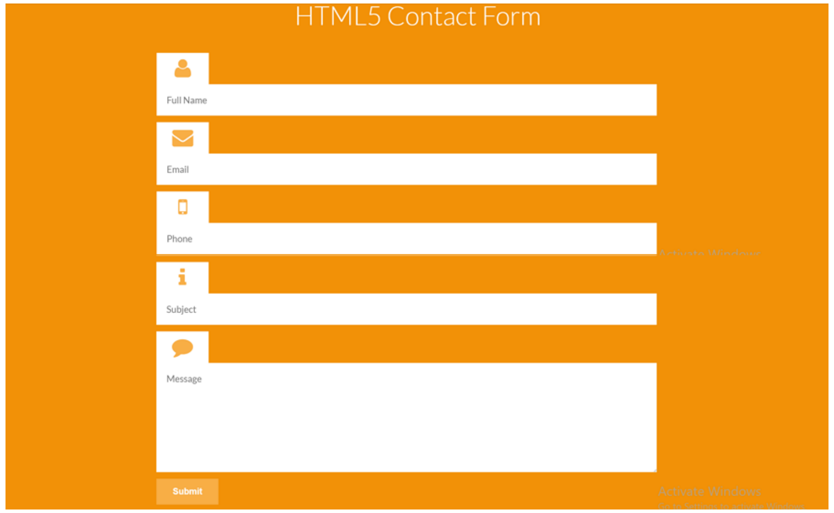
GET API Security

- **Use HTTPS** to encrypt data in transit, protecting parameters passed in URLs.
- **Avoid sensitive data** in URLs to prevent exposure through server logs or browser history.
- **Validate input** to defend against SQL injection and other injection attacks.
- **Implement rate limiting** to protect against DoS attacks and abuse.
- **Be cautious with caching**, ensuring sensitive information isn't stored or exposed.
- Use API Security Tools such as Akto to find vulnerabilities in CI/CD.

POST API Security

- **Enforce HTTPS** for secure data transmission.
- **Use token-based authentication** (like JWT or OAuth) for secure access control.
- **Validate and sanitize input** to prevent XSS, SQL Injection, and other vulnerabilities.
- **Protect against CSRF attacks** by using anti-CSRF tokens.
- **Validate Content-Type** to ensure the API handles only expected data formats.
- Use API Security Tools such as Akto to find vulnerabilities such as XSS in APIs. The easiest way to get started with Akto is through Helm charts.

TRY THESE


HTML5 Contact Form

Full Name

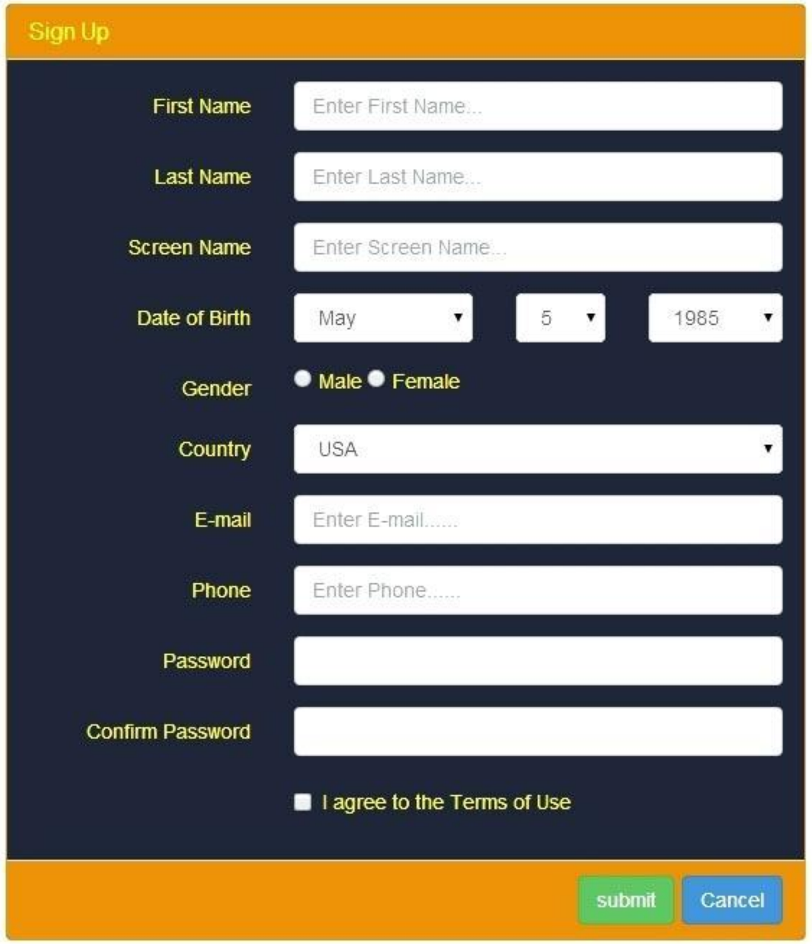
Email

Phone

Subject

Message

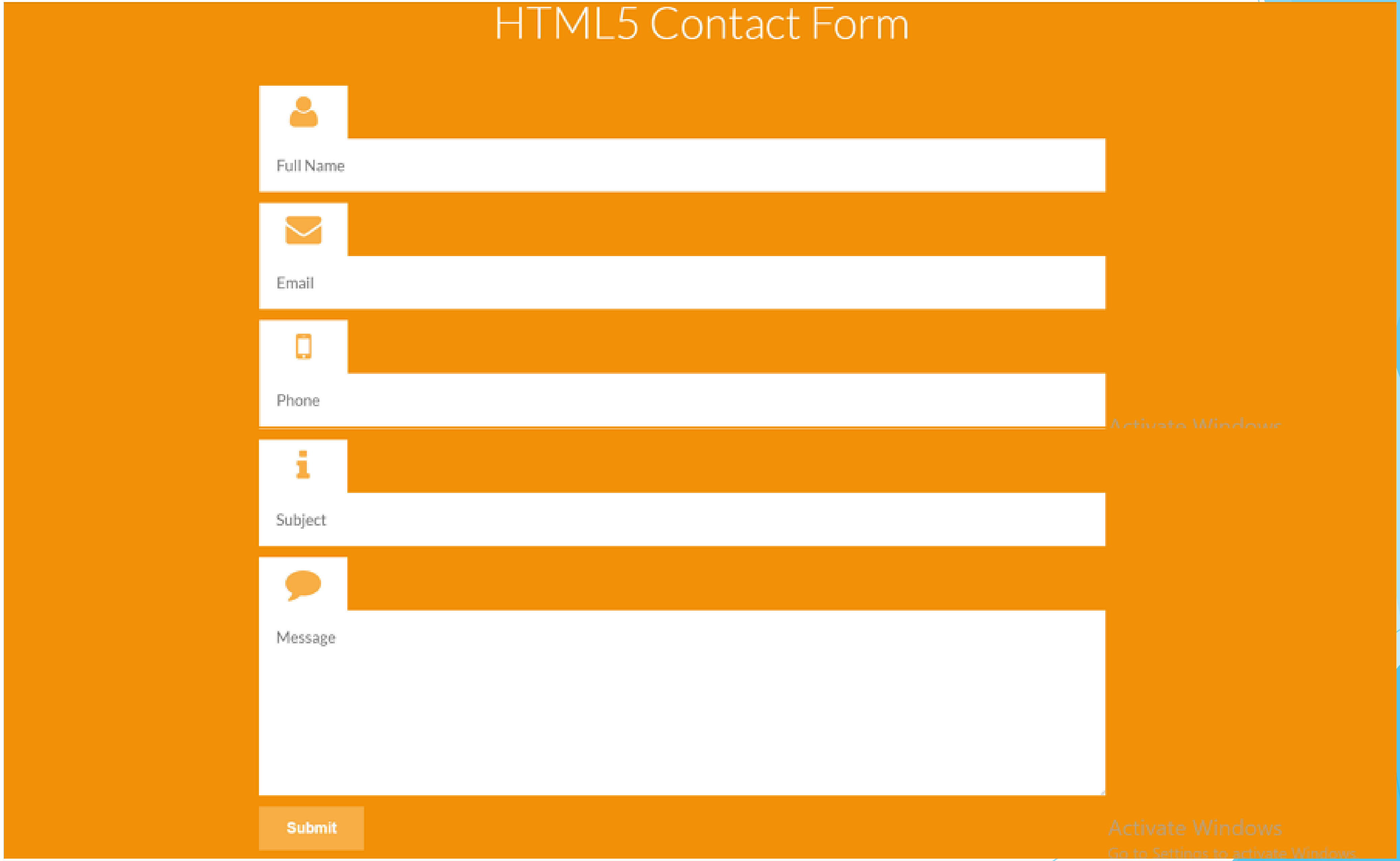
Submit


Sign Up

First Name	Enter First Name...
Last Name	Enter Last Name...
Screen Name	Enter Screen Name...
Date of Birth	May ▾ 5 ▾ 1985 ▾
Gender	○ Male ○ Female
Country	USA ▾
E-mail	Enter E-mail......
Phone	Enter Phone......
Password	
Confirm Password	

☐ I agree to the Terms of Use

submit Cancel



HTML5 Contact Form

Full Name

Email

Phone

Subject

Message

Submit

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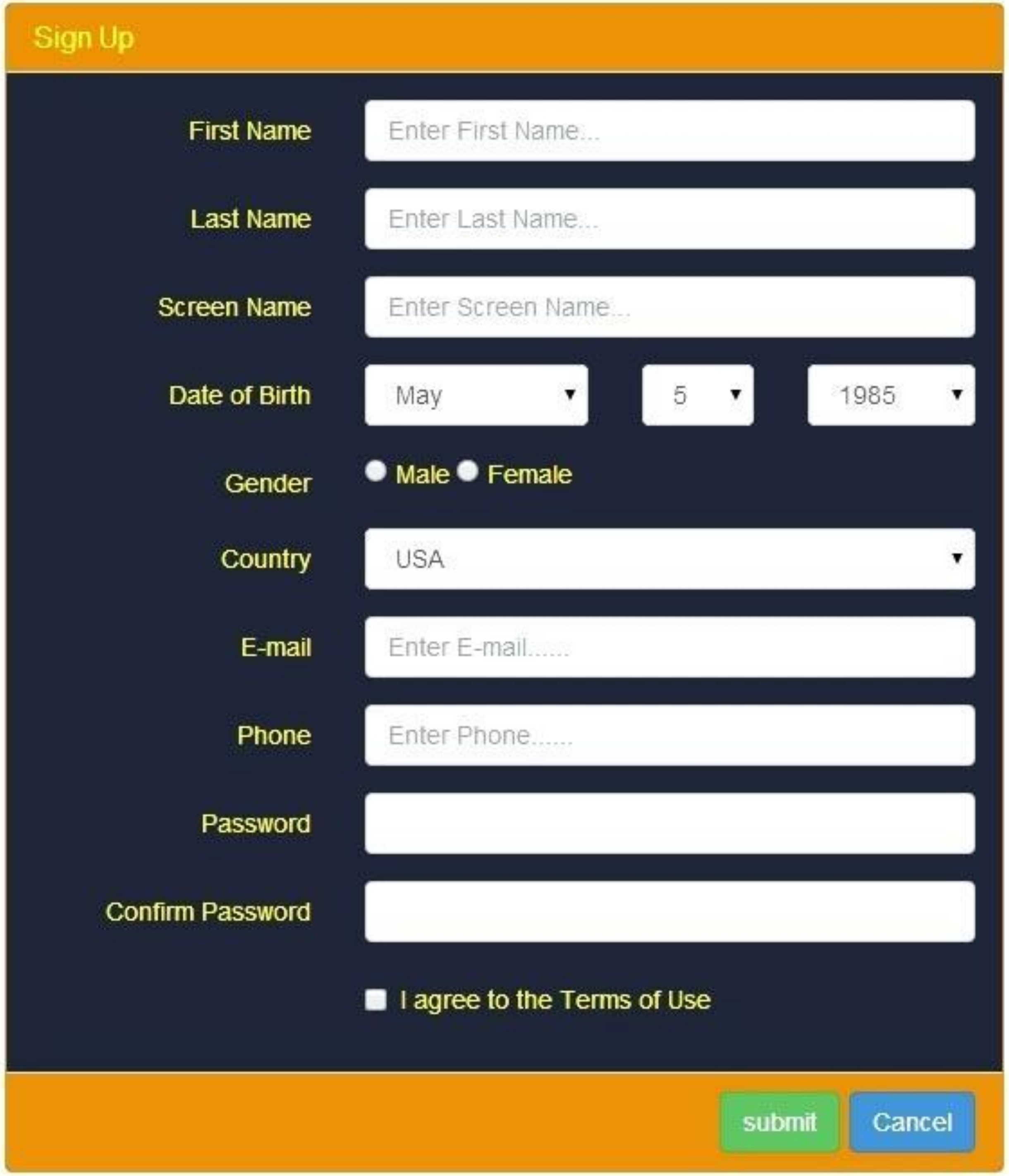

Sign Up

First Name	Enter First Name...
Last Name	Enter Last Name...
Screen Name	Enter Screen Name...
Date of Birth	May ▾ 5 ▾ 1985 ▾
Gender	○ Male ○ Female
Country	USA ▾
E-mail	Enter E-mail......
Phone	Enter Phone......
Password	
Confirm Password	

☐ I agree to the Terms of Use