HTML Form

Web application with HTML and CSS

Lesson Objectives

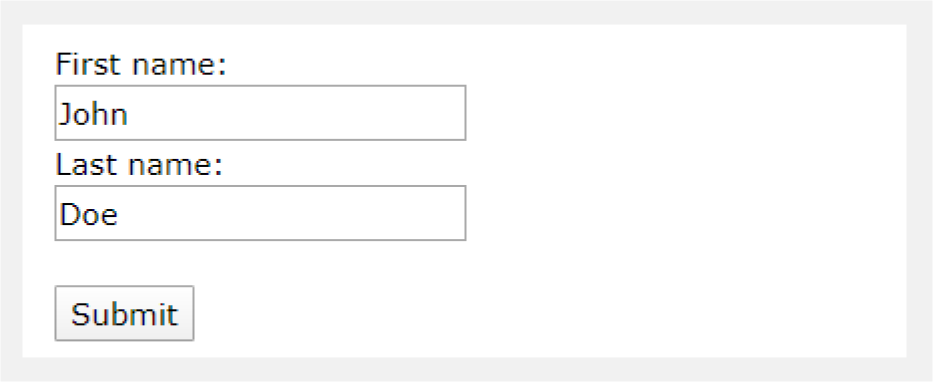
- HTML Form
- Form controls
- HTML Validate
- Debbug HTML

Section 1

HTML FORM

HTML Form

- **Overview:** The HTML <form> element defines a form that is used to collect user input. An HTML form contains **form elements**.
- **Form elements:** Are different types of input elements, like: text fields, checkboxes, radio buttons, submit buttons, and more.



First name:
John

Last name:
Doe

Structure HTML Form

- **Structure HTML Form:** The tags you use to manage the general structure of the form include:
  - **<form>:** Defines a form and attributes that determine the form's behavior. Form element can contain one or more of the following form elements

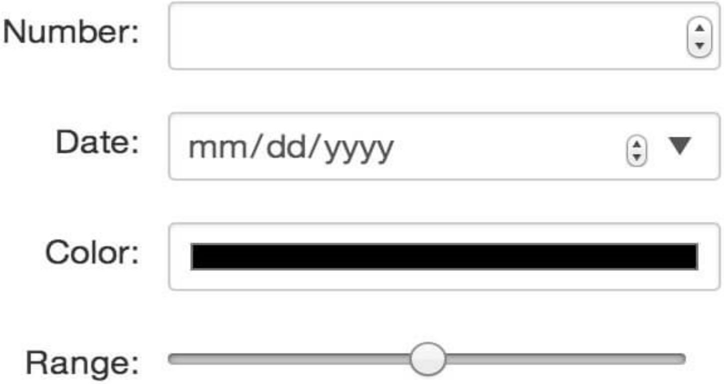
  => Some attributes of form:
    - ***action***: Specifies where to send the form-data when a form is submitted.
    - ***method*****:** Specifies the HTTP method to use when sending form-data.
    - ***target*****:** Specifies where to display the response that is received after submitting the form

Structure HTML Form

- **Structure HTML Form:** The tags you use to manage the general structure of the form include:
  - **<fieldset>:** Groups a series of input elements together
  - **<legend>:** Describes the purpose of the <fieldset>
  - **<label>:** Defines a label for an HTML form widget
  - **<button>:** Defines a clickable button

Structure HTML Form

- **Structure HTML Form:** The tags you use to manage the general structure of the form include:
  - **<input>:** Can be displayed in several ways, depending on the type attribute.



Number:

Date: mm/dd/yyyy

Color:

Range:

type="number"

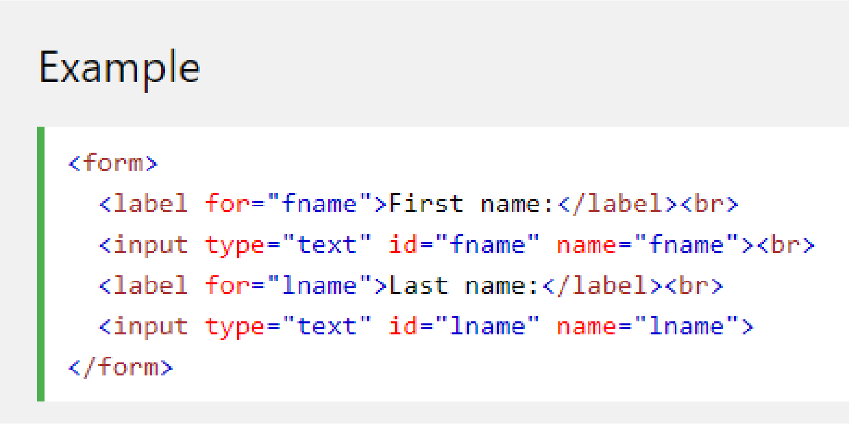
type="date"

type="color"

type="range"

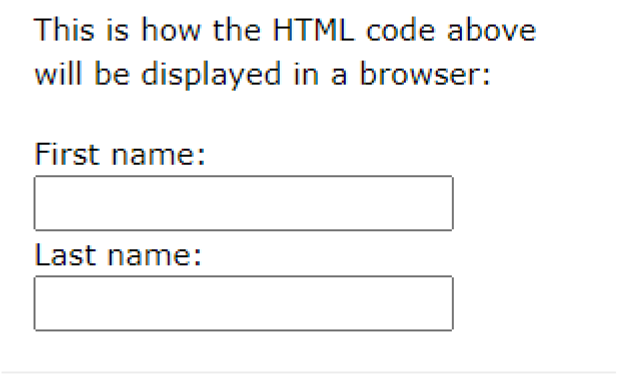
Form elements - <input>

- One of the **most used** form element.
- By default: it creates **single-line text input field**



Example

```
<form>
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname">
</form>
```



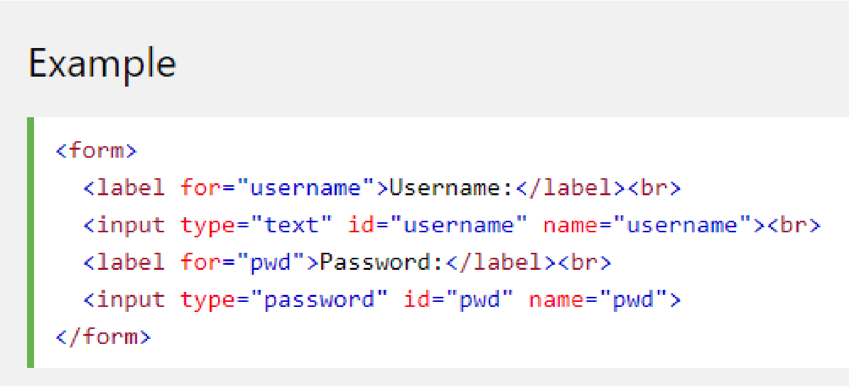
This is how the HTML code above will be displayed in a browser:

First name:

Last name:

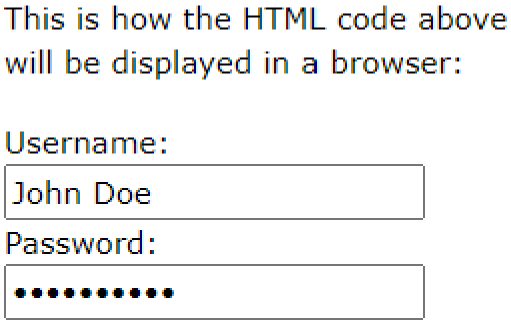
Form elements - <input>

- Input Type Password: defines a **password field**.
- The characters in a password field are masked (shown as asterisks or circles)



Example

```
<form>
  <label for="username">Username:</label><br>
  <input type="text" id="username" name="username"><br>
  <label for="pwd">Password:</label><br>
  <input type="password" id="pwd" name="pwd">
</form>
```



This is how the HTML code above will be displayed in a browser:

Username:

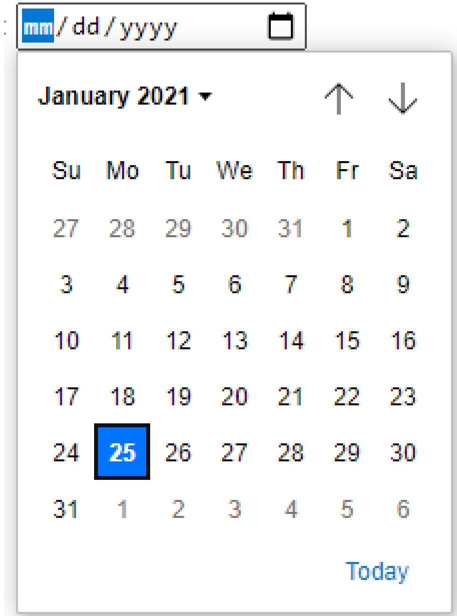
John Doe

Password:

●●●●●●●●●●●

Form elements - <input>

- Input Type Date: is used for input fields that should contain a date.
- Depending on browser support, a date picker can show up in the input field
- The min and max attributes to add restrictions to dates



mm/dd/yyyy

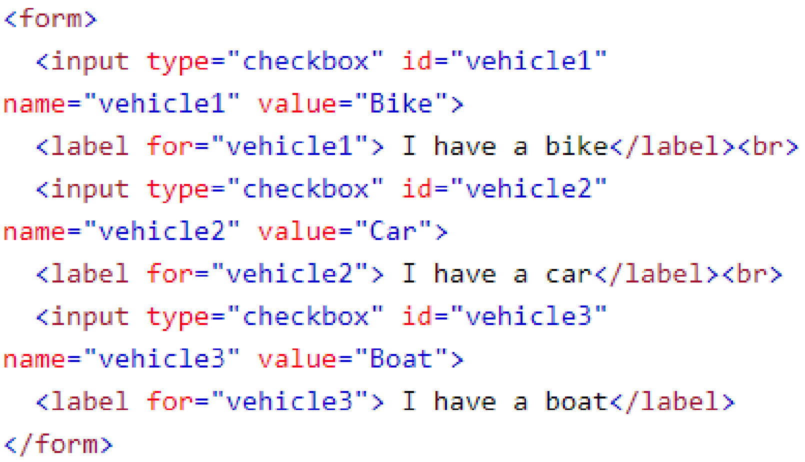
January 2021

Su	Mo	Tu	We	Th	Fr	Sa
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

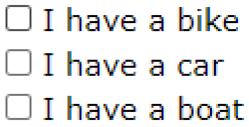
Today

Form elements - <input>

- Input Type Checkbox: defines a **checkbox**.
- Checkboxes let a user select ZERO or MORE options of a limited number of choices.



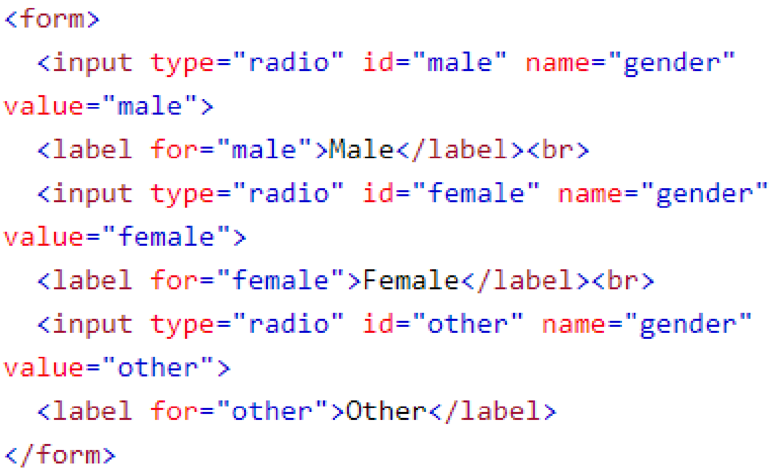
```
<form>
  <input type="checkbox" id="vehicle1"
name="vehicle1" value="Bike">
  <label for="vehicle1"> I have a bike</label><br>
  <input type="checkbox" id="vehicle2"
name="vehicle2" value="Car">
  <label for="vehicle2"> I have a car</label><br>
  <input type="checkbox" id="vehicle3"
name="vehicle3" value="Boat">
  <label for="vehicle3"> I have a boat</label>
</form>
```



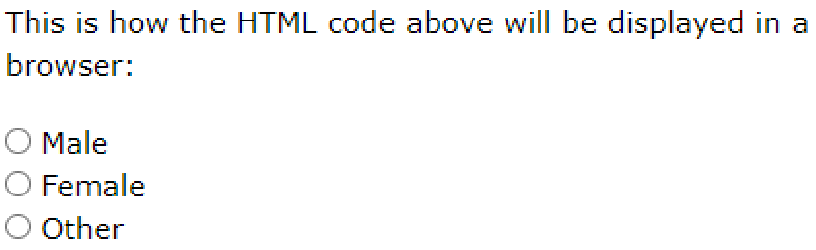
□ I have a bike
□ I have a car
□ I have a boat

Form elements - <input>

- Input Type Radio: defines a **radio button**.
- Radio buttons let a user select ONLY ONE of a limited number of choices:



```
<form>
  <input type="radio" id="male" name="gender"
value="male">
  <label for="male">Male</label><br>
  <input type="radio" id="female" name="gender"
value="female">
  <label for="female">Female</label><br>
  <input type="radio" id="other" name="gender"
value="other">
  <label for="other">Other</label>
</form>
```



This is how the HTML code above will be displayed in a browser:

○ Male
○ Female
○ Other

HTML checked Attribute

- The checked attribute is a **boolean** attribute.
- The checked attribute can be used with <input type="checkbox"> and <input type="radio">
- When present, it specifies that an <input> element should be pre-selected (checked) when the page loads.
- We use checked attribute as a default value

Comparison

CHECKBOX VS RADIO

Form elements - <input>

- Input Type Submit: defines a button for **submitting** form data to a **form-handler**
- Input Type Reset: defines a **reset button** that will reset all form values to their default values

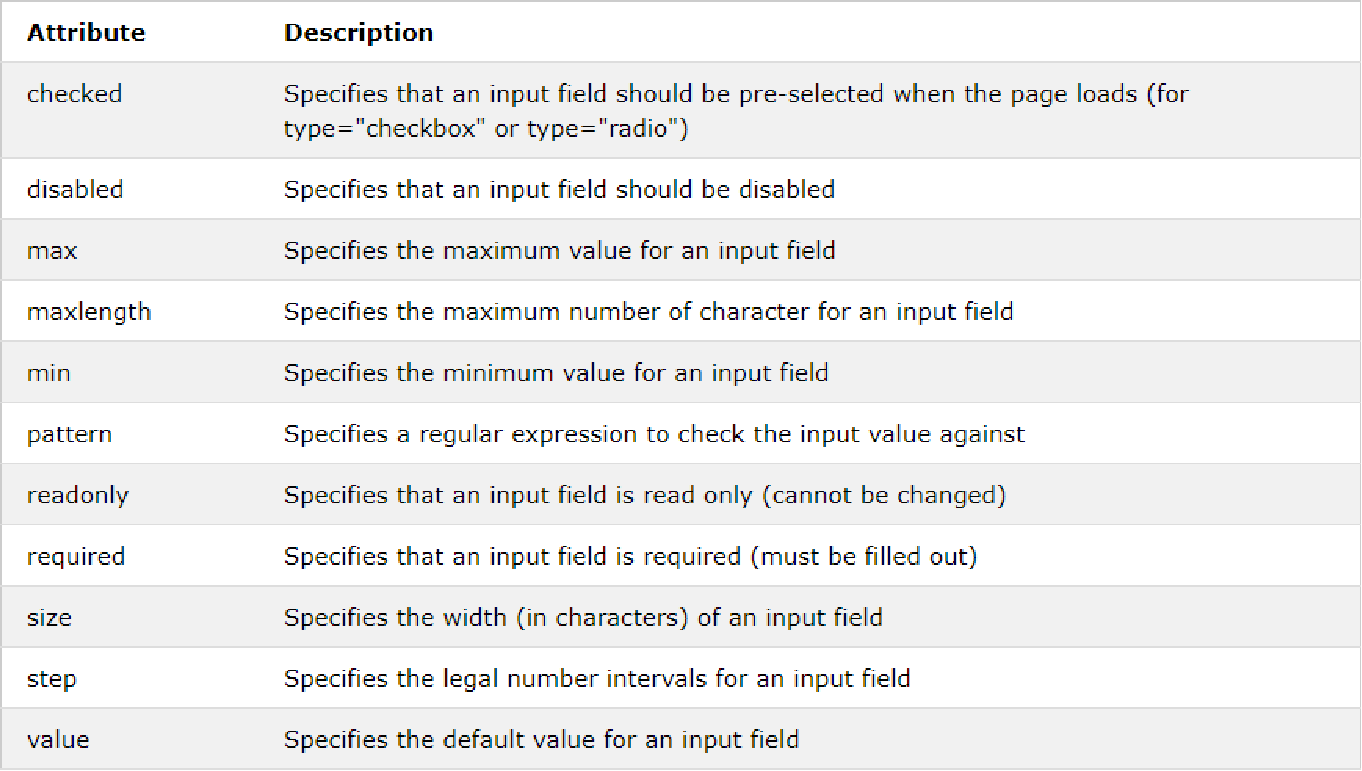
Form elements - <input>

- Input Type Datetime-local: specifies a date and time input field, with no time zone
- Input Type Email: used for input fields that should contain an e-mail address
- Input Type File: defines a file-select field and a "Browse" button for file uploads

Form elements - <input>

- Input Type Number: defines a **numeric** input field
- Input Type Range: defines a control for entering a number whose exact value is not important (like a slider control)
- Input Type Search
- Input Type Tel
- Input Type Time
- Input Type Url
- Input Type Week

Input Restrictions

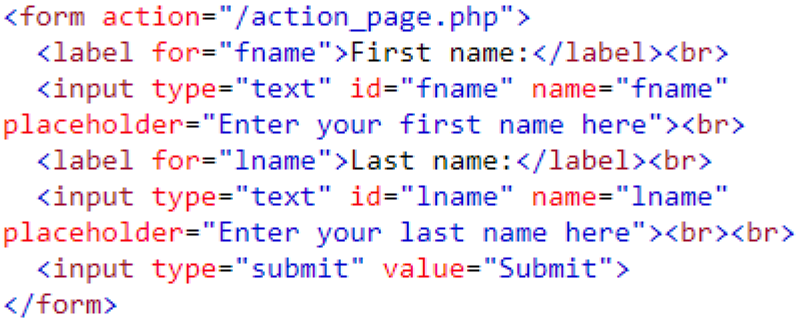


Attribute	Description
checked	Specifies that an input field should be pre-selected when the page loads (for type="checkbox" or type="radio")
disabled	Specifies that an input field should be disabled
max	Specifies the maximum value for an input field
maxlength	Specifies the maximum number of character for an input field
min	Specifies the minimum value for an input field
pattern	Specifies a regular expression to check the input value against
readonly	Specifies that an input field is read only (cannot be changed)
required	Specifies that an input field is required (must be filled out)
size	Specifies the width (in characters) of an input field
step	Specifies the legal number intervals for an input field
value	Specifies the default value for an input field

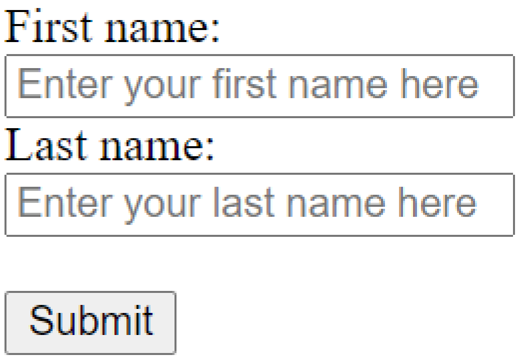
Input placeholder

- Specifies a short hint that describes the expected value of an input field (e.g. a sample value or a short description of the expected format).
- The short hint is displayed in the input field before the user enters a value.
- The placeholder attribute only works with the following input types: text, search, url, tel, email, and password.

Input placeholder



```
<form action="/action_page.php">
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname"
placeholder="Enter your first name here"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname"
placeholder="Enter your last name here"><br><br>
  <input type="submit" value="Submit">
</form>
```



First name:

Enter your first name here

Last name:

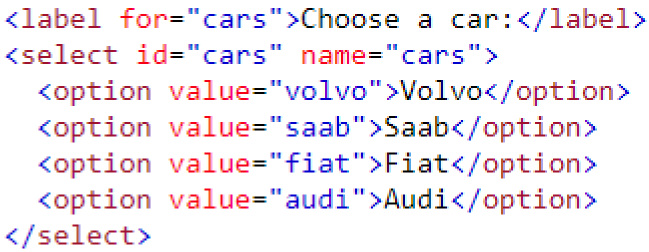
Enter your last name here

Form elements - <label>

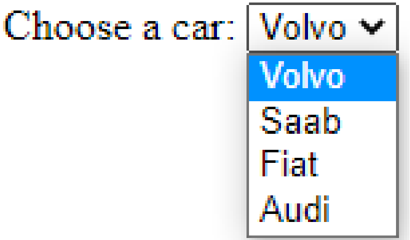
- The <label> element defines a label for several form elements.
- The <label> element is useful for screen-reader users, because the screen-reader will read out loud the label when the user focus on the input element.
- The <label> element also help users who have difficulty clicking on very small regions (such as radio buttons or checkboxes) - because when the user clicks the text within the <label> element, it toggles the radio button/checkbox.
- The for attribute of the <label> tag should be equal to the id attribute of the <input> element to bind them together.

Form elements - <select>

- The <select> element defines a drop-down list
- The <option> elements defines an option that can be selected.
- By default, the first item in the drop-down list is selected.
- Note: always set default blank option or set selected option



```
<label for="cars">Choose a car:</label>
<select id="cars" name="cars">
  <option value="volvo">Volvo</option>
  <option value="saab">Saab</option>
  <option value="fiat">Fiat</option>
  <option value="audi">Audi</option>
</select>
```

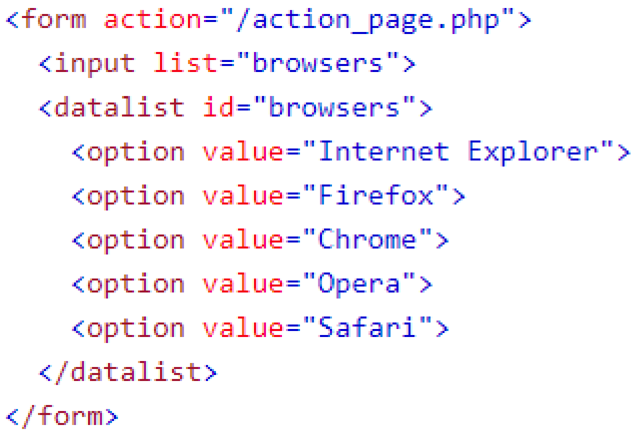


Choose a car: Volvo

Volvo
Saab
Fiat
Audi

Form elements - <datalist>

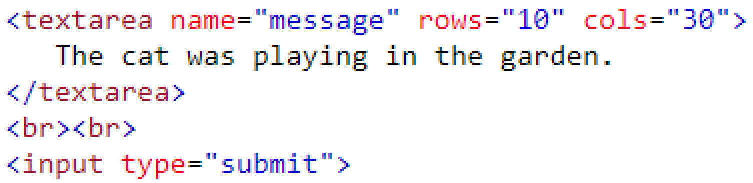
- The <datalist> element specifies a list of pre-defined options for an <input> element.
- Users will see a drop-down list of the pre-defined options as they input data.
- The list attribute of the <input> element, must refer to the id attribute of the <datalist> element.



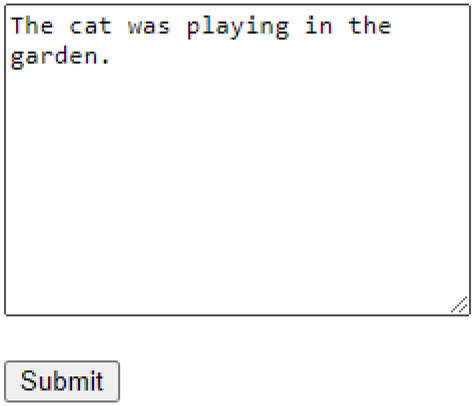
```
<form action="/action_page.php">
  <input list="browsers">
  <datalist id="browsers">
    <option value="Internet Explorer">
    <option value="Firefox">
    <option value="Chrome">
    <option value="Opera">
    <option value="Safari">
  </datalist>
</form>
```

Form elements - <textarea>

- The <textarea> element defines a multi-line input field (a text area)
- The rows attribute specifies the visible number of lines in a text area.
- The cols attribute specifies the visible width of a text area



```
<textarea name="message" rows="10" cols="30">
   The cat was playing in the garden.
</textarea>
<br><br>
<input type="submit">
```

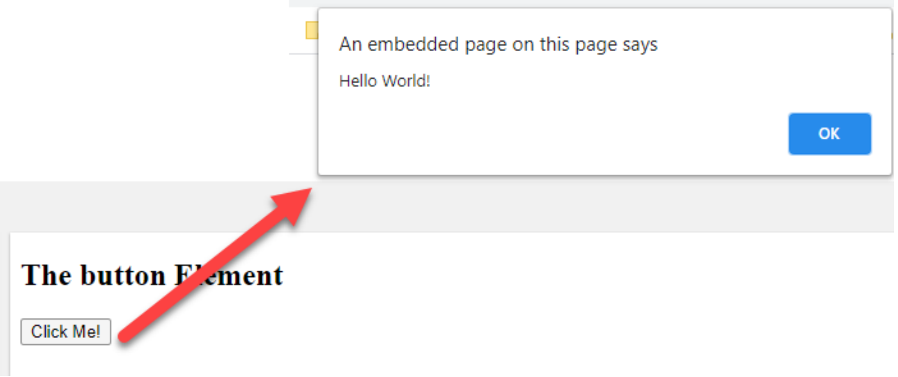


The cat was playing in the
garden.

Form elements - <button>

- The <button> element defines a clickable button

```
<button type="button" onclick="alert('Hello World!')">
Click Me!
</button>
```



An embedded page on this page says

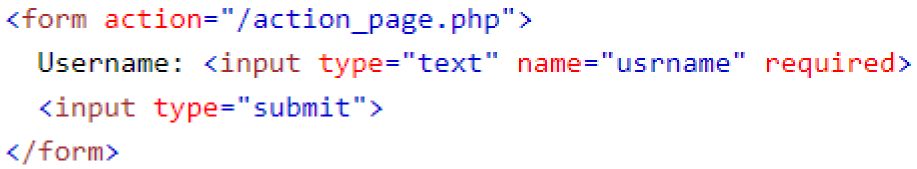
Hello World!

The button Element

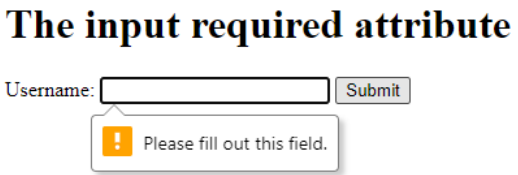
HTML required Attribute

- The required attribute is a boolean attribute.
- When present, it specifies that the element must be filled out before submitting the form.
- The required attribute can be used on:
  - ✓ <input>
  - ✓ <select>
  - ✓ <textarea>

HTML required Attribute



```
<form action="/action_page.php">
  Username: <input type="text" name="usrname" required>
  <input type="submit">
</form>
```

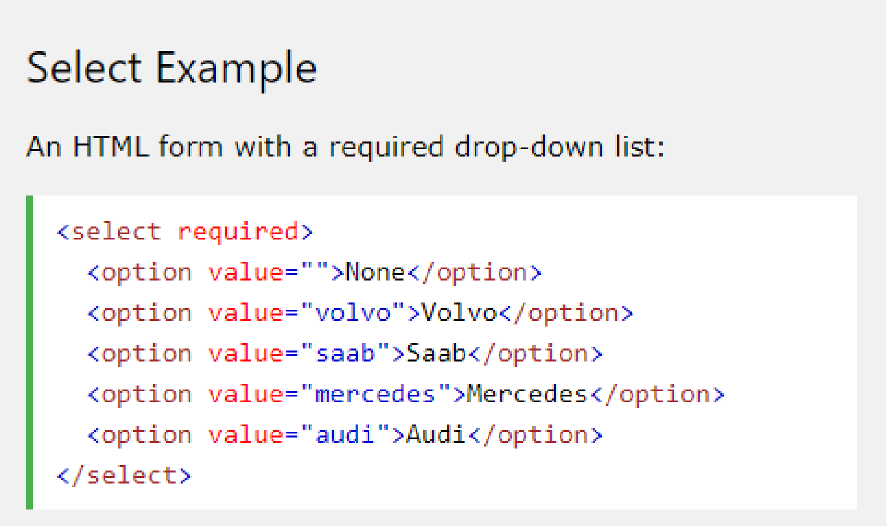


The input required attribute

Username: Submit

Please fill out this field.

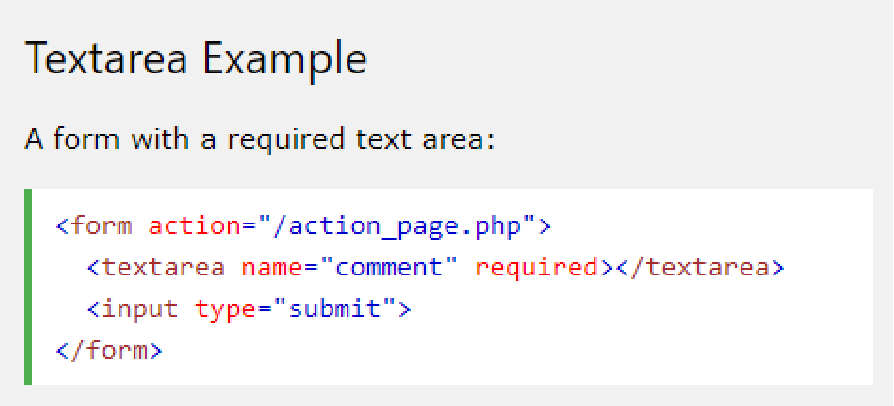
HTML required Attribute



Select Example

An HTML form with a required drop-down list:

```
<select required>
  <option value="">None</option>
  <option value="volvo">Volvo</option>
  <option value="saab">Saab</option>
  <option value="mercedes">Mercedes</option>
  <option value="audi">Audi</option>
</select>
```



Textarea Example

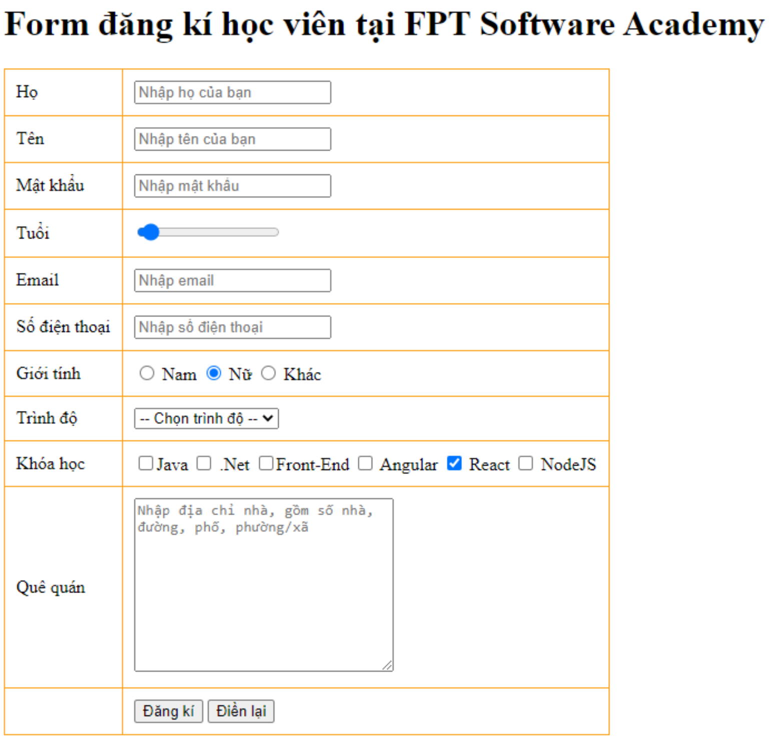
A form with a required text area:

```
<form action="/action_page.php">
  <textarea name="comment" required></textarea>
  <input type="submit">
</form>
```

Practice

CREATE FORM

Create form



Form đăng kí học viên tại FPT Software Academy

Họ	Nhập họ của bạn
Tên	Nhập tên của bạn
Mật khẩu	Nhập mật khẩu
Tuổi	
Email	Nhập email
Số điện thoại	Nhập số điện thoại
Giới tính	○ Nam ● Nữ ○ Khác
Trình độ	-- Chọn trình độ --
Khóa học	□ Java □ .Net □ Front-End □ Angular ☑ React □ NodeJS
Quê quán	Nhập địa chỉ nhà, gồm số nhà, đường, phố, phường/xã
	Đăng kí Điền lại

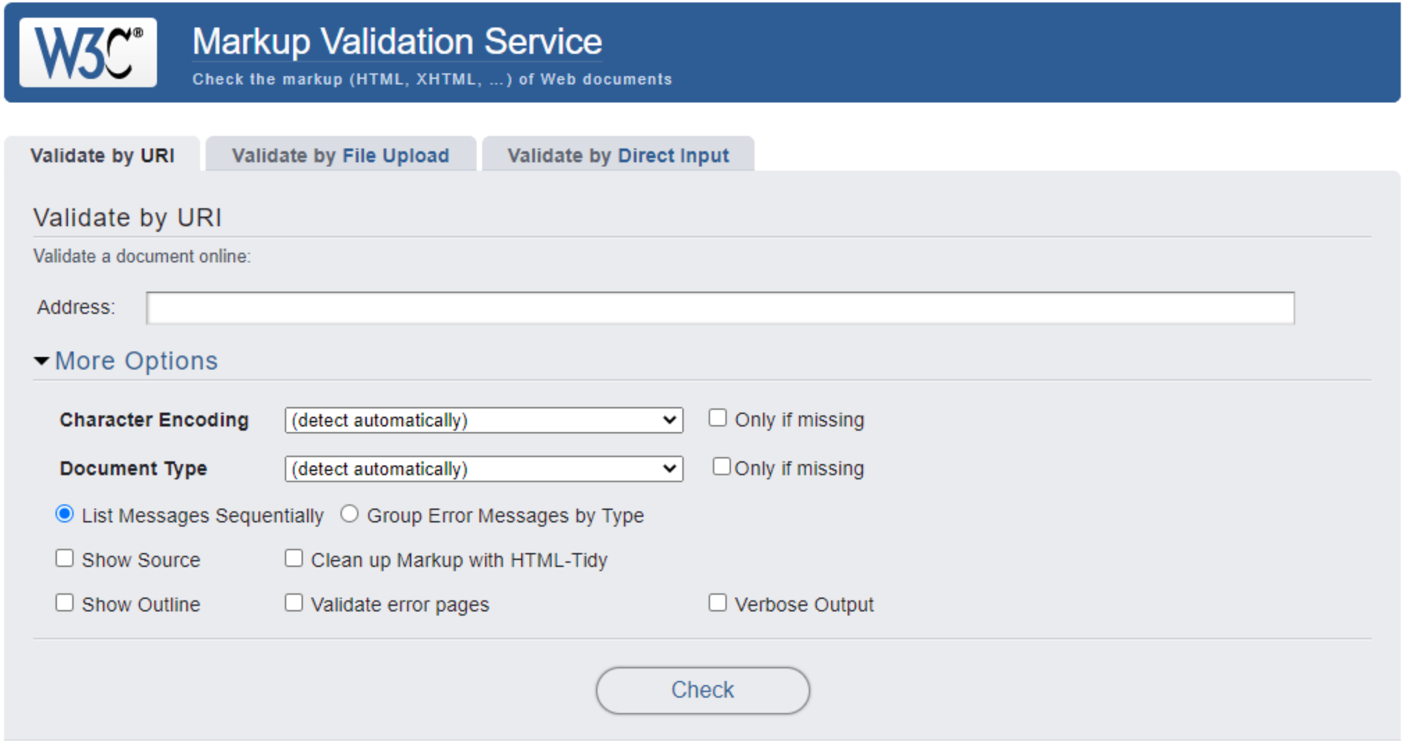
Section 2

HTML VALIDATE

HTML Validate

- To make sure your code following standard conventions or rules
- Goto https://validator.w3.org/ to validate:
  - ✓ By URI
  - ✓ By file upload
  - ✓ By direct input

HTML Validate



Markup Validation Service

Check the markup (HTML, XHTML, ...) of Web documents

Validate by URI

Validate a document online:

Address:

▾ More Options

Character Encoding (detect automatically) □ Only if missing

Document Type (detect automatically) □ Only if missing

● List Messages Sequentially ○ Group Error Messages by Type

□ Show Source □ Clean up Markup with HTML-Tidy

□ Show Outline □ Validate error pages □ Verbose Output

Section 3

DEBBUG HTML

Syntax error and Logic error

- There are two main types of error that you'll come across:
  - **Syntax error**: Relate to spelling errors in your code.

  Easy to fix as long as you are familiar with the language's syntax and know what the error messages mean.

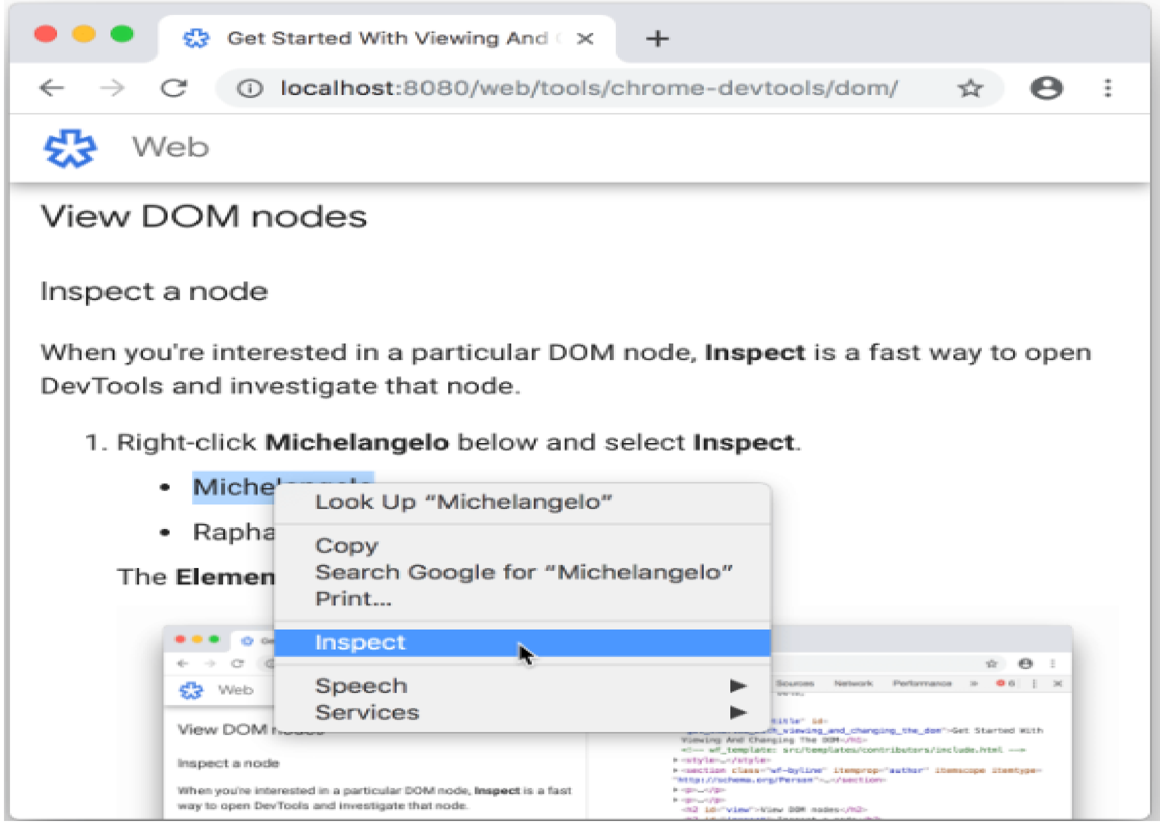
  - **Logic error:** The syntax is actually correct, but the code is not what you intended it to be so the program runs incorrectly

  Often harder to fix than syntax errors, because there isn't an error message to direct you to the source of the error.

DOM Inspector

- **Dom Inspector:** A developer tool used to inspect, browser, and edit the Document Object Model of documents - usually web pages
- Basic actions of the DOM Nodes viewer:
  - ✓ Selecting elements by click
  - ✓ Searching for Nodes in the DOM
  - ✓ Updating the DOM Dynamically

DOM Inspector



Get Started With Viewing And (

localhost:8080/web/tools/chrome-devtools/dom/

Web

View DOM nodes

Inspect a node

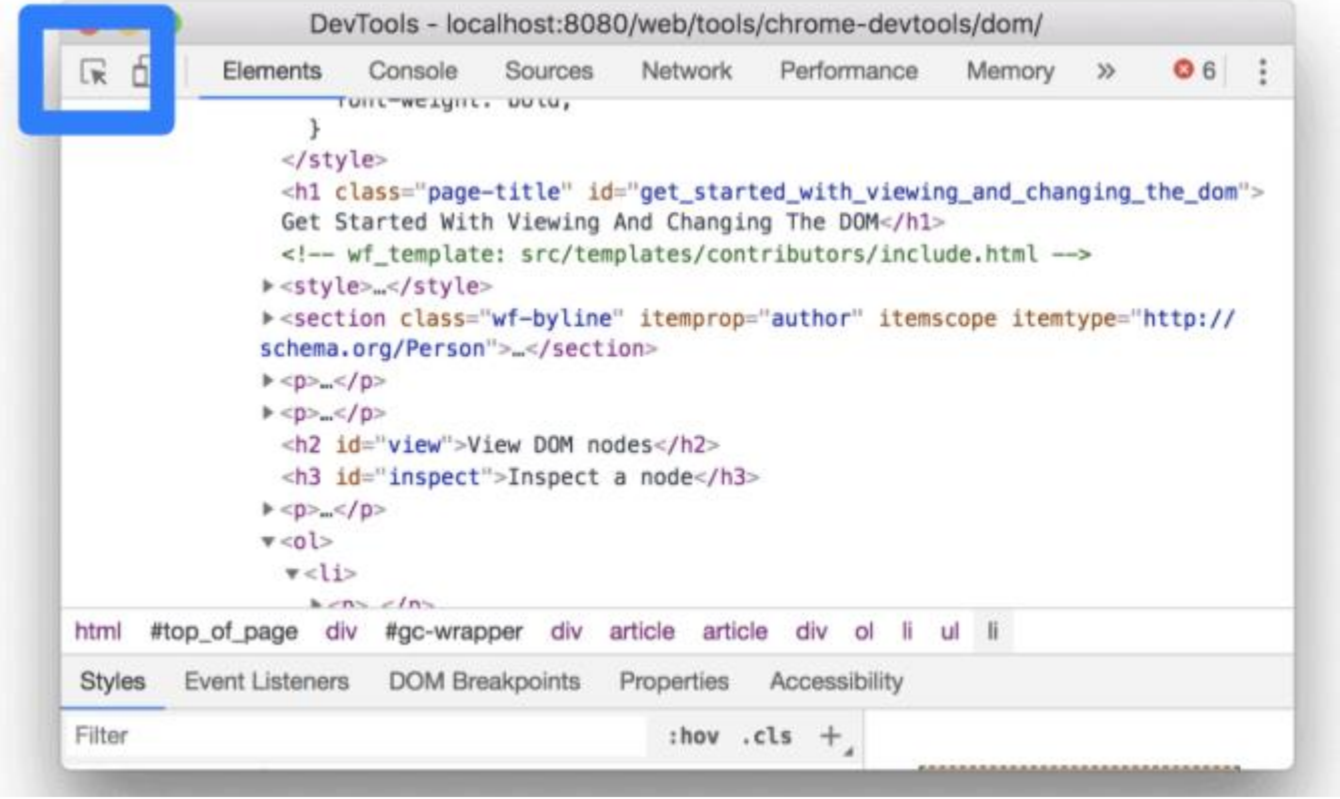
When you're interested in a particular DOM node, **Inspect** is a fast way to open DevTools and investigate that node.

1. Right-click **Michelangelo** below and select **Inspect**.
   - Miche
   - Rapha

The **Elemen**

=> Right click on the web page to use Dom Inspector

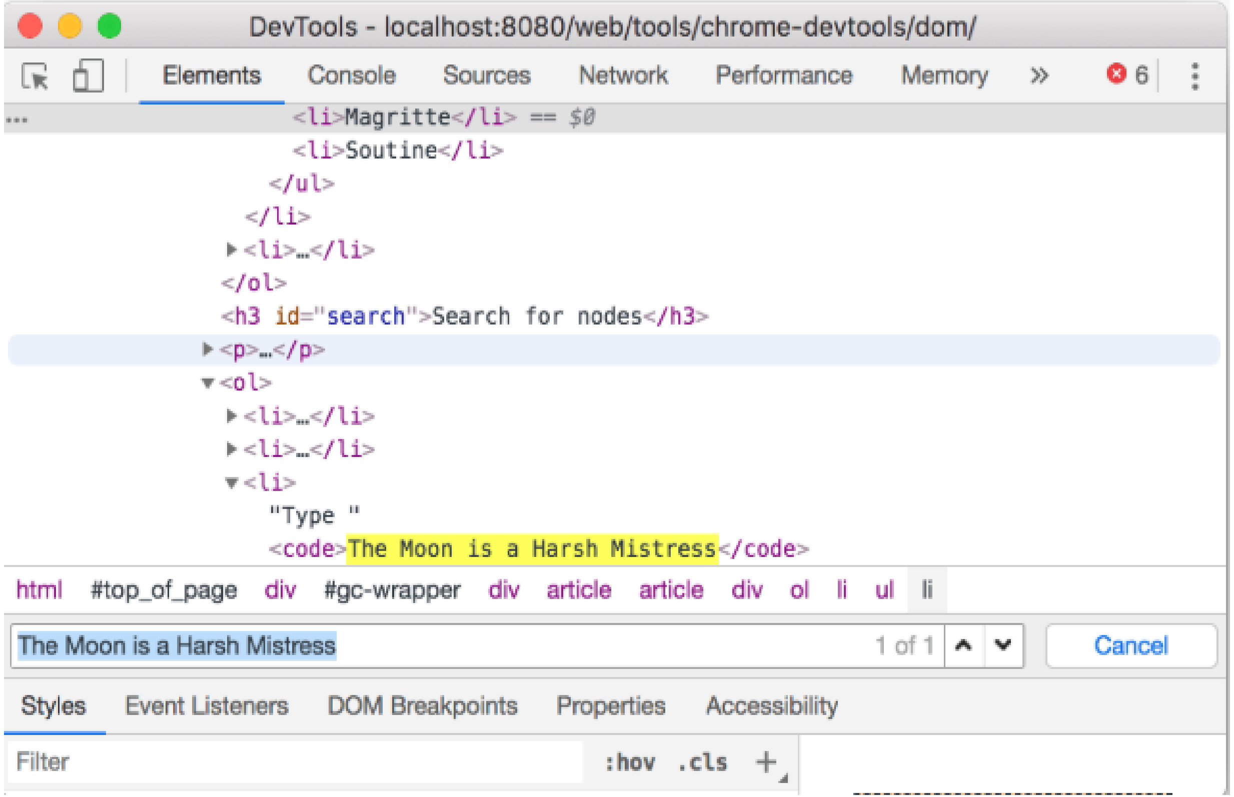
DOM Inspector



```
      font-weight: bold;
    }
  </style>
  <h1 class="page-title" id="get_started_with_viewing_and_changing_the_dom">
  Get Started With Viewing And Changing The DOM</h1>
  <!-- wf_template: src/templates/contributors/include.html -->
▶<style>…</style>
▶<section class="wf-byline" itemprop="author" itemscope itemtype="http://
schema.org/Person">…</section>
▶<p>…</p>
▶<p>…</p>
  <h2 id="view">View DOM nodes</h2>
  <h3 id="inspect">Inspect a node</h3>
▶<p>…</p>
▼<ol>
  ▼<li>
    ▶<p>…</p>
```

=> Click to choose the node

DOM Inspector



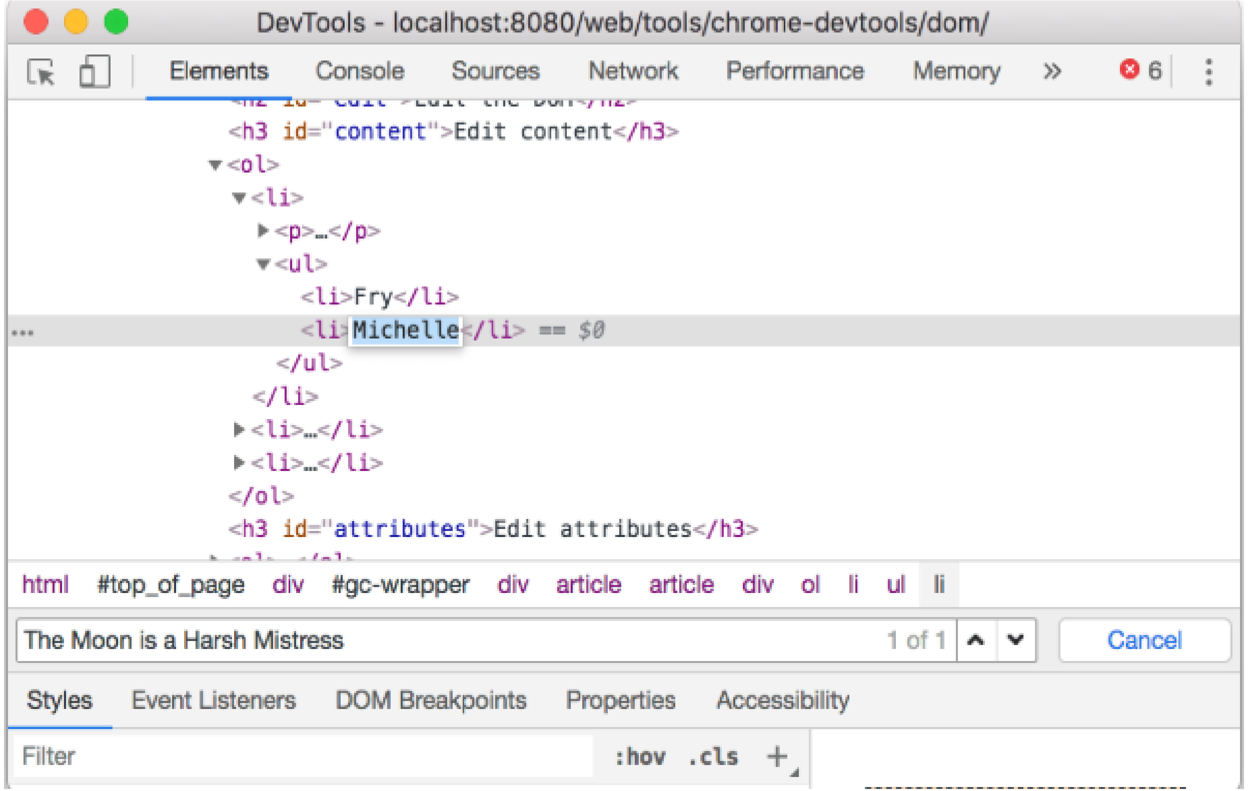
DevTools - localhost:8080/web/tools/chrome-devtools/dom/
Elements
Console
Sources
Network
Performance
Memory
»
6

```
<li>Magritte</li> == $0
  <li>Soutine</li>
</ul>
</li>
<li>…</li>
</ol>
<h3 id="search">Search for nodes</h3>
<p>…</p>
<ol>
  <li>…</li>
  <li>…</li>
  <li>
    "Type "
    <code>The Moon is a Harsh Mistress</code>
```

html #top_of_page div #gc-wrapper div article article div ol li ul li
The Moon is a Harsh Mistress
1 of 1
Cancel
Styles
Event Listeners
DOM Breakpoints
Properties
Accessibility
Filter
:hov .cls +

=> Press Control+F, Type to the search bar at the bottom of the DOM Tree

DOM Inspector



```
<h3 id="content">Edit content</h3>
▼<ol>
  ▼<li>
    ▶<p>…</p>
    ▼<ul>
        <li>Fry</li>
...     <li>Michelle</li> == $0
     </ul>
   </li>
  ▶<li>…</li>
  ▶<li>…</li>
 </ol>
 <h3 id="attributes">Edit attributes</h3>
```

The Moon is a Harsh Mistress 1 of 1 Cancel

=> Double click to the content or the tag to edit then press Enter to confirm the change

Lesson Summary

Thank you