

# HTML Form

*Web application with HTML and CSS*



# Lesson Objectives

- HTML Form
- Form controls
- HTML Validate
- Debug HTML

## Section 1

# 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:

Last name:

- **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:** 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:** 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:	<input type="number"/>	→ type="number"
Date:	<input type="date"/>	→ type="date"
Color:	<input type="color"/>	→ type="color"
Range:	<input type="range"/>	→ type="range"

- **Structure HTML Form:** The tags you use to manage the general structure of the form include:
  - **<select>**: Defines a **drop-down list**, the **<option>** tags inside the **<select>** element define the available options in the list.
- ⇒ Some attributes of select:
  - **disabled**: Specifies that a drop-down list should be disabled
  - **form**: Defines which form the drop-down list belongs to
  - **multiple**: Specifies that multiple options can be selected at once
  - **required**: Specifies that the user is required to select a value before submitting the form



# 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:

Password:

# 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>
```

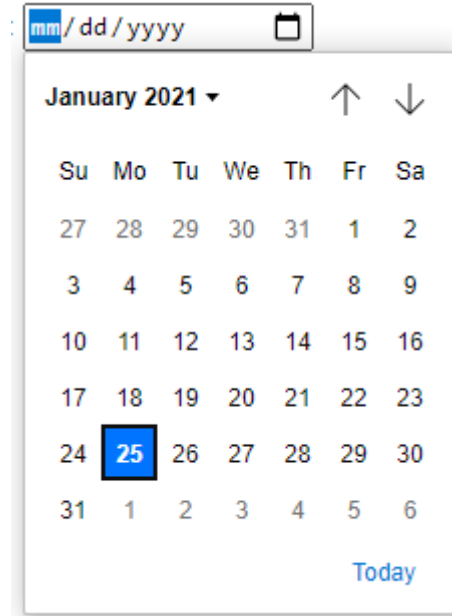
This is how the HTML code above  
will be displayed in a browser:

Username:

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



# 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

- 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



- 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

- 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

# 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

- 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:

Last name:

# Form elements - <label>

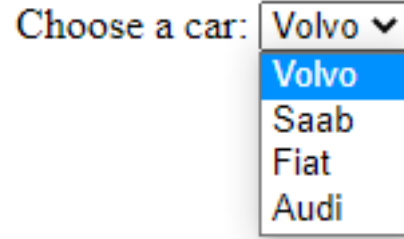
- The <label> element defines a label for several form elements.
- The <label> element is useful for screen-reader users, because the screen-reader will read out loud the label when the user focus on the input element.
- The <label> element also help users who have difficulty clicking on very small regions (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>
```



# Form elements - <datalist>

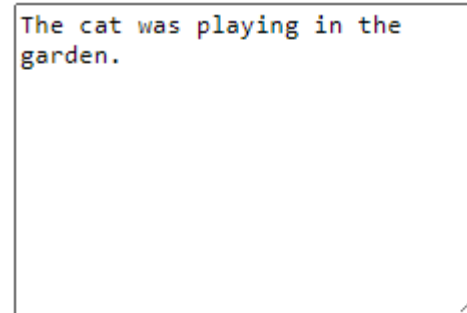
- The <datalist> element specifies a list of pre-defined options for an <input> element.
- Users will see a drop-down list of the pre-defined options as they input data.
- The list attribute of the <input> element, must refer to the id attribute of the <datalist> element.

```
<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

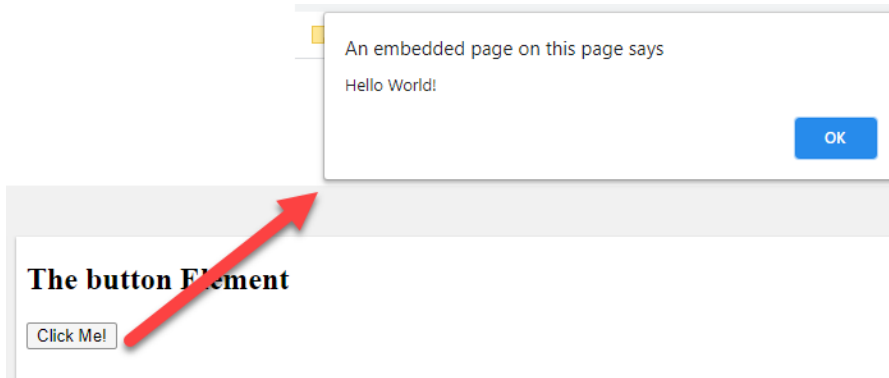
```
<textarea name="message" rows="10" cols="30">  
    The cat was playing in the garden.  
</textarea>  
<br><br>  
<input type="submit">
```

A screenshot of a web browser showing a text area with the text "The cat was playing in the garden." and a submit button below it. The text area is a rectangular box with a thin border, and the text is in a monospaced font. The submit button is a small rectangular button with the word "Submit" in a sans-serif font.

# Form elements - <button>

- The <button> element defines a clickable button

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




- 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:

 Please fill out this field.

## 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



## Form đăng kí học viên tại FPT Software Academy

Họ	<input type="text" value="Nhập họ của bạn"/>
Tên	<input type="text" value="Nhập tên của bạn"/>
Mật khẩu	<input type="password" value="Nhập mật khẩu"/>
Tuổi	<input type="range" value=""/>
Email	<input type="text" value="Nhập email"/>
Số điện thoại	<input type="text" value="Nhập số điện thoại"/>
Giới tính	<input type="radio"/> Nam <input checked="" type="radio"/> Nữ <input type="radio"/> Khác
Trình độ	-- Chọn trình độ --
Khóa học	<input type="checkbox"/> Java <input type="checkbox"/> .Net <input type="checkbox"/> Front-End <input type="checkbox"/> Angular <input checked="" type="checkbox"/> React <input type="checkbox"/> NodeJS
Quê quán	<div>Nhập địa chỉ nhà, gồm số nhà, đường, phố, phường/xã</div>
	<input type="button" value="Đăng kí"/> <input type="button" value="Điền lại"/>

## Section 2

# 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



## Markup Validation Service

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

Validate by URI

Validate by File Upload

Validate by Direct Input

### Validate by URI

Validate a document online:

Address:

#### ▼ More Options

**Character Encoding**  ☐ Only if missing

**Document Type**  ☐ 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

Check

## Section 3

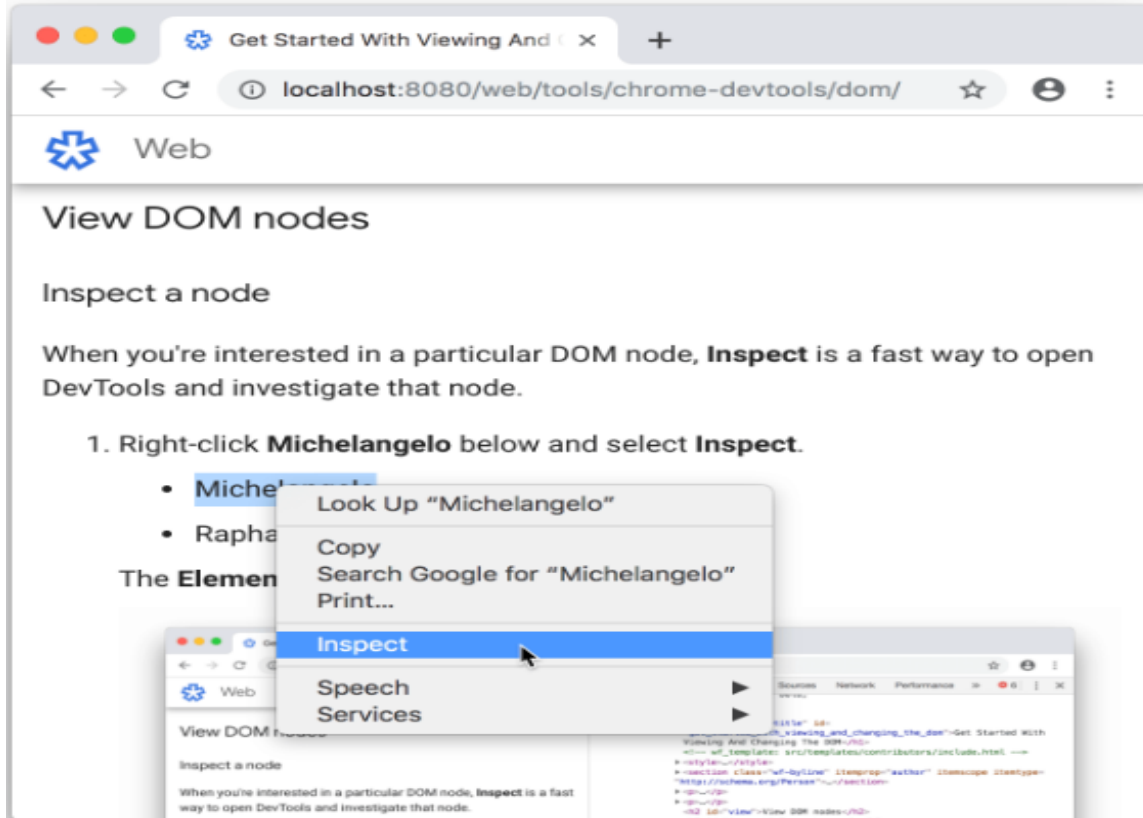
# DEBUG HTML

# 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:** 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

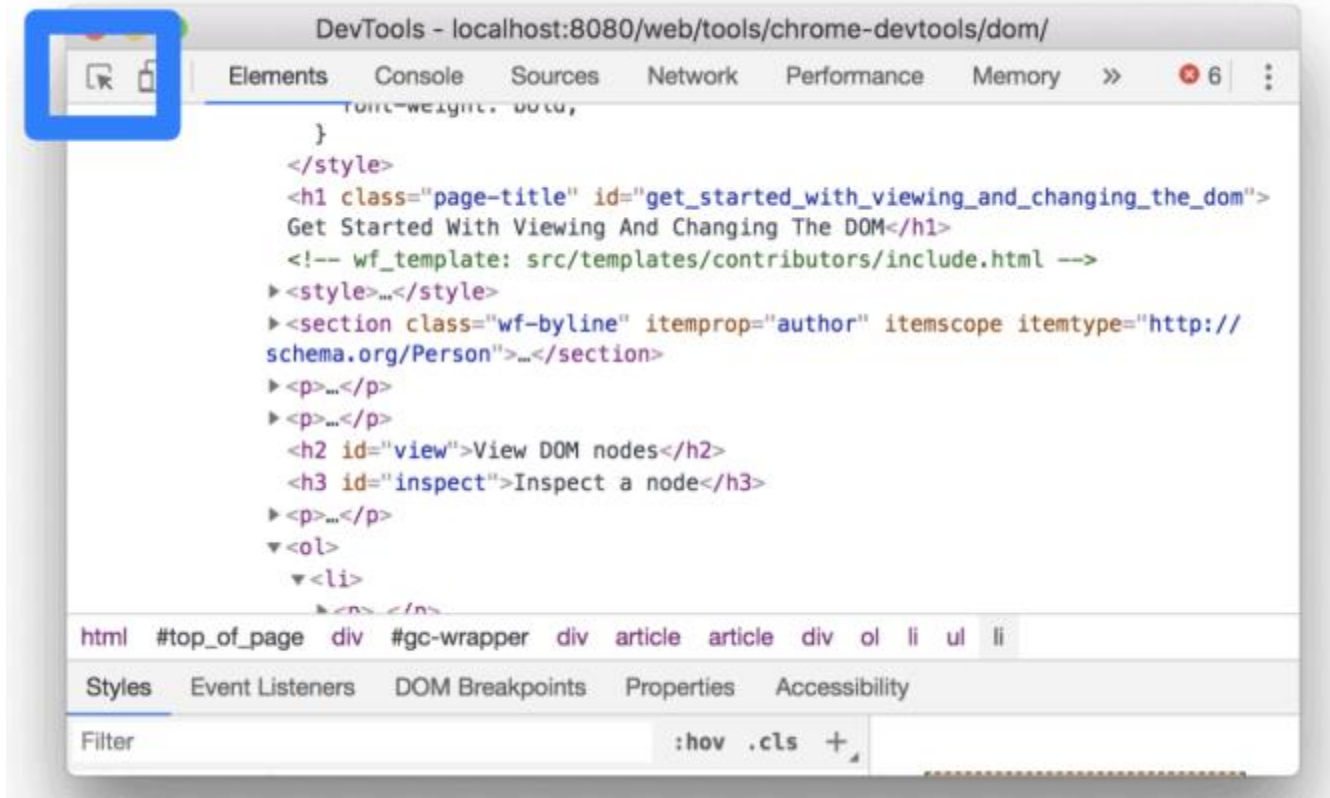
# DOM Inspector



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

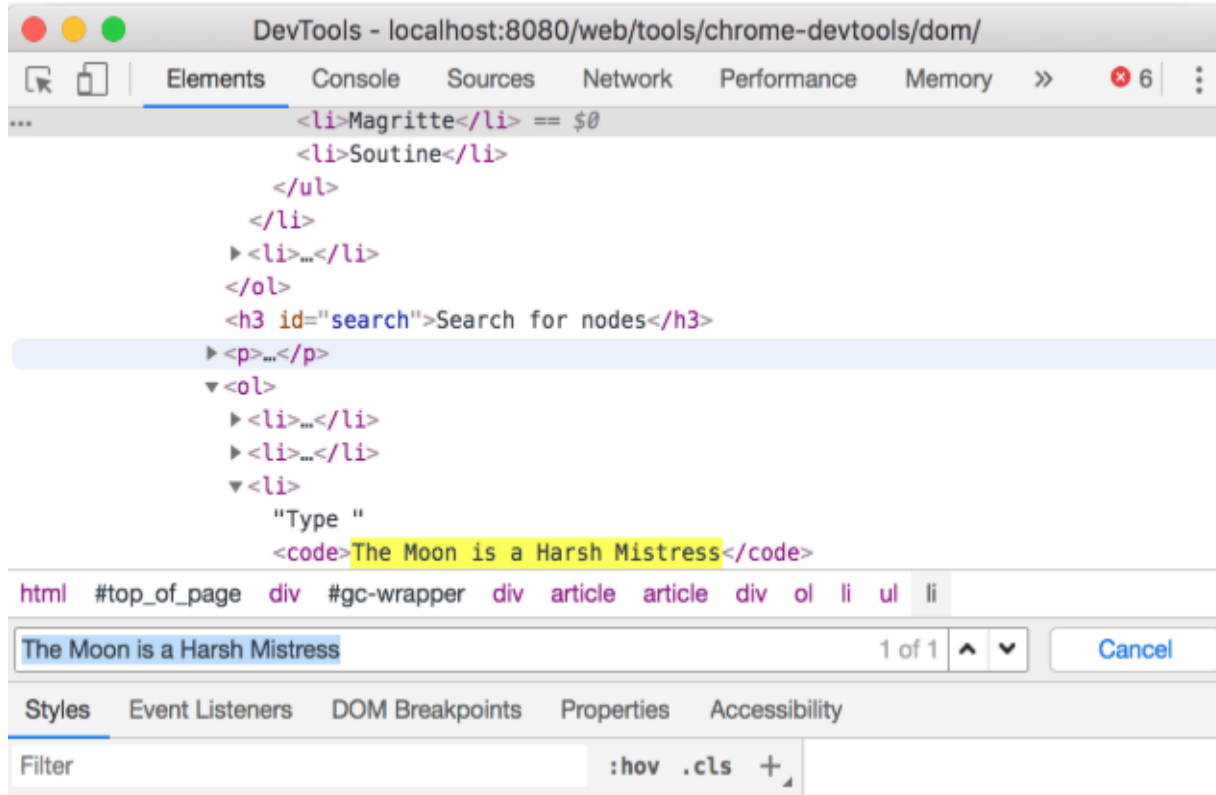


# DOM Inspector



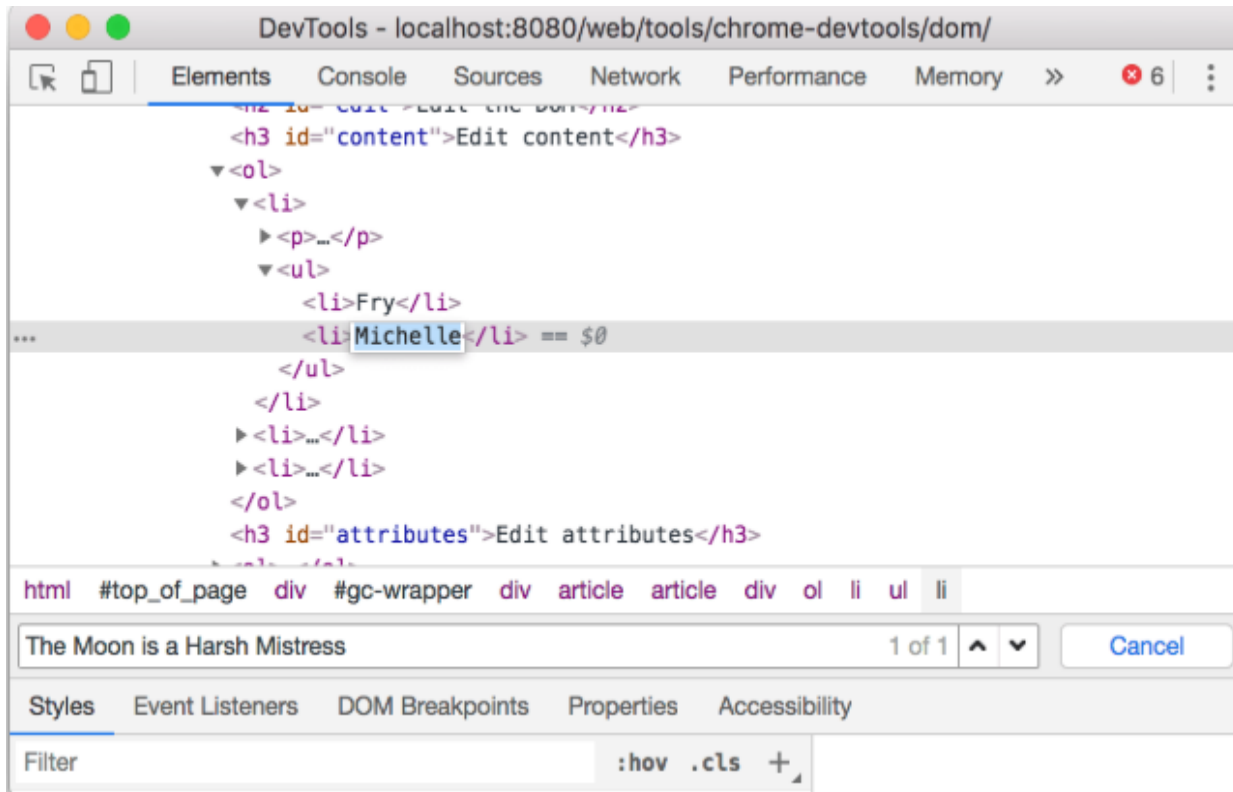
=> Click to choose the node

# DOM Inspector



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

# DOM Inspector



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

# Lesson Summary

- <Summarize the main points in the lesson, compared to the lesson objectives>

**Thank you**

