

HTML5

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What is HTML?

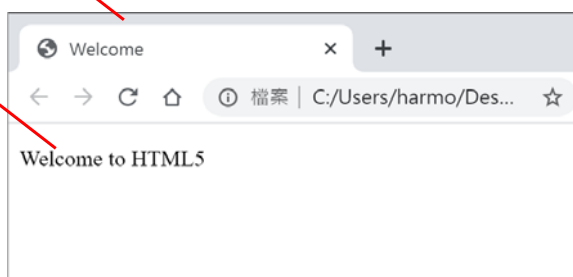
- Hyper Text Markup Language
 - Specify the structure and content displayed in browsers
 - Save it with the.html or .htm filename extension
- HTML uses (markup) tags to describe web pages
 - Keywords surrounded: <html>
- HTML tags normally come in pairs:
<body> and </body>, and , etc.
 - The 1st tag is the start tag (or opening tag)
 - The 2nd tag is the end tag (or closing tag)

```

<!DOCTYPE html>
<html>
  <head>
    <meta charset = "utf-8">
    <title>Welcome</title>
  </head>

  <body>
    <p>Welcome to HTML5</p>
  </body>
</html>

```

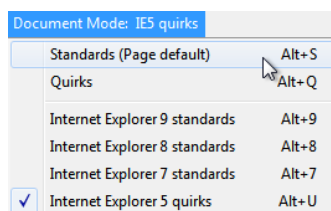


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Document Type Declaration

<!DOCTYPE html>

- The document type declaration (DOCTYPE) is required in HTML5 documents so that browsers render the page in **standards mode**
 - First thing in HTML doc, before the <html> tag
- Some browsers operate in **quirks mode** to maintain backward compatibility with web pages that are not up-to-date with the latest standards



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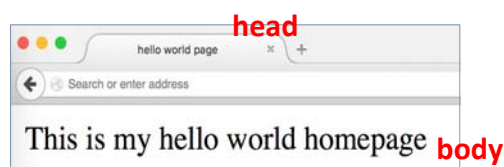
Comments

- Notes
- Insert comments in your HTML5 markup to improve readability and describe the content of a document
- The browser ignores comments when your document is rendered
- Comments start with `<!--` and end with `-->`

```
<!-- this is comments -->
<!-- first HTML5 example -->
```

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Page Structure



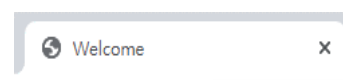
- `<html>` tag at the beginning and the end
 - telling the browser where the document starts and where it stops
 - `<html>` and `</html>`
- HTML5 consists of a head and a body sections
 - The head is used for text and tags that do not show directly on the page
 - `<head>` `</head>`
 - The body is used for text and tags that are shown directly on the page
 - `<body>` `</body>`

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Head

- Head section contains information about the HTML5
 - `<head> this is title </head>` (title bar of the browser)
 - Search engines use title: index purposes & display results
- `<meta charset="utf-8">`
 - `<meta>` tag provides metadata about the HTML page
 - Metadata won't be showed on the page (machine parsable)
 - `<meta name="description" content="Free Web tutorials">`
 - `<meta name="keywords" content="HTML, CSS, JavaScript">`
- Character set (utf-8): 8-bit Unicode Transformation Format (most common)
- Helps the browser determine how to display the content

```
<head>
  <meta charset="utf-8">
  <title>Welcome</title>
</head>
```



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Body

- The body section contains the page's content
 - HTML5 markup contains: text, images, graphics, animations, audios, and videos
 - All kinds of information you see on the webpages

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="utf-8">
  <title>Welcome</title>
</head>
<body>
  <p>Hello World!</p>
</body>
</html>
```

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HTML Nested Elements

- HTML elements: everything from the start tag to the end tag
- Nested HTML Elements
 - Most HTML elements can be nested (can contain other HTML elements)

```

<html>
  <body>
    <p>This is my first paragraph.</p>
  </body>
</html>

```

three elements nested...

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Paragraph Examples

- <p> </p> tags
 - Add a new **paragraph**
 - <p> This is a paragraph </p>
-
 tag
 - Add a new **line** without starting a new paragraph
 - This is
 a paragraph
- <div> </div> tags
 - defines a **division** or a section in HTML document

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HTML Paragraph

- HTML paragraphs: `<p>` `</p>` tags
 - Add a new line

```
<!DOCTYPE html>
<html>
<body>
  <p>Hello World!</p>
  <p>Add a new line: 1</p>
  <p>Add a new line: 2</p>
</body>
</html>
```

Hello World!

Add a new line: 1

Add a new line: 2

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HTML Paragraph with no line breaks

- HTML Line Breaks: `
` tag
 - Add a new line without starting a new paragraph

```
<!DOCTYPE html>
<html>
<body>
  <p>Hello World!</p>
  <p>Add <br>a text<br> with line breaks</p>
  <p>Add a new line: 2</p>
</body>
</html>
```

Hello World!

Add
a text
with line breaks

Add a new line: 2

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HTML Paragraph - division

- `<div>` `</div>` tags
 - defines a division or a section in HTML document

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

  <p> Paragraph outside the div element</p>
  <div>
    <p> Paragraph inside the div element</p>
  </div>

  <div style="color:#FF6347">
    <p> Paragraph inside the div element</p>
  </div>

  <div align="right">
    <p> Paragraph inside the div element</p>
  </div>

</body>
</html>
```

Paragraph outside the div element

Paragraph inside the div element

Paragraph inside the div element

Paragraph inside the div element

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HTML Headings

- HTML5 provides six heading elements for specifying the relative importance of info
- Headings are defined with the `<h1>` to `<h6>` tags
 - `<h1>` defines the most important heading
 - `<h6>` defines the least important heading

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Headings example

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

  <h1>Heading 1</h1>
  <h2>Heading 2</h2>
  <h3>Heading 3</h3>
  <h4>Heading 4</h4>
  <h5>Heading 5</h5>
  <h6>Heading 6</h6>

</body>
</html>
```

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

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HTML Text Formatting tags

- HTML uses tags like **** for **bold** text or *<i>* for *italic* text
- These HTML tags are called formatting tags

**** - Bold text

**** - Important text

<i> - Italic text

**** - Emphasized text

<mark> - Marked text

<small> - Smaller text

**** - Deleted text

<ins> - Inserted text

<sub> - Subscript text

<sup> - Superscript text

Source: https://www.w3schools.com/html/html_formatting.asp

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Text formatting example

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

  <p><b>This text is bold</b></p>
  <p><i>This text is italic</i></p>
  <p>This is<sub> subscript</sub> and <sup>superscript</sup></p>

</body>
</html>
```

This text is bold

This text is italic

This is subscript and superscript

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Exercise 1

Create a html page that contains the following information:

- <p> </p> tags
-
 tag
- <div> </div> tags
- <h1> to <h6> tags (pick up two of tags)
- And the formatting tags, <i> </i>, , etc. (pick up three of the tags)

Your page should utilize HTML headings, paragraphs, line breaks and some HTML text formatting such as bold or italic.

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Exercise 1- Example

Hypertext Markup Language (HTML)

The standard markup language for documents designed to be displayed in a web browser. It can be assisted by **Cascading Style Sheets (CSS)** and *JavaScript*.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages.

With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page.

Source: <https://en.wikipedia.org/wiki/HTML>

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Exercise 1- Example (Code)

```
<!DOCTYPE html>
<html>
<body>
  <h1>Hypertext Markup Language (HTML)</h1> The standard markup language for documents designed to be displayed in a web browser.
  It can be assisted by <b>Cascading Style Sheets (CSS)</b> and <i>JavaScript</i>.
  <p>
    <!-- 2nd paragraph -->
    Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages.
    <br> HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.
    <!-- 3rd paragraph -->
    <div style="color: #DD0000"> HTML elements are the building blocks of HTML pages. </div>
    <div style="color: #0000A0">With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page.</div>
    <!-- footnote -->
    <h6>Source: https://en.wikipedia.org/wiki/HTML</h6>
  </body>
</html>
```

HTML Attributes

Attributes provide additional information about HTML elements

- HTML elements can have attributes to provide additional info about an element
- Attributes are **always specified in the start tag**
- Attributes come in **name** and **value** pairs, separated by an equals sign (=)
 - For example: name="value"
 - **src** attribute: specify the file location
 - **width or height** attribute: specify the width and height of an image
 - **alt** attribute: specify an alternative text to be used, if an image cannot be displayed

```

```

```

```

https://www.w3schools.com/html/html_attributes.asp

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Linking Attribute

`Link` to a webpage

[NCCU Homepage](https://www.nccu.edu.tw/)

```
<!DOCTYPE html>
<html>
<body>
  <a href="https://www.nccu.edu.tw/">NCCU Homepage</a>
</body>
</html>
```

- **href** (hypertext reference) specifies a resource's location
 - a web page or location within a web page
 - a file, an e-mail address, etc.
- If the web server cannot locate a requested document, it returns an error message (404 Not Found)

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Linking (Cont.)

Hyperlinking to an E-Mail Address

- Link to an e-mail address using a **mailto: recipient email address**
 - Launch the default e-mail program

```
<!DOCTYPE html>
<html>
<body>
  <p>Click <a href = "mailto:sychien@nccu.edu.tw">here</a>
    to launch the default e-mail program.
</body>
</html>
```

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Webpage



Once
clicked

Click [here](#) to launch the default e-mail program.

Mail app

格式	插入	繪圖	選項	放棄	傳送
B <i>I</i> <u>U</u> ▼	☰	標題 1 ▼	↶ 復原 ▼		
寄件者: harmonics41@gmail.com				✉	
收件者: sychien@nccu.edu.tw ;				👤 副本與密件副本	
主旨					

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HTML Images I

- The `` tag contains attributes only and has no closing tag
 - ``
- **src** attribute: specify the image file location
- **alt** attribute: specify the alternate text for an image, if the image cannot be displayed
 - alt attribute makes web pages more accessible to users with disabilities, especially vision impairments (e.g., speech synthesizer software)
 - Width and height are optional attributes
 - If omitted, the browser uses the image's actual width and height
 - Images are measured in pixels

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



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

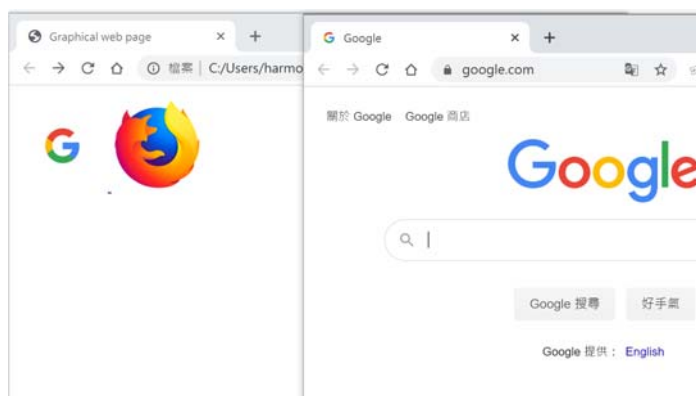
 google-icon  firefox-icon

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HTML Images II

Using Images as the Hyperlinks

- Create graphical web pages that link to other resources



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```
<!DOCTYPE html>
<html>
  <head>
    <meta charset = "utf-8">
    <title>Graphical web page</title>
  </head>

  <body>
    <p>
      <a href = "https://www.google.com/">
        <img src = "google-icon.png"
          width = "100" height = "100" alt = "google.com">
      </a>
      <a href = "https://www.mozilla.org/zh-TW/firefox/new/">
        <img src = "firefox-icon.png"
          width = "100" height = "100" alt = "firefox">
      </a>
    </p>
  </body>
</html>
```

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Exercise 2

Modify the page you created in exercise 1

- Include a hyperlink to the w3schools
<https://www.w3schools.com/html/default.asp>
- Add an image
https://www.w3schools.com/images/w3schools_green.jpg
- Add an e-mail address test@test.com

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Exercise 2- Example

Hypertext Markup Language (HTML)

The standard markup language for documents designed to be displayed in a web browser. It can be assisted by **Cascading Style Sheets (CSS)** and *JavaScript*.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages.

With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page.

Source: <https://en.wikipedia.org/wiki/HTML>

[w3schools](https://www.w3schools.com/html/default.asp)



[send an email](mailto:test@test.com)

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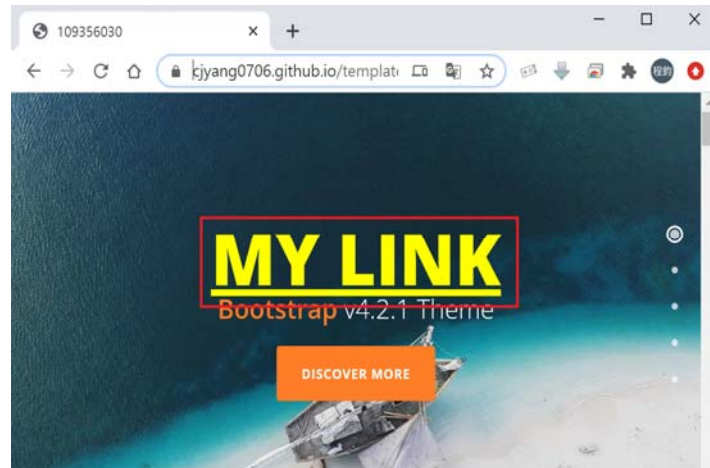
Exercise 2- Example (Code)

```
<!DOCTYPE html>
<html>
<body>
  <h1>Hypertext Markup Language (HTML)</h1> The standard markup language for documents designed to be displayed in a web browser.
  It can be assisted by <b>Cascading Style Sheets (CSS)</b> and <i>JavaScript</i>.
  <p>
    <!-- 2nd paragraph -->
    Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages.
    <br> HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.
    <!-- 3rd paragraph -->
    <div style="color: #DD0000"> HTML elements are the building blocks of HTML pages. </div>
    <div style="color: #0000A0">With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page.</div>
    <!-- footnote -->
    <h6>Source: https://en.wikipedia.org/wiki/HTML</h6>
    <a href="https://www.w3schools.com/html/default.asp"> w3schools </a> <p>
      <p>
    <a href="mailto:test@test.com"> send an email </a>
  </body>
</html>
```

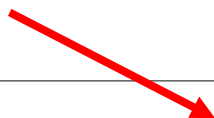
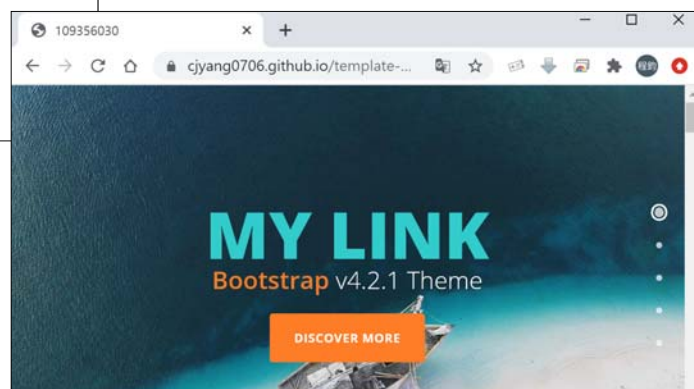
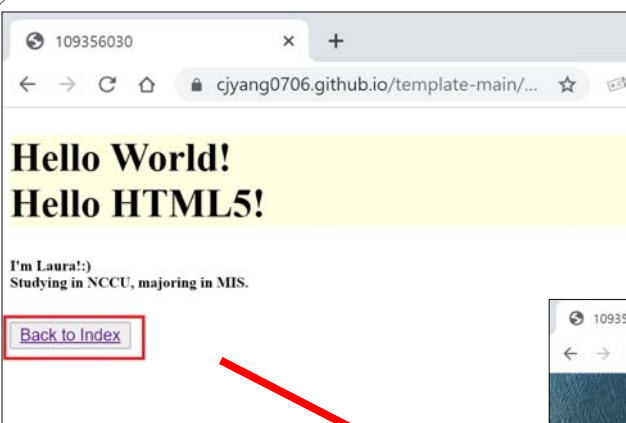
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Homework (Due by Nov. 15 (sun), 11:59pm)

1. Create a web page to introduce yourself (intro.html)
 - Try the formatting attributes
2. On the intro page, create a link to connect to the template page
3. On the template page, create a link to connect to the intro page
4. Push the project to github
5. Submit the URL of your project to moodle (make sure it works)



Example: <http://cijyang0706.github.io/template-main/example.html>



Accessibility Guidelines

- Design for multiple devices
 - Desktop
 - Laptop
 - Tablet
 - Mobile phone
- Provide alternatives for aural and visual content
 - Alt tags for images, transcripts for audio, etc.
 - W3C: <https://www.w3.org/standards/webdesign/accessibility>

			
第一優先等級	A+優先等級	第2優先等級	第3優先等級

<https://www.handicap-free.nat.gov.tw/Home/Info>

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HTML Character Entities

- ▶ HTML5 provides **character entity references** (in the form `&code;`) for representing special characters

Symbol	Description	Entity Name
©	copyright	©
®	registered trademark	®
€	euro	€
&	ampersand	&
>	greater than	>
#	hashtag	#
%	percentage	&percent;
\$	dollar sign	$

- ▶ For an extensive list of character entities:
 - ▶ https://www.w3schools.com/html/html_entities.asp

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```

<!DOCTYPE html>
<html>
  <head>
    <meta charset = "utf-8">
    <title>HTML Character Entities</title>
  </head>

  <body>
    <p>
      You can insert &copy; special &euro; symbols &amp; between text
    </p>
  </body>
</html>

```

You can insert © special € symbols & between text

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Ordered List vs. Unordered List

- **Unordered** list element **ul**
 - creates a list in which each item in the list begins with a **bullet point**
- **Ordered** list element **ol**
 - type and start attributes
- Each entry is an **li** (list item) element

Unordered List

```

<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>

```

- Coffee
- Tea
- Milk

Ordered List

```

<ol start="50">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>

<ol type="I" start="50">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>

```

50. Coffee
51. Tea
52. Milk

L. Coffee
LI. Tea
LII. Milk

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```

<!DOCTYPE html>
<html>
  <head>
    <meta charset = "utf-8">
    <title>Unordered List</title>
  </head>

  <body>
    <h1>Unordered List</h1>
    <ul>
      <li><a href = "https://www.google.com/">Google</a></li>
      <li><a href = "https://www.mozilla.org">Firefox</a></li>
    </ul>
  </body>
</html>

```

Unordered List

- [Google](https://www.google.com/)
- [Firefox](https://www.mozilla.org)

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Tables

- **<table>** defines an HTML table
- **<caption>** specifies a table title
- **<tr>** defines table row
- **<th>** defines table header
 - elements are bold and centered
- **<td>** defines table data
 - elements are regular and left-aligned


```

<body>
<table border="1">
  <caption>Store Information</caption>
  <tr>
    <th>Store</th>
    <th>Phone</th>
    <th>Address</th>
  </tr>
  <tr>
    <td>Apple</td>
    <td>0123456</td>
    <td>A City</td>
  </tr>
  <tr>
    <td>Google</td>
    <td>654321</td>
    <td>B City</td>
  </tr>
</table>
</body>

```

Table header

Table data

Store Information		
Store	Phone	Address
Apple	0123456	A City
Google	654321	B City

Table
caption

<https://www.w3schools.com/code/tryit.asp?filename=GK789NBHGLJC>

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Tables (rowspan & colspan)

- ▶ You can merge data cells with the *rowspan* and *colspan* attributes
- ▶ The values of these attributes specify the num of rows or columns occupied by the cell
- ▶ Can be placed inside any data cell or table header cell

```
<th colspan="2">Telephone</th>
```

```
<td rowspan="2">Bill Gates</td>
```

Name	Telephone	
Bill Gates	55577854	55577855
	41255854	41255523

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Table

	colspan="3"		
	No Span	No Span	No Span
No Span	rowspan="2"	rowspan="2"	rowspan="2"
No Span			

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_table_colspan
https://www.w3schools.com/TagS/tryit.asp?filename=tryhtml_td_rowspan

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```
<body>
<table border="1">
  <caption>Table</caption>
  <thead>
    <tr>
      <th rowspan="2">
        
      </th>
      <th colspan="3">colspan="3"</th>
    </tr>
    <tr>
      <th>No Span</th>
      <th>No Span</th>
      <th>No Span</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td rowspan="2">rowspan="2"</td>
      <td rowspan="2">rowspan="2"</td>
      <td rowspan="2">rowspan="2"</td>
    </tr>
    <tr>
      <td rowspan="2">rowspan="2"</td>
      <td rowspan="2">rowspan="2"</td>
      <td rowspan="2">rowspan="2"</td>
    </tr>
  </tbody>
</table>
</body>
```

	colspan="3"		
	No Span	No Span	No Span
rowspan="2"	rowspan="2"	rowspan="2"	rowspan="2"

Exercise-1

Modify the page you created last time

Create a table and include the table elements

- table border
- tr, td, th
- rowspan & col span

Hypertext Markup Language (HTML)

The standard markup language for documents designed to be displayed in a web browser. It can be assisted by **Cascading Style Sheets (CSS)** and *JavaScript*.

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HTML elements are the building blocks of HTML pages.

With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page.

Source: <https://en.wikipedia.org/wiki/HTML>

[w3schools](#)



[send an email](#)

Forms

HTML provides **forms** for collecting information from users

```
<body>
<form method="post" action="http://XXX.com">
  <p>
    *Store name: <input type="text" name="snm">
  <p/>
  <p>
    *Address: <input type="text" name="addr"><p/>
  <p/>
  <p>
    Phone: <input type="text" name="phone"><p/>
  <p>
    <input type="submit" name="newst" value="Create">
    <input type="submit" name="return" value="Return">
  <p/>
</form>
</body/>
```

*Store name:

*Address:

Phone:

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Form-data (method="get")

Form-data can be sent as URL variables (with method="get")

- Useful for form submissions where a user want to **bookmark** the result
- Appends form-data into the URL in name/value pairs
- **Never use GET to send sensitive data** (will be visible in the URL)
- GET is better **for non-secure data**, like query strings in Google

```
<form action="/action_page.php" method="get" >
  <label for="fname">First name:</label>
  <input type="text" name="fname"><br><br>
  <label for="lname">Last name:</label>
  <input type="text" name="lname"><br><br>
  <input type="submit" value="Submit">
</form>
```

First name:

Last name:

Your input was received as:

fname=John&lname=Doe

w3schools.com/action_page.php?fname=John&lname=Doe

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Form-data (method="post")

Form-data can be sent as HTTP post transaction (with method="post")

- Appends form-data inside the body of the HTTP request
 - Data is not shown in URL
- POST cannot be bookmarked

https://www.w3schools.com/tags/tryit.asp?filename=tryhtml_form_method

```
<form action="/action_page.php" method="post" >
  <label for="fname">First name:</label>
  <input type="text" name="fname"><br><br>
  <label for="lname">Last name:</label>
  <input type="text" name="lname"><br><br>
  <input type="submit" value="Submit">
</form>
```

w3schools.com/action_page.php

First name:

Last name:

Your input was received as:

fname=John&lname=Doe

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Hidden Inputs

- ▶ Forms can contain visual and nonvisual components.
- ▶ Nonvisual components, called hidden inputs, store any data that you specify

```
<form action="/action_page.php">
  <label for="fname">First name:</label>
  <input type="text" id="fname" name="fname"><br><br>
  <input type="hidden" name="country" value="Taiwan">
  <input type="submit" value="Submit">
</form>
```

First name:

Your input was received as:

fname=John&country=Taiwan

https://www.w3schools.com/TAGs/tryit.asp?filename=tryhtml5_input_type_hidden

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Text input element I

```
<form action="/action_page.php">
  <label for="username">Username:</label>
  <input type="text" id="username" name="username" maxlength="10">
  <input type="submit" value="Submit">
</form>
```

Username:

Your input was received as

- ▶ The text input inserts a text field into the form, which allows the user to input data
- ▶ The label element provides users with information about the input element's purpose
- ▶ The size attribute specifies the number of characters visible in the text field
- ▶ Optional attribute maxlength limits the number of characters input into a text field

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Text input element II

```
<form action="/action_page.php">
  <label for="username">Username:</label>
  <input type="password" id="username" name="username" maxlength="10">
  <input type="submit" value="Submit">
</form>
```

Username:

Your input was received as

- The password input inserts a password box into a form
 - type = "password"
 - Allows users to enter sensitive information, such as credit card num and passwords
 - Masking the information input with another character, usually asterisks
 - The actual value input is sent to the web server, not the asterisks that mask the input

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Checkbox

The checkbox input element enables users to select and option

- When the checkbox is selected, a check mark appears in the checkbox
- Checkboxes can be used individually and in groups
- Checkboxes that are part of the same group have the same name and different values
- On submit, send the form-data to a file named "/action_page.php"

```
<form action="/action_page.php">
  <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><br><br>
  <input type="submit" value="Submit">
</form>
```

☒ I have a bike
☒ I have a car
☐ I have a boat

Submit

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Radio button

Radio buttons are similar to checkboxes

- Except that **only one** radio button in a group can be selected at any time
- All radio buttons in a group have the same name attribute but different value attributes

```
<form action="/action_page.php">
  <input type="radio" id="age1" name="age" value="30" checked>
  <label for="age1">0 - 30</label><br>
  <input type="radio" id="age2" name="age" value="60">
  <label for="age2">31 - 60</label><br>
  <input type="radio" id="age3" name="age" value="100">
  <label for="age3">61 - 100</label><br><br>
  <input type="submit" value="Submit">
</form>
```

Please select your age:

☒ 0 - 30
☐ 31 - 60
☐ 61 - 100

Submit

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Drop-down list

The **select** input provides a drop-down list of items

- The `name` attribute identifies the drop-down list
- The `option` element adds items to the drop-down list

```
<form action="/action_page.php">
  <label for="cars">Choose a car:</label>
  <select name="cars" id="cars">
    <option value="volvo">Volvo</option>
    <option value="saab">Saab</option>
    <option value="opel">Opel</option>
    <option value="audi" selected>Audi</option>
  </select>
  <br><br>
  <input type="submit" value="Submit">
</form>
```

Choose a car: Audi ▼

Submit

Volvo

Saab

Opel

Audi

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Submit & Reset

```
<form action="/action_page.php">
  <label for="email">Enter your email:</label>
  <input type="email" id="email" name="email">
  <label for="pin">Enter a PIN:</label>
  <input type="text" id="pin" name="pin" maxlength="4">
  <input type="reset" value="Reset">
  <input type="submit" value="Submit">
</form>
```

Enter your email:

Enter a PIN:

Reset Submit

The submit input element is a button

- When the submit button is pressed, the form's data is sent to the location specified in the form's `action` attribute
- The `value` attribute sets the text displayed on the button
- The reset input element allows a user to reset all form elements to their default values

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Textarea

```
<form action="/action_page.php">
<label for="w3review">Review of W3Schools:</label>
<textarea id="w3review" name="w3review" rows="4" cols="50">
  At w3schools.com you will learn how to make a website.
  They offer free tutorials in all web development technologies.
</textarea>
<input type="submit" value="Submit">
</form>
```

Review of W3Schools:

At w3schools.com you will learn how to make a website. They offer free tutorials in all web development technologies.

Submit

- The textarea element inserts a multiline text area into the form
- The num of rows is specified with the rows attribute, and the num of columns (i.e., characters per line) with the cols attribute

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Feedback Form

Please fill out this form to help us improve our site.

Name:

Comments:

Enter comments here.

E-mail Address:

Things you liked:

Site design ☐ Links ☐ Ease of use ☐ Images ☐ Source code ☐

How did you get to our site?:

Search engine ☒ Links from another site ☐ Deitel.com Web site ☐ Reference in a book ☐ Other ☐

Rate our site:

Submit

Clear

Lab
Due by
Nov 30, 11:59pm

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About me -- 108306XXX	
 <p>personal photo</p>	Name: <input type="text"/> Gender: <input type="radio"/> Male <input checked="" type="radio"/> Female <input type="radio"/> Other
	County: <input type="text" value="Tapei"/> Birthday: <input type="text" value="1994/10/28"/>
	E-mail: <input type="text"/>
Hobby	<input type="checkbox"/> Swimming <input type="checkbox"/> Volleyball <input checked="" type="checkbox"/> Movies <input type="checkbox"/> Games <input checked="" type="checkbox"/> Sleeping
Skill	<input checked="" type="checkbox"/> Java <input checked="" type="checkbox"/> HTML <input type="checkbox"/> Python <input checked="" type="checkbox"/> Microsoft Office <input type="checkbox"/> Adobe Premiere
Say Something	Say something here. <input type="text"/>
<input type="button" value="Submit"/> <input type="button" value="重設"/>	

HW
Due by
Dec 3, 11:59pm

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HTML5 II

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Input Type - Color

- **Color** input type enables the user to enter a color
- Older version of browsers render the color input type as a text field
 - The user can enter a hexadecimal code or a color name (such as #ADD8E6)

```
<label>Color:
  <input type = "color" autofocus />
  (Hexadecimal code such as #ADD8E6)
</label>
```



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Autofocus Attribute

autofocus attribute is an optional attribute

- Can be used in only one input element on a form
- Automatically gives the focus to the input element
- Allowing the user to begin typing in that element immediately

Color: (Hexadecimal code such as #ADD8E6)

```
<label>Color:
  <input type = "color" autofocus />
  (Hexadecimal code such as #ADD8E6)
</label>
```

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New HTML5 Input Types Demo

This form demonstrates the new HTML5 input types and the placeholder, required and autofocus attributes.

Color: (Hexadecimal code such as #ADD8E6)

Date: (yyyy-mm-dd)

Datetime: (yyyy-mm-ddThh:mm+ff:gg, such as 2012-01-27T03:15)

Datetime-local: (yyyy-mm-ddThh:mm, such as 2012-01-27T03:15)

Email: (name@domain.com)

Month: (yyyy-mm)

Number: (Enter a number between 0 and 7)

Range: 0 20

Search: (Enter your search query here.)

Tel: (###) ###-####

Time: (hh:mm)

URL: (http://www.domainname.com)

Week: (yyyy-Wnn, such as 2012-W01)

Autofocus Example

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

<form action="/action_page.php">
  First name: <input type="text" name="fname" autofocus><br>
  Last name: <input type="text" name="lname"><br>
  <input type="submit">
</form>

<p><strong>Note:</strong> The autofocus attribute of the input tag is not supported
in Internet Explorer 9 and earlier versions.</p>

</body>
</html>
```

First name:

Last name:

Note: The autofocus attribute of the input tag is not supported in Internet Explorer 9 and earlier versions.

https://www.w3schools.com/TAGs/tryit.asp?filename=tryhtml5_input_autofocus

Input Type – Validation I

- Validate formats on the client side
 - No need to add complicated JavaScript code
 - Reducing the amount of invalid data submitted
 - Reducing Internet traffic to correct invalid input
- The server should still validate all user input

```
<form>
  <input type="email" required /> <br />
  <input type="submit" value="Submit Now!">
</form>
```

Email: (name@domain.com)

Month: (m)

! Please include an '@' in the email address. 'test#yahoo.com' is missing an '@'.

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Input Type - email

- Email input type enables a user to enter
 - An email address
- HTML5 validates the e-mail address
 - If invalid, a callout asks the user to enter an email in the proper format

```
<label>Email:
  <input type = "email" placeholder = "name@domain.com"
    required /> (name@domain.com)
</label>
```

Email: (name@domain.com)

Month: (m)

! Please include an '@' in the email address. 'test#yahoo.com' is missing an '@'.

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_input_email

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Input type - Required Attribute

- The **required** attribute forces the user to enter a value before submitting the form
- You can add required to any of the input types

```
<label>Email:
  <input type = "email" placeholder = "name@domain.com"
    required /> (name@domain.com)
</label>
```

Email: (name@domain.com)

Month:  Please fill out this field. (y-mm)

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Placeholder Attribute

The placeholder attribute (light gray)

- Allows user to place temporary text in a text field
- Provides an example of the text format the user should enter
- HTML5 supports placeholder text for six input types
 - Text, search, url, tel, email, and password

```
<label>Search:
  <input type = "search" placeholder = "search query" />
</label>
```

Search:

https://www.w3schools.com/html/tryit.asp?filename=tryhtml5_input_placeholder

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Input Type – Validation II

Input type	Format
Week	yyyy-Wnn
Time	hh:mm
Email	name@domain.com
url	http://www.domain-name.com
Date	yyyy-mm-dd
Month	yyyy-mm

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Input Type – Validation III

If you want to bypass validation, you can add the **formnovalidate** attribute to input type submit

```
<input type = "submit" value = "Submit" formnovalidate />  
<input type = "reset" value = "Clear" />
```

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Input Type - Date

- The **date** input type enables the user to enter a date in the form yyyy-mm-dd

```
<input type="date" name="bookdate" value="2017-10-05" min="2017-10-05" max="2017-10-12">
```

- Chrome
 - Spinner control: a text field with an up-down arrow
 - User can select a date by clicking the up or down arrow
 - The start date is the current date

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_input_date

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Input Type - Week

- The **week** input type enables the user to select a year and week number in the format Wth-Year
 - Wth ranges 1~52: Week 01, 2017 represents the first week of 2017
 - IE, Firefox and Safari render a text field
 - Chrome renders an up-down control

```
<form action="/action_page.php">
  Select a week:
  <input type="week" name="year_week">
  <input type="submit">
</form>
```

Select a week: Week 40, 2017 Submit

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_input_week

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Input Type - Month

- The **month** input type enables the user to enter month and year (e.g., July 2017)
 - If invalid, a callout asks the user to enter a month in the proper format

```
<form action="/action_page.php">
  Birthday (month and year):
  <input type="month" name="bdaymonth">
  <input type="submit">
</form>
```

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_input_month

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Input Type - Time

- The **time** input type enables the user to enter the date and time
- The data is entered as *hour, minute* and *am/pm*
- Internet Explorer, Firefox and Safari all display a text field
- Chrome supports this feature (time picker)

Select a time:

```
<form action="/action_page.php">
  Select a time:
  <input type="time" name="usr_time">
  <input type="submit">
</form>
```

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_input_time

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Input Type datetime-local

- The **datetime-local** input type enables the user to enter the date and time
- The data is entered as year, month, day, hour, minute, second and fraction of a second
- Internet Explorer, Firefox and Safari all display a text field
- Chrome supports this feature

```
<form action="/action_page.php">
  Enter a date and time for your party booking:
  <input type="datetime-local" name="partytime">
  <input type="submit" value="Send">
</form>
```

10/05/2017, 09:00 AM

October 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_input_datetime-local

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Input Type - Number

- The **number** input type enables the user to enter a numerical value
 - **min** attribute sets the minimum valid number
 - **max** attribute sets the maximum valid number
 - **value** attribute sets the default value
- Chrome provides a spinner control for adjusting the number

```
<form action="/action_page.php">
  Quantity (between 1 and 5):
  <input type="number" name="quantity" min="1" max="5" value="1">
  <input type="submit">
</form>
```

Quantity (between 1 and 5):

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_input_number

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Input Type - Range

The **range** input type appears as a *slider* control in Chrome, Safari and Opera

- **min** attribute sets the minimum valid number
- **max** attribute sets the maximum valid number
- **value** attribute sets the default value
- Inherently self-validating: user is unable to move the slider outside the bounds of the min or max value

```
<form action="/action_page.php" method="get">
  Points: 0
  <input type="range" name="points"
    min="0" max="10" value = "3"> 10
  <input type="submit">
</form>
```

Points: 0  10


https://www.w3schools.com/html/tryit.asp?filename=tryhtml_input_range

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input Type - Search

- The **search** input type provides a search field for entering a query.
 - Functionally equivalent to an input of type text
- When the user inputs a query in the search field, Chrome and Safari display an X that can be clicked to clear the field

```
<form action="/action_page.php">
  Search:
  <input type="search" name="query">
  <input type="submit">
</form>
```

Search: 

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_input_search

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input Type - Tel

- The **tel** input type enables the user to enter a telephone number
 - Display as a text field in all of the browsers
- HTML5 does not self validate the tel input type

```
<form action="/action_page.php">
  Telephone:
  <input type="tel" name="usrtel">
  <input type="submit">
</form>
```

Telephone:

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_input_tel

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Input Type - url

- The **url** input type enables user to enter an URL
 - The element is rendered as a text field
- HTML5 does not check whether the URL entered is valid; rather it validates that the URL entered is in the proper format

• Proper format: *http://google.com*

```
<form action="/action_page.php">
  Add your homepage:
  <input type="url" name="homepage">
  <input type="submit">
</form>
```

Add your homepage:

Note: The type="url" is not  Please enter a URL.

https://www.w3schools.com/html/tryit.asp?filename=tryhtml_input_url

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Exercise 2

New HTML5 Input Types Demo

This form demonstrates the new HTML5 input types and the placeholder, required and autofocus attributes.

Color: (Hexadecimal code such as #ADD8E6)

Date: (yyyy-mm-dd)

Datetime-local: (yyyy-mm-ddThh:mm, such as 2012-01-27T03:15)

Email: (name@domain.com)

Month: (yyyy-mm)

Number: (Enter a number between 0 and 7)

Range: 0 20

Search:

Tel:

Time: (hh:mm)

URL: (http://www.domainname.com)

Week: (yyyy-Wnn, such as 2012-W01)

Input Element - Autocomplete

- The **autocomplete** attribute can automatically fill in user's info based on previous input
 - Such as name, address or email
 - It is possible to have autocomplete "on" for the form, and "off" for specific input fields, or vice versa

```
<form action="/action_page.php" autocomplete="on">
  First name:<input type="text" name="fname"><br>
  Last name: <input type="text" name="lname"><br>
  E-mail: <input type="email" name="email" autocomplete="off"><br>
  <input type="submit">
</form>
```

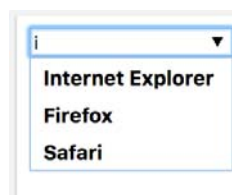
First name:
 Last name:
 E-mail:

https://www.w3schools.com/html/tryit.asp?filename=tryhtml5_input_autocomplete

datalist Element

- The **datalist** element provides input options for a text input element
 - datalist support varies by browser
 - In Chrome, when the user types "i", all options contain the letter "I" or "i" appearing in the drop-down list

```
<input list="browsers" name="browser">
<datalist id="browsers">
  <option value="Internet Explorer">
  <option value="Firefox">
  <option value="Chrome">
  <option value="Opera">
  <option value="Safari">
</datalist>
```



https://www.w3schools.com/html/tryit.asp?filename=tryhtml5_datalist

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Mark and Time Elements

The **mark** element highlights the text that is enclosed in the element

```
<p>Do not forget to buy <mark>milk</mark> today.</p>
```

Do not forget to buy **milk** today.

https://www.w3schools.com/tags/tryit.asp?filename=tryhtml5_mark

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Meter Element

The **meter** element defines a scalar measurement within a known range

- e.g., disk usage, the relevance of a query result, etc.
- should not be used to indicate progress
 - For progress bars, use the `<progress>` tag

```
<p>Display a gauge:</p>
<meter value="2" min="0" max="10">2 out of 10</meter><br>
<meter value="0.6">60%</meter>
```

Display a gauge:



Downloading progress:

```
<progress value="22" max="100"> </progress>
```

Downloading progress:

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Exercise 2

Add the following 4 columns into the exercise 1:

1. the **autocomplete** = "on" and "off" attributes in the name and email columns
2. the **datalist** element in the birth month column

Autocomplete and Datalist Demo

First Name: (First name)

Last Name: (Last name)

Email: (name@domain.com)

Birth Month:

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