

Forms

Forms are defined in HTML using the <form> tag. Within these tags you can place a range of different elements to create the fields on the form. A form is used to collect information from visitors to a web page, and requires a program on the web server to process the information.

In the first step, we will create a form in HTML without worrying about processing its information.

CREATING A FORM

Create a file Form.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>Questionnaire</title>
  </head>
  <body>
    <h1>Help Questionnaire</h1>
    <h3>Answer Some Questions</h3>
    <hr />
    <form action="Thanks.html">

    </form>
  </body>
</html>
```

For Your Reference... To create a form:

1. Add the opening <form> tag
2. Add the action attribute with the address of the program that will process the information
3. Add the closing </form> tag

You can use the method attribute to specify the way the form's information is sent to the web server. There are two options: GET and POST. The GET option sends the information in the URL while the POST option hides the information and should be used for most forms.

CREATING TEXT INPUT FIELDS

Within the <form> tags you can place a range of different elements to create the fields on the form. A text input field is simply a text box that is used to enter text. It is ideal for names, addresses, and any other field where you want the user to enter information on a single line. Each text input field is given a label, ID and name.

```
<!DOCTYPE html>
<html>
  <head>
    <title>Questionnaire</title>
  </head>
  <body>
    <h1>Help Questionnaire</h1>
    <h3>Answer Some Questions</h3>
    <hr />
    <form action="Thanks.html">
      <h4>Name and Address Details</h4>
      <label for="name-input">Name</label>
      <input type="text" id="name-input" name="Name" /> <br />
      <label for="suburb-input">Suburb/Town</label>
      <input type="text" id="suburb-input" name="Suburb" />
      <label for="postcode-input">Postcode</label>
      <input type="text" id="postcode-input" name="Postcode" />
    </form>
  </body>
</html>
```

Pool Construction Questionnaire

Answer Some Questions

Name and Address Details

Name

Suburb/Town Postcode

For Your Reference... To create a text input field:

1. Add the <input> tag
2. Add the attribute type="text"
3. Add the id attribute
4. Add the name attribute

- The name attribute is used when the data is processed on the web server.
- use **maxlength** attribute to control the number of characters that can be entered in the field.

AUTOFOCUS AND PLACEHOLDER TEXT

You can make it easier for your users to fill in form data by making use of the autofocus and placeholder attributes on your text inputs. The autofocus attribute can be set to make an input active when the user opens the page, enabling them to start typing immediately. The placeholder attribute can be used to display a short hint to help the user know what type of data is expected.

In your text editor, add the autofocus attribute to the name input as shown

```
<input type="text" id="name-input" name="Name" autofocus /> <br />
```

In your text editor, type the code for the email label and text input field as shown

```
<label for="email-input">Email</label>
<input
  type="text"
  id="email-input"
  name="Email"
  placeholder="example@example.com"
/>
```

```
<!DOCTYPE html>
<html>
  <head>
    <title>Questionnaire</title>
  </head>
  <body>
    <h1>Help Questionnaire</h1>
    <h3>Answer Some Questions</h3>
    <hr />
    <form action="Thanks.html">
      <h4>Name and Address Details</h4>
      <label for="name-input">Name</label>
      <input type="text" id="name-input" name="Name" autofocus />
      <br />
      <label for="email-input">Email</label>
      <input
        type="text"
        id="email-input"
        name="Email"
        placeholder="example@example.com"
      />
      <br />
      <label for="suburb-input">Suburb/Town</label>
```

```
<input type="text" id="suburb-input" name="Suburb" />
<label for="postcode-input">Postcode</label>
<input type="text" id="postcode-input" name="Postcode" />
</form>
</body>
</html>
```

Pool Construction Questionnaire

Answer Some Questions

Name and Address Details

Name

Email

Suburb/Town Postcode

For Your Reference...

- To make an input active when the page is loaded:
Add the autofocus attribute to the input
- To add placeholder text to an input: Add the placeholder attribute to the input with the text you would like to display to the user
- The autofocus attribute should only be set on one input per page.
- The placeholder attribute can be used to show the required format of the input (e.g. the email or date format), the use for the field (e.g. "Search") or to show that the field is required.

CREATING RADIO BUTTONS

Radio buttons provide a list of mutually exclusive options for the user to select from. The advantages of using radio buttons are that you force the user to make only one selection, you can control the options listed making the purpose of the question unambiguous, and you avoid the risk of multiple names being typed in for the same type or option.

Add the following code to Form:

```

<br />
<h4>Pool Type</h4>
<input
  type="radio"
  id="pool pool-type-1"
  name="PoolType"
  value="InGroundConcrete"
  checked
/>
<label for="pool pool-type -1">In Ground - Concrete</label>
<input
  type="radio"
  id="pool pool-type-2"
  name="PoolType"
  value="InGroundFibreglass"
/>
<label for="pool pool-type -2">In Ground - Fibreglass</label>
<input
  type="radio"
  id="pool pool-type-3"
  name="PoolType"
  value="InGroundOther"
/>
<label for="pool pool-type -3">In Ground - Other</label>
<input
  type="radio"
  id="pool pool-type-4"
  name="PoolType"
  value="AboveGround"
/>
<label for="pool pool-type -4">Above Ground</label>>

```

For Your Reference... To create radio buttons:

1. Add the <input> tag
 2. Add the attribute type="radio"
 3. Add the id attribute
 4. Add the name attribute
 5. Add the attribute checked if this radio button should be checked by default
- The name attribute is used to group the radio buttons – all radio buttons in the same group should have the same name.
 - When value is used with radio buttons, it is used to specify the value sent to the web server when the element is selected.

Pool Construction Questionnaire

Answer Some Questions

Name and Address Details

Name

Email

Suburb/Town Postcode

Pool Type

☒ In Ground - Concrete ☐ In Ground - Fibreglass ☐ In Ground - Other ☐

CREATING CHECKBOXES

Checkboxes are used to provide a list of options from which the user can select some, all, or none. The advantages of using checkboxes are that you provide the user with a series of defined responses making the question unambiguous, you enable the user to provide varying amounts of information, and you avoid the risk of multiple names being typed in for the same type or option.

Add the following code to the end of Form:

```
<label for="pool pool-type -4">Above Ground</label>
<h4>Pool Challenges</h4>
<input type="checkbox" id="challenge 1" value="WaterGreen" />
<label for="challenge 1">Water Green</label>
<input type="checkbox" id="challenge 2" value="WaterCloudy" />
<label for="challenge 2">Water Cloudy</label>
<input type="checkbox" id="challenge 3" value="WaterIrritation" />
<label for="challenge 3">Water Causes Irritation</label>
<input type="checkbox" id="challenge 4" value="Maintenance" />
<label for="challenge 4">General Maintenance Required</label>
```

Pool Construction Questionnaire

Answer Some Questions

Name and Address Details

Name
Email
Suburb/Town Postcode

Pool Type

☒ In Ground - Concrete ☐ In Ground - Fibreglass ☐ In Ground - Other ☐ Above Ground

Pool Challenges

☐ Water Green ☐ Water Cloudy ☐ Water Causes Irritation ☐ General Maintenance Required

To create checkboxes:

1. Add the `<input>` tag
2. Add the attribute `type="checkbox"`
3. Add the `id` attribute
4. Add the `name` attribute
5. Add the attribute `checked` if this checkbox should be checked by default

When `value` is used with checkboxes, it is used to specify the value sent to the web server when the element is selected.

CREATING A DROP-DOWN LIST

A drop-down list is a list of items that appears when you click on a drop arrow. The advantages of using a drop-down list are that the list presents a series of mutually exclusive options for the user to select from and it doesn't take up a large amount of space on the form to do it. A drop-down list is created using the `<select>` and `<option>` tags.

Add the following code:

```
<h4>Pool Size</h4>
<select name="PoolSize">
  <option value="Regular Spa">Regular Spa</option>
  <option value="Large Spa">Large Spa</option>
  <option value="Small Pool">Small Pool</option>
  <option value="Regular Pool" selected>Regular Pool</option>
```

```
<option value="Large Pool">Large Pool</option>
<option value="Commercial Pool">Commercial Pool</option>
</select>
```

Pool Construction Questionnaire

Answer Some Questions

Name and Address Details

Name

Email

Suburb/Town Postcode

Pool Type

☒ In Ground - Concrete ☐ In Ground - Fibreglass ☐ In Ground - Other ☐ Above Ground

Pool Challenges

☐ Water Green ☐ Water Cloudy ☐ Water Causes Irritation ☐ General Maintenance Required

Pool Size

▼

To create a drop-down list:

1. Add the opening `<select>` tag
2. Add the name attribute
3. Add an `<option>` tag for each option
4. Add the attribute `selected` if this option should be selected by default
5. Add the closing `</select>` tag

`<option>` can be used between the `<select>` tags only.

CREATING A SCROLLABLE LIST

A scrollable list is very similar to a drop-down list except that more than one option is visible at a time. The number of options that are visible depends on the value assigned to the `size` attribute of the `<select>` tag. The advantage of using a scrollable list is that you can see more of the options, and can use the `multiple` attribute to enable the selection of several items at once.

Modify the code as follows:


```
<select name="PoolSize" multiple size="4">
```

Pool Construction Questionnaire

Answer Some Questions

Name and Address Details

Name

Email

Suburb/Town Postcode

Pool Type

☒ In Ground - Concrete ☐ In Ground - Fibreglass ☐ In Ground - Other ☐ Above Ground

Pool Challenges

☐ Water Green ☐ Water Cloudy ☐ Water Causes Irritation ☐ General Maintenance Required

Pool Size

To create a scrollable list:

1. Add the opening `<select>` tag
2. Add the name, multiple and size attributes
3. Add an `<option>` tag for each option
4. Add the attribute selected if this option should be selected by default
5. Add the closing `</select>` tag

You can select a series of consecutive items by clicking on the first item, then holding down **shift** and clicking on the last item.

CREATING A TEXT AREA

A text area is a multiple line text box designed to enable users to provide detailed information as requested in a form. It is defined using the `<textarea>` tag. The size of the text box on the screen can be set with the attributes `cols`, which is the width of the box in characters, and `rows`, which is the number of rows. The text will wrap automatically.

Add the following code to the end of Form:

```
<h4>Additional Information</h4>
<textarea name="Comments"></textarea>
```

Pool Construction Questionnaire

Answer Some Questions

Name and Address Details

Name
Email
Suburb/Town Postcode

Pool Type

☒ In Ground - Concrete ☐ In Ground - Fibreglass ☐ In Ground - Other ☐ Above Ground

Pool Challenges

☐ Water Green ☐ Water Cloudy ☐ Water Causes Irritation ☐ General Maintenance Required

Pool Size

Regular Spa
Large Spa
Small Pool
Regular Pool

Additional Information

To create a text area:

1. Add the opening `<textarea>` tag
2. Add the name attribute
3. Add the closing `</textarea>` tag

- If you want to include some default text in the textbox, place the text between the `<textarea>` tags. You cannot format this text in any way – the tags you use will be displayed as well as the text.
- The `<textarea>` tag does not self-close – it needs a closing tag

CREATING RESET AND SUBMIT BUTTONS

A reset button is a button that, when clicked, will cause the fields in a form to be reset to their default values. A submit button, when clicked, will send the contents of the form to a specified program on a server or to an email address. Both of these buttons are specified using the <input> tag. The buttons are formatted automatically in your browser.

Add the following code to the end of Form:

```
<p>  
    <input type="reset" value="Reset" />  
    <input type="submit" value="Submit" />  
</p>
```

Pool Construction Questionnaire

Answer Some Questions

Name and Address Details

Name
Email
Suburb/Town Postcode

Pool Type

☒ In Ground - Concrete ☐ In Ground - Fibreglass ☐ In Ground - Other ☐ Above Ground

Pool Challenges

☐ Water Green ☐ Water Cloudy ☐ Water Causes Irritation ☐ General Maintenance Required

Pool Size

Regular Spa
Large Spa
Small Pool
Regular Pool

Additional Information

Reset

Submit

To create a reset button:

Add `<input type="reset" value="Reset" />`

To create a submit button:

Add `<input type="submit" value="Submit" />`

The action attribute in `<form>` may also be accompanied by the attribute setting `method="post"`. This provides a more secure data transmission as the information is not passed in the URL and visible in the address bar.

FORM VALIDATION

In previous versions of HTML, making input fields required and restricting the type of information they accept required writing code. HTML5 includes new attributes that you can use to validate your fields, making this a much easier task for you and a more consistent experience for web surfers. However, at the time of writing they are not supported in all browsers, so use them with care!

In your text editor, add the **required** attribute to the name and email input fields. We can't respond to enquiries if we don't know who they are and how to contact them!

```
<form action="Thanks.html">
  <h4>Name and Address Details</h4>
  <label for="name-input">Name</label>
  <input type="text" id="name-input" name="Name" autofocus
  required />
  <br />
  <label for="email-input">Email</label>
  <input type="text" id="email-input" name="Email"
  placeholder="name@example.com" required />
  <br />
```

Add the pattern attribute to the post code input as shown

*The value of the pattern attribute is a **regular expression**, which is a way of specifying the required format. This expression states that the post code must consist of four numbers. Regular expressions are outside the scope of this course and can get very complicated...*

```
<label for="postcode-input">Postcode</label>
<input type="text" id="postcode-input" name="Postcode"
pattern="\d{4}" />
<br />
```

Some common Regular Expression patterns are shown here:

Type	Pattern	Example
Phone number (xxx) xxx-xxxx format)	\(\\d{3}\\) \\d{3}-?\\d{3}\\d{3}	(562) 988-1688 (562) 9881688
Short date (single or double-digit month-day format)	\\d{1,2}/\\d{1,2}/\\d{4}	12/25/2009
Social Security number (xxx-xx-xxxx)	\\d{3}-\\d{2}-\\d{4}	123-45-6789
Time (h:mm or hh:mm format)	[0-9]?[0-9]:[0-9][0-9]	17:50
ZIP code	\\d{5}-\\d{4}\\d{5}	90807 or 92064-3404
ID or tracking number (<i>"Tracking ID"</i> followed by a colon, space, and any combination of letters or numbers)	Tracking ID:\\s*(\\w*)\\s*	Tracking ID: 12KDF7Q89WFL
Legal Land Description (Two possible formats. Both have the format two letters-two numbers-three numbers-two numbers. Then, the first allows a single digit at the end. The second allows a letter and digit at the end.)	[A-Z]{2}-\\d{2}-\\d{3}-\\d{2}-[A-Z]d [A-Z]{2}-\\d{2}-\\d{3}-\\d{2}-\\d	NW-03-042-12-W4
Last Name, First Name (Allows for hyphens in the last name, and underscores in both names.)	((\\w -)+)\\s*,\\s*(\\w+)?\\s*	Smith, Paul
Fiscal Year (October through September of the next year)	1[0-2]/\\d{2}/2015 0?[1-9]/\\d{2}/2016	Returns a date between 10/01/2015 and 9/31/2016
Parent folder from a folder path (Finds everything after the last backslash in a string)	(([^\\]*)\$)	From <i>My Documents\Sales\Contracts</i> returns <i>Contracts</i>

Source: <https://doc.laserfiche.com/laserfiche.documentation/en-us/Subsystems/ProcessAutomation/Content/Resources/Regular%20Expressions/Common-Regular-Expressions.htm>

To make an input field required:

- Add the required attribute to the field

To make an input field's value match a pattern:

- Add the pattern attribute to the field with a regular expression describing the pattern that the input value must match

You should always validate the user's input on the server as well as in the browser, as there are many ways that malicious users can circumvent your form inputs and send the information directly to the server.

MORE FORM CONTROLS

In addition to the standard form controls of textboxes, radio buttons, checkboxes and lists, HTML5 includes a number of form controls intended to make it easier to collect information such as passwords and email addresses as well as making data input much easier for mobile phone users. Some of these controls are described below.

Input Types

password Password inputs display a textbox that hides the password as it's typed in. This might be implemented by replacing characters with stars or black circles

email Email inputs display a textbox but on smartphones the keyboard that is shown will be tailored for emails, usually with an "@" key and ".com" key

number Number inputs restrict input to numbers. On desktop browsers these generally appear as a box with up and down arrows while on smartphones the keyboard that is shown will only contain numbers

range Ranges display a slider that the user can drag to select a value

date Date inputs restrict input to dates and, depending on the browser, may include a popup to select the date from

time Time inputs restrict input to times and, depending on the browser, may include a popup to select the time from

datetime Date/time inputs function as a combination of date inputs and time inputs

tel Telephone inputs restrict input to phone numbers and will trigger some smartphones to show a special keyboard for entering phone numbers

color Colour inputs restrict input to colours and, depending on the browser, may include a popup to select the colour from

url URL inputs will trigger some smartphones to show a special keyboard for entering URLs, usually with a ".com" key

Some of these input types may not be implemented on all browsers. You can still use them, however, as in browsers where they are not implemented they will just behave as input textboxes.

Email or phone

Password

johnsmith@example.com

.....

The above example displays an email text field and a password field. When the fields are filled in, the characters in the password are displayed as dots in order to maintain security.

\$79 - \$3398

The above example displays a range slider. These are common on retail websites as they allow you to filter products by price.

Start

Tue 1/03/2016

March 2016

M T W T F S S

29 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

Today

12:30 PM

✓ 12:30 PM

12:45 PM

1:00 PM

1:15 PM

1:30 PM

1:45 PM

2:00 PM

2:15 PM

These examples display a date picker and a time field. The date popup and the time menu are each displayed by clicking on the drop arrow in the field.