

Forms & inputs

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References

- w3Schools Forms:
 - HTML Forms / [Form Elements](#) / [Input types](#)
- w3schools DOM:
 - [HTML DOM Tutorial](#)
 - [HTML DOM Reference](#)

HTML Inputs

- HTML inputs allow you to get input from the user.
 - You can enclose inputs in a <form> element, but this is not required.
 - IF you use a <form> element, you should place the submit button outside of the form to prevent the page from reloading.

Simple text input example

- In your HTML:
 - Use the **onclick** attribute of the <button> to specify the function to execute when you click the button (the **event handler**).
- In the event handler:
 - Use **document.getElementById** to get a JS object representing the HTML element.
 - Use the **value** property of a text input to get the data.
 - Set the **innerHTML** of a display element to show the results.
- Note:
 - In Google Chrome, an element id automatically becomes a global JS variable
- Example:

HTML	<pre>Name:
 <input id='nameinput' type='text'></input>
 <button onclick='submit()'> Submit </button> <hr> <div id='result'></div></pre>
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JS	<pre>function submit(){ // get references to the elements // not required since ids become global variables! var nameinput = document.getElementById('nameinput') var result = document.getElementById('result') var name = nameinput.value result.innerHTML = "Hello " + name }</pre>
Result	Name: Jane Submit Hello Jane!

Other text input types

- Other text inputs include
 - password
 - textarea
- You can use **document.getElementsByTagName** to get all of your inputs in an array.

HTML	<pre>Name:
 <input type='text'/'>
 Password:
 <input type='password'/'>
 Message:
 <textarea></textarea>
 <button onclick='submit()'> Submit </button> <hr> <div> </div></pre>
JS	<pre>function submit(){ // get elements using tagnames var inputs = document.getElementsByTagName('input') var textarea = document.getElementsByTagName('textarea')[0] var div = document.getElementsByTagName('div')[0] // get values var name = inputs[0].value var pass = inputs[1].value var msg = textarea.value // update result div.innerHTML = "Name: " + name + "
 Pass: " + pass + "
 Message: " + msg }</pre>

Result	Name: Joe Password: Message: Hey there! Submit Name: Joe Pass: asdf Message: Hey there!
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Select (dropdown) menus

- Use a select menu to select an item from a list

HTML	<pre><select id="cars"> <option value="Volvo">Volvo</option> <option value="Saab">Saab</option> <option value="Fiat">Fiat</option> <option value="Audi">Audi</option> </select> <button onclick='submit()'>Submit</button> <hr> <div id='result'></div></pre>
JS	<pre>function submit(){ result.innerHTML = cars.value }</pre>
Result	Audi ▾ Submit Audi

Checkboxes and radio buttons

- Elements:
 - Radio buttons are functionally similar to selects - you use them to choose a single option.
 - Checkboxes are used when you want to select multiple options.
- Attributes / Properties
 - Use **name** to group checkboxes and radio buttons.

- You can use **disabled** to disable elements.
- Use **checked** to check elements by default and to determine which selection(s) in a group are selected

HTML	<pre><!-- select one --> <input type="radio" name="species" value="human" checked> human
 <input type="radio" name="species" value="dog"> dog
 <input type="radio" name="species" value="bird"> bird
 <input type="radio" name="species" value="fish"> fish
 <input type="radio" name="species" value="alien" disabled> alien

 <!-- select many --> <input type="checkbox" name="vehicle" value="bike">bike
 <input type="checkbox" name="vehicle" value="car">car
 <input type="checkbox" name="vehicle" value="seg">segway
 <input type="checkbox" name="vehicle" value="scoot">scooter
 <input type="checkbox" name="vehicle" value="plane">airplane

 <button onclick='submit()'>Submit</button> <hr> <div id='result'></div></pre>
JavaScript	<pre>function submit(){ // get species var species = document.getElementsByName('species') var s; for(var i=0; i<species.length; i++){ if(species[i].checked){ s = species[i].value break } } // get all vehicles var vehicles=document.getElementsByName('vehicle') var v=[] for(var i=0; i<vehicles.length; i++){ if(vehicles[i].checked){ v.push(vehicles[i].value) } } // the array will be converted to a string // same as calling v.toString() result.innerHTML = "I am a " + s + " and I have " + v }</pre>

Result	☒ human ☐ dog ☐ bird ☐ fish ☐ alien ☒ bike ☒ car ☐ segway ☐ scooter ☐ airplane Submit I am a human and I have bike,car
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Using CSS selectors

- You can also access HTML elements using CSS query selectors.
 - `document.querySelector` get 1st matching element
 - `document.querySelectorAll` get all matching elements
- Some more advanced CSS selectors are:
 - `[attribute=value]` select elements with matching attr/value pairs
 - `:checked` select checked input elements
- You can also combine selectors.
 - See the [CSS Selectors Reference](#) for more info

HTML & Result	(See above: checkboxes & radiobuttons)
JS	<pre> function submit(){ var species = document.querySelector('[name=species]:checked') var s = species.value var vehicles = document.querySelectorAll('[name=vehicle]:checked') var v = [] for(var i=0; i<vehicles.length; i++){ v.push(vehicles[i].value) } result.innerHTML = "I am a " + s + " and I have " + v } </pre>

Using the form element

- The <form> element allows you to group inputs
 - A page's form(s) are accessed using **document.forms**
 - The form elements become properties of the form object by **name**.
 - You can also use the <output> element

HTML	<pre><!-- DO set these values for method and onsubmit --> <form method='post' onsubmit='return false'> <input name='in1' /> <output name='out1'></output>
 <input name='in2' /> <output name='out2'></output>
 <input name='in3' /> <output name='out3'></output>
 <select name='in4'> <option value='A'> A </option> <option value='B'> B </option> <option value='C'> C </option> </select> <output name='out4'></output>
 <input type='submit' onclick='process()' /> </form></pre>
JS	<pre>// DON'T name the function submit() function process(){ var form = document.forms[0] form.out1.value = form.in1.value form.out2.value = form.in2.value form.out3.value = form.in3.value form.out4.value = form.in4.value }</pre>
Result	