

Web Form Validation using JavaScript

Earlier in unit 20, we made forms using HTML and saw how HTML5 can be used for form validation – such as not allowing a form to be processed if there is an empty text box. Using JavaScript though, we can make more customised validation rules.

1. The first job is to create a web form, in this example it will be a form that could be used for logging in to an account. Open a new HTML file in Notepad++ and save it in a folder called **form-validation**, save the file as **reg-form.html**, then add the following code:

```
1  <!DOCTYPE html>
2  <!-- Set the page default language to British English -->
3  <html lang="en-gb">
4  <head>
5      <title>Login</title>
6      <link rel="stylesheet" href="form-style.css" type="text/css" />
7
8  </head>
9
10 <body>
11     <!-- Registration Form -->
12     <!-- novalidate removes the default HTML5 form validation -->
13     <form action="login.php" method="post" id="loginForm" novalidate>
14         <fieldset>
15             <legend>Login</legend>
16
17             <div>
18                 <label for="fname">First Name:</label>
19                 <input type="text" name="fname" id="fname" class="form1">
20             </div>
21
22             <div>
23                 <label for="sname">Surname:</label>
24                 <input type="text" name="sname" id="sname">
25             </div>
26
27             <div>
28                 <input type="submit" value="Login &rarr;" id="submit">
29             </div>
30
31             <div>
32                 <input type="reset" value="Reset &rarr;" id="reset">
33             </div>
34         </fieldset>
35     </form>
36
37     <script src="reg-form-script-v1.js"></script>
38
39 </body>
40 </html>
```

2. In order to style the form, you could add the following CSS (you can choose how you would like to implement it):

```
1  body {
2      font-family: sans-serif;
3  }
4  .error {
5      border: 2px solid red;
6      width: 175px;
7  }
8  input[type="text"] {
9      margin: 5px;
10 }
11 input[type="submit"] {
12     margin-bottom: 5px;
13 }
14 label {
15     width: 100px;
16     text-align: right;
17     display: inline-block;
18 }
19 form {
20     width: 450px;
21 }
```

As you can see there are no comments – if you want to use this CSS, you **must** comment it.

3. The next step is to create an external JavaScript file in Notepad++, name it **reg-form-script-v1.js**, then add the following code:

```

1  /*
2      Create a JavaScript function to validate an HTML form
3      which contains two inputs - one for first name and
4      a second for surname.
5  */
6
7  function validateForm() {
8
9      // Get references to the form elements
10     var fname = document.getElementById('fname');
11     var sname = document.getElementById('sname');
12     var error = 0;
13
14     // validate the text inputs
15     if (fname.value.length == 0) {
16         alert('Please enter your first name');
17         error = 1;
18     }
19     else if (sname.value.length == 0) {
20         alert('Please enter your surname');
21         error = 1;
22     }
23     else {
24         error = 0;
25     } // End of the validation if-else block
26
27     if (error == 1) {
28         return false;
29     }
30     else {
31         return true;
32     } // End of the error if statement
33
34 } // End of the function definition
35
36 function init() {
37
38     document.getElementById('loginForm').onsubmit = validateForm;
39
40 } // End of init function
41
42 // Assign an event listener to the window's load event.
43 window.onload = init;

```

Activity

We broke down each section of the form in class on the board. You know need to write-up a detailed explanation of what the JavaScript code is doing. You need to cover the following details in your write-up:

- What are the variables storing?
- How is the **getElementById** used?
- What does each section of the if statement do?
- What does **return false** and **return true**?
- What is the purpose of the function called **init()** ?
- What is the purpose of the statement **window.onload = init** ?

Software groups only:

- Why would the use of switch statements not be efficient in this example?

The write-up is to be emailed to Mark by the end of the week – failure to hand will be mentioned to your tutor.