CS 106: Web Technology - I Assignment #7

Anup Adhikari

`anup.adhikari@gandakiuniversity.edu.np`

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1   JavaScript Form Validation

Objectives

The objective of the lab is:

- To understand client side form handling using JavaScript.

HTML form validation can be done by JavaScript. It is important to validate the form submitted by the user because it can have inappropriate values. So, validation is must to authenticate user.

JavaScript provides facility to validate the form on the client-side so data processing will be faster than server-side validation. Most of the web developers prefer JavaScript form validation.

Through JavaScript, we can validate name, password, email, date, mobile numbers and more fields.

Validation Techniques

Different Validation techniques can be explored to validate a form.

1. password validation
2. number validation
3. string validation
4. image validation

While the validation techniques are being used, it is necessary to get the value item to be validated. The query of the required DOM element can be done using:

DocumentGetstatements

```
// getElementsBy*
// querySelectorAll
// querySelector
```

Identify the query selector to determine:

- The table with id='age-table'.

- All label elements inside that table (there should be 3 of them).

- The first td in that table (with the word "Age").

- The form with name='search'.

- The first input in that form.

- The last input in that form.

`query.html`

```html
1    <!DOCTYPE HTML>
2    <html>
3    <body>
4        <form name="search"
5        <label>Search the site:
6            <input type="text" name="search">
7        </label>
8        <input type="submit" value="Search!">
9        </form>
10
11       <hr>
12
13       <form name="search-person">
14       Search the visitors:
15       <table id="age-table">
16           <tr>
17           <td>Age:</td>
18           <td id="age-list">
19   <label>
20   <input type="radio" name="age" value="young">less than 18</label>
21   <label>
22   <input type="radio" name="age" value="mature">18−50</label>
23   <label>
24   <input type="radio" name="age" value="senior">more than 50</label>
25           </td>
26           </tr>
27
28           <tr>
29           <td>Additionally:</td>
30           <td>
31               <input type="text" name="info[0]">
32               <input type="text" name="info[1]">
33               <input type="text" name="info[2]">
34           </td>
35           </tr>
36
37       </table>
38
39       <input type="submit" value="Search!">
40       </form>
41   </body>
42   </html>
```

Given the Login page on the MyShow service, add a Javascript validation for the username and the password fields, imposing, for both of them, that the number of inserted characters is at least 4. If less than 4 characters are inserted, a suitable pop-up window shall be visualized, alerting the user to correct the provided data.

Add a registration link to the MyShow login page. If selected, the registration link causes the loading of a new page (registration.html) where users can enter their username, password and e-mail address. The registration page uses a Javascript validation, stored in the registration.js file, for checking the correctness of inserted data. In particular, a user registration can be accomplished if and only if:

1. the username has at least 8 characters

2. the user password has at least 8 characters of which at least 2 numbers, 2 alphabetic characters and one special character

1. Open the index.html and reservation.js files from the link.

2. 2. In the JavaScript file, notice that the ready event handler contains the declaration for a variable named emailPattern that contains the pattern that will be used to validate the email address.

3. Code a statement that moves the focus to the Arrival date text box.

4. Code an event handler for the submit event of the form. This event handler should validate the user entries and cancel the submission of the form if any of the entries are invalid. The validation is as follows:

   - A value must be entered into each text box. The number of nights must be numeric.
   - The email address must match the pattern that's provided.
   - Be sure to trim the entries and put them back into the controls regardless of whether the entries are valid.

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <title>Reservation request</title>
6      <link rel="stylesheet" href="main.css">
7      <script src="https://code.jquery.com/jquery-3.1.1.min.js"></script>
8      <script src="reservation.js"></script>
9  </head>
10 <body>
11     <h1>Reservation Request</h1>
12     <form action="response.html" method="get" name="reservation_form" id="reservation_form">
13         <fieldset>
14             <legend>General Information</legend>
15             <label for="arrival_date">Arrival date:</label>
16             <input type="text" name="arrival_date" id="arrival_date" autofocus>
17             <span>*</span><br>
18             <label for="nights">Nights:</label>
19             <input type="text" name="nights" id="nights">
20             <span>*</span><br>
21             <label>Adults:</label>
22             <select name="adults" id="adults">
23                 <option value="1">1</option>
24                 <option value="2">2</option>
25                 <option value="3">3</option>
26                 <option value="4">4</option>
27             </select><br>
28             <label>Children:</label>
29             <select name="children" id="children">
30                 <option value="0">0</option>
31                 <option value="1">1</option>
32                 <option value="2">2</option>
33                 <option value="3">3</option>
34                 <option value="4">4</option>
35             </select><br>
36         </fieldset>
37         <fieldset>
38             <legend>Preferences</legend>
39             <label>Room type:</label>
40             <input type="radio" name="room" id="standard" class="left" checked>Standard &nb
41             <input type="radio" name="room" id="business" class="left">Business  &nbsp
42             <input type="radio" name="room" id="suite" class="left last">Suite<br>
43             <label>Bed type:</label>
44             <input type="radio" name="bed" id="king" class="left" checked>King   
45             <input type="radio" name="bed" id="double" class="left last">Double Double<br>
46             <input type="checkbox" name="smoking" id="smoking">Smoking<br>
47         </fieldset>
48         <fieldset>
49             <legend>Contact Information</legend>
50             <label for="name">Name:</label>
51             <input type="text" name="name" id="name">
52             <span>*</span><br>
53             <label for="email">Email:</label>
54             <input type="text" name="email" id="email">
55             <span>*</span><br>
56             <label for="phone">Phone:</label>
57             <input type="text" name="phone" id="phone" placeholder="999-999-9999">
58             <span>*</span><br>
59         </fieldset>
60         <input type="submit" id="submit" value="Submit Request"><br>
61     </form>
62 </body>
63 </html>
```

4

```css
body {
font-family: Arial, Helvetica, sans-serif;
background-color: white;
margin: 0 auto;
width: 600px;
border: 3px solid blue;
padding: 10px 20px;
}
fieldset {
margin-top: 1em;
margin-bottom: 1em;
padding: .5em;
}
legend {
color: blue;
font-weight: bold;
font-size: 85%;
margin-bottom: .5em;
}
label {
float: left;
width: 90px;
}
input, select {
margin-left: 1em;
margin-right: 1em;
margin-bottom: .5em;
}
input {
width: 14em;
}
input.left {
width: 1em;
padding-left: 0;
}
p {
margin-top: 0;
margin-bottom: .5em;
}
input.last {
margin-bottom: 1em;
}
#adults, #children {
width: 35px;
}
#smoking {
width: 1em;
margin-left: 0;
}
#submit {
margin-left: 0;
width: 10em;
}
span {
color: red;
}
```

```
reservation.js
1  $(document).ready(function() {
2
3  var emailPattern = /\b[A-Za-z0-9._%+-]+@[A-Za-z0-9.-]+\.[A-Za-z]{2,4}\b/;
4
5  }); // end ready
```

Click here for source code.

> **Question 5**
>
> This is an HTML file which is used to add items in billing application. Working File
>   Complete the JS script so that new items can be added and final bill amout can be evaluated.
>
> ❶
>
> **Info:** remove the $ and use NPR instead.