



Input Validation

Validation

- Client



Why?

- Server



Why?



Automatic Validation

- CodeIgniter's form-validation library
- Isolates validation rules
- Functions:
 - Build in validation constraints
 - Handling errors
 - Populating form fields

Rule Reference

Rule	Parameter	Description	Example
required	No	Returns FALSE if the form element is empty.	
matches	Yes	Returns FALSE if the form element does not match the one in the parameter.	matches[form_item]
is_unique	Yes	Returns FALSE if the form element is not unique to the table and field name in the parameter.	is_unique[table.field]
min_length	Yes	Returns FALSE if the form element is shorter than the parameter value.	min_length[6]
max_length	Yes	Returns FALSE if the form element is longer than the parameter value.	max_length[12]
exact_length	Yes	Returns FALSE if the form element is not exactly the parameter value.	exact_length[8]
greater_than	Yes	Returns FALSE if the form element is less than the parameter value or not numeric.	greater_than[8]
less_than	Yes	Returns FALSE if the form element is greater than the parameter value or not numeric.	less_than[8]
alpha	No	Returns FALSE if the form element contains anything other than alphabetical characters.	
alpha_numeric	No	Returns FALSE if the form element contains anything other than alpha-numeric characters.	
alpha_dash	No	Returns FALSE if the form element contains anything other than alpha-numeric characters, underscores or dashes.	
numeric	No	Returns FALSE if the form element contains anything other than numeric characters.	
integer	No	Returns FALSE if the form element contains anything other than an integer.	
decimal	Yes	Returns FALSE if the form element is not exactly the parameter value.	
is_natural	No	Returns FALSE if the form element contains anything other than a natural number: 0, 1, 2, 3, etc.	
is_natural_no_zero	No	Returns FALSE if the form element contains anything other than a natural number, but not zero: 1, 2, 3, etc.	
valid_email	No	Returns FALSE if the form element does not contain a valid email address.	
valid_emails	No	Returns FALSE if any value provided in a comma separated list is not a valid email.	
valid_ip	No	Returns FALSE if the supplied IP is not valid. Accepts an optional parameter of "IPv4" or "IPv6" to specify an IP format.	
valid_base64	No	Returns FALSE if the supplied string contains anything other than valid Base64 characters.	

HTML5 Validation

- Includes built-in support for validation
- Saves a lot of Javascript
- Specify validation rules as attributes
- Validation runs when form is submitted



Validation Mechanisms

- **required** attribute

```
<input id="name" placeholder="Jane Smith" required>
```

- Regular expression

```
<input id="promoCode" placeholder="QRB-001"  
  title="Promotion code is 3 uppercase letters, a dash, then 3 numbers"  
  pattern="[A-Z]{3}-[0-9]{3}">
```

- Custom function

```
<textarea id="comment" oninput="validateComments(this)" >
```

```
function validateComments(input) {  
  if (input.value.length < 20)  
    input.setCustomValidity("Please comment in more detail");  
  else  
    input.setCustomValidity(""); // All is well, clear error message  
}
```

Validation Styling

- Can set CSS rules based on a fields validation status/requirements
- Pseudoclasses

:required

:optional

:valid

:invalid

:in-range

```
input:required{  
    background-color: lightyellow;  
}
```

```
1
2 <!DOCTYPE html>
3
4 <html>
5     <head>
6         <style>
7             input {
8                 display: block;
9             }
10        </style>
11    </head>
12 <body>
13     <h1>Input Validation</h1>
14 <?php
15
16
17
18
19     echo form_open('manual/register');
20     echo form_label('Username');
21     echo form_input('username');
22     echo form_label('Password');
23     echo form_password('password');
24     echo form_label('Password Confirmation');
25     echo form_password('passconf');
26     echo form_label('Phone');
27     echo form_input('phone');
28     echo form_submit('submit', 'Register');
29     echo form_close();
30 ?>
31 </body>
32
33 </html>
34
35
```



```
1 <?php
2
3 class Manual extends CI_Controller {
4
5     function __construct() {
6         // Call the Controller constructor
7         parent::__construct();
8     }
9
10    function index() {
11        $this->load->view('manualForm');
12    }
13
14    function register() {
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41    }
42 }
43
44
```

```
1
2 <!DOCTYPE html>
3
4 <html>
5     <head>
6         <style>
7             input {
8                 display: block;
9             }
10        </style>
11    </head>
12 <body>
13     <h1>Success!</h1>
14
15 </body>
16
17 </html>
18
19
```

```
1 <?php
2
3 class Auto extends CI_Controller {
4
5
6     function __construct() {
7         // Call the Controller constructor
8         parent::__construct();
9     }
10
11     function index() {
12         $this->load->view('autoForm');
13     }
14
15     function register() {
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35     }
36
37
38
39
40
41
42
43
44
45
46
47
48 }
49
50
```

```

1 <!DOCTYPE html>
2 <html>
3     <head>
4         <style>
5             input {
6                 display: block;
7             }
8         </style>
9         <script src="http://code.jquery.com/jquery-latest.js"></script>
10        <script>
11
12
13
14
15
16
17
18
19
20
21
22
23
24        </script>
25    </head>
26 <body>
27     <h1>Input Validation</h1>
28 <?php
29     echo validation_errors();
30
31     echo form_open('auto/register');
32     echo form_label('Username');
33     echo form_error('username');
34     echo form_input('username'                );
35     echo form_label('Password');
36     echo form_error('password');
37     echo form_password('password'            );
38     echo form_label('Password Confirmation');
39     echo form_error('passconf');
40     echo form_password('passconf'            );
41     echo form_label('Phone');
42     echo form_error('phone');
43     echo form_input('phone'                  );
44     echo form_submit('submit', 'Register');
45     echo form_close();
46 ?>
47 </body>
48
49 </html>
50
51

```

```
1<?php if ( ! defined('BASEPATH')) exit('No direct script access allowed');
2
3$config = array(
4    'register' => array(
5        array(
6            'field' => 'username',
7            'label' => 'Username',
8            'rules' => 'required|min_length[5]|max_length[12]'
9        ),
10       array(
11           'field' => 'password',
12           'label' => 'Password',
13           'rules' => 'required|min_length[4]'
14       ),
15       array(
16           'field' => 'passconf',
17           'label' => 'Password Confirmation',
18           'rules' => 'required|min_length[4]|matches[password]'
19       ),
20       array(
21           'field' => 'phone',
22           'label' => 'Phone Number',
23           'rules' => 'required|callback_phone_check'
24       )
25    )
26);
27
28
29
```