

Client-Side Validation and Server side validation of Dynamic Websites

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Abstract

The main aim of this research paper is to ensure that the user has provided the necessary information in proper format to complete the operations successfully.

When users input the data, the web servers or the browsers will check that whether the user entered all the necessary information within the fields with proper format and with some limits set by the application. This process is called as validation.

I. INTRODUCTION

Ideally, users can fill out the online form with the required details and effectively complete their work, however People often commit some mistakes, This is where validation of the web forms comes into play.

The validation is a necessary part of all the web forms and web based applications, without the validation it is impossible to submit the form.

The web forms allow user to enter the data to complete the operation such as, a login page with certain credentials, sometimes the user may enter an invalid user id or password. In this case, the validation should be performed.

A web form may contain any number of fields like name, email, password etc. the mandatory fields should be filled carefully so that the form gets submitted successfully

Web applications are developed using client side programming languages or server side programming languages such as JSP, PHP, ASP etc, or with static web pages (HTML) and with combination of the languages.

In dynamic websites, the web model built using server side programming languages accepts input from remote users.

The web applications should be tested properly so that the malicious users cannot bypass the web form.

Client Side Validation

The type of validation carried on the user's browser is known as client validation. For this validation, there is no need of server and there is no wait time.

Since there is no wait time, the client validation works faster.

The client validation is carried out using some script languages like java script thus the user inputs can be validated.

In client-side validation, if validation fails, the form will never get submitted and the users will get the feedback immediately.

The Main drawback of client-side validation is that it is insecure and depends on JavaScript.If the user flips the JavaScript off then the method can be quickly bypassed, this has made validation on the client side insecure and weak.

Both the client side validation and server side validation can be used in a single web form to create a dynamic web form or a powerful web form.

Client side validation always respond faster to your web application but the server side validation can act as a backup to your web application just in case the user switch off the JavaScript support on the browser. The Client-side validation is carried out within the browsers using some script languages like java script or any other script as the code is stored within the page or within a linked file.

Validation of the client form may be faster than validation at the server side but there may some situation like the users broser does not support the java script or it has been disabled so understanding

the limts of this validation will be helpful to decide whether to use client side validation or not .

Several browsers may have different behavioursThus, it is always possible that the browser does not execute the JavaScript code as intended

The client validation consistsofthree different types of validation

- 1.Required fields
- 2.Correct format and
- 3.Confirmation fields.

Required information

The first and most obvious thing that the validation should perform is required information.

All the fields in a web form should be filled with the proper information and if one of the field is not provided then the validation should fail and suggest users to provide the information.

Required fields should be marked properly so that the users provide the information up front.



In the above image shows the required field with a asterisk symbol

The user has to enter all the fields before submitting the form, the mandatory fields are commonly marked with an **asterisk (*)**.

However, all users may not know the meaning of an asterisk sign.

All the new and old users may probably know the general idea of what an asterisk symbol means.

The better practice for this is to just add a message note on the top of the form so that it indicates the user to fill all the fields and no need to place any asterisk or markers in the form.



The image shows a 'Sign Up' form with the following fields: Full Name, Your Email, New Password, I am: (Select Sex), Birthday (Month, Day, Year), and a Sign Up button. A red box highlights the Sign Up button, and a message below it says 'You must fill in all of the fields.'

The above image shows the example of simple message that all the fields are required

Replacing the asterisk symbol with the simple line (you must fill in all the fields).

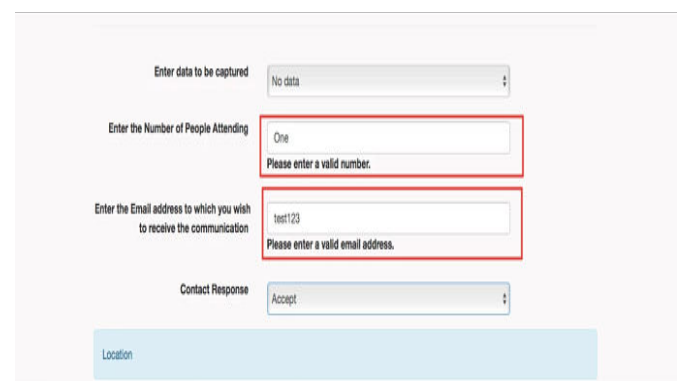
Correct Format

The correct format is nothing but ensuring that the users has provided the information in the right format so that the form gets submitted successfully without any errors.

The users has to provide necessary information with the proper format such as an email address,

phone numbers, user id and others.

If the user has failed to enter the information in the correct format then the user should be informed immediately with the error message, example: you have entered an invalid email address, then the users should be suggested with the valid formats using regular expressions is the best and easy way to validate the correct format.



The image shows a form with the following fields: Enter data to be captured (No data), Enter the Number of People Attending (One), Enter the Email address to which you wish to receive the communication (test123), Contact Response (Accept), and Location. Red boxes highlight the 'Enter the Number of People Attending' and 'Enter the Email address to which you wish to receive the communication' fields, with error messages 'Please enter a valid number.' and 'Please enter a valid email address.' respectively.

In the above image the webpage requests the user for the valid number and a valid email address

In the web forms users are actually allowed to enter the text in a variety of formats and syntaxes, and make it intelligently interpreted by the application. The user doesn't think about "correct" formats and complex user interfaces, they just want something to be done.

Let the user type whatever he wants, and make the program do the right thing with it,

The correct format is must needed for submitting the web form.

Using of regular expressions ensures the data in the correct format

Confirmation fields

When the user is dealing with some important data an additional confirmation field should be provided so that he confirms that he has entered the right information this method of validation is called confirmation fields.

Always the confirmation fields are placed below or next to the target fields describing the purpose of confirm fields such as confirm your phone number and password ,the validation should check both the fields, If both the values do not match then the user should be informed about the error and the validation should fail, if the values do match then we can use a success indicator as an option.

Sign up. It's free.

Username

Password

Choose password

Re-type password

Next step >

Current member? [Login](#)

Nowadays all the websites or web based applications use this methods for the best results and also this method helps the user to confirm the fields

SERVER-SIDE VALIDATION

The validation which takes place on the Server is called Server Side Validation.

In this server side scripting the data is sent to the server for validation , then the server will check for the errors and return the results to the client computer.

If the data is not in the required format then the server will send a error message to the client computer , this method of validation is secure because if the user turn off the java script in the browser then also it is difficult to bypass the validation.

The server side validation is slow compared to the client side validation ,as the users has to wait for the responses from server.

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PHP Server Side Form Validation

Full name	Enter full name atleast 5 letters	please enter fullname with atleast 5 letters
Email Address	Enter email address	please enter valid email address
Password	Enter password	password didnot matched with confirm password
Confirm password	Enter confirm password	password didnot matched with confirm password

The server side validation is the best validation method compared to client side because the client side validation can be bypass but the server side validation cannot be bypass.

The developers use the server side scripting to develop the dynamic websites and web based applications .

Regular expressions are used in the server side validation.

Conclusion

The validation which is carried out in browser (client validation) is faster than the server validation but the client side validation is insecure

however ,Using both the client side and server side validation creates a powerful and dynamic web forms.

If the validation fails then the users should be provided with the proper error message with a suggestion like enter numbers only or enter a valid phone number

The error message should be placed on the top of the page so that the users notice the message immediately and correct the error part, we should always mark the error message with the dark colors so that it is highlighted, always use the regular expressions for the best results

References:

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