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# JavaScript Forms

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## JavaScript Form Validation

HTML form validation can be done by JavaScript.

If a form field (fname) is empty, this function alerts a message, and returns false, to prevent the form from being submitted:

### JavaScript Example

```
function validateForm() {  
  var x = document.forms["myForm"]["fname"].value;  
  if (x == "") {  
    alert("Name must be filled out");  
    return false;  
  }  
}
```

The function can be called when the form is submitted:

### HTML Form Example

```
<form name="myForm" action="/action_page.php"
```

```
onsubmit="return validateForm()" method="post">  
Name: <input type="text" name="fname">  
<input type="submit" value="Submit">  
</form>
```

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## JavaScript Can Validate Numeric Input

JavaScript is often used to validate numeric input:

Please input a number between 1 and 10

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## Automatic HTML Form Validation

HTML form validation can be performed automatically by the browser:

If a form field (fname) is empty, the **required** attribute prevents this form from being submitted:

### HTML Form Example

```
<form action="/action_page.php" method="post">  
  <input type="text" name="fname" required>  
  <input type="submit" value="Submit">  
</form>
```

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Automatic HTML form validation does not work in Internet Explorer 9 or earlier.

## Data Validation

Data validation is the process of ensuring that user input is clean, correct, and useful.

Typical validation tasks are:

- has the user filled in all required fields?
- has the user entered a valid date?
- has the user entered text in a numeric field?

Most often, the purpose of data validation is to ensure correct user input.

Validation can be defined by many different methods, and deployed in many different ways.

**Server side validation** is performed by a web server, after input has been sent to the server.

**Client side validation** is performed by a web browser, before input is sent to a web server.

## HTML Constraint Validation

HTML5 introduced a new HTML validation concept called **constraint validation**.

HTML constraint validation is based on:

- Constraint validation **HTML Input Attributes**
- Constraint validation **CSS Pseudo Selectors**
- Constraint validation **DOM Properties and Methods**

## Constraint Validation HTML Input Attributes

Attribute	Description
disabled	Specifies that the input element should be disabled

max	Specifies the maximum value of an input element
min	Specifies the minimum value of an input element
pattern	Specifies the value pattern of an input element
required	Specifies that the input field requires an element
type	Specifies the type of an input element

For a full list, go to [HTML Input Attributes](#).

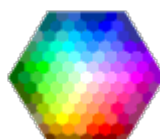
## Constraint Validation CSS Pseudo Selectors

Selector	Description
:disabled	Selects input elements with the "disabled" attribute specified
:invalid	Selects input elements with invalid values
:optional	Selects input elements with no "required" attribute specified
:required	Selects input elements with the "required" attribute specified
:valid	Selects input elements with valid values

For a full list, go to [CSS Pseudo Classes](#).

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