Restriction attributes

In lesson 3 we have already spoke about HTML attributes. We said that HTML attributes are additional instructions for HTML elements. Restriction attributes are attributes that will restrict default behavior of HTML element.

For example, if we want to restrict website users just to read value from some input field, and that value cannot be changed, we can use readonly HTML attribute.

```
<input type="text" name="qualification" readonly />
```

Or, if we want to require from website users to enter some value in some specific field, we can use required HTML attribute.

```
<input type="text" name="username" required />
```

All available restriction attributes are disabled, readonly, required, size, step, pattern, min, max, minlength, and maxlength.

disabled attribute is restriction attribute that we use to disable HTML element.

```
<input type="text" name="name" value="MasterMinds" disabled />
```

MasterMinds

We can disable all form elements (input field, buttons, radio buttons, checkboxes etc.).

When field in HTML form is disabled, when we submit that form value for disabled field will not be sent to the server for server side data processing.

readonly attribute is restriction attribute that we use to restrict HTML element that its value can only be read and cannot be changed.

```
<input type="text" name="name" value="MasterMinds" readonly />
```

MasterMinds

When field in HTML form has readonly attribute, when we submit that form value for readonly field will be sent to the server for server side data processing.

required attribute is restriction attribute that we use to require from website users to enter some value in that specific field.

```
<input type="text" name="nameField"  required />
```

⚠ Please fill out this field.

If we try to submit HTML form that has field with required HTML attribute and if that field is not filled out, we will get validation error like we have in example above.

size attribute is restriction attribute that we use to define/restrict width of input field measured by characters.

```
<input type="text" name="nameField"  size="10" />
```

1 2 3 4 5 6 7 8 9 10

When we set size for input field it doesn't mean that we can't enter more than that number of characters, it just means that only that number of characters will be visible.

step attribute is restriction attribute that we use to define valid step that we can use for input field.

```
<input type="number" name="numberField" value="0" step="5" />
```

```
0                                    ⬍
```

For our example above, we have step with value 5 and our initial value 0. This means that we can enter values like 0, 5, 10, 15 or negative values -5, -10, -15 etc.

pattern attribute is restriction attribute that we use to define pattern that we need to follow in input field.

```
<input type="tel" name="telField" pattern="[0-9]{3}-[0-9]{3}-[0-9]{3}" />
```

```
548963787
```

⚠ Please match the requested format.

If value that we have entered doesn't follow requested format, we will get validation error like we have in example above.

> NOTE: Value that is defined for pattern attribute (in example above [0-9]{3}-[0-9]{3}-[0-9]{3}) represents regular expression.

min and **max** attributes are restriction attributes that we use to define minimum value and maximum value that we can enter in input field.

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```
<input type="number"  name="numberField" min="5" max="10" />
```

```
5  ⬍
```

Min and max attributes are applicable only on numerical and date input fields. This means that we can define only minimum and maximum number value or minimum and maximum date that we can enter in specific field number or date field.

minlength and *maxlength* attributes are restriction attributes that we use to define minimum number of characters and maximum number of characters that we can enter in input field.

```
<input type="text"  name="textField" minlength="5" maxlength="10" />
```

1 2 3 4 5 6 7 8 9 10 11 12 13

In our example above, number of characters that we can enter in text field need to be between 5 and 10.

If we enter less than 5 characters and try to submit form where this input text field belongs, we will get validation error, and by default our input field can get only that number of characters that is defined like a maxlength, so you will not be able to enter more than that number of characters.