Form Elements

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HTML5: New Form elements

HTML5 has several new elements for forms.

- input types
  - > email
  - > url
  - > tel
  - > number
  - > range
  - > date pickers
  - > search
  - > color
- Other elements
  - > datalist
  - > keygen
  - > output
- Form Validation attributes

HTML5: Input – e-mail

- The email type is used for input fields and will have an email address.

- Depending on browser support, the e-mail address can be automatically validated when submitted.

E-mail: <input type="email" name="user_email" />

<input type="email" value="default@example.com">

<input type="email" size="32" minlength="3" maxlength="64">

<input type="email" placeholder="sophie@example.com">

E-mail:

Input - url

- The url type is used for input fields and will have a URL address.

- The value of the url field is automatically validated when the form is submitted.

Homepage: <input type="url" name="user_url" />

tel

```
<form>
Telephone: <input type="tel" name="phone"
pattern="[0-9]{3}-[0-9]{2}-[0-9]{3}" required>
<input type="submit">
<span>Format: 123-45-678</span>
</form>
```

Telephone: [   ] Submit
Format: 123-45-678

Input - number

- defines a numeric input field
- Set restrictions on what numbers are accepted:

Points: <input type="number" name="points" min="1" max="10" />

Attribute	Value	Description
max	*number*	Specifies the maximum value allowed
min	*number*	Specifies the minimum value allowed
step	*number*	Specifies legal number intervals (if step="3", legal numbers could be -3,0,3,6, etc)
value	*number*	Specifies the default value

Input - range

- Slider control
- Default range is 0 to 100
- The range type is used for input fields that should contain a value from a range of numbers.
- You can also set restrictions on what numbers are accepted:

<input type="range" name="points" min="1" max="10" />

Depending on browser support:
The input type "range" can be displayed as a slider control.

Points: [=====||=====] [Submit]

Input – date pickers

input type for selecting date and time:

> date - Selects date, month and year

> month - Selects month and year

> week - Selects week and year

> time - Selects time (hour and minute)

> datetime - Selects time, date, month and year

> datetime-local - Selects time, date, month and year (local time)

Date

Birthday:
  <input type="date" name="bday">

Birthday: mm / dd / yyyy

<form>
Enter a date before 1980-01-01:
<input type="date" name="bday" max="1979-12-31">

Enter a date after 2000-01-01:
<input type="date" name="bday" min="2000-01-02">

</form>

Enter a date before 1980-01-01:

mm / dd / yyyy

Enter a date after 2000-01-01:

mm / dd / yyyy

January 2020 ▼					◀	●	▶
Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1

mm / dd / yyyy

Time, Date

`<input type="time" id="tnputtime" name="inputtime">`

Select a time:

Birthday (date and time):
 `<input type="datetime-local" name="bdaytime">`

Input - search

- The search type is used for search fields like a site search or Google search.

- The search field behaves like a regular text field.

Search Google:<input type="search" id="gsearch" name="gsearch">

Search Google: [   ]

Input – color picker

- input field that contains a color.

- allow you to select a color from a color picker. Default: black color

Color: <input type="color" name="user_color" />

Color Picker

```
<form>
  Select your favorite color:
  <input type="color" name="favcolor" value="#ff0000">
  <input type="submit">
</form>
```
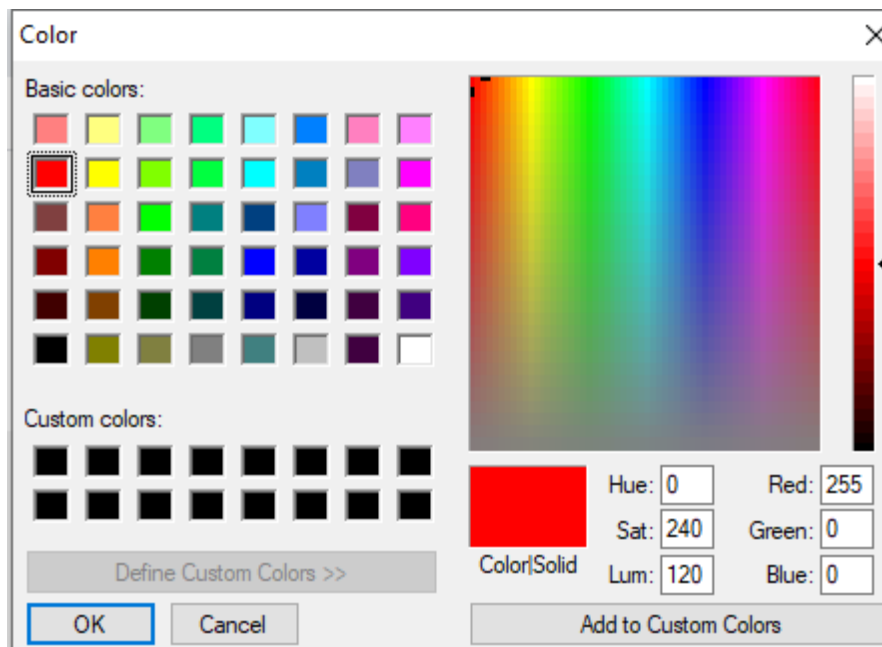
Other new form elements

HTML5 has several new elements and attributes for forms.

> datalist

> keygen

> output

datalist

1. The **datalist** element specifies a list of options for an input field. The list is created with option elements inside the datalist. (similar to SELECT tag)

Eg: <datalist id="browsers">

    <option value="Internet Explorer">

    <option value="Firefox">

  </datalist>

Difference between <select> and <datalist> elements in HTML

•<datalist> is a new element in HTML5. It is a text field that suggests the possible values from an available list. Users can also enter value that is not in the available list.

• <select> provides a number of values from which user needs to select one. User cannot enter value that is not in the list.

keygen

2. The purpose of the **keygen** element is to provide a secure way to authenticate users. (keytype:rsa,dsa,ec)

Eg: <keygen name="security" keytype="rsa">

RSA - Rivest–Shamir–Adleman
DSA - Digital Signature Algorithm)
EC - Elliptic Curve

output

3. The **output** element is used for different types of output, like calculations or script output:

```
<form oninput="x.value=parseInt(a.value)+parseInt(b.value)">
0<input type="range" id="a" value="50">100
+<input type="number" id="b" value="50">
=<output name="x" for="a b"></output>
</form>
```

Form validation attributes

required	Specifies that an input field is required (must be filled out)
pattern	Specifies a regular expression to check the input value against