Spanning columns or rows

```
<table>
    <tr>
        <td>row 1 col 1</td>
        <td>row 1 col 2</td>
        <td>row 1 col 3</td>
    </tr>
    <tr>
        <td colspan="3">This second row spans all three columns</td>
    </tr>
    <tr>
        <td rowspan="2">This cell spans two rows</td>
        <td>row 3 col 2</td>
        <td>row 3 col 3</td>
    </tr>
    <tr>
        <td>row 4 col 2</td>
        <td>row 4 col 3</td>
    </tr>

</table>
```

row 1 col 1	row 1 col 2	row 1 col 3
This second row spans all three columns		
This cell spans two rows	row 3 col 2	row 3 col 3
	row 4 col 2	row 4 col 3

Table with thead, tbody, tfoot, and caption

```
<table>
 <caption>Table Title</caption> <!--| caption is the first child of table |-->
  <thead> <!--=======================| thead is after caption |-->
    <tr>
      <th>Header content 1</th>
      <th>Header content 2</th>
    </tr>
  </thead>

  <tbody> <!--=======================| tbody is after thead |-->
    <tr>
      <td>Body content 1</td>
      <td>Body content 2</td>
    </tr>
  </tbody>

  <tfoot><!--| tfoot can be placed before or after tbody, but not in a group of tbody. |-->
<!--| Regardless where tfoot is in markup, it is rendered at the bottom. |-->



    <tr>
      <td>Footer content 1</td>
      <td>Footer content 2</td>
    </tr>
  </tfoot>

</table>
```

Comments

```
<!-- I'm an HTML comment! -->
```

They can be incorporated inline within other content:

```
<h1>This part will be displayed <!-- while this will not be displayed -->.</h1>
```

They can also span multiple lines to provide more information:

```
<!-- This is a multiline HTML comment.
  Whatever is in here will not be rendered by the browser.
  You can "comment out" entire sections of HTML code.
-->
```

However, they **cannot** appear within another HTML tag, like this:

```
<h1 <!-- testAttribute="something" -->>This will not work</h1>
```

Images

Parameters

- Src: Specifies the URL of the image
- Srcset: Images to use in different situations (e.g., high-resolution displays, small monitors, etc)
- Alt: Alternative text that should be displayed if for some reason the image could not be displayed
- Width: Specifies the width of the image (optional)
- Height: Specifies the height of the image (optional)

Creating an image

```
<img src="images/hello.png" alt="Hello World">
```

You can also get images from a web URL:

```
<img src="https://i.stack.imgur.com/ALgZi.jpg?s=48&g=1" alt="StackOverflow user Caleb Kleveter">
```

Choosing alt text

- Alt-text is used by screen readers for visually impaired users and by search engines.
- It's therefore important to write good alt-text for your images.

ALT=“ ”

- An empty alt attribute indicates that the image is not a key part of the content (that is not necessary to understand the rest) and thus may be omitted from rendering.
- The lack of an alt attribute indicates that the image is a key part of the content
  - that there simply is no textual equivalent available for rendering(resultant image).

Responsive image using the "srcset" attribute

- Images to use in different situations (e.g., high-resolution displays, small monitors, etc).
- srcset is just telling the browser what images we have available, and what are their sizes.
  - img/hello-300.jpg is 300px wide
  - img/hello-600.jpg is 600px wide
  - img/hello-900.jpg is 900px wide
  - img/hello-1200.jpg is 1200px wide
- src is always mandatory image source. In case of using with srcset, src will serve fallback image in case browser is not supporting srcset.

Responsive image using picture element

- This attribute is required when <source> tag is used in <picture>.

```
<picture>
  <source media="(min-width: 600px)" srcset="large_image.jpg">
  <source media="(min-width: 450px)" srcset="small_image.jpg">
  <img src="default_image.jpg" style="width:auto;">
</picture>
```

Usage

To display different images under different screen width, you must include all images using the source tag in a picture tag as shown in the above example.

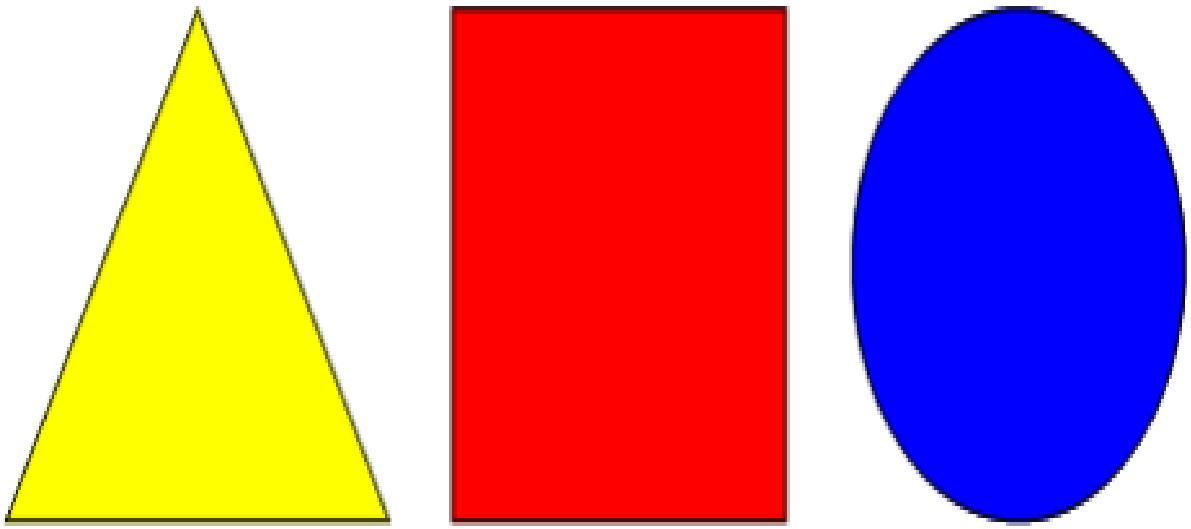
Result

- On screens with screen width >600px, it shows large_image.jpg
- On screens with screen width >450px, it shows small_image.jpg
- On screens with other screen width, it shows default_image.jpg

Image Maps

- Image with clickable areas that usually act as hyperlinks.
- Image is defined by the <img> tag,
- map is defined by a <map> tag with <area> tags to denote each clickable area.
- Use the “usemap” and “name” attributes to bind the image and the map.
- usemap The name of the map with a hash symbol prepended to it.
- For example, for a map with name=“demand", the image should have usemap="#demand".

To create an image map so that each of the shapes in the image below are clickable:



The code would be as follows:

```
<img src="http://jaced.com/blogpix/2007/trisquarecircle/002.gif" usemap="#shapes">
<map name="shapes">
    <area shape="polygon" coords="79,6,5,134,153,134">
    <area shape="rectangle" coords="177,6,306,134">
    <area shape="circle" coords="397,71,65">
</map>
```

- name
  - name of the map to identify it. To be used with the image's usemap attribute.
- Below are <area> -specific attributes.
- When href is specified, making the <area> a link, <area> also supports all of the attributes of the anchor tag (<a>) except ping.
- alt The alternate text to display if images are not supported. This is only necessary if href is also set on the <area>.

- coords
- The coordinates outlining the selectable area. When shape="polygon", this should be set to a list of "x, y" pairs separated by commas (i.e., shape="polygon" coords="x1, y1, x2, y2, x3, y3, ...").
- When shape="rectangle", this should be set to left, top, right, bottom.
- When shape="circle", this should be set to centerX, centerY, radius.

- href :The URL of the hyperlink, if specified.
  - If it is omitted, then the <area> will not represent a hyperlink.
- Shape: The shape of the <area> . Can be set to "default" to select the entire image (no coords attribute necessary), circle or circ for a circle, rectangle or rect for a rectangle, and polygon or poly for a polygonal area specified by corner points.

Main document

edu_main - Notepad

File Edit Format View Help

```
<html>
<head>
<title>Desc. about img as clickable link tag</title>
</head>
<body>
<img src="C:\Users\Manju\Documents\education.jfif" usemap="#shapes">
<map name="shapes">

 <area shape="default" alt="education" href="C:\Users\Manju\Documents\education.html">

</map>
</body>
</html>
```

Image file description

education - Notepad

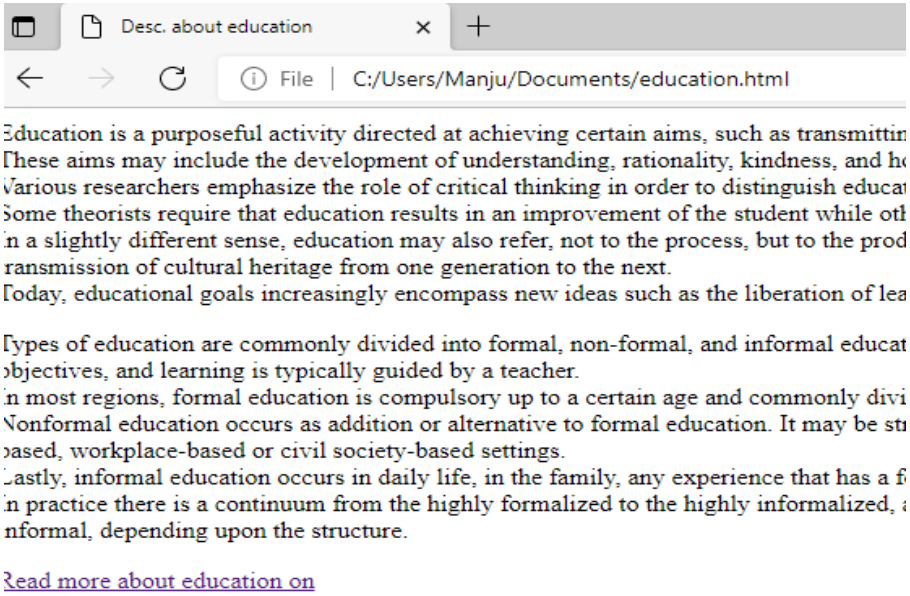
File Edit Format View Help

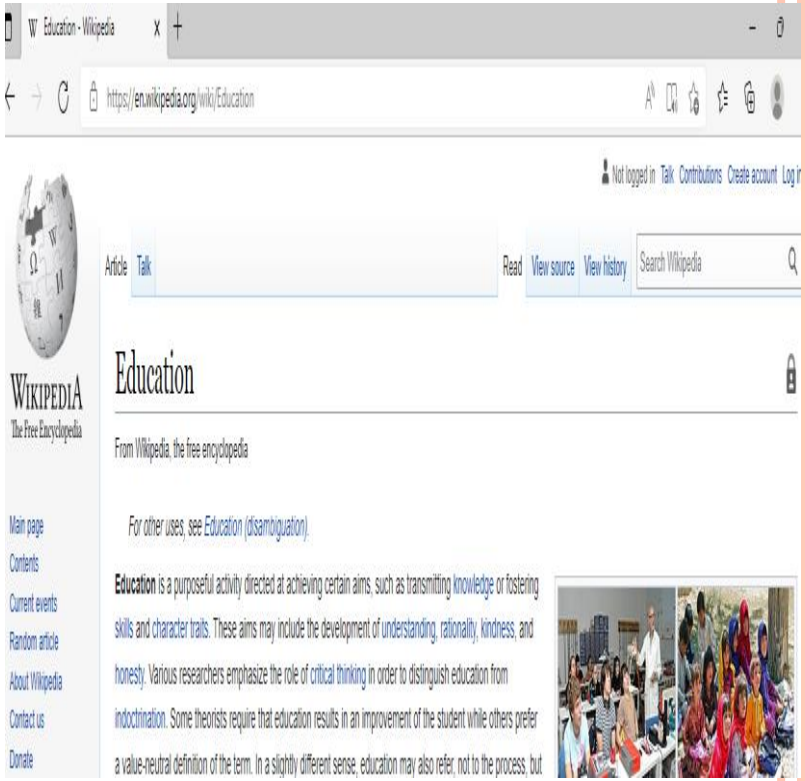
```
<html>
<head>
<title>Desc. about education</title>
</head>
<body>
<p>Education is a purposeful activity directed at achieving certain aims, such as '
These aims may include the development of understanding, rationality, kindness, an
<p>Types of education are commonly divided into formal, non-formal, and informal e
al learning can occur in all three settings.For instance, homeschooling can be cla

<a href="https://en.wikipedia.org/wiki/Education">Read more about education on</a>
</body>
</html>
```

OUTPUT


Desc. about img as clickable link
File | C:/Users/Manju/Desktop/edu_main.html


Desc. about education
File | C:/Users/Manju/Documents/education.html
Education is a purposeful activity directed at achieving certain aims, such as transmittin
These aims may include the development of understanding, rationality, kindness, and h
Various researchers emphasize the role of critical thinking in order to distinguish educa
Some theorists require that education results in an improvement of the student while oth
In a slightly different sense, education may also refer, not to the process, but to the prod
ransmission of cultural heritage from one generation to the next.
Today, educational goals increasingly encompass new ideas such as the liberation of lea
Types of education are commonly divided into formal, non-formal, and informal educat
objectives, and learning is typically guided by a teacher.
In most regions, formal education is compulsory up to a certain age and commonly divi
Nonformal education occurs as addition or alternative to formal education. It may be st
based, workplace-based or civil society-based settings.
Lastly, informal education occurs in daily life, in the family, any experience that has a f
In practice there is a continuum from the highly formalized to the highly informalized,
nformal, depending upon the structure.
Read more about education on


Education - Wikipedia
https://en.wikipedia.org/wiki/Education
Not logged in Talk Contributions Create account Log in
Article Talk
Read View source View history
Search Wikipedia
WIKIPEDIA
The Free Encyclopedia
Education
From Wikipedia, the free encyclopedia
For other uses, see Education (disambiguation).
Education is a purposeful activity directed at achieving certain aims, such as transmitting knowledge or fostering skills and character traits. These aims may include the development of understanding, rationality, kindness, and honesty. Various researchers emphasize the role of critical thinking in order to distinguish education from indoctrination. Some theorists require that education results in an improvement of the student while others prefer a value-neutral definition of the term. In a slightly different sense, education may also refer, not to the process, but
Main page
Contents
Current events
Random article
About Wikipedia
Contact us
Donate

Input Control Elements

- Elements are used within a element to declare input controls that allow users to input data.

Text

Syntax

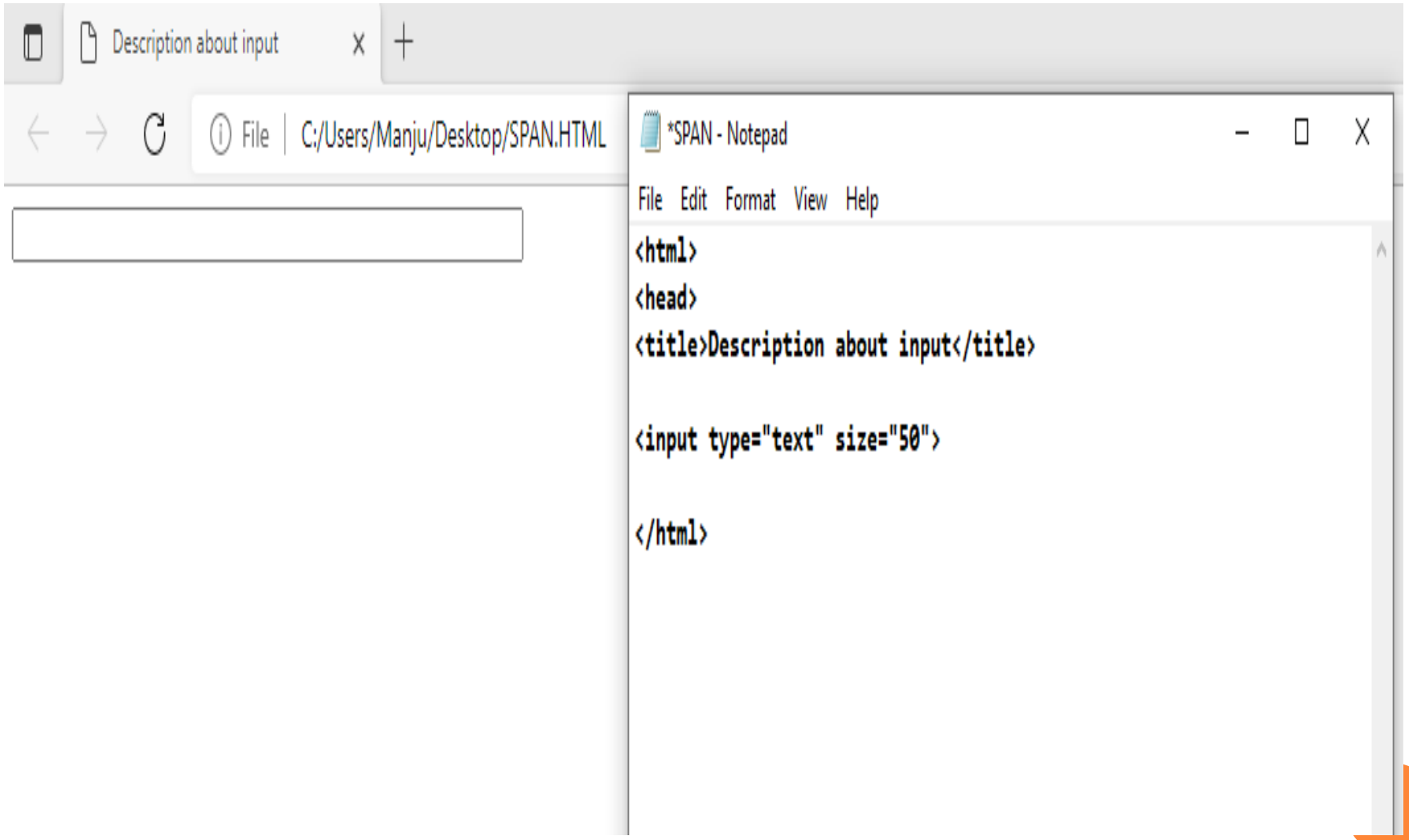
```
<input type="text">
```

or (without specifying a `type`, using the default attribute):

```
<input>
```

The default width of a text field input is 20 characters. This can be changed by specifying a value for the `size` attribute like this:

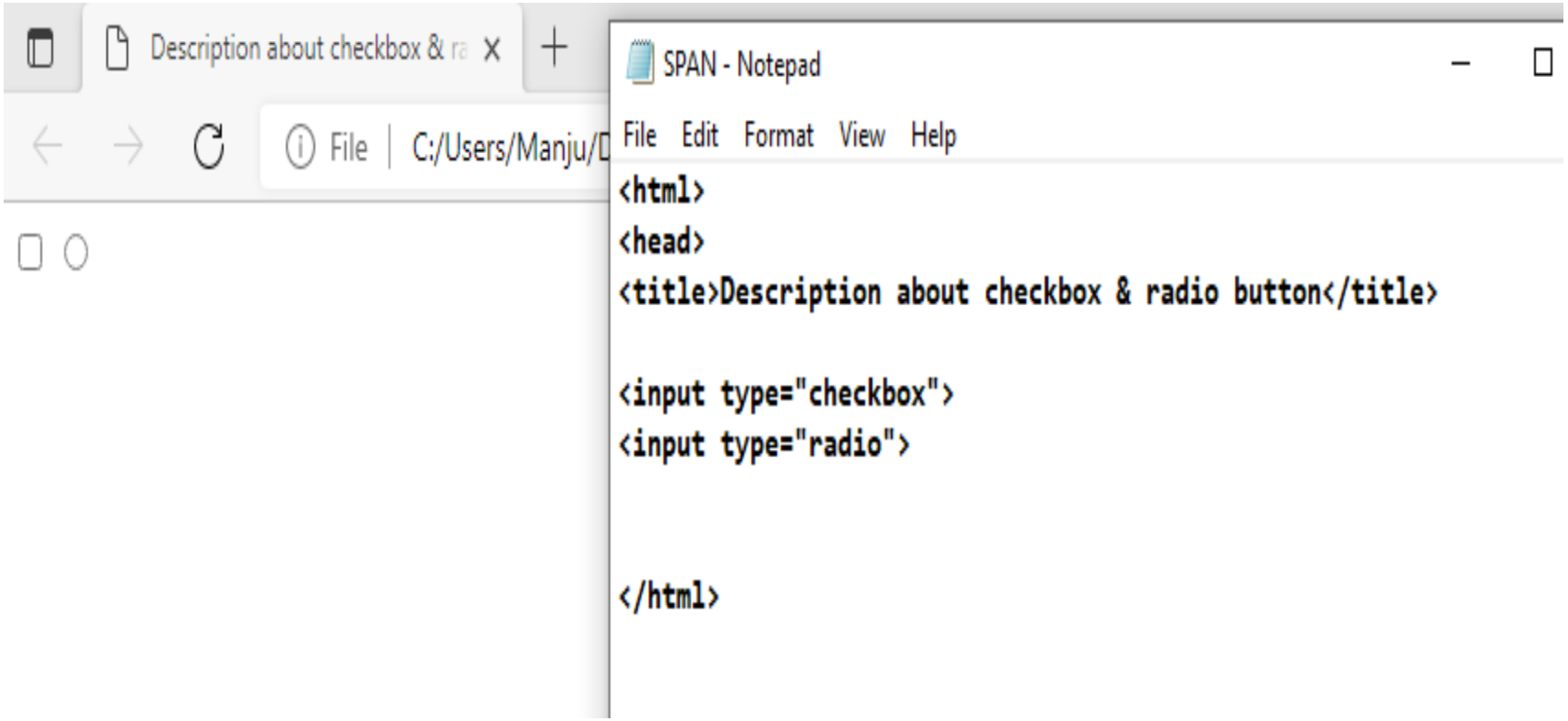
```
<input type="text" size="50">
```


Description about input
File
C:/Users/Manju/Desktop/SPAN.HTML
*SPAN - Notepad
File Edit Format View Help
<html>
<head>
<title>Description about input</title>
<input type="text" size="50">
</html>

Checkbox and Radio Buttons

The simplest checkbox or radio button is an `<input>` element with a `type` attribute of `checkbox` or `radio`, respectively:

```
<input type="checkbox">
<input type="radio">
```


Description about checkbox & ra
File
C:/Users/Manju/D
SPAN - Notepad
File Edit Format View Help
<html>
<head>
<title>Description about checkbox & radio button</title>
<input type="checkbox">
<input type="radio">
</html>

Example:

```
<input type="radio" name="color" id="red" value="#F00">
<input type="radio" name="color" id="green" value="#0F0">
<input type="radio" name="color" id="blue" value="#00F">
```

When viewed, radio buttons appear as a circle (unchecked) or a filled circle (checked). Checkboxes appear as a square (unchecked) or a filled square (checked). Depending on the browser and operating system, the square sometimes has rounded corners.

Attributes

- checkboxes and radio buttons have a number of attributes to control their behavior

VALUE

- Specifies the string value to associate with the button in the event of form submission.
- Checkboxes and radio buttons are special in that when the value is omitted, it defaults to "on" when submitted, rather than sending a blank value.

CHECKED

- Initial state of a checkbox or radio button.
- This is a Boolean attribute and may be omitted.

Each of these are valid, equivalent ways to define a checked radio button:

```
<input checked>
<input checked="">
<input checked="checked">
<input checked="ChEcKeD">
```

The absence of the `checked` attribute is the only valid syntax for an unchecked button:

```
<input type="radio">
<input type="checkbox">
```

When resetting a `<form>`, checkboxes and radio buttons revert to the state of their `checked` attribute.

Accessibility Labels

- To give context to the buttons and show users what each button is for, each of them should have a label.
- This can be done using a element to wrap the button.

or with a `<label>` element with a `for` attribute set to the `id` attribute of the button:

```
<input type="checkbox" name="color" value="#F00" id="red">
<label for="red">Red</label>
```

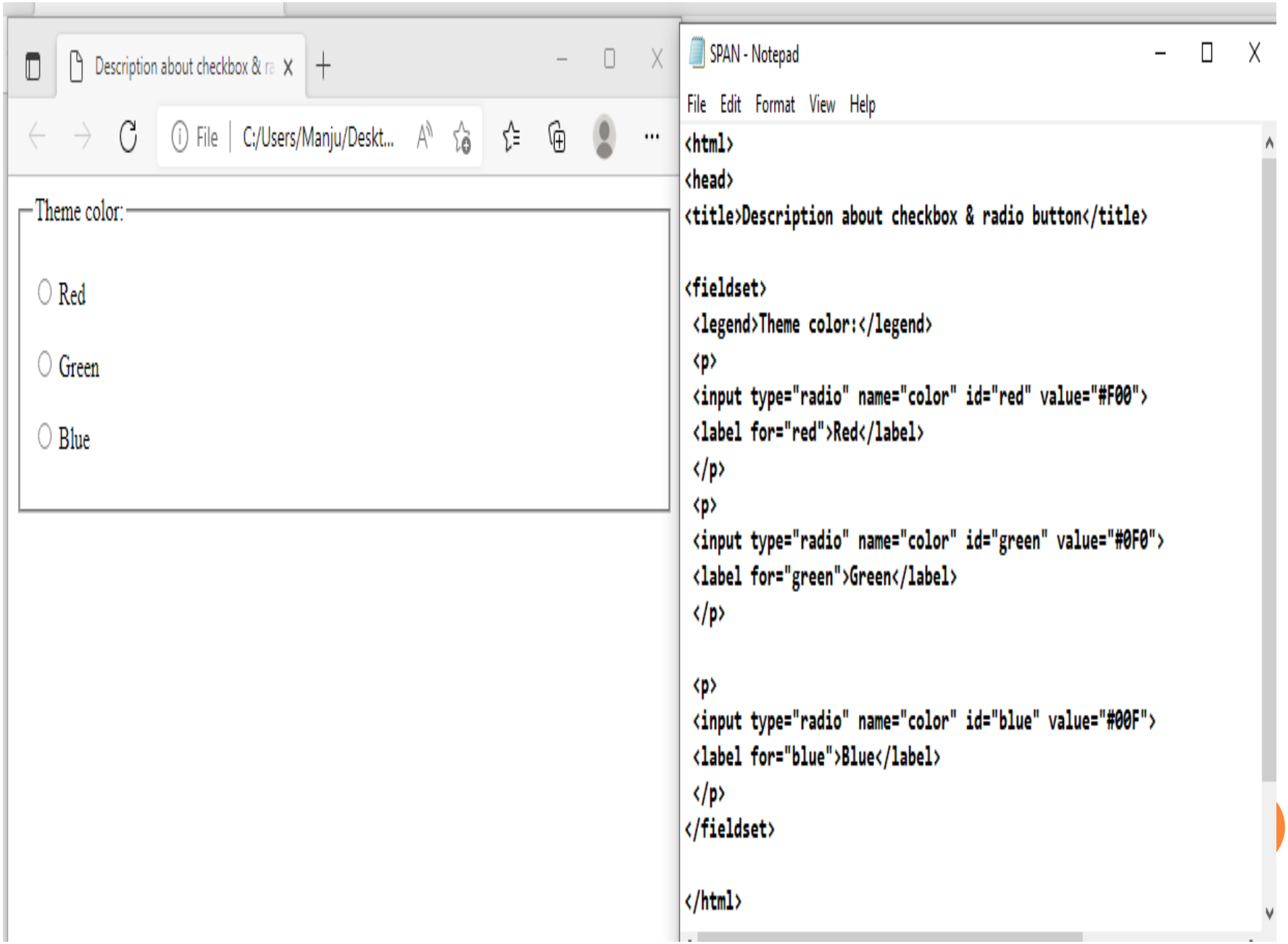
<LABEL> AS REFERENCE

- Using the for attribute you don't have to place the control element as descendant of label ***- but the for value must match it's ID***

```
<input id="cats" type="checkbox"
  name="Cats">
<label for="cats" >I like Cats!</label>
```

Button Groups

- Since each radio button "affects" the others in the group, it is common to provide "a label" or context for the entire group of radio buttons.
- To provide a label for the entire group, the radio buttons should be included in a ***<fieldset> element with a <legend> element within it.***


Description about checkbox & ra
File
C:/Users/Manju/Deskt...
Theme color:
Red
Green
Blue
SPAN - Notepad
File Edit Format View Help
<html>
<head>
<title>Description about checkbox & radio button</title>
<fieldset>
<legend>Theme color:</legend>

<input type="radio" name="color" id="red" value="#F00">
<label for="red">Red</label>

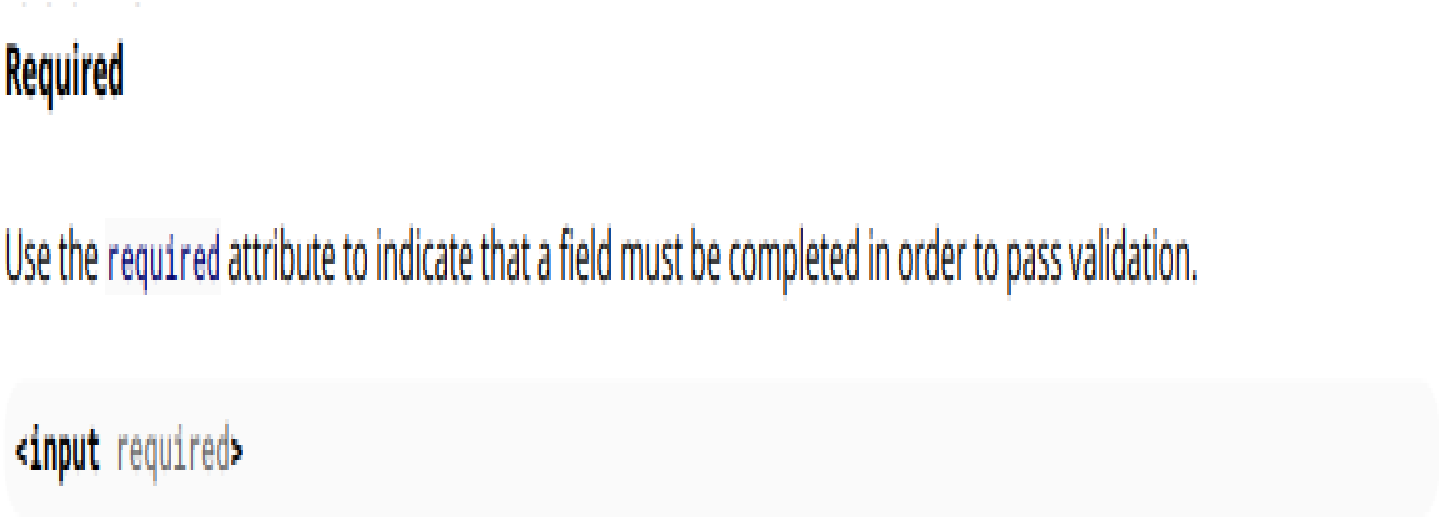
<input type="radio" name="color" id="green" value="#0F0">
<label for="green">Green</label>

<input type="radio" name="color" id="blue" value="#00F">
<label for="blue">Blue</label>

</fieldset>
</html>

Input Validation

- Some newer input types (like email, url, tel, date and many more) are automatically validated and do not require your own validation constraints.



Minimum / Maximum Length

Use the `minlength` and `maxlength` attributes to indicate length requirements. Most browsers will prevent the user from typing more than *max* characters into the box, preventing them from making their entry invalid even before they attempt submission.

```
<input minlength="3">
<input maxlength="15">
<input minlength="3" maxlength="15">
```

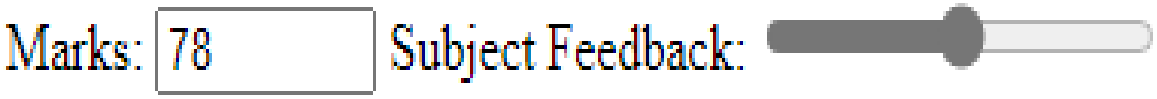
Hello Yenepoya Institute of A	Hello Yenepoya	Hello Yenepoya

Specifying a range

- Use min and max attributes to restrict the range of numbers a user can input into an input of type number or range

Marks: <input type="number" name="marks" min="0" max="100" />

Subject Feedback: <input type="range" name="feedback" min="1" max="5" />



Match a Pattern

- For more control, use the pattern attribute to specify any regular expression that must be matched in order to pass validation.
- You can also specify a title, which is included in the validation message if the field doesn't pass.
- The pattern attribute specifies a regular expression that the <input> element's value is checked against on form submission.
- **Note:** The pattern attribute works with the following input types: text, date, search, url, tel, email, and password.
- ***Not all browsers display a message for invalid patterns, although there is full support among most used modern browsers.***

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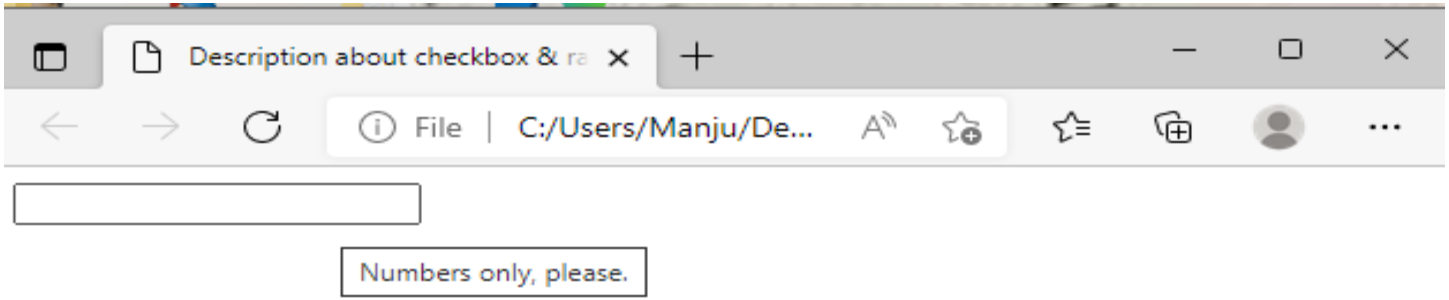
File Edit Format View Help

```
<html>
<head>
<title>Description about checkbox & radio button</title>

<input pattern="\d*" title="Numbers only, please.">

</html>
```



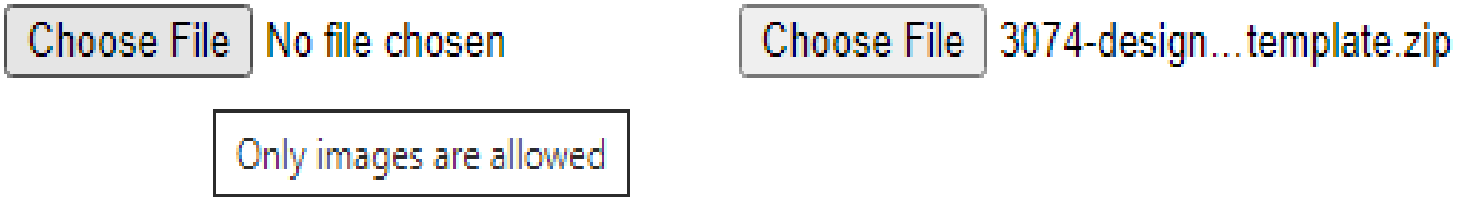
Accept File Type

For input fields of type `file`, it is possible to accept only certain types of files, such as videos, images, audios, specific file extensions, or certain media types. For example:

```
<input type="file" accept="image/*" title="Only images are allowed">
```

Multiple values can be specified with a comma, e.g.:

```
<input type="file" accept="image/*,.rar,application/zip">
```



Adding `novalidate` attribute to the `form` element or `formnovalidate` attribute to the submit button, prevents validation on form elements. For example:

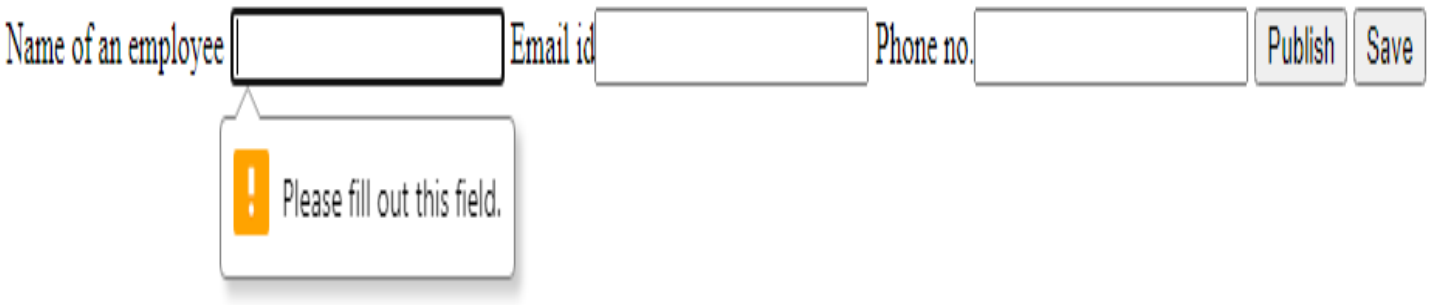
```
<form>
    <input type="text" name="name" required>
    <input type="email" name="email" required>
    <input pattern="\d*" name="number" required>

    <input type="submit" value="Publish"> <!-- form will be validated -->
    <input type="submit" value="Save" formnovalidate> <!-- form will NOT be validated -->
</form>
```

The form has fields that are required for "publishing" the draft but aren't required for "saving" the draft.

CONTROL - Notepad

File Edit Format View Help

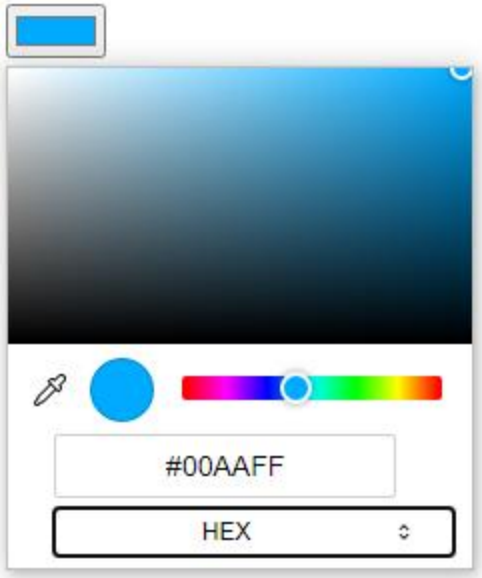
```
<HTML>
<HEAD>
<TITLE>DESC. ABOUT VALIDATION</TITLE>
</HEAD>
<BODY>


<form>
        <label>  Name of an employee  <input type="text" name="name" required>
                Email id<input type="email" name="email" required>
                Phone no.<input pattern="\d*" name="number" required></label>
        <input type="submit" value="Publish">          <!-- form will be validated -->
        <input type="submit" value="Save" formnovalidate>      <!-- form will NOT be validated -->
</form>


</BODY>
<HTML>
```


Name of an employee
Email id
Phone no.
Publish
Save
Please fill out this field.

Color

- In supporting browsers, the input element with a type attribute, whose value is color, creates a button-like control, with a color equal to the value of color attribute (defaults to black if value is not specified or is an invalid hexadecimal format)

```
<input type="color" name="favcolor" value="#ff0000">
```



Clicking this button opens the operating system's color widget, which allows user to select a color.

Fallback for browsers which do not support this input type is a regular input `type=text`.

#ff0000

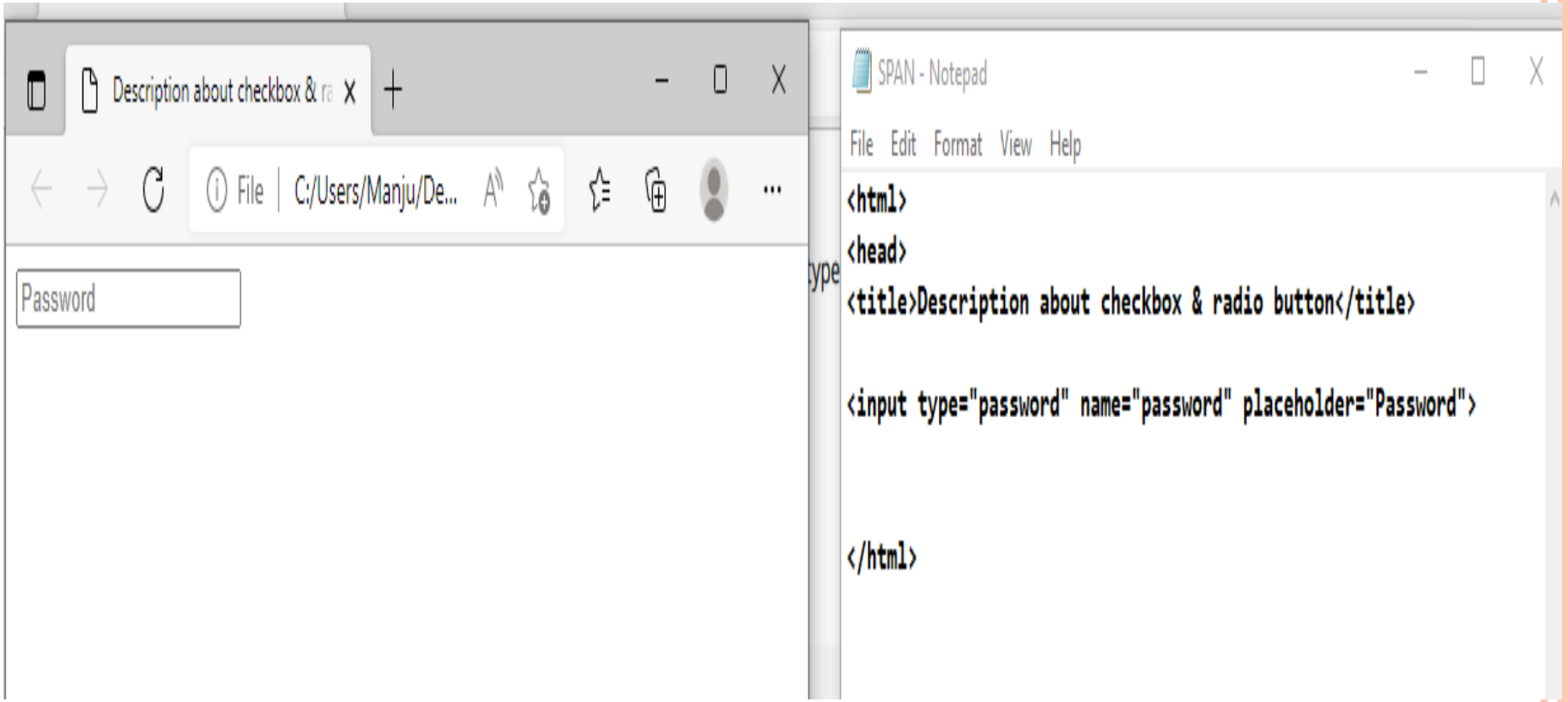
Password

```
<input type="password" name="password">
```

The input element with a type attribute whose value is `password` creates a single-line text field similar to the input `type=text`, except that text is not displayed as the user enters it.

```
<input type="password" name="password" placeholder="Password">
```

Placeholder text is shown in plain text and is overwritten automatically when a user starts typing.


Description about checkbox & ra
File
C:/Users/Manju/De...
Password
SPAN - Notepad
File Edit Format View Help
<html>
<head>
<title>Description about checkbox & radio button</title>
<input type="password" name="password" placeholder="Password">
</html>

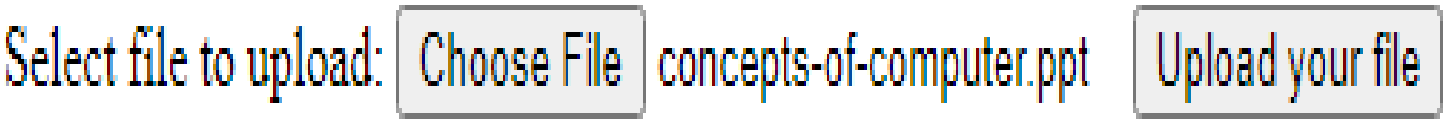
UPLOAD A FILE

```
<input type="file" name="fileSubmission">
```

- EXAMPLE:

```
<form action="upload_file.php" method="post" enctype="multipart/form-data">
    Select file to upload:
    <input type="file" name="fileSubmission" id="fileSubmission">
    <input type="submit" value="Upload your file" name="submit">
</form>
```

•The **enctype** attribute specifies how the form-data should be encoded when submitting it to the server.
•The action attribute specifies where to send the form-data when a form is submitted.



Multiple files

Adding the `multiple` attribute the user will be able to select **more than one** file:

```
<input type="file" name="fileSubmission" id="fileSubmission" multiple>
```

Accept Files

Accept attribute specifies the types of files that user can select. E.g. `.png`, `.gif`, `.jpeg`.

```
<input type="file" name="fileSubmission" accept="image/x-png,image/gif,image/jpeg" />
```

Button

```
<input type="button" value="Button Text">
```

Buttons can be used for triggering actions to occur on the page, without submitting the form. You can also use the `<button>` element if you require a button that can be more easily styled or contain other elements:

```
<button type="button">Button Text</button>
```

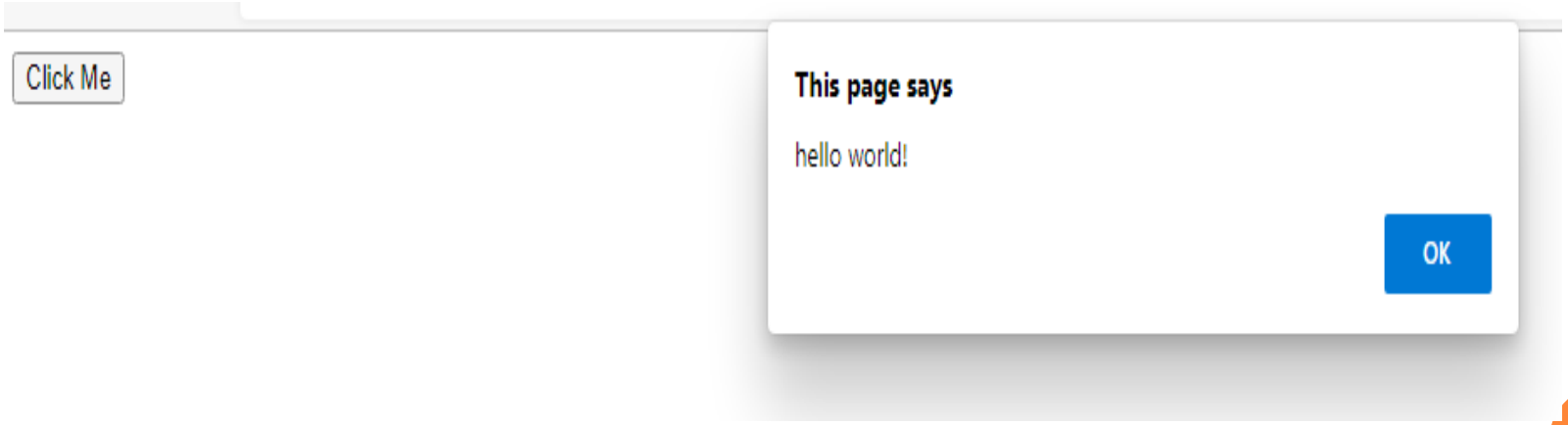
Button Text

Buttons are typically used with an "onclick" event:

```
<input type="button" onclick="alert('hello world!')" value="Click Me">
```

or

```
<button type="button" onclick="alert('hello world!')">Click Me</button>
```



Attributes

[name]

The `name` of the button, which is submitted with the form data.

[type]

The `type` of the button.

Possible values are:

`submit` : The button submits the form data to the server. This is the default if the attribute is not specified, or if the attribute is dynamically changed to an empty or invalid value.

`reset` : The button resets all the controls to their initial values.

`button` : The button has no default behavior. It can have client-side scripts associated with the element's events, which are triggered when the events occur.

`menu` : The button opens a popup menu defined via its designated element.

`value`

The initial value of the button.

Extra Attributes for Submit Buttons

Attribute	Description
`form`	Specifies the ID of the form the button belongs to. If none is specified, it will belong to its ancestor form element (if one exists).
`formaction`	Specifies where to send the form-data when the form is submitted using this button.
`formenctype`	Specifies how the form-data should be encoded when submitting it to the server using this button. Can only be used with `formmethod="post"`.
`formmethod`	Specifies the HTTP method to use (POST or GET) when sending form-data using this button.
`formnovalidate`	Specifies that the form-data should not be validated on submission.
`formtarget`	Specifies where to display the response that is received after submitting the form using this button.

Submit

```
<input type="submit" value="Submit">
```

- A submit input creates a button which submits the form it is inside when clicked.
- You can also use the element if you require a submit button that can be more easily styled or contain other elements:

```
<button type="submit">
  <img src="submit-icon.jpg" /> Submit
</button>
```