

form elements (html forms)

input tag

- > input tag is used create a form elements (input elements)
- > these elements are used to take input/accept data from users.
- > input is un-paired tag and inline element

Syn:

<input attributes>

Note: by default, input tag creates “text field”.

Types of IE → text, password, number, hidden, submit, reset, image, radio, checkbox, date, time, email, url, file, color, range etc...

attributes of input tag:

type → it reps which type of control you want to create.

if we are not specified by default it creates a textbox.

input

type="text|hidden|password|number|button|reset|submit|image|checkbox|radio|file|color|email|url|range|date|time|datetime-local|month|week..."

name → it represents name of control, used in server-side programming (not unique)

id → it represents id of control, used in client-side programming (unique)

value → it used to initialize input elements (default value)

readonly → this attribute not allowed to change the value of control

size → this attribute specifies size of control (width of control)

disabled → this attribute disabled the control

placeholder → this attribute used to display prompting text with in the element

maxlength → this attribute used to set max limit of data (no.of chars)

required ➔ this attribute used to force the user to enter data (mandatory field)

autofocus ➔ this attribute set's cursor position (Default location)

tabindex ➔ this attribute controlling cursor movements (when we r pressing tab key, where cursor is moving)

min ➔ this attribute used to set minimum limit of number value (lower bound)

max ➔ this attribute used to set maximum limit of number value (upper bound)

step ➔ this attribute used to specify incremental & decrement value of number

text fields

>text field used for taking input(any type of data) from user or text box allows us to type data.

>text fields are used for typing of username, first name, pincode, phone, address etc...

>by using "**input**" tag we can create text fields

>user can type any no.of char's but single line, if u want to set a limit use "maxlength" attribute.

>text field allows you to type data in 1 line.

Syn:

<input type="text" attributes/>

Note:

id → used by client-side programming (javascript)

=> unique (duplicate id are not)

name → used by server-side programming
(servlet/asp.net/php...)

=> either unique or not

hidden field

>an in-visible text field with default value is called a "hidden field".

>hidden fields are used to send some information about user/client to a server-side program without asking the user.

>to perform **session tracking**, we are using hidden fields.

>like normal text fields, hidden fields data is also sent to the server when we click the submit button.

Syn:

<input type="hidden" name="NAME" value="VAL" attributes>

password control

> password is a text field but the data is not visible.

> it's used for accepting password, pin, cvv, otp, verification code, passcode... from the user.

> password is displayed as * or dot

Syn:

<input type="password" attributes>

number control

>this control used to accept only numerical value (numbers only) from user

>it prevents typing of alphabets, special chars (in some browsers), except **minus**, **dot** and **e** alphabet.

>but some browser allows to type all these data but given error while submitting form

> some browsers displaying number fields with increment/decrement buttons

SYn:

`<input type="number" attributes>`

attributes:

min =>it rep starting value of number field (by default no min)

max =>it rep ending value of number field (by default no max)

step =>it rep increment/decrement value (by default +1/-1)

general button control

>button control is used to execute some code in the background whenever the user clicked/pressed on that button.

>we can execute either JS or jQuery or Angular

>its standard button (not submit), it is unable to send requests to the server.

> These buttons are used to perform some client-side operations.

> these button values are not sent to the server.

Syn:

`<input type="button" attributes>`

reset button

>reset is one type of button, used for reset the html form/UI, meaning it clears all values of form.

>reset button must be part of the "form" tag.

> these button values are not sent to the server.

Syn:

`<input type="reset">`

submit button

>submit is one type of button, used to submit/send the html forms/page/UI to a server-side program.

>while submitting the html form, all input parameters (enter by user), hidden parameter (by programmer) are prepared as a "Query String"

ex:

<https://www.redbus.in/search.aspx> ? param-name=value¶m-name=value &...

param-name => name of text box or name of password field or name of button...

value => value of text box or value of password field or value of button...

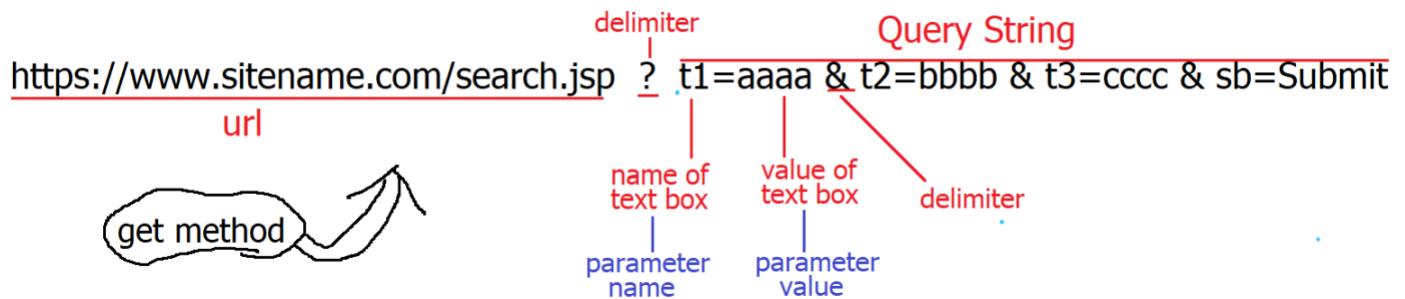
>outside the form, if we design anything that is not submitted to the server and without name attribute also not submittable.

>submit button value also sent to server

Syn:

<input type="submit" value="VAL" attributes>

<form action="search.jsp">



public String getParameter(String param)

String st = request.getParameter("t1")

post

https://www.sitename.com/search.jsp

image button

> "image submit button" is used to submit a form to the server.

> when the user clicks on the image button, browser is submitting data with x-co & y-co of image button

Syn:

`<input type="image" src="filename" .../>`

working with html forms => application form

> form is collection/group of html input elements

> by using <form> tag we can create html form(s) (mean application form)

> web document/page it contains only one body, but a body can contain multiple forms.

> forms are used to collect info from users(ex: signup page, singing page, user registration, product delivery info etc...)

info we collected by using some fields (created by tag) like text field, password, checkbox, radio button, combo-box, list box, date, submit button, etc...

> form is used to submit input values (user's data) to a server-side program.

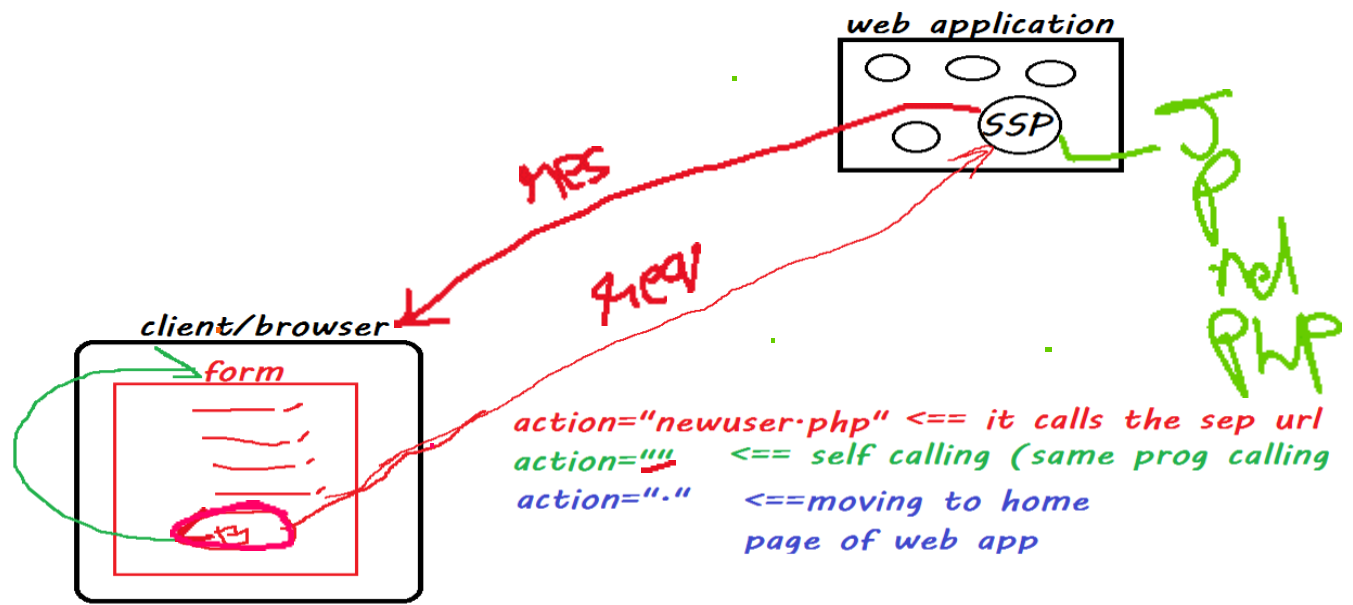
> form is a paired tag & block level

> form tag is sub tag of body tag

Syn: <form attributes>

UI designing

</form>



attributes:

1 action :url represents destination program address or
which program we want to call specify here

diff forms of urls:

<https://www.irctc.co.in>

<https://www.sitenam.com/login.class> | [login.aspx](https://www.sitenam.com/login.aspx) | [login.php](https://www.sitenam.com/login.php) | [login.ns](https://www.sitenam.com/login.ns) | [login.cgi](https://www.sitenam.com/login.cgi) | [login.py](https://www.sitenam.com/login.py)

"" self-calling (its calling/sending data to current prog)

"." home of current application

2 method: it represents the way of sending data from client to server

it supports two ways, those are

get:

> it displaying data in address bar

[https://www.redbus.in/search ?
fromCityName=Hyderabad&toCityName=Guntur&onward=10-Jan-
2022&opId=0&busType=Any](https://www.redbus.in/search?fromCityName=Hyderabad&toCityName=Guntur&onward=10-Jan-2022&opId=0&busType=Any)

> get method stores user inputs in browser history

> it's less secured

> get is a default method

> we can bookmark these pages

> get methods max data limit is 5.7kb

> get is faster than post

> it supports to send text data only

use-case's 🔍 search page, retrieving data from db, ...

Post:

> it not displaying any data in address bar

<https://www.redbus.in/search>

<https://www.irctc.co.in/nget/booking/train-list>

- > post method doesn't store user inputs in browser history

- > it's more secured

- > we can't bookmark these pages

- > post method data no limit

- > post method slower than the get

use-case's ? login page, sign-up page, registration pages, ...

3 target : its rep where to open destination page,

_self, _blank, parent, framename ..

default is _self

4 enctype : it rep in which format we are sending data to server

html support two types, those are

>application/x-www-form-urlencoded

If you want to send data to the server without attachment and file uploading use this method.

It is default option

>multipart/form-data

if u want send data to server with attachment and file uploading

5 autocomplete : it automatically saves data while typing in the UI (textbox, password, address, pincode,)

on/off

on is default

6 novalidate : while submitting html perform some basic validation, if u don't do those validations, switch off this.

check box

>check boxes are used to allow the user to select some options, for example product, class, color selection, sport selection, select branch, select collage etc.

>whenever we want to select more than one option use check box's

>if the checkbox is selected/checked it returns "on" (true) value, if the checkbox is unchecked it returns "off" (false) value.

checked → on (SSP), true (CSP)

un checked → off (SSP), false(CSP)

100cb => same purpose => 100cb name should be same

100cb =>20cb =>purpose games => 20 name should be games

30cb =>purpose sports => 30cb name is sports

50cb => name3

SYn:

<input type="checkbox" attributes>

Note: all check boxes should be created with the same name.

"checked" attribute of the check box makes the checkbox by default checked, while opening the page.

Syn: checked="checked" before html5 ver

checked since html5 ver

radio button

> RB is used to display two or more options to the user, but allows the user to select any one of them.

SYn:

<input type="radio" attributes>

Note:

> all RBs should be created with the same name.

> "checked" attribute of RB makes the RB by default selected, while opening the page.

file

>file used to upload or attachment

>we can upload or attach any type of file, but @time a only one file

Syn <input type="file" attributes>

attributes:

multiple => it allows multiple to upload @time

accept => filtering type of file

Note:

while uploading file method should be "post" and enctype is "multipart/form-data"

color

>used to select color by user, selected color we can apply on any control using JS

Syn: <input type="color">

date & time controls

date

>used to create a date box (date picker/popup calendar), where the user can select a date.

>the browser by default provides a built-in date picker.

Syn: <input type="date" attributes>

time

>used to create a time box, where the user can enter/select time (in the form of hours, minutes and seconds)

Syn:<input type="time" attributes>

datetime

>used to create a date-cum-time control

Syn: <input type="datetime-local" attributes>

month

>used to create a month box, where the user can select a month.

Syn: `<input type="month" ...>`

week

>used to create a week box, where the user can select a week.

Syn: `<input type="week" ...>`

email

>used to create an email textbox, where the user can enter a valid email id only.

>it displays an error message automatically (built-in validation), if the user enters other than email id (should contain @ and .).

Syn: `<input type="email" attributes>`

url

>used to create an url box, where the user can enter a valid url for downloading files or playing videos.

>it displays an error message automatically (built-in validation), if the user enters other than url.

Syn: `<input type="url" attributes>`

range

>used to create a slider bar, based on the specific range.

>this control req min value and max value, if we are not specified then browser takes default values.

Syn: `<input type="range" attributes>`

attributes

min => it sets min value of slider

max => it sets max value of slider

step => it sets increment value

value => sets indicator init position

appearance: slider-vertical;

search

> used to create a search box, where the user can enter some search text, it also displays a clear button to clear the text inside the search box.

Syn: `<input type="search" ... >`

dropdown (combo box) control

>using the "select" tag we can create a dropdown list/CB.

>dropdown list is used to display some options/items to the user and allows the user to select any one of them.

>"option" sub tag of "select" tag.

> "option" tag used to create/to add items/options to dropdown list.

> both are paired tags.

> select is inline element and option is block level element

Syn:<select attributes>

<option attributes> Text </option>

<option> Text </option>

...

</select>

new Syn:

<option> Text </option>

<option value="ws" > text </option>

Note: by default, DDB is displaying 1st added option/item

attributes:

selected : this attribute of "option" tag, used to change default selected option/item of DDB

list box

>using the "select" tag we can create a list box.

>list box is used to display some options/items to the user and allows the user to select any one of them (by default).

> "option" sub tag of "select" tag.

> "option" tag used to create/to add items/options to the list box.

> "size" attribute used to change DDB into List box.

Syn: <select size="N" attributes>

<option attributes> Text </option>

<option> Text </option>

<option> Text </option>

...

</select>

Note: by default DDB is displaying 1st added option

attributes:

selected : this attribute of "option" tag, used to change default selected option/item of DDB

multiple : it allows user to select more than one option @time

size : attribute used to change DDB into List box and no. of options to display @time

option groups

> "optgroup" tag is used to group-up some options/items inside the "select" tag.

> one "select" tag can contain many "optgroup" tags, the "optgroup" tag contains many "options".

> its paired tag

> "optgroup" tag is the sub tag of "select" tag.

Syn:

```
<select>
```

```
    <optgroup label="Text">
```

```
        <option> ..</option>
```

```
        <option> ..</option>
```

```
        <option> ..</option>
```

```
    </optgroup>
```

```
    <optgroup>
```

```
        ...
```

```
    </optgroup>
```

```
</select>
```


textarea

>"textarea" tag is used to create a multi-line textbox.

use case: comments, address, feedback, delivery instr, ...

>its paired tag& inline tag

>it creates a multi-line text box, with default sizes (2row & 20 col)

Syn: <textarea attributes>

init value

</textarea>

attributes:

rows : it rep no.of lines to display @time, if more lines of data entered

automatically scrollbar is activated.

cols : it rep no.of chars per line

maxlength : it rep total no.of chars allowed in textbox.

Note: user can resize the textarea, at runtime in the browser.

progress bar

- > "progress" tag is used to display the progress of a task.
- > to move progress bar dynamically, we have to use "JS"
- > it is a paired tag.

SYn: <progress attributes></progress>

attributes:

min max value

label

- > label tag is used to create heading/prompting messages for elements or controls.
- > label providing description for controls, it gives an idea to user what we have to type.
- > when the user clicks on the label, the cursor will appear in the associated control automatically.
- > its paired tag.

SYn: <label attributes> text </label>

attributes

for : used to specify the id of the control that is associated with the control

Note: labels are not sent to the server while submitting the form.

HTML5 tags

Datalist

Syn: <datalist attributes>
 <option>text</option>
 OR
 <option value="text">

 </datalist>

Mapping: <input type="text" list="datalist-id"/>

output tag

> this tag used to print data/output value on webpage.

> it is paired & inline element.

Syn <output attributes> text </output>

details and summary

> details and summary tags are used to allow the user to expand/collapse some information, when the user clicks on the heading.

> both are paired & block level

> details tag is the main tag and summary is the sub tag of details tag.

Syn:

<details>

<summary>Short info</summary>

Detailed Information

</details>

header

>"header" tag represents header bar, which may include website logo, search box, main links, etc...

>it doesn't provide any styles by default; we have to apply styles manually, using CSS.

>its paired tag.

Syn: <header>

place header content here

</header>

nav

>"nav" tag represents navigation bar, which may include top navigation menus.

>it doesn't provide any styles by default; we have to apply styles manually, using CSS.

>its paired tag.

Syn: <nav>

place menus/links here

</nav>

section

>"section" tag represents a specific section of the page(box or container), which may include main-content/information.

>it doesn't provide any styles by default; we have to apply styles manually, using CSS.

>its paired tag.

Syn: <section>

place main content here

</section>

footer

>"footer" tag represents the footer part of the web page, which may include information of contact, faqs, location, copyrights, etc...

>it doesn't provide any styles by default; we have to apply styles manually, using CSS.

>its paired tag.

Syn: <footer>

place footer content here

</footer>

aside

>"aside" tag represents the "right-side" part of the web page, which may contain ads/other promotional information.

>it doesn't provide any styles by default; we have to apply styles manually, using CSS.

>its paired tag.

Syn: <aside>

place ads/extra info here

</aside>

article

element specifies independent, self-contained content.

- Newspaper articles
- Forum posts
- Blog posts
- User comments

Syn: <article>

place ads/extra info here

</article>

figure

The <figure> element is used for indicating self-contained content. The tag can include images, diagrams, illustrations, code examples, etc.

figcaption

The <figcaption> element is used for adding signature or annotation to the <figure> tag.

Syn: <figure>

Image

`<figcaption> caption/text </figcaption>`
`</figure>`

mark

The `<mark>` element is used to mark a part of the text which has relevance. It **can be used** to highlight a text for showing emphasis, highlight search terms in search results to provide context, or distinguish a new content added by the user by showing it differently

Paired tag & inline

Syn: `<mark> text </mark>`

bdi

The `<bdi>` element is used to isolate bidirectional text when a language with a right-to-left directionality, such as Arabic or Hebrew, is used inline with left-to-right languages

Paired tag & inline

Syn: `<bdi> text </bdi>`

base tag

this tag is used to specify a base URI or URL to use for all relative links contained within an HTML document.

Only one “base” element can be specified within a document, and it must be placed within “head” element.

We can also specify how other links should open using the target attribute.

Its unpaired tag

Syn: `<base href="base-url" target="target"/>`

Audio tag

The `<audio>` is one of the HTML5 elements added to allow embedding audio files to a web page. Since not all browsers support all audio formats, the audio file is encoded using special codecs.

The **<source>** tag or the src attribute is used to indicate the variations of the same audio file. The path to an audio file can contain absolute or relative URLs.

Syn:-

```
<audio attributes></audio>
```

OR

```
<audio attributes>
```

```
    <source src="filename" type="audio/type">
```

```
</audio>
```

Attribute	Definition
------------------	-------------------

src	URL => Specifies the path to the audio file.
-----	--

controls	Displays the control panel (start button, scroll, volume control).
----------	--

If the controls attribute is missing, the audio file will not be displayed on the page.

autoplay	Plays the audio file automatically after loading the page.
----------	--

loop Repeat the audio file from the beginning after its completion.

muted Mutes the sound when the audio file is played.

Video tag

The <video> is one of the HTML5 elements added to allow embedding video files to a web page. Since not all browsers support all audio formats, the audio file is encoded using special codecs.

The <source> tag or the src attribute is used to indicate the variations of the same audio file. The path to an audio file can contain absolute or relative URLs.

Syn:-

```
<video attributes></video>
```

OR

```
<video attributes>
```

```
  <source src="filename" type="video/mp4">
```

```
  ...
```

</video>

Attribute	Definition
-----------	------------

src	URL => Specifies the path to the video file.
-----	--

controls	Displays the control panel (start button, scroll, volume control).
----------	--

If the controls attribute is missing, the video file will not be displayed on the page.

autoplay	Plays the audio file automatically after loading the page.
----------	--

loop	Repeats continuously the audio file from the beginning after its completion.
------	--

muted	Mutes the sound when the audio file is played.
-------	--

width	width of video player
-------	-----------------------

height	height of video player
--------	------------------------

poster	to set wall poster/paper of video
--------	-----------------------------------

frameset & frame

iframe

- > "iframe" stand for inline-frame, html5 rel tag
- > placing one webpage result within another webpage.
- > its paired tag & inline tag

Syn:

<iframe attributes>

</iframe>

att:

src => which page we want to include

srcdoc => it displaying text

width =>

height =>

frameborder => disable/enable border

map tag

- > this is used to map an img to other images or webpages.
- > map tag used to explore internal details about part area of img
- > area is sub tag map tag
- > area tag used to create mapping co-ordi
- > map tag should link img tag by using "usemap" attribute of img
- > map is paired and area is non-paired

Syn:

```
<imgsrc="image">
```

```
<map name="">
```

```
    <area shape="" href="" coords="" alt="">
```

```
    <area shape="" href="" coords="" alt="">
```

```
    ...
```

```
</map>
```

Shape: it rep mapping area shape.

it sup 3 shapes, those are

> circle

> rect

> poly

Hrefits destination url or image

coords shape x and y co-ords

<https://www.image-map.net/>

marquee tag

> used to move text/element in different directions

> its deprecated tag.

> its paired tag

Syn:

<marquee attributes>text|img| component </marquee>

attributes:

direction => down, up, left (default), right

loop => continues moving (default)

scrollamount => 6

scrolldelay => 84ms

behavior => alternate

meta

> data about data means we provide some info/details about a webpage.

> meta is unpaired

> meta is subtag of <head> tag

> by using meta we provide info to browser, search engines, users/programmers.

Define keywords for search engines:

```
<meta name="keywords" content="HTML, CSS, JavaScript">
```

Define a description of your web page:

<meta name="description" content="HTML and CSS tutorial">

Define the author of a page:

<meta name="author" content="SK">

Refresh document:

<meta name="refresh" content="45">

<meta http-equiv="refresh" content="time; url=URL">

Setting the viewport:

<meta name="viewport" content="width=device-width, initial-scale=1.0">