Basic structure

```
<!DOCTYPE html>
<html>
    <head>
        <title></title>
    </head>
    <body>
        body tags and main content
    </body>
</html>
```

The main elements in HTML are the tags. Tags structure and present the data in different forms.

Heading

```
<h1>Heading 1</h1>
<h2>Heading 2 </h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 6 </h6>
```

Paragraph

```
<p>write a paragraph</p>
```
Attribute 'style' can be used with <p> to display the text inside <p> in a specific manner. For example,
```
<p style = "color:blue">I will appear blue</p>
<p style = "background-color:blue">Highlighting as blue</p>
<br> line break
```

Span

Span tag is used for styling inline elements.

```
<span style = "color:green"> Address </span>
```

- prints the word 'Address' in the specified color (here green). The style attribute is used to style HTML elements.

-   – space (non-breaking)
- " - add quotation mark (")
- < - less than symbol (<)
- > - greater than symbol (>)
- & - the '&' or ampersand symbol
- © - copyright symbol
- ™ - trademark symbol

Formatting

- Bold text
- <i>*Italic text*</i>
- <u>*underlined text*</u>
- <mark>I am highlighted in yellow</mark>- marks the text in yellow. If other colors are needed, span is used.
- I am highlighted in pink
- I am strong - give emphasis to a particular text; mostly bold
- - chosen font for the text
- Font is not used in HTML 5, CSS is used. Attributes of <font> -
- **<face>** - the font family, for example Courier New
- **<size>** - size of the text
- **<color>** - color of the text in hex value (eg. #FF000F) or text (eg.red)
- <small></small> - smaller text, fine print size
- <strike>Strike that out</strike> - strikeout the text inside the tag
- - superscript (text above the normal text like exponential numbers)
- - subscript
- - emphasis
- <pre></pre> - preformatted text
- <tt></tt> - typewriter text

Body

<body> - the main content lies in the body. Inside <body> there can be many sections. **Attributes –**

- **background=""** - Background Image source; can be left empty if no image
- **bgcolor=""** - Background Colour in hex value
- **text=""** - page text color
- **link=""** - Link Colour
- **alink=""** - Active (current) Link Colour
- **vlink=""** - Visited Link Colour
- **bgproperties=""** - Background Properties. A value of "fixed" means non-scrolling watermark

- **topmargin="?"** - Top Margin Size in Pixels
- **leftmargin=""** - Side Margin Size in Pixels

Metadata

<meta> tag is a part of **<head>** and describes information about data. Most common use of metadata is by search engines for keywords. **<meta charset = "UTF-8">** - most common character set **Attributes** –

- **name = ""** – can be name like keyword, author, description etc...
- **content = ""** – the value corresponding to above names

Example - <meta name="keywords" content="What is HTML, How to learn HTML">

Sections and divisions

- **<div></div>** new section; nested div tags are very common when multiple sub-sections are required
- **<hr>** - horizontal line

<hr> has the following attributes –

- <hr size = "" width = ""/width = "%" color = "" align = "left/center/right">
- **size** – thickness of the line in pixels
- **width** – in pixels or percentage (any one)
- **color** – color in hex value
- **align** – alignment; left, right or center

Tables

```
<table>
  <tr>
    <td></td>
    <td></td>
    <td></td>
  </tr>
  <tr>
    <td></td>
    <td></td>
    <td></td>
  </tr>
</table>
```

- **<table>** - creates a table,

- **\<tr>** - creates a row,
- **\<td>** - creates column,
- **\<th>** - creates header columns

\<table> attributes –

- **border=""** - Thickness of outside border in pixels
- **bordercolor=""** - Border Colour in hex value
- **cellspacing=""** - Space between each cell in pixels
- **cellpadding=""** - Space between cell border and content
- **align=""** - Horizontal Alignment; left, right, center
- **bgcolor=""** - Background Colour hex value
- **width=""** - Table Width in pixels or %
- **height=""** - Table Height in pixels or %

\<td> attributes

- **colspan=""** - Number of columns the cell spans across
- **rowspan=""** - Number of rows cell spans across
- **width=""** - width of cell in pixels or %
- **height=""** - height of cell in pixels or %
- **bgcolor=""** – hex value of background colour for the cell (column)
- **align=""** - Horizontal Align; left, center, right
- **valign=""** - Vertical Align; top, middle, bottom
- **\<colgroup>** - is used to define attributes for particular columns of the table.

Example –

```
<colgroup>
   <col span="1" style="background-color:green">
   <col style="background-color:blue">
</colgroup>
```

The first column will be highlighted as green, whereas other columns will be highlighted as blue.

Forms

Most of the dynamic content like user inputs, submitting a page, filling a form happen inside this tag. It is a group of related inputs.

```
<form>
   <input>
      <select><option></option></select>
```

```
        <textarea>
</form>
```

<form> tag attributes –

- **action="url"** - destination url upon form submission
- **method=""** - form method - get, post
- **enctype=""** - type of encoding; for file upload it is "multipart/form-data"

<input> tag attributes –

- **type=""** - Mandatory input Field Type: text, password, checkbox, submit and so on.
- **name=""** - Form Field Name (mandatory for form processing)
- **value=""** - value (entered by user) or default value
- **size=""** - field size
- **maxlength=""** - Maximum acceptable length of Input Field data
- **checked** - Mark selected field in checkbox (multi-select) or radio button (single-select)

<select> </select> - Select options from drop-down list **<select> tag Attributes:**

- **name=""** - Drop Down Combo-Box Name; mandatory for form processing
- **size=""** - size of the drop-down list
- **multiple** - Allow multiple selections

<option></option> - individual items of the drop-down list **<option> tag Attributes:**

- **value=""** - Option value selected or default value set
- <textarea>lot of text like description </textarea> - Large area for text inputs

<textarea> Tag Attributes:

- **name=""** - Text area name for form processing
- **rows=""** - Number of rows of text shown
- **cols=""** - Number of columns (characters per row)
- **wrap=""** - text wrapping

iframe

- **<iframe src=""></iframe>** - embed another document within the current document (page) in a frame.
- Attribute **"src"** – location of the document to be embedded

Links

HTML links, also called as hyperlinks are defined by 'a' tag – <a> **Attributes** –

- **href** = "" – the url to be visited when the link is clicked
- **target** = "" – specifies where to open the link - _blank (new tab/window), _self (same window/tab), _parent (in the parent frame), framename – open in a particular frame.
- **title** = "" – gives information about the element
- **id** = "" – to create bookmarks in the page that can be used as value in href attribute.

Examples –

- Go to hackr.io
- Open a resource from the given location
- Reach a div element specified by the name

Styles

For styling, there are many attributes being used with various tags. The attributes are –

```
<style>
    text-align= "" – align text; left, right, center
    background-color = "" – background color of the element
    color="" – for color of texts
    font-family = "" – for various fonts
    font-size = "" size of the font
    border = "" – border thickness and color for a table
</style>
```

These styling elements are put together in a CSS.

Lists

There are two types of lists – ordered and unordered. - ordered list **Attributes** –

- **type**="" – the numbering of the list – A, a, I, 1, i
- **start** = "" – starting value
- - unordered list

Attributes –

- **type** = "" – **type of bullet** – square, circle, disc
- - individual value in the list

Attributes –

- <value> = "" – value of list item
- <type>="" – type of the list item

Images

<img> - shows the image when page loads Attributes –

- src ="sourceofimage" – source of the image; url or file location; mandatory
- alt = "alternate text" – alternate text; mandatory
- align = "left/right/center" – alignment with respect to surrounding items (text)
- width = "" – in pixels or percentage
- height = "" - in pixels or percentage
- border = "" – thickness of the border in pixels
- hspace = "" – space in pixels on the sides of the image
- vspace = "" – space in pixels on top and bottom of the image

HTML5 Tags

- <aside> - content that is not part of any element, but has to be put alongside the main content
- <figure> - any illustration like photos, diagrams, code listing and so on.
- <figcaption> - caption for the <figure> element
- <header> - A section's heading (similar to that in MS word), header can have other content like navigation links, forms etc…
- <footer> - the content at the bottom of the page/section eg. copyright information, terms and conditions etc…
- <main> - the tag is an indicator of where the main content of the page starts
- <details> - box with expand/collapse functionality to allow for more text space
- <summary> - summary of content of the particular element. Can be description, caption etc…
- <mark> - highlight part of a text to give prominence
- <nav> - section with navigation links to sections on a page or to other pages
- <section> - a particular part (group) on the page, for example, about us or testimonials section of a web page
- <time> - the mentioned time in machine-readable format. It can have date, time, time-zone offset, durations etc…
- <datalist> - similar to autocomplete; defined preset options for input controls
- <keygen> - key pair (public and private) generator for forms. Public key is sent to server when form is submitted, while the private key is stored in the local keystore
- <output> - result of any calculations
- <progress> - indicates task progress through a progress bar
- <embed> - embed media from external source
- <source> - source for audio or video