- The visible part of the HTML document is between `<body>` and `</body>`.
- HTML headings are defined with the `<h1>` to `<h6>` tags. `<h1>` defines the most important heading. `<h6>` defines the least important heading:
- The visible part of the HTML document is between `<body>` and `</body>`.

Headings

- It is important to use headings to show the document structure. `<h1>` headings should be used for main headings, followed by `<h2>` headings, then the less important `<h3>`, and so on.
- `<h1>` defines the most important heading.
- `<h6>` defines the least important heading.

```html
<h1>Heading 1 - The largest heading </h1>
<h2>Heading 2</h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 6 - The smallest heading </h6>
```

Paragraphs

- The HTML `<p>` element defines a paragraph.

```html
<p> Hello </p>
```

- A paragraph always starts on a new line and browsers automatically add some white space (a margin) before and after a paragraph.

Links

- `a` tag is used to create links
- `href` is called as attribute and mentions where to go to when the link is clicked

```html
<a href="test.html">click me!</a>
```

- There are three types of link - internal, external, bookmark links
- Internal links point to web pages within the same server

```html
<a href="test.html">click me!</a>
```

```
<img src="independence.jpg" alt="Independent India">
```

4. Images can be adjusted in size using **style** attribute or using **height/width** attribute.

```
<img src="img01.jpg" alt="kerala" style="width:500px;height:600px;">
```

```
<img src="img01.jpg" alt="kerala" width="500px" height="400px">
```

5. Images loaded from the same server are called as Internal Images.

```
<img src="Lucifer.jpg" alt="Mohanlal" width="500px"  height="400px">
```

6. Images loaded from other server/computer/website are called External Images.

```
<img src="https://upload.wikimedia.org/wikipedia/commons/thumb/c/cb/Mohanlal_Viswanathan_Nair_BNC.jpg/220px-
Mohanlal_Viswanathan_Nair_BNC.jpg" alt="Mohanlal"width="500px"  height="400px">
```

7. Animated GIFs can be displayed using **img** tag.

```
<img src="globa.gif" alt="ready to race" style="width:70px;height:100px;">
```

8. Images can be made into hyperlinks by placing them inside the **a** tag.

```
<a href="newpage.html"><img src="mammoty.jpg"></a>
```

Picture Element

- The **<picture>** tag gives web developers more flexibility in specifying image resources.
- The **<picture>** element contains two tags: one or more **<source>** tags and one **<img>** tag.
- The browser will look for the first **<source>** element where the **media** query matches the current viewport width, and then it will display the proper image (specified in the srcset attribute). The **<img>** element is required as the last child of the **<picture>** element, as a fallback option if none of the source tags matches.

```
     <li>  </li>
   </ol>
```

Definition List

- The `<dl>` tag defines the description list, the `<dt>` tag defines the term (name), and the `<dd>` tag describes each term.

```
<dl>
  <dt>Coffee</dt>
  <dd>- black hot drink</dd>
  <dt>Milk</dt>
  <dd>- white cold drink</dd>
</dl>
```

Elements & Attributes

- An HTML element is defined by a start tag, some content, and an end tag:
- Some HTML elements have no content (like the `<br>` element). These elements are called empty elements. Empty elements do not have an end tag!
- HTML elements can be nested (this means that elements can contain other elements).

```
<body>
    <h1>My First Heading</h1>
    <p>My first paragraph.</p>
</body>
```

- HTML tags are not case sensitive: <P> means the same as <p>(demands lowercase for stricter document types).
- Attributes provide **additional information** about elements
- The `<a>` tag defines a hyperlink. The `href` attribute specifies the URL of the page the link goes to.

```
<a href="https://www.mashupstack.com">Click Here</a>
```

- The `<img>` tag is used to embed an image in an HTML page. The `src` attribute specifies the path to the image to be displayed.

```
<img src="img.jpg">
```

- The `<img>` tag should also contain the `width` and `height` attributes, which specifies the width and height of the image (in pixels).

```
<i>Italic</i>
<b>Bold</b>
<em>Emphasis</em>
<strong>Strong</strong>
<small>Small</small>
<del>Deleted</del>
<ins>Inserted</ins>
<sub>Subscript</sub>
<sup>SuperScript</sup>
<mark>Mark</mark>
```

Quotations

- `<blockquote>`:-Defines a section that is quoted from another source.

Marquee

- The `<marquee>` tag is used to create marquee: This scrolling text can be displayed either horizontally across or vertically in your web page.

```
<marquee direction="right">Example of marquee</marquee>
```

Comment

- Comments are not displayed by the browser, but they can help document your HTML source code.

```
<!-- Write your comments here -->
```

Inline & Block Elements

- There are two display values: block and inline.
- A block-level element always starts on a new line and takes up the full width available.
- An inline element does not start on a new line and it only takes up as much width as necessary.

Span and Div

- The `<div>` element is a block-level and is often used as a container for other HTML elements.

Iframes

- The HTML `<iframe>` tag specifies an inline frame.

  ```
  <iframe> </iframe>
  ```

- The `src` attribute defines the URL of the page to embed.

  ```
  <iframe  src="https://www.example.com"></iframe>
  ```

- Always include a `title` attribute (for screen readers).
- The `height` and `width` attributes specifies the size of the iframe.

  ```
  <iframe width="400" height="300"
  src="https://www.example.com"></iframe>
  ```

- Use `border:none;` to remove the border around the iframe

Head Tag

- The `<head>` element is a container for metadata (data about data) and is placed between the `<html>` tag and the `<body>` tag.
- Metadata is data about the HTML document. Metadata is not displayed.
- Metadata typically define the document title, character set, styles, scripts, and other meta information.
- The following elements can go inside the <head> element:
  - <title> (required in every HTML document)
  - <style>
  - <base>
  - <link>
  - <meta>
  - <script>
  - <noscript>

Script & Link Tag

Meta Tag

- The `<meta>` element defines which character set is used, page description, keywords, author, and other metadata.

```html
<meta charset="UTF-8"> <!---to define the character set-->

<meta name="description" content="Html tutorials"><!---to define a description of your web page-->

<meta name="keywords" content="HTML,CSS,XML,JavaScript"><!---to define keywords for search engines-->
```

- The viewport will vary depending on the device. It will be smaller on a mobile phone, a bit more larger in a tablet and much larger in a laptop screen.

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

- **Cookies** are extra information that the server sends to the browser to track the users. This is used to personalize the content for the user and also to get the user based analytics. This method is no longer used and disabled by browsers.

```html
<meta http-equiv="Set-Cookie" content="key=value">
```

HTML Entities

- Character entities are used to display reserved characters in HTML.
- It can be entity name or entity number. For example:- To display a less than sign (<) we must write:< or <

Forms in HTML

- Forms are used to get input from user.
- A form contains **form elements** such as text input, radio buttons, checkbox, textarea, select box etc.

```html
<form>
form elements..
form elements..
</form>
```

- A form has the following attributes:-
  - method
  - action
  - target (not important)

- **enctype** specifies the encoding that needs to be done while submitting a form.

```html
<!DOCTYPE html>
<html>
<head>
    <title></title>
</head>
<body>
    <form action="register.php" method="post" enctype="multipart/form-data">
        ...
        ...
    </form>
</body>
</html>
```

Form Elements

- The `<input>` element is the most important form element and it is displayed in several ways, depending on the type attribute.Such as Textfield,RadioButton,SubmitButton etc.
    - `<input type="text">` defines a single-line input field for text input.
    - `<input type="radio">` used when out of many options, just one option is required to be selected.
    - `<input type="submit">` defines a button for submitting the form data to a form-handler.
- The HTML `<textarea>` tag is used within a form to declare a textarea element - a control that allows the user to input text over multiple rows.
- The `<label>` tag defines a label for many form elements.The for attribute of the `<label>` tag should be equal to the `id` attribute of the `<input>` element to bind them together.
- The `<fieldset>` element is used to group related data in a form.The `<legend>` element defines a caption for the `<fieldset>` element.
- The `<button>` element defines a clickable button.

Input Types

- In HTML `<input type=" ">` is an important element of HTML form. The "type" attribute of input element can be various types, which defines information field.
- `text` defines a single-line text input field.
- `password` defines defines a password field.
- `color` is used for input fields that should contain a color.

- The input `step` attribute specifies the legal number intervals for an input field.
- The input `value` attribute specifies an initial value for an input field.
- The input `autofocus` attribute specifies that an input field should automatically get focus when the page loads.
- The input `placeholder` attribute specifies short a hint that describes the expected value of an input field.

Audio and Video Tags

- `video` tag is used to show video in a page while `audio` tag is used to show the audio
- Both of them have `controls` attribute which is used to show the play and pause buttons
- Both audio and video tags have `source` element that specifies the media file and its url is provided in the `src` attribute
- The code looks like this:-

```html
<!DOCTYPE html>
<html>
<body>
    <!-- Code for Video  -->
    <video controls width="400" height="300" autoplay>
        <source src="/media/examples/flower.webm" type="video/webm">
        <source src="/media/examples/flower.mp4" type="video/mp4">
        Sorry, your browser doesn't support embedded videos.
    </video>
    <!-- Code for audio -->
    <audio controls>
        <source src="/build/audios/jingle_bells.ogg" type="audio/ogg">
        <source src="/build/audios/audio.mp3" type="audio/mpeg">
    </audio>
</body>
</html>
```

Embed Youtube Video

- Upload the video to YouTube.
- Take a note of the video id.
- Define an <iframe> element in your web page.
- Let the src attribute point to the video URL.
- Use the width and height attributes to specify the dimension of the player.
- Add any other parameters to the URL.

`<details>`	Defines additional details that the user can view or hide
`<dialog>`	Defines a dialog box or window
`<figcaption>`	Defines a caption for a `<figure>` element
`<figure>`	Defines self-contained content, like illustrations, diagrams, photos, code listings, etc.
`<footer>`	Defines a footer for the document or a section
`<header>`	Defines a header for the document or a section
`<main>`	Defines the main content of a document
`<mark>`	Defines marked or highlighted text
`<menuitem>`	Defines a command/menu item that the user can invoke from a popup menu
`<meter>`	Defines a scalar measurement within a known range (a gauge)
`<nav>`	Defines navigation links in the document
`<progress>`	Defines the progress of a task
`<rp>`	Defines what to show in browsers that do not support ruby annotations
`<rt>`	Defines an explanation/pronunciation of characters (for East Asian typography)
`<ruby>`	Defines a ruby annotation (for East Asian typography)
`<section>`	Defines a section in the document
`<summary>`	Defines a visible heading for a `<details>` element
`<time>`	Defines a date/time
`<wbr>`	Defines a possible line-break

Canvas

- A canvas is a rectangular area on an HTML page. By default, a canvas has no border and no content.
- Always specify an `id` attribute (to be referred to in a script), and a `width` and `height` attribute to define the size of the canvas. To add a border, use the style attribute.

```
<canvas id="myCanvas" width="200" height="100"></canvas>
```

SVG

- SVG stands for Scalable Vector Graphics.
- SVG is used to define graphics for the Web
- The HTML `<svg>` element is a container for SVG graphics.

Web Storage

<mark>	Defines marked or highlighted text
<menuitem>	Defines a command/menu item that the user can invoke from a popup menu
<meter>	Defines a scalar measurement within a known range (a gauge)
<nav>	Defines navigation links in the document
<progress>	Defines the progress of a task
<rp>	Defines what to show in browsers that do not support ruby annotations
<rt>	Defines an explanation/pronunciation of characters (for East Asian typography)
<ruby>	Defines a ruby annotation (for East Asian typography)
<section>	Defines a section in the document
<summary>	Defines a visible heading for a <details> element
<time>	Defines a date/time
<wbr>	Defines a possible line-break

List of the new HTML5 Form Elements.

HTML5 added the following form elements:

1. <datalist>

2. <keygen>

3. <output>

List of the new HTML5 Input Elements, and Input Attributes.

New Input Types	New Input Attributes
• color • date • datetime • datetime-local • email • month • number • range • search • tel • time • url • week	• autocomplete • autofocus • form • formaction • formenctype • formmethod • formnovalidate • formtarget • height and width • list • min and max • multiple • pattern (regexp) • placeholder • required • step

- All tags need to be indented with 2 spaces

- Images need to be provided with alt, height and width attributes

- Meta viewport, meta charset, lang attribute should be added to html pages

- All html documents should have html or htm extension

- Ignore the type attribute when external CSS or external CSS is loaded

- Provide proper single-line/multi-line comments in the html code

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