Html HyperText Markup language

* New features in html5: indexDB, audio and video support, semantic tags
* Different tags are to create a good structure and specific tags tell search engines what they should anticipate in that tag. By using the right tag search engines and robots can understand and show our websites better on their search pages.

## <doctype> and <html></html>

* **<!DOCTYPE html>** //Doctype is not an HTML tag, it tells the browsers the file is an html file, and you can define the version of HTML. But it's better if you don't define the version. Comes before any other tag
* **<html lang="en" dir="rtl"></html>** //main tag

## Comments in Html

* **<!-- -->**
* You can remove comments in live usage

Attributes

* width="450"
* height="200"
* class="main" // use for multiple elements. Used to find an element
* id="main" //unique value
* dir="rtl"
* data = ""

Tags

## Head

* **<title>main page</title>**
* **<style></style>**

**Metadata**

* Are used for search engine robots, and by them, these robots understand more about our website. Some of these meta tags are understood by browsers, like charset.
* <meta charset="utf8">
* <meta name="" content=""> // name: author, description
* <meta name="keyword" content="">
* <meta name="viewport" content="width=device-width, initial-scale=1.0" />
* <meta property="og:image" content=""> // open graph data. og:image, og:description, og:title, similar to above. Telegram robots, for example, can read these metas and show the right content.
* <meta rel="alternate" type="application/rss+xml" title="" href="">

**link**

* <link rel="stylesheet" hreft="" media="all" title=""> // media options: all, print, screen, speech
  + title property // to show a text on hover. Default browser property.

## Heading

* h1, h2, h3 ,h4, h5, h6
* important in optimization for search engines(SEO)
* every page should have one h1, at most two to three h2 and any number of h3

## paragraph

* For content and longer texts

## emphasis

* To tell the user and SEs robots what part of the text is more important
* <em></em> // makes the text italic. The <em> HTML element marks text that has stress emphasis. The <em> element can be nested, with each level of nesting indicating a greater degree of emphasis.
* **<strong></strong>** //bold, <b></b> was used in the past but now <strong> is recommended.

## hr horizontal rule and br

* **<hr> or <hr /> or </ hr>** // single tag
* **<br> or <br /> or </ br>** // single tag, breaks the line

## Image

* **<img src="./file.jpg" alt="alternative text">** //src is an attribute that image tag has. In the network tab in the chrome dev tool, you can see what files are loaded. Alt is used for SEO and when the image couldn't load.

## ul (unordered list) and ol (ordered list)

* **<li></li> // list item**
* **<ol><li></li></ol>** // the put a number before the li

## Link – a tag

* To direct users to other pages, internal or external links.
* <a href="" target="\_blank"></a> // \_blank opens the the link in another tab.
* <a href="[**tel:+98**](tel:+98)"></a> // if your system has a calling application it directs it to the call.
* <a href="**mailto:a@g.com**"></a>

## Tables

* <table> <tr> <td></td></tr></table> // tr: table row, td: table data. You can use any type of tag in table tds.

<table>

<thead>

<tr>

<**th**></**th**>

<**th**></**th**>

<**th**></**th**>

</tr>

</thead>

<tbody>

<tr>

<td><td>

<td><td>

<td><td>

</tr>

</tbody>

</table>

## Video and audio (html5)

**Video**

* It's better to use **mp4** format
* **<video src="">text</video>** // if the source was not supported text will be shown
* **<source src="" />** is a single tag you put inside video tag, you can put the src attribute directly in the video. The difference is that by source tag we can set different formats for videos and customize them on the browser that supports them.
* **controls attribute** // controllers can differ in different browsers and we can customize them with javascript
* **poster=""** // it allows us to show a default poster before starting the video

<video controls width="720" height="350" poster="https://roocket.ir/public/images/2019/7/5/optimize.png">

<source src="./static/1-what-is-html.mp4">

Your Browser dose not support the video Tag

</video>

**audio tag**

* similar to video
* preload="auto" // it loads it when loading the page, and you can play it

<audio controls>

<source src="./static/12-best-freelancer.mp3">

</audio>

## form

* forms
* **action="URL"** // send the data to this URL
* **method ="post"** // the sent data is not visible to the user
* **method ="get"** // send data via URL, you can change them by modifying the value in the URL

**input**

* **<input type="">** // single tag. In html5 you can have input with different types.
* types:
  + **text**
  + **date**
  + **submit** // value ="name"
  + **radio** //Grouping: To only chose one radio put the same name for all radios in a group.
  + **email** // the browser check the format
  + **password**

<input type="password" id="password" name="password" minlength="3">

* + **password-confirm**
  + **checkbox**
  + **Search** // in modern html

**Input Properties**

* **value=""** // it is shown in the input as the default value
* **placeholder=""** // the default shown text in input type="text" and textarea
* **onsubmit =""**
* **onblur=""** // activated when you click out of the input.

**label**

* **<label></label>** // is used to clarify what the input is for. It's the title of the input. If you wrap the input in the label, clicking on the label activates the input
* Another method is to use for="id"

<label for="**name**"> Sarah </label> <input type="text" id="**name**">

* **name=""** // it is needed to get the value on the server side. The names in the get value are shown in the url like name=Sarah. If we use the post for method in the form tag, it won't be added to url.

<label>Sarah <input type="checkbox" name=""></label>

<label>Derry <input type="radio" name=""></label>

**textarea**

* for multi-lines texts
* cols and rows // to change the default size

<lable for="id"></label>

<textarea name="body" cols="10" rows="20"></textarea>

**button**

* this is a more newly used method than input type="submit"
* <button></button>

**select box**

* <select name=""><option value="item1"></option></select>
* Value // the value is not shown in the options. You have to put the text inside as the option shown text.

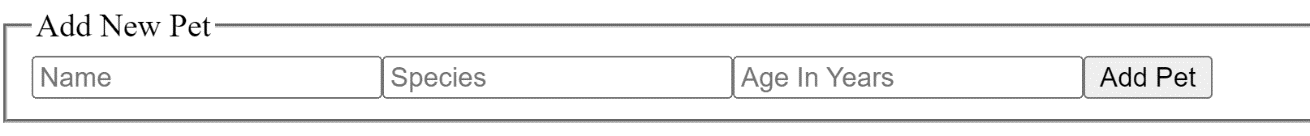
<select name="category">

<option value="item1">item1</option>

<option value="item2">item2</option>

<option value="item3">item3</option>

</select>

**fieldset - legend**

<form onSubmit="">

<fieldset>

<legend>Add New Pet</legend>

<input placeholder="Name" />

<input placeholder="Species" />

<input placeholder="Age In Years" />

<button>Add Pet</button>

</fieldset>

</form>

## Iframe

* To show the content of another website on our website
* It is used for example for player websites like YouTube, to play a video from YouTube on our website, without setting a video tag.
* These websites give us the option to share their videos using script, iframe, or AMP.
* <iframe src="" ></iframe>

<iframe src="quora.com" >

#document > html > head > body

</iframe>

## Div division

* It helps to divide the different parts of our page

## Span

* Usually divide strings

## Blockquote

* <blockquote> </blockquote>

Semantic tags html5

* Readability, and SEO
* <header></header>
* <nav></nav> // we can have more than one navbar
* <footer></footer>
* <aside></aside> // a side section
* <article></article>
* <figure></figure> // to use in an article for example
* <section></aside> // it is used similar to div

## Section

* The content of the section is connected to each other in meaning. And the SE understands that the content is somehow connected.
* It is used to list posts, articles, and

## Article

* The content of the article can be distributed or reused independently in another place. Meaning that x can be copied and reused in another place without losing meaning or functionality.
* For example in reviews every review is an independent concept, so we can use articles for every review.

Short Codes

* &nbsp; // space
* &laquo; // arrow to left

**HTML**

* <noscript> text </noscript> // This tag shows a message to the user when the script engine in the browser is not available.
* <meta name="viewport"> // Meta tag response. Most simply, when a user resizes a screen by this tag and content, It'll resize the font.

<meta name="viewport" content="width=device-width, initial-scale=1" />

* SVG, Scalable Vector Graphics is an XML-based vector image format for two-dimensional graphics with support for interactivity and animation. It has a higher quality when zooming.

Nesting Rules

* P: Cant have children that are:
  + ul
  + h1-h4