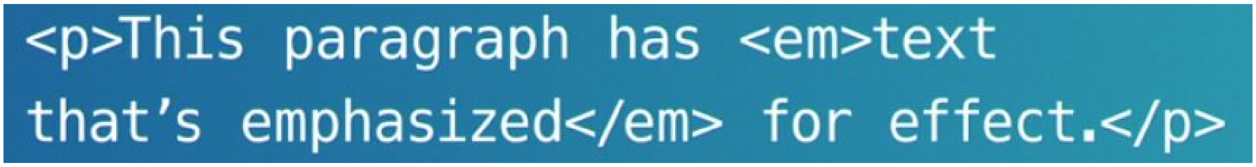
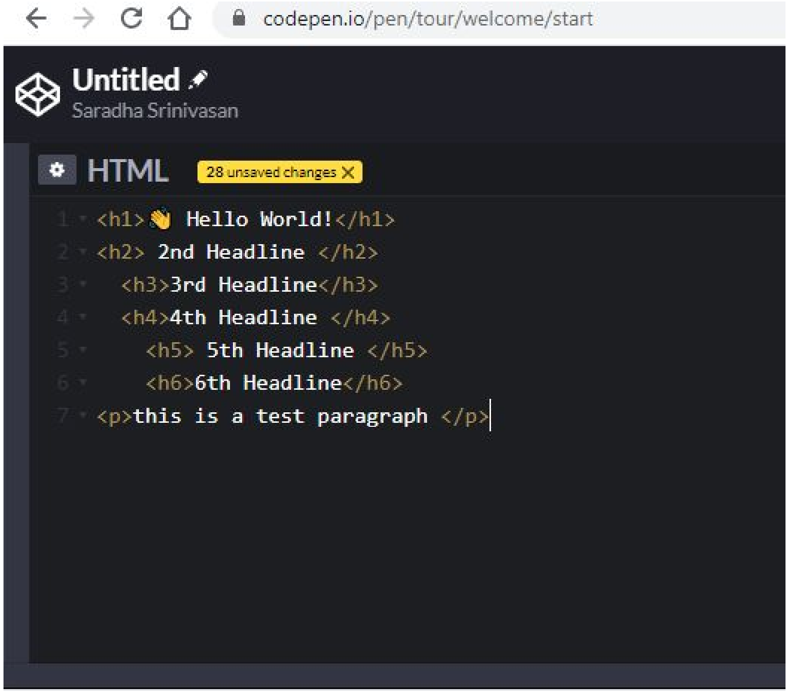
**HTML:**

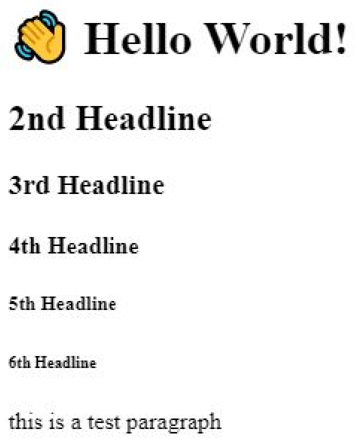
1. A HTML tag can be nested inside another HTML tag. Ex:
2. 

```
<p>This paragraph has <em>text
that’s emphasized</em> for effect.</p>
```

3. Codepen.io - where it is like a sandbox and you can play with HTML code
4. HTML markup for headlines:
   a. There are 6 markups for headlines: <h1> to <h6>



```
<h1>👋 Hello World!</h1>
<h2> 2nd Headline </h2>
  <h3>3rd Headline</h3>
  <h4>4th Headline </h4>
    <h5> 5th Headline </h5>
    <h6>6th Headline</h6>
<p>this is a test paragraph </p>
```



👋 Hello World!

2nd Headline

3rd Headline

4th Headline

5th Headline

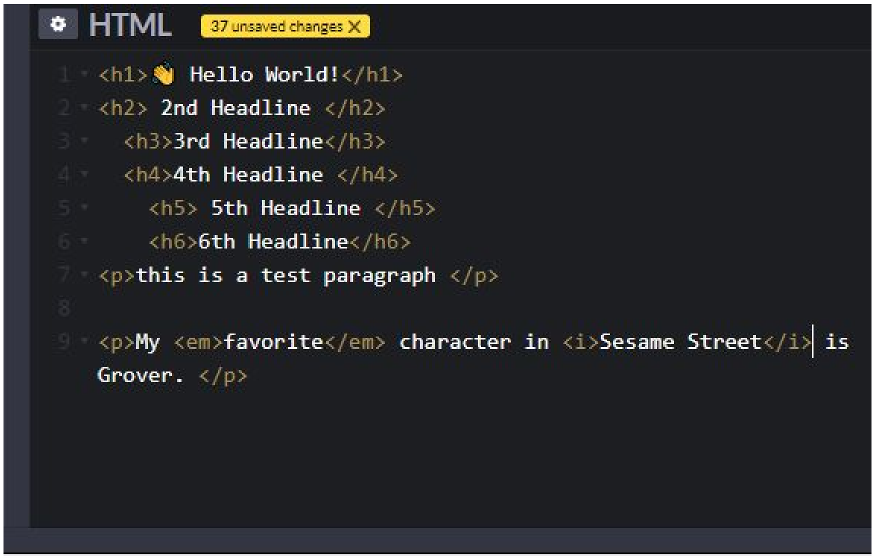
6th Headline

this is a test paragraph

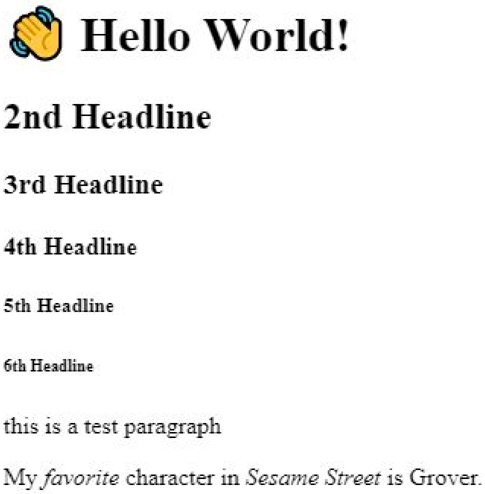
   b.

5. Bold and Italics:
   a. There can be 2 reasons to italicize: 1. To emphasize the importance 2. To make a Visual Impact

b. For ex: My *favorite* character in *Sesame Street* is Grover. - Here ‘favorite’ is emphasized for importance and ‘Sesame Street’ is italicized to visually show its a TV show.
c. 2 HTML tags are available to italicise: 1. For emphasizing 2. For visually showing
d. <i> tag is for Visual impact <em> is for emphasizing or showing something is important.



```
<h1>👋 Hello World!</h1>
<h2> 2nd Headline </h2>
  <h3>3rd Headline</h3>
  <h4>4th Headline </h4>
    <h5> 5th Headline </h5>
    <h6>6th Headline</h6>
<p>this is a test paragraph </p>

<p>My <em>favorite</em> character in <i>Sesame Street</i> is
Grover. </p>
```



👋 **Hello World!**

**2nd Headline**

**3rd Headline**

**4th Headline**

**5th Headline**

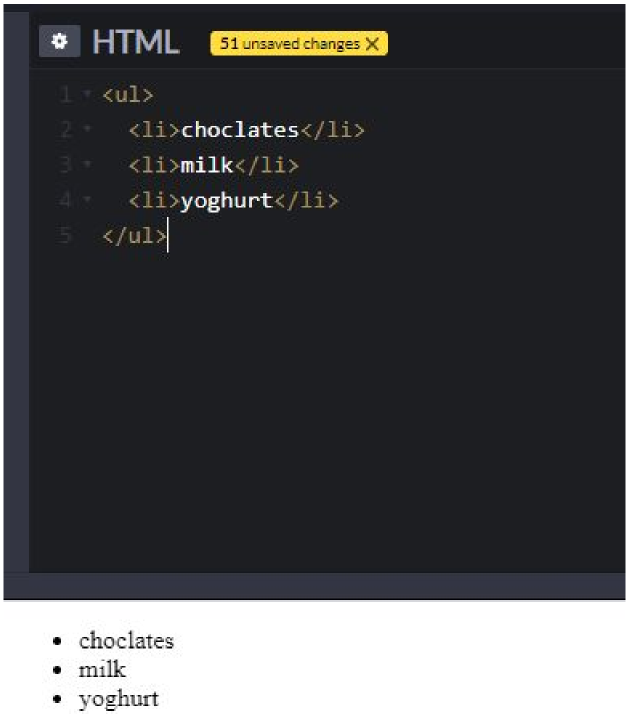
**6th Headline**

this is a test paragraph

My *favorite* character in *Sesame Street* is Grover.

e.
f. Similarly, for ‘Bold’ there are 2 tags.
g. <strong> - Importance, seriousness, urgency
h. <b> Bold - just a simple tag like <i> - there is no special meaning to it.

6. Lists:
   a. 3 kinds: 1. Unordered lists 2. Ordered lists 3. Definition lists
   b. <li> - list item
   c. <ul> - unordered list - grocery list

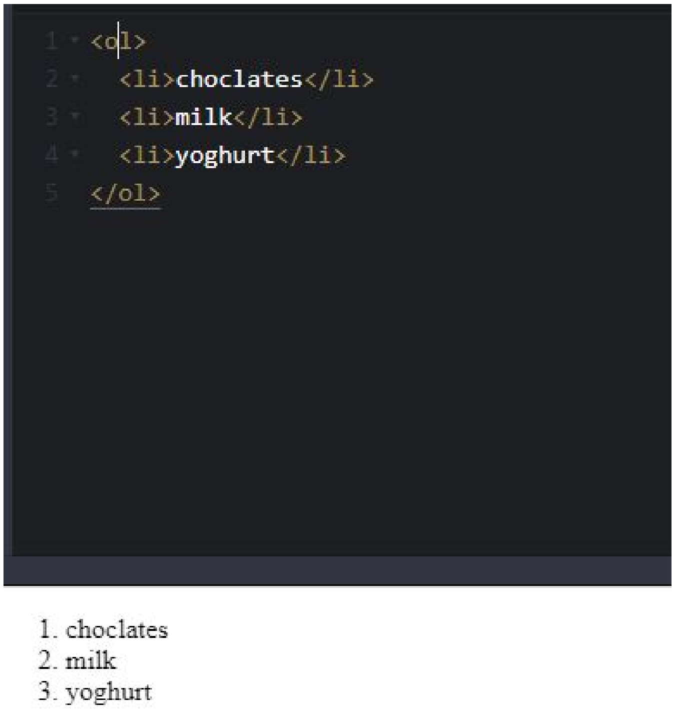


```
<ul>
  <li>choclates</li>
  <li>milk</li>
  <li>yoghurt</li>
</ul>
```

- choclates
- milk
- yoghurt

d.

e. <ol> - ordered list - step by step recipe

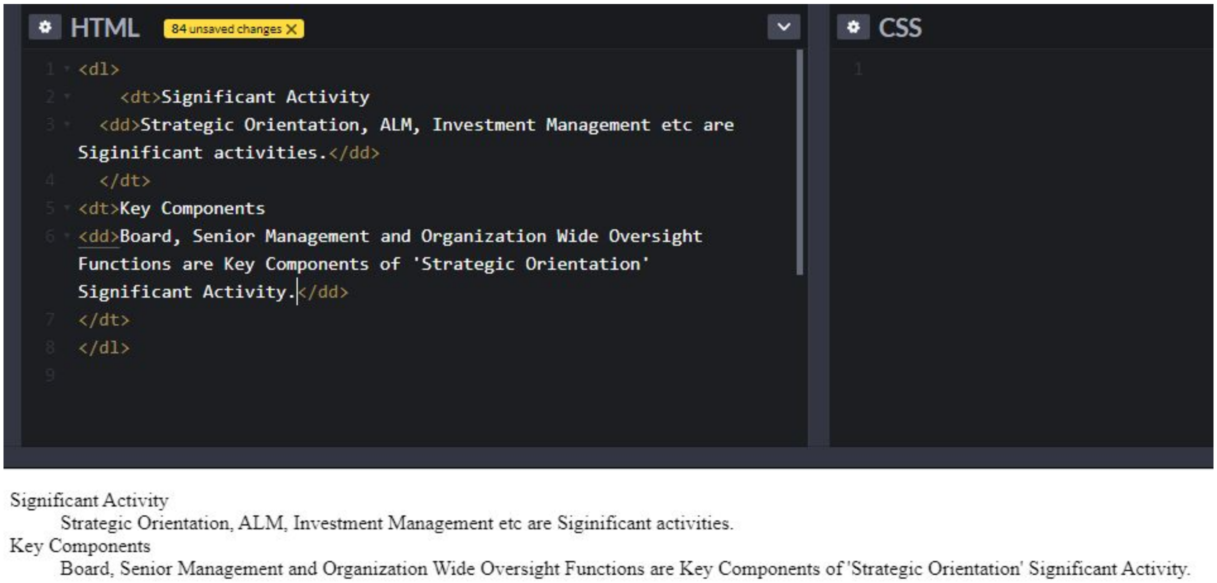


```
<ol>
  <li>choclates</li>
  <li>milk</li>
  <li>yoghurt</li>
</ol>
```

1. choclates
2. milk
3. yoghurt

f.

g. <dl> - Definition list - for Key value pair : like we have an item and a definition for that item. <dt>term></dt> - Definition Term, <dd>Definition</dd>. We can have more than 1 <dd> for 1 <dt>.

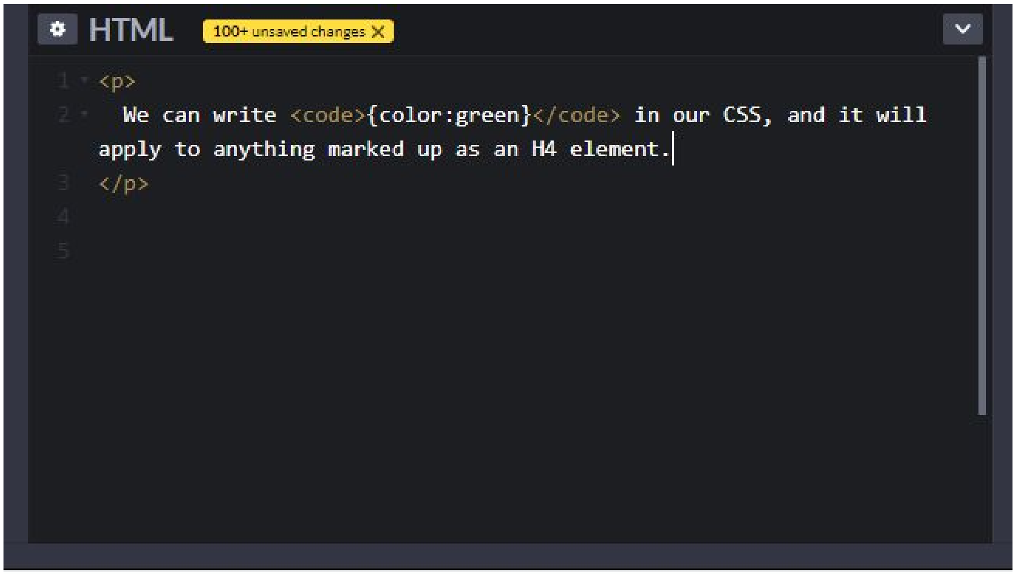


```
<dl>
    <dt>Significant Activity
  <dd>Strategic Orientation, ALM, Investment Management etc are Siginificant activities.</dd>
  </dt>
<dt>Key Components
<dd>Board, Senior Management and Organization Wide Oversight Functions are Key Components of 'Strategic Orientation' Significant Activity.</dd>
</dt>
</dl>
```

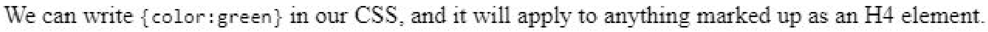
```
Significant Activity
        Strategic Orientation, ALM, Investment Management etc are Siginificant activities.
Key Components
        Board, Senior Management and Organization Wide Oversight Functions are Key Components of 'Strategic Orientation' Significant Activity.
```

    h.

7. Quotes
    a. <q> - puts quotation marks around the text
    b. <blockquote> - for marking a paragraph as quote
8. Inline Elements - we use them in the middle of text:
    a. <q>
    b. <strong>
    c. <b>
    d. <i>
    e. <em>
9. Block level Elements - they start a new block
    a. <blockquote>
    b. <p>
    c. <ul>
10. Date and Time:
    a. <time></time>
    b. <time datetime="2020-06-09">June 09, 2020</time> - datetime attribute tells the machine that the date is formatted as “YYYY-MM-DD” in this case.
    c. <time datetime> - here time is element name and datetime is attribute name
11. Code, pre and br

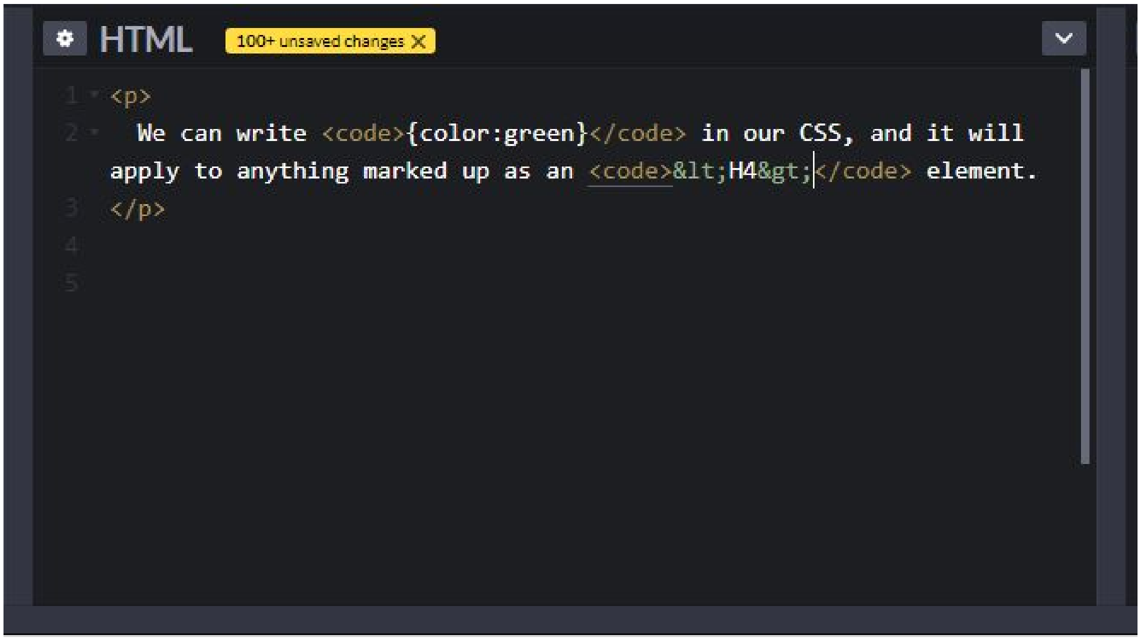


```
<p>
  We can write <code>{color:green}</code> in our CSS, and it will apply to anything marked up as an H4 element.
</p>
```

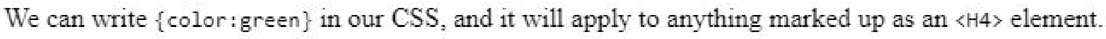
a. 

We can write `{color:green}` in our CSS, and it will apply to anything marked up as an H4 element.

12. HTML Entities:
    a. < = &lt;
    b. > = &gt;
    c. & = &amp;

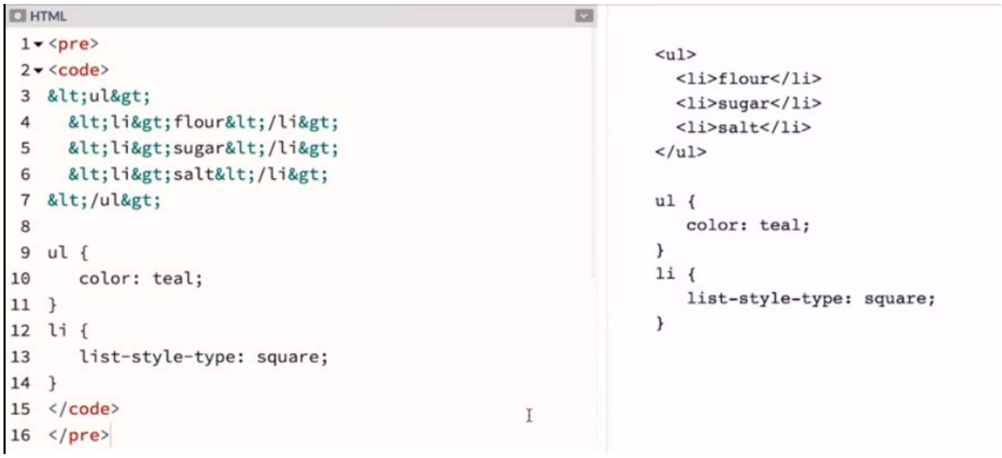


```
<p>
  We can write <code>{color:green}</code> in our CSS, and it will apply to anything marked up as an <code>&lt;H4&gt;</code> element.
</p>
```

d. 

We can write `{color:green}` in our CSS, and it will apply to anything marked up as an `<H4>` element.

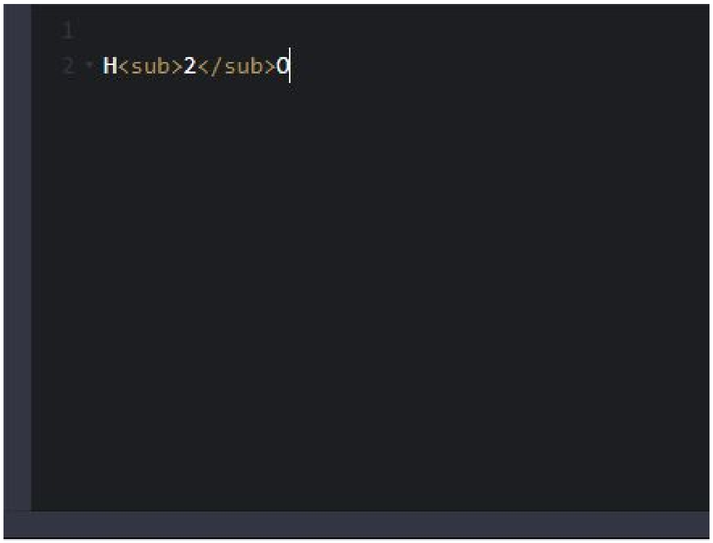
13. <br> - line break -there is no closing tag
14. <pre> </pre> - this tag helps maintain the format in which the content is typed in, including the line breaks and indentations.

15. 

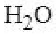
```
<pre>
<code>
&lt;ul&gt;
  &lt;li&gt;flour&lt;/li&gt;
  &lt;li&gt;sugar&lt;/li&gt;
  &lt;li&gt;salt&lt;/li&gt;
&lt;/ul&gt;

ul {
   color: teal;
}
li {
   list-style-type: square;
}
</code>
</pre>
```

```
<ul>
  <li>flour</li>
  <li>sugar</li>
  <li>salt</li>
</ul>

ul {
   color: teal;
}
li {
   list-style-type: square;
}
```

16. Subscripts, Superscripts and small text
    a. Ex for Subscript: H2O - we use <sub> tag

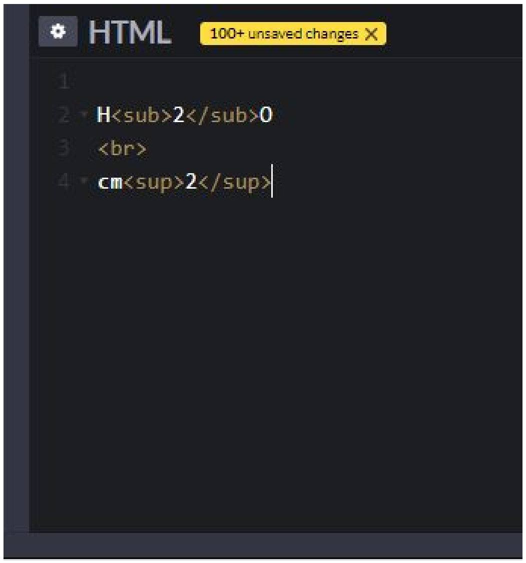


```

H<sub>2</sub>O
```



$H_2O$

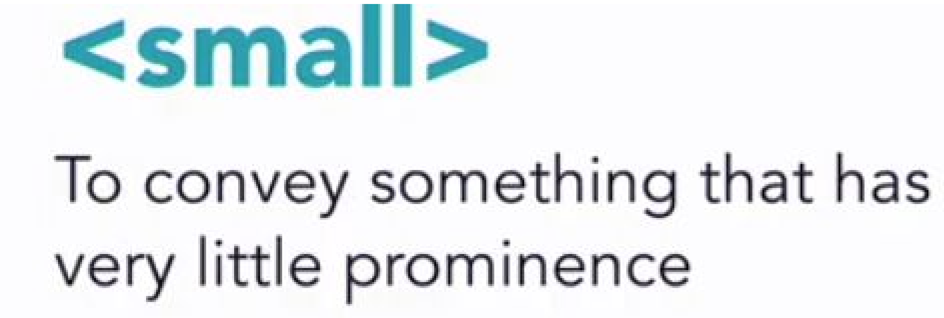
    b.
    c. Ex for Superscript: cm2 - we use <sup> tag



```
H<sub>2</sub>O
<br>
cm<sup>2</sup>
```

d. $H_2O$
$cm^2$

17. MathML is a special Markup language for math.

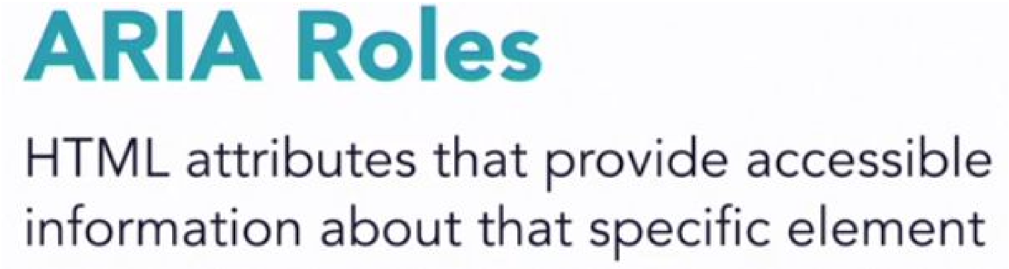
18. 

<small>

To convey something that has very little prominence

19. Global attributes:
    a. Attributes that can be applied to any HTML element.
    b. The **class** Attribute - allows us to target all elements with that class in our CSS of Javascript.
    c. <p class=”intro”>
            This is the introduction.
       </p>
    d. The id Attribute - Allows us to target a unique element with that id in our CSS of Javascript.
    e. <p class=”intro” id=”article-intro”>
            This is the introduction.
       </p>
    f. The lang attribute = tells which language the text is in. For Ex: <p lang=”en-US”> some text</p>
    g. The dir attribute = tells which direction the text has to be read.

20. ARIA roles

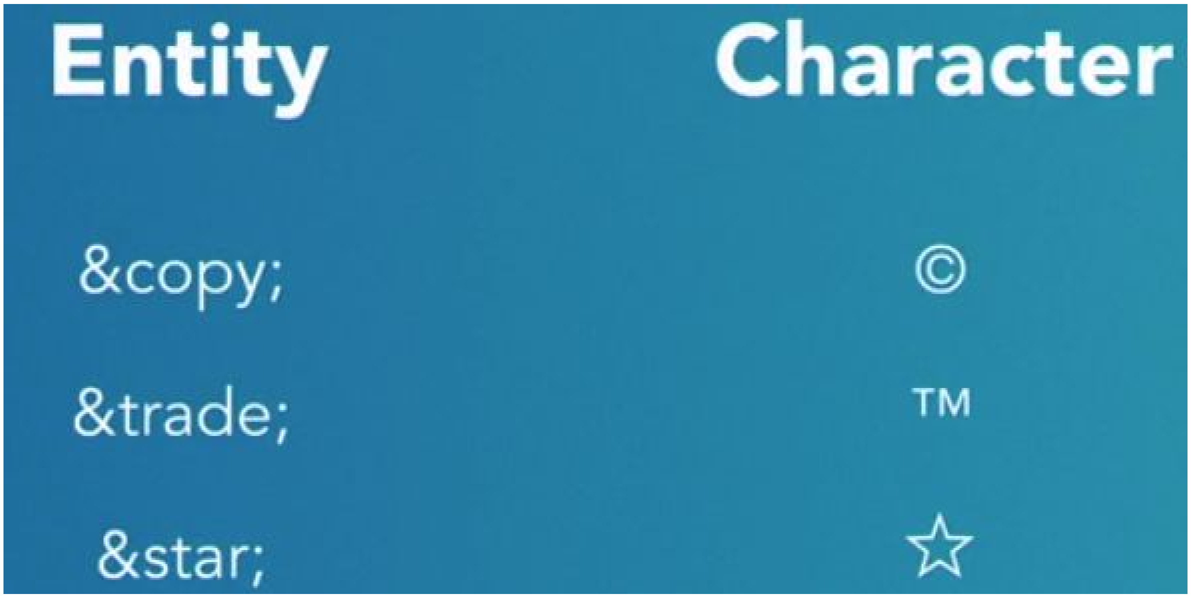
a. 

## ARIA Roles

HTML attributes that provide accessible information about that specific element

b. Have to find out more about this.

21. <!--    → to comment some code in HTML

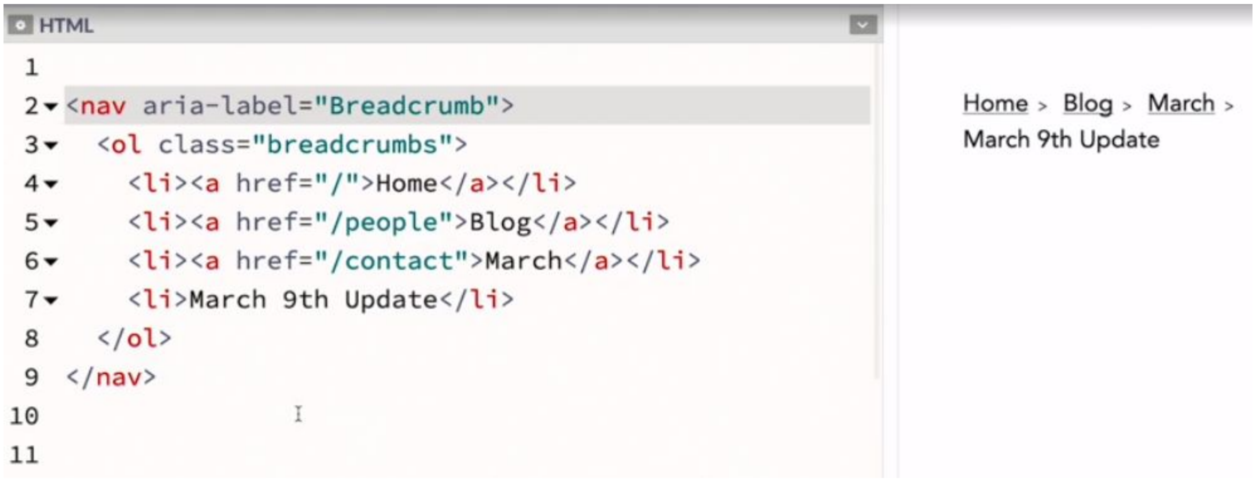
22. 

| Entity | Character |
|---|---|
| &copy; | © |
| &trade; | ™ |
| &star; | ☆ |

23. &nbsp; - non breaking space - it means that the browser should not break between the words when it sees &nbsp; in the code. For Ex: LinkedIn&nbsp;Learning - the browser will make sure it keeps LinkedIn Learning in 1 line and not break them between lines.

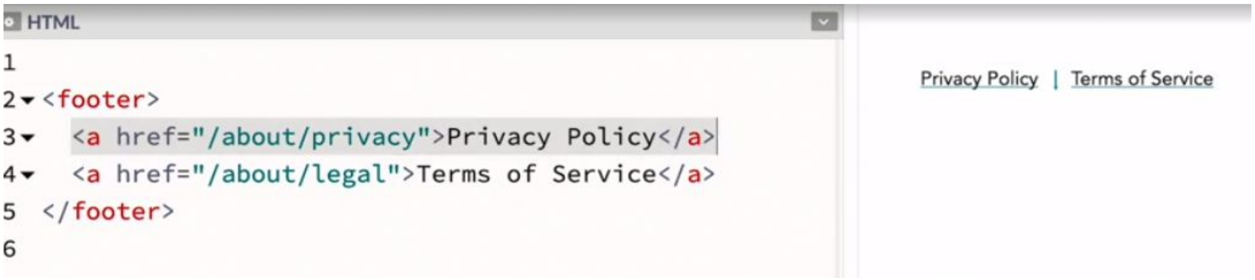
24. Links:

    a. The Anchor Element: <a href=”page.html”>Link</a>

25. 

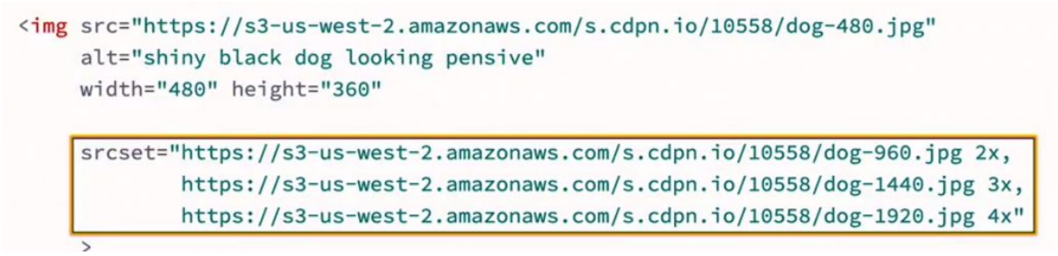
```html

<nav aria-label="Breadcrumb">
  <ol class="breadcrumbs">
    <li><a href="/">Home</a></li>
    <li><a href="/people">Blog</a></li>
    <li><a href="/contact">March</a></li>
    <li>March 9th Update</li>
  </ol>
</nav>


```

Home > Blog > March >
March 9th Update

26. 

```html

<footer>
  <a href="/about/privacy">Privacy Policy</a>
  <a href="/about/legal">Terms of Service</a>
</footer>

```

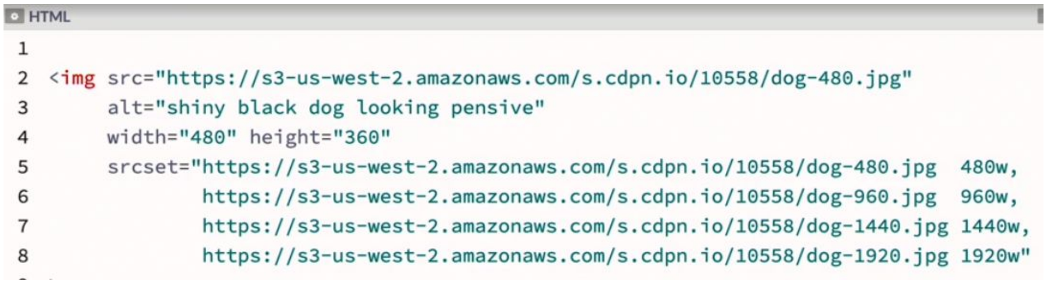
Privacy Policy | Terms of Service

27. Images
    a. Element name is <img> and it has 4 attributes:
    b. <img src=”image.jpg” alt=”black dog” width=”400” height=”300”>
    c. Src attribute tells browser which image file to load
    d. Alt attribute = this acts as an alternative whenever the browser cannot load the image and the image cannot be seen.
    e. Width and height are in pixels
28. Image formats
    a. Gif
        i. Does well compressing large areas of a single color
        ii. Limited color space of 256 colors
        iii. Can do transparency, with jagged edges
        iv. Can have multiple frames, and make a little movie
    b. SVG - Scalable vector graphic
        i. Logos, icons etc
        ii. Vector file (it’s not pixelated) - contains instructions for drawings. These images can scale large or small without distorting
    c. JPG - Image format for compressing photos
        i. Can be compressed
        ii. Size vs. quality
    d. PNG
        i. Images that need transparency
        ii. Good at compression
        iii. Photos and images
29. Responsive images: <img element with srcset attribute can be used
    a. 

```html
<img src="https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/dog-480.jpg"
     alt="shiny black dog looking pensive"
     width="480" height="360"

     srcset="https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/dog-960.jpg 2x,
             https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/dog-1440.jpg 3x,
             https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/dog-1920.jpg 4x"
     >
```

    b. Browser will pick the appropriate image from srcset attribute according to the screen resolution
30. Responsive Width: what if the image has to adjust based on screen width

a.



```
<img src="https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/dog-480.jpg"
     alt="shiny black dog looking pensive"
     width="480" height="360"
     srcset="https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/dog-480.jpg  480w,
             https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/dog-960.jpg  960w,
             https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/dog-1440.jpg 1440w,
             https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/dog-1920.jpg 1920w"
```

b. 480w = 480 px wide etc

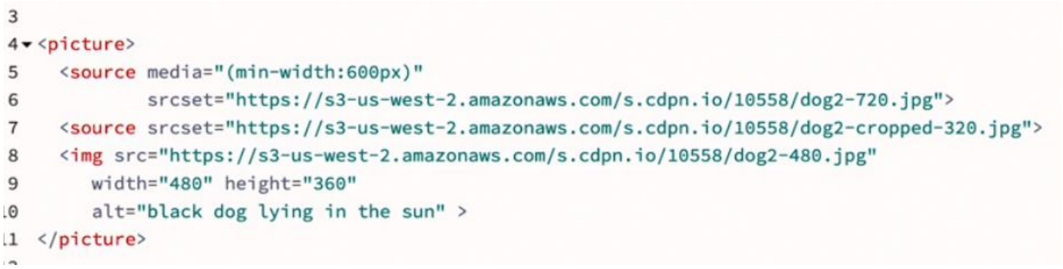
c. The sizes attribute - lists which size image to use at which media query

d. The srcset attribute - allows you to specify multiple files to be used based on either viewport width or image pixel width

31. Responsive pictures - to use different images in mobile, laptop and bigger monitor

a. <picture> element is used

b.



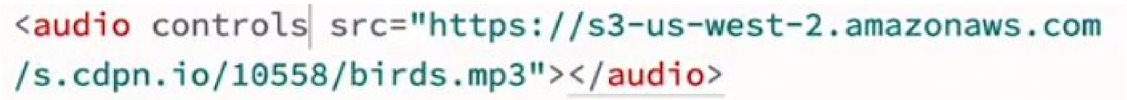
```
<picture>
  <source media="(min-width:600px)"
          srcset="https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/dog2-720.jpg">
  <source srcset="https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/dog2-cropped-320.jpg">
  <img src="https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/dog2-480.jpg"
     width="480" height="360"
     alt="black dog lying in the sun" >
</picture>
```

c.

32. Audio:

a. <audio> element used to place audio

b.



```
<audio controls src="https://s3-us-west-2.amazonaws.com
/s.cdpn.io/10558/birds.mp3"></audio>
```

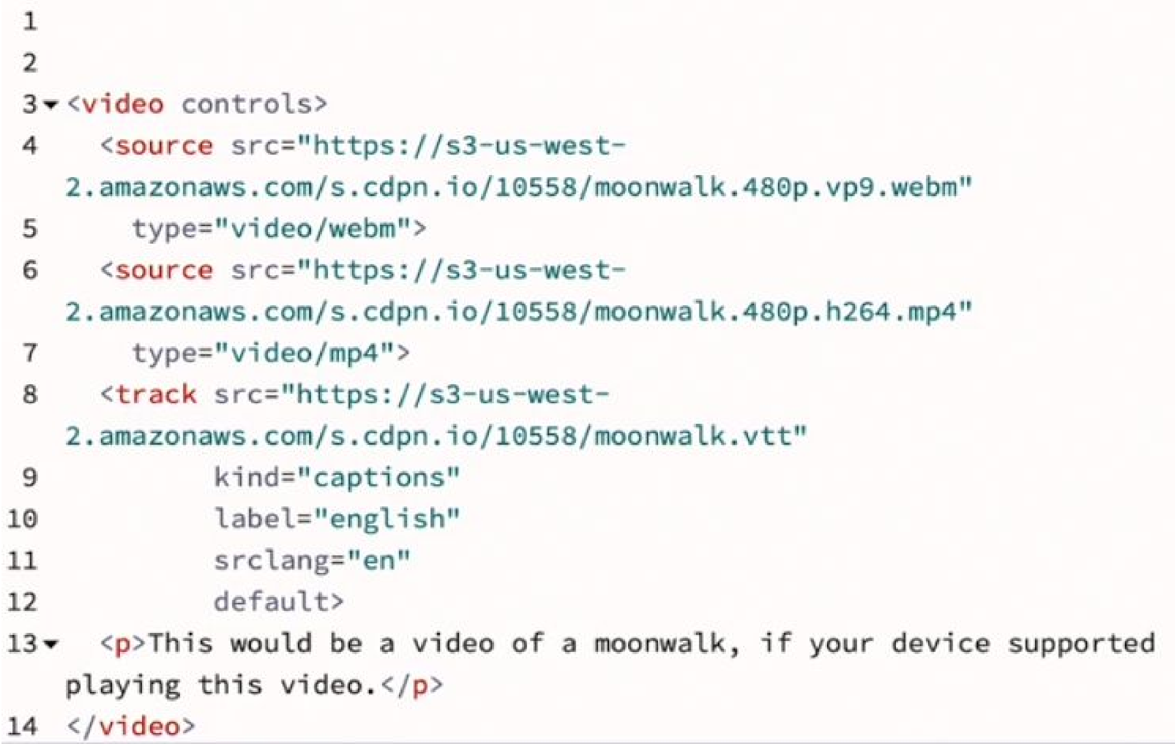
c. Controls attribute will enable us to use the audio controls (like volume control, play/pause) in built in the browser

d. Loop attribute will let the audio loop again when the file is finished playing

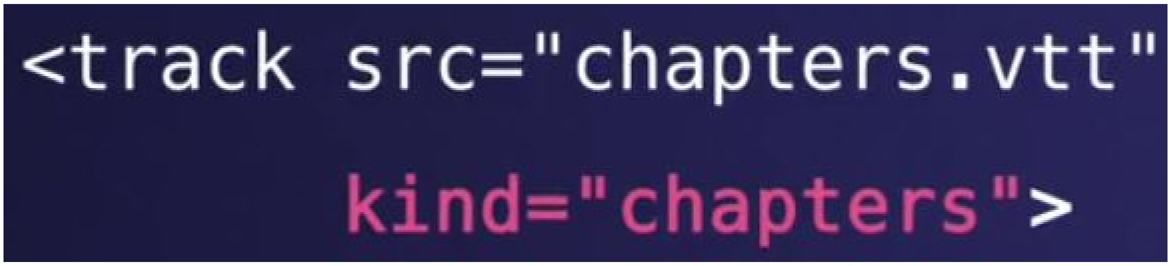
e. Autoplay attribute will let the browser play the music as soon as the page loads automatically

33. Video:

a. <video> element

b. 

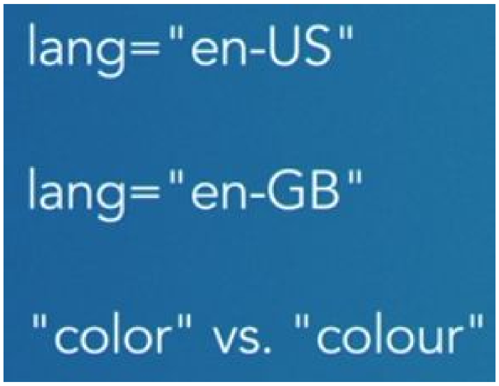
```


<video controls>
  <source src="https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/moonwalk.480p.vp9.webm"
    type="video/webm">
  <source src="https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/moonwalk.480p.h264.mp4"
    type="video/mp4">
  <track src="https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/moonwalk.vtt"
         kind="captions"
         label="english"
         srclang="en"
         default>
  <p>This would be a video of a moonwalk, if your device supported playing this video.</p>
</video>
```

c. 

```
<track src="chapters.vtt"
       kind="chapters">
```

d. kind=chapters gives the users the option to jump to various chapters in a video

34. Embedding:
    a. We can embed a map or a video or audio or slide deck or code in a page
    b. <iframe> element is used for embedding

35. 

lang="en-US"

lang="en-GB"

"color" vs. "colour"

36. This matters for spell checkers. (color vs colour)
37. Lang and dir attributes are universal attributes we can add to any element.

38. Charset attribute defines the alphabet or set of characters for the script language. Ex: UTF-8, ASCII Unicode has over 137,000 characters today.
    a. <meta charset=”UTF-8”>
39. To be inclusive of all languages, we can include lang, dir and charset attributes  for the project.
    a. <html lang=”en-US” dir=”ltr”> some text</p> (ltr=left to right, rtl=right to left if lang=”ara” (arabic))
40. Div and span:
    a. <div> is a block-level element
    b. <span> is an inline element
    c. <div> and <span> can take all global attributes: class, id, lang and aria roles
41. The HTML page
    a. It must start with doctype declaration - declares which era this HTML file is from.
    b. <!doctype html>
    c. <html lang=”en-US” dir=”ltr”>

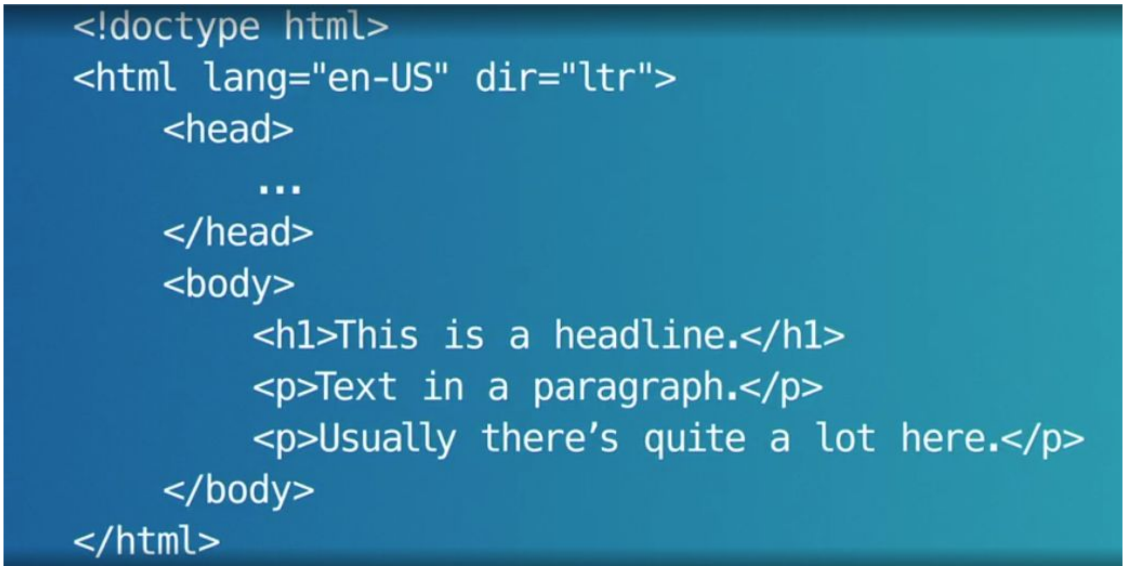
<head> (The head element contains information the browser needs to know, though it won’t be displayed on the page).

</head>

<body> (The body element contains the information and content that will be displayed on the page)

</body>

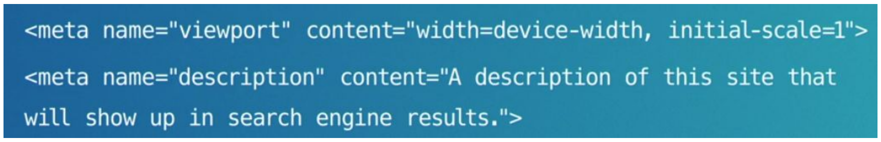
</html>

    d. 

```
<!doctype html>
<html lang="en-US" dir="ltr">
    <head>
        ...
    </head>
    <body>
        <h1>This is a headline.</h1>
        <p>Text in a paragraph.</p>
        <p>Usually there’s quite a lot here.</p>
    </body>
</html>
```

42. What goes inside the <head>
    a. The meta element <meta charset=”UTF-8”> - it is used only inside the head
    b. Conveys metadata about the page
    c. Every head element should have a <title> tag. This is not the title or content that we see in the body of the web page. It is the title of the tab, bookmark title, that we see in the address bar.

d. Some more things we will add to this <meta> element are:

   i. 

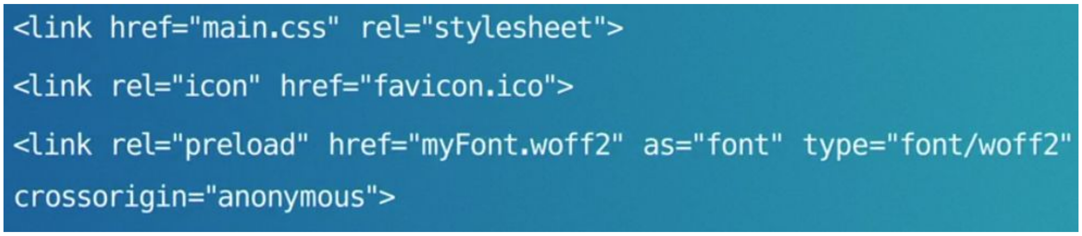
```
<meta name="viewport" content="width=device-width, initial-scale=1">
<meta name="description" content="A description of this site that
will show up in search engine results.">
```

   ii. This description allows the search engines to find our web page.

e. The other element that we use inside the <head> is the <link> element. It links to a range of other assets like css files, fonts, icons, images etc that we want to load.

f. The rel attribute tells the browser which kind of asset it is.

g. The href attribute provides the URL to the asset.

h. 

```
<link href="main.css" rel="stylesheet">
<link rel="icon" href="favicon.ico">
<link rel="preload" href="myFont.woff2" as="font" type="font/woff2"
crossorigin="anonymous">
```

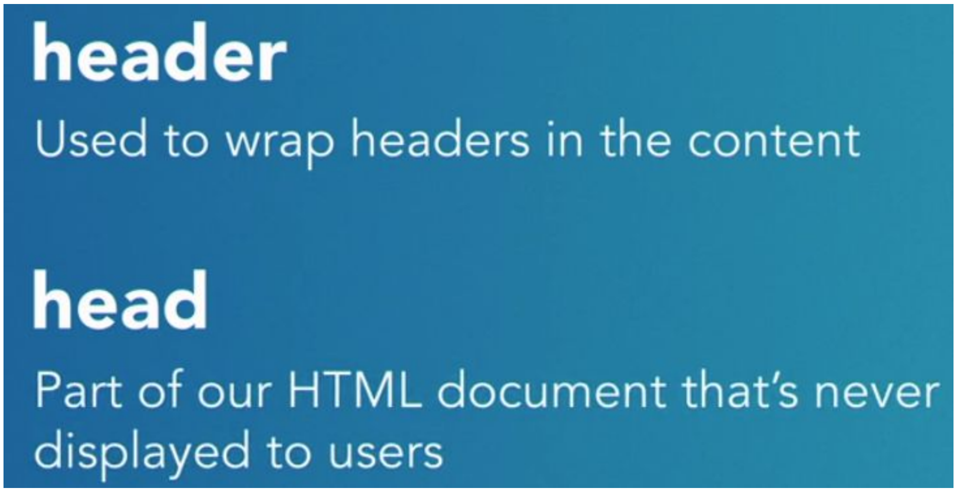
i. The <script> tag goes inside the <head> element too. This tells the browser to load a Javascript file.

43. What goes inside the <body>

   a. 6 main elements: main, header, footer, article, section, aside

   b. The main element wraps around the main content of the page. It's used only once per webpage. It tells the browser that this is where the main content is.

   c. The header and footer elements - used to mark places on the page where the content is a header or a footer

   d. 

**header**

Used to wrap headers in the content

**head**

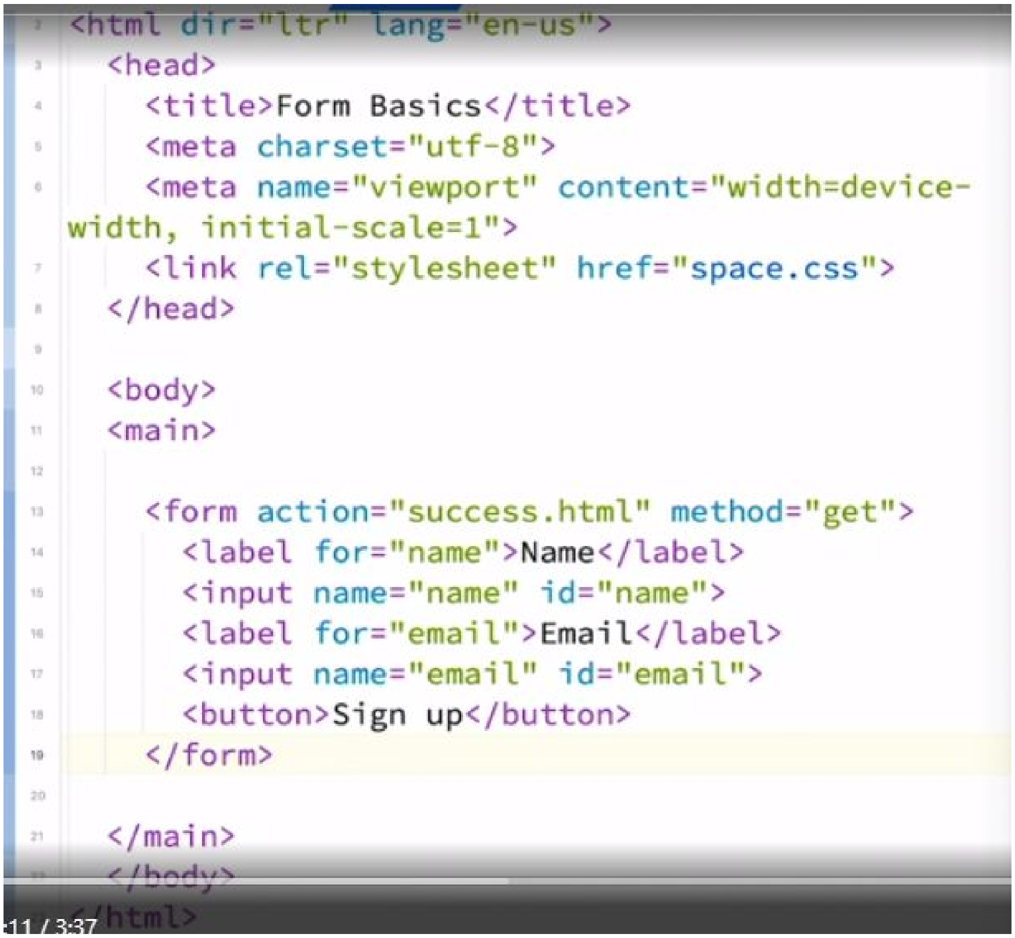
Part of our HTML document that's never displayed to users

   e. The article element - wrapped around any instance of an article

   f. The section element - wraps around sections of content

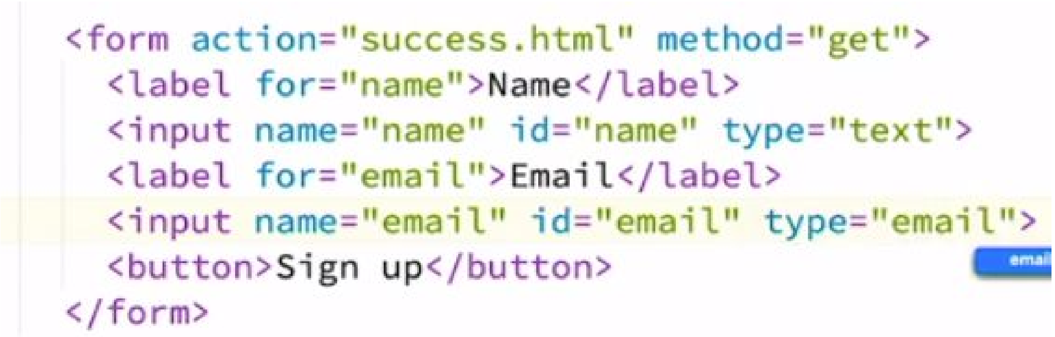
   g. The aside element - marks content that is off to the side or not the main attraction

44. Example to use <form> element and bind a label to an input text box: use "for" attribute in <label> and "id" attribute in <input> tag.

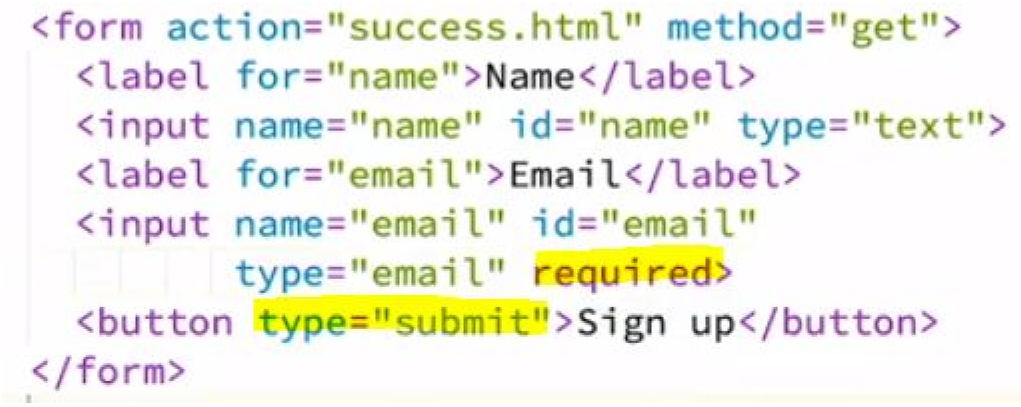
a. 

```
<html dir="ltr" lang="en-us">
  <head>
    <title>Form Basics</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-
width, initial-scale=1">
    <link rel="stylesheet" href="space.css">
  </head>

  <body>
  <main>

    <form action="success.html" method="get">
      <label for="name">Name</label>
      <input name="name" id="name">
      <label for="email">Email</label>
      <input name="email" id="email">
      <button>Sign up</button>
    </form>

  </main>
  </body>
</html>
```

b. If we want to tell the browser that we want to collect email address in email text box, add “type” attribute to the <input>

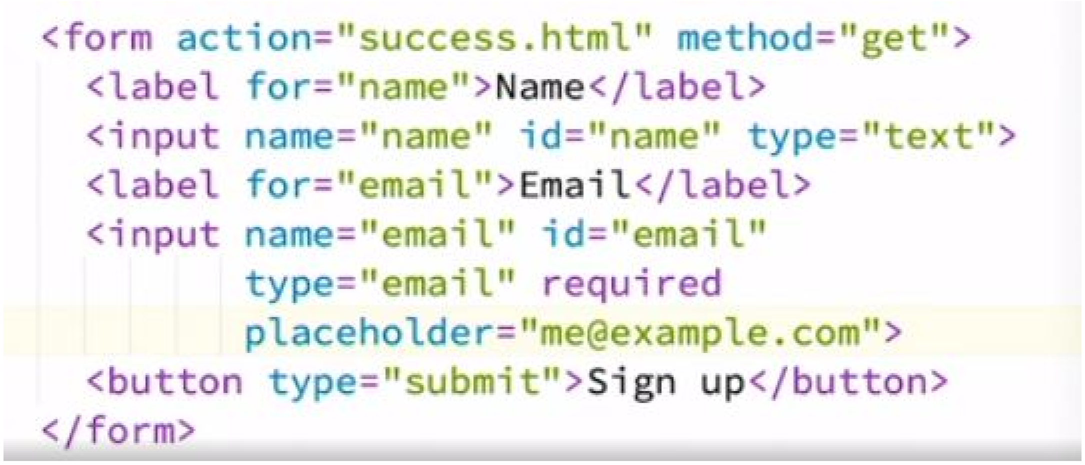
c. 

```
<form action="success.html" method="get">
  <label for="name">Name</label>
  <input name="name" id="name" type="text">
  <label for="email">Email</label>
  <input name="email" id="email" type="email">
  <button>Sign up</button>
</form>
```

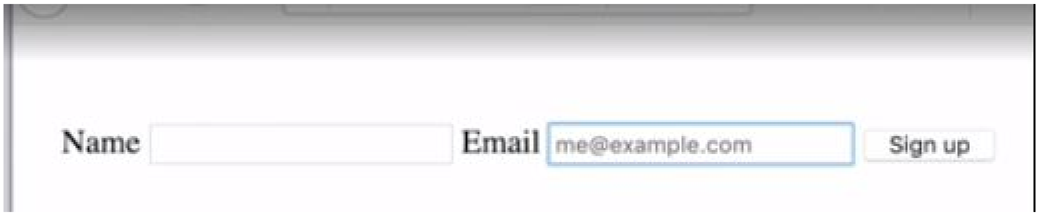
d. 

```
<form action="success.html" method="get">
  <label for="name">Name</label>
  <input name="name" id="name" type="text">
  <label for="email">Email</label>
  <input name="email" id="email"
         type="email" required>
  <button type="submit">Sign up</button>
</form>
```

e. To show some default text in the text box,

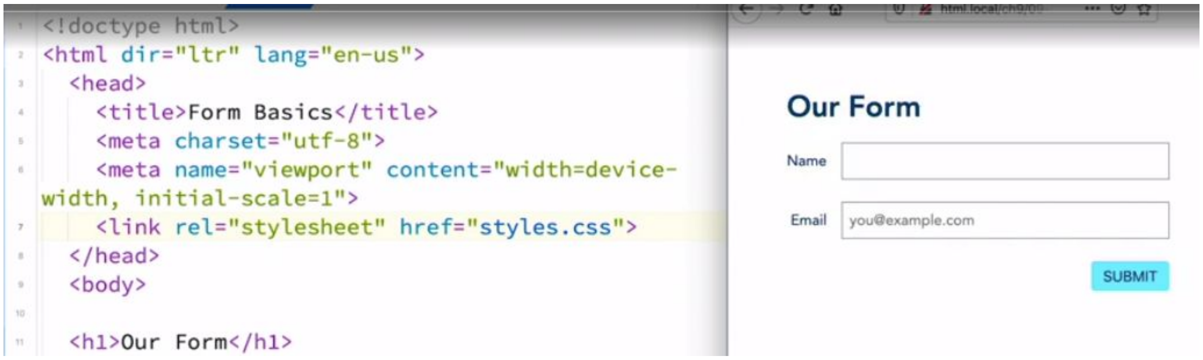
f. 

```
<form action="success.html" method="get">
  <label for="name">Name</label>
  <input name="name" id="name" type="text">
  <label for="email">Email</label>
  <input name="email" id="email"
         type="email" required
         placeholder="me@example.com">
  <button type="submit">Sign up</button>
</form>
```

g. 

h.

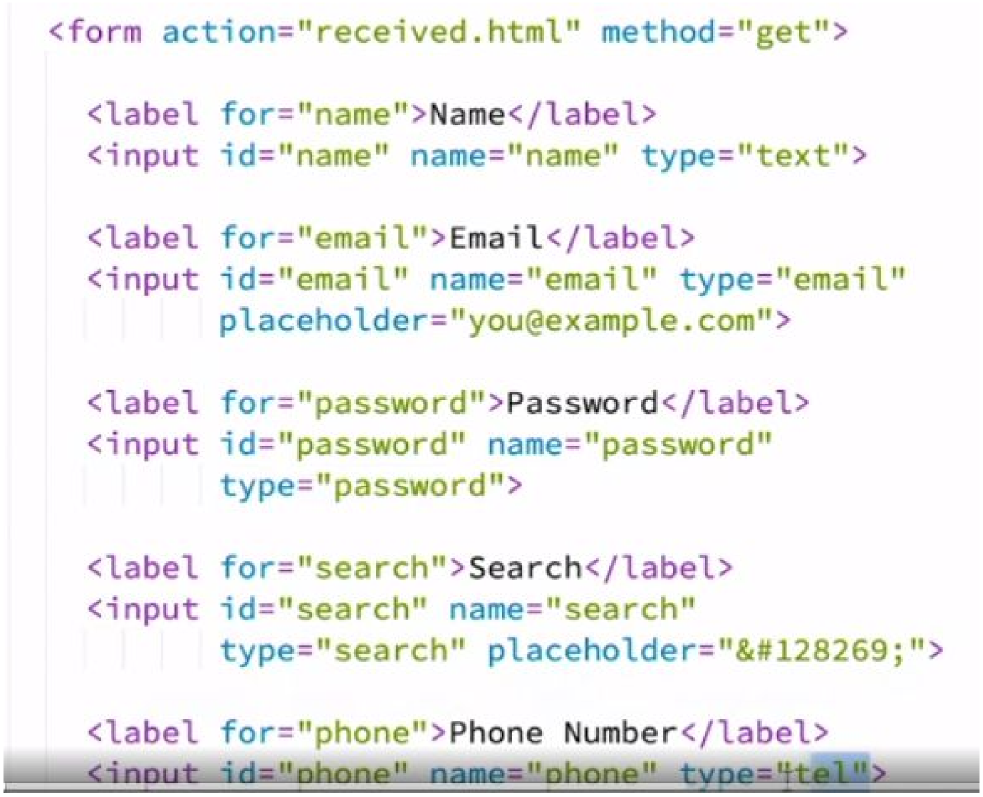
45. Additional form elements:

a. 

```
<!doctype html>
<html dir="ltr" lang="en-us">
  <head>
    <title>Form Basics</title>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-
width, initial-scale=1">
    <link rel="stylesheet" href="styles.css">
  </head>
  <body>

  <h1>Our Form</h1>
```

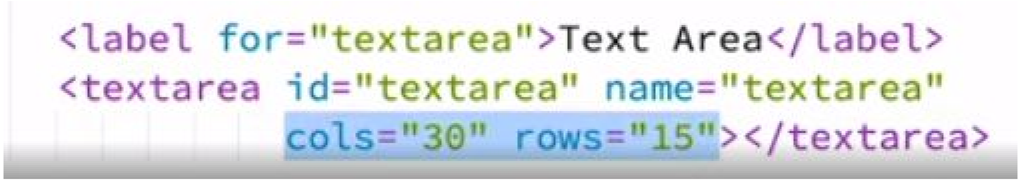
b. We have added style.css to make it look pretty.

c.



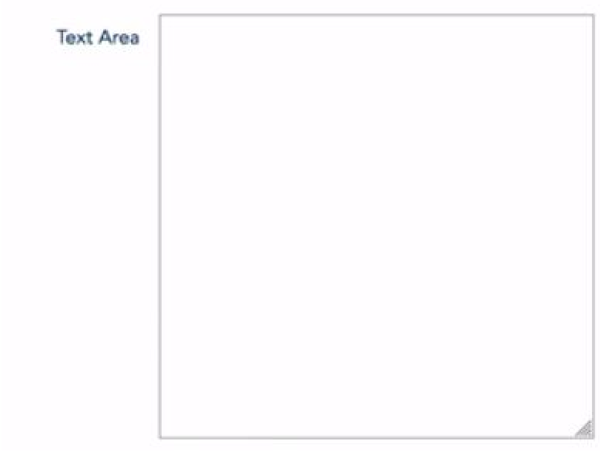
```
<form action="received.html" method="get">

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

  <label for="email">Email</label>
  <input id="email" name="email" type="email"
         placeholder="you@example.com">

  <label for="password">Password</label>
  <input id="password" name="password"
         type="password">

  <label for="search">Search</label>
  <input id="search" name="search"
         type="search" placeholder="&#128269;">

  <label for="phone">Phone Number</label>
  <input id="phone" name="phone" type="tel">
```

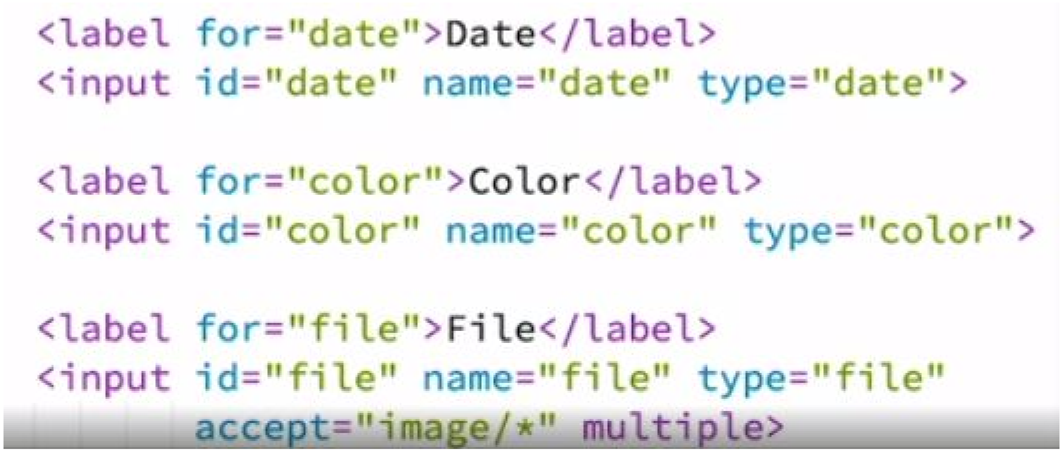
d.



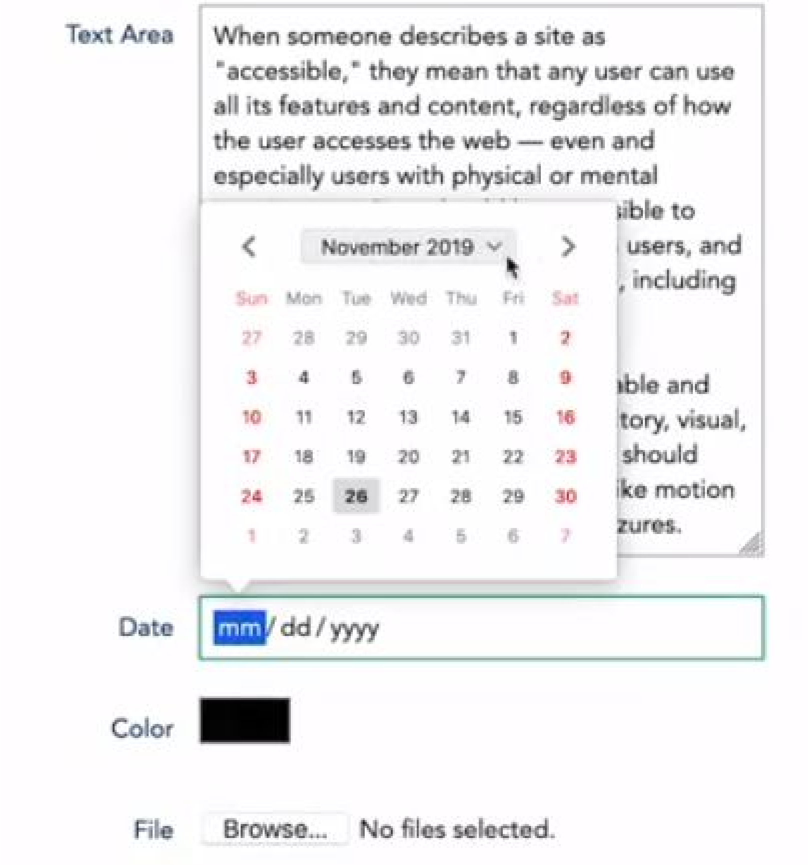
```
<label for="textarea">Text Area</label>
<textarea id="textarea" name="textarea"
          cols="30" rows="15"></textarea>
```

e.



f. 

```
<label for="date">Date</label>
<input id="date" name="date" type="date">

<label for="color">Color</label>
<input id="color" name="color" type="color">

<label for="file">File</label>
<input id="file" name="file" type="file"
       accept="image/*" multiple>
```

g. 

Text Area

When someone describes a site as "accessible," they mean that any user can use all its features and content, regardless of how the user accesses the web — even and especially users with physical or mental

sible to

users, and

, including

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November 2019

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|
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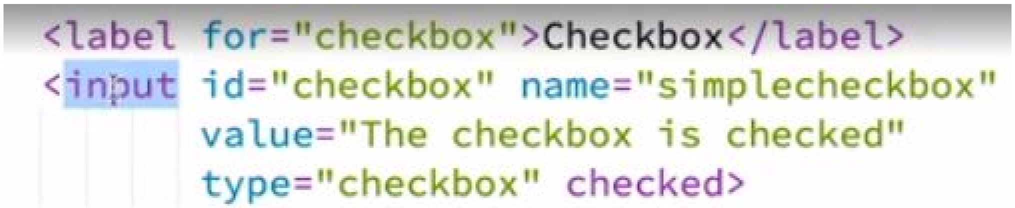
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Date: mm / dd / yyyy

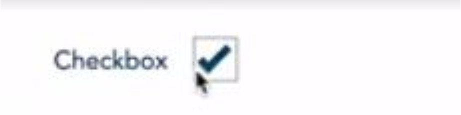
Color: ■

File: Browse... No files selected.

h. Simple Check box:

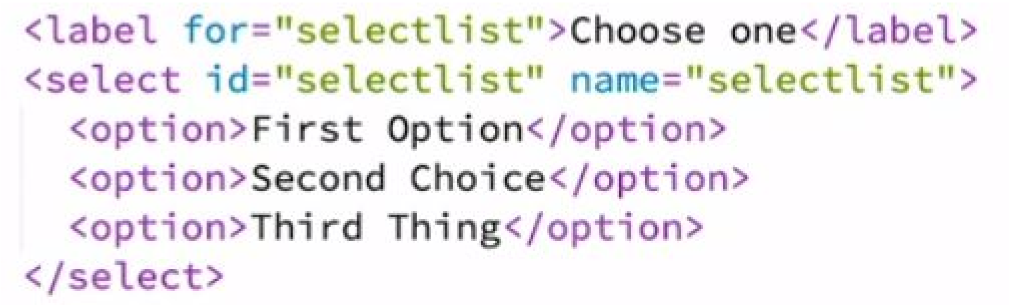
i. 

```
<label for="checkbox">Checkbox</label>
<input id="checkbox" name="simplecheckbox"
       value="The checkbox is checked"
       type="checkbox" checked>
```



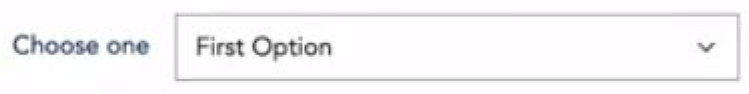
ii.

i. A Combo box:



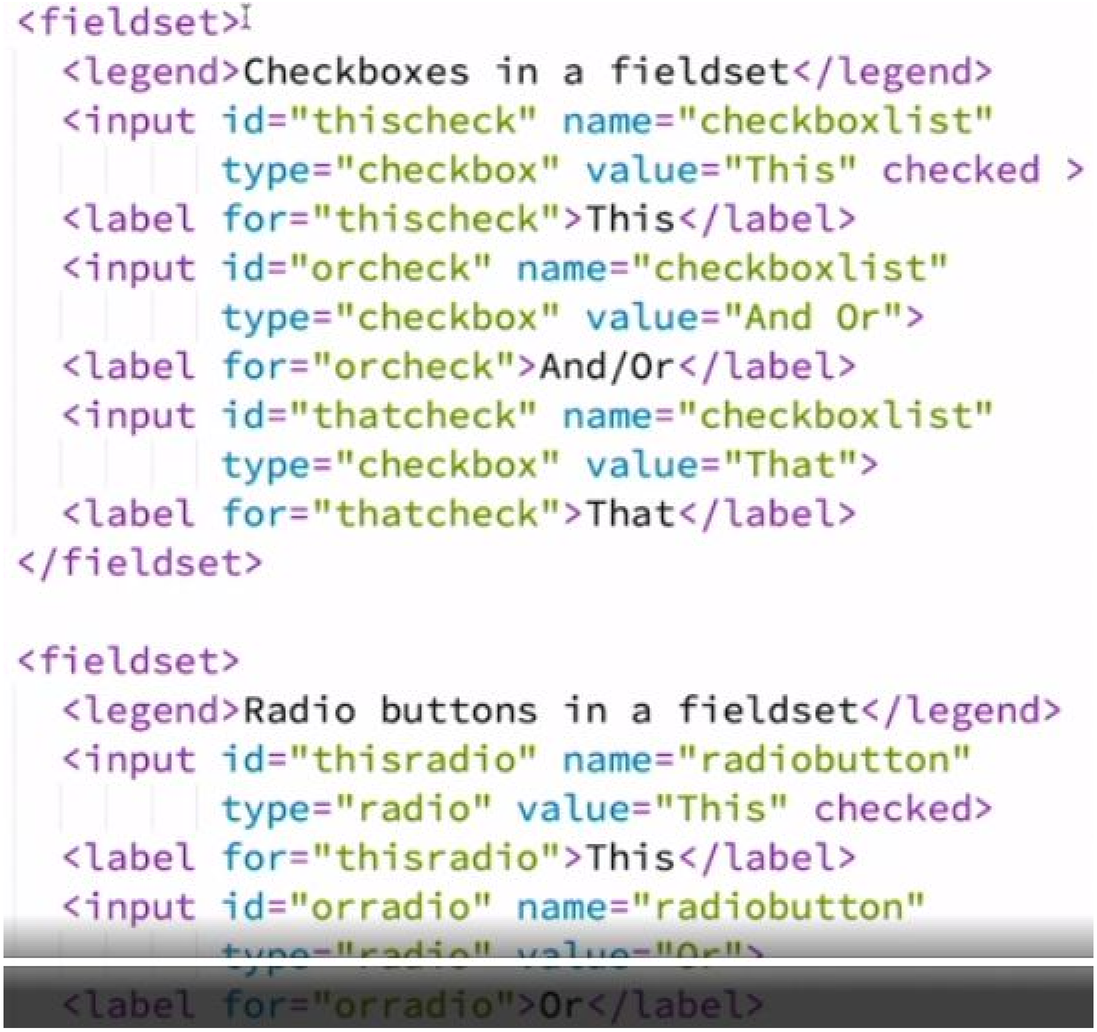
```
<label for="selectlist">Choose one</label>
<select id="selectlist" name="selectlist">
  <option>First Option</option>
  <option>Second Choice</option>
  <option>Third Thing</option>
</select>
```

i.



ii.

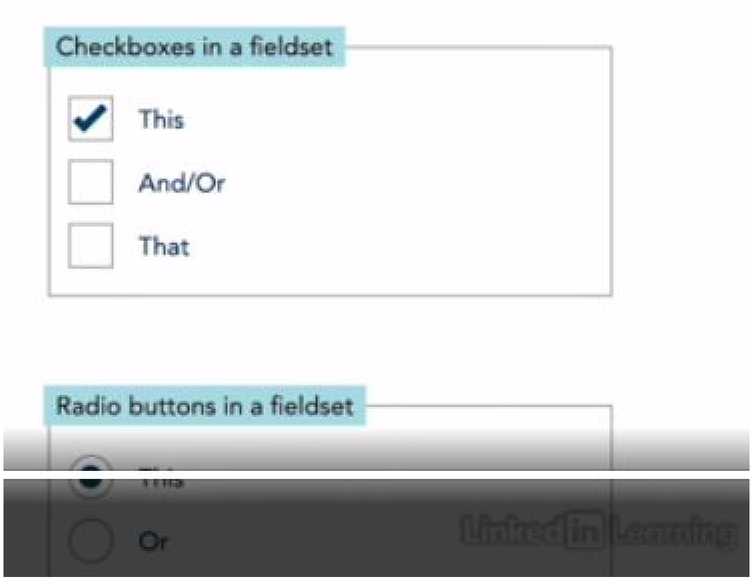
j. To make a set of checkboxes or radio buttons:



```
<fieldset>
  <legend>Checkboxes in a fieldset</legend>
  <input id="thischeck" name="checkboxlist"
         type="checkbox" value="This" checked >
  <label for="thischeck">This</label>
  <input id="orcheck" name="checkboxlist"
         type="checkbox" value="And Or">
  <label for="orcheck">And/Or</label>
  <input id="thatcheck" name="checkboxlist"
         type="checkbox" value="That">
  <label for="thatcheck">That</label>
</fieldset>

<fieldset>
  <legend>Radio buttons in a fieldset</legend>
  <input id="thisradio" name="radiobutton"
         type="radio" value="This" checked>
  <label for="thisradio">This</label>
  <input id="orradio" name="radiobutton"
         type="radio" value="Or">
  <label for="orradio">Or</label>
```

k.

l. 

Checkboxes in a fieldset

☑ This

□ And/Or

□ That

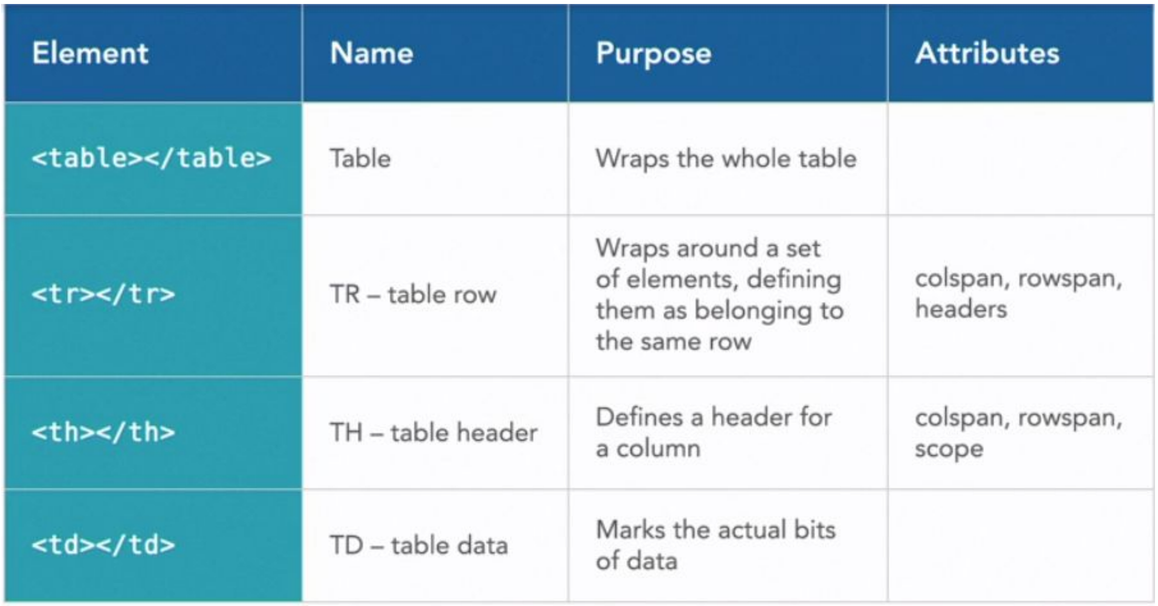
Radio buttons in a fieldset

● This

○ Or

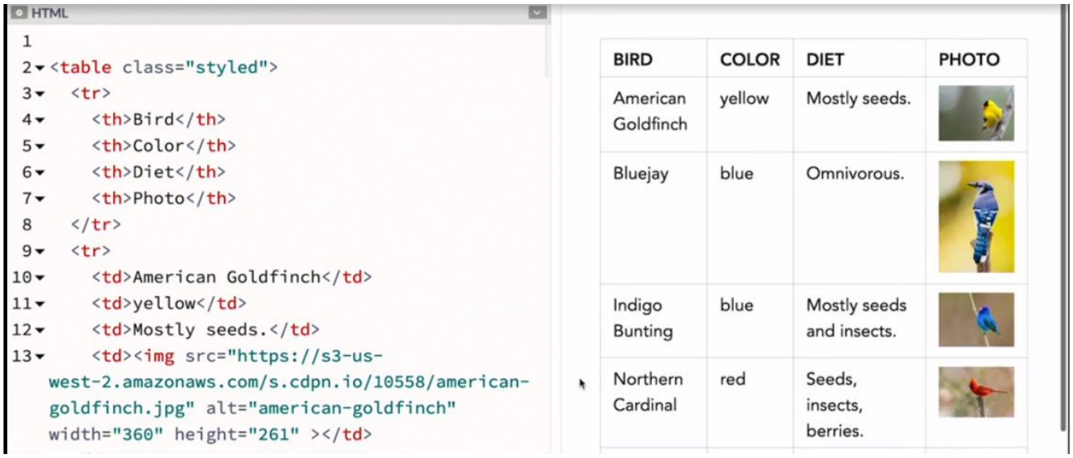
46. HTML Table - for tabular data

a. <table>, <tr>, <th> and <td>

b. 

| Element | Name | Purpose | Attributes |
|---|---|---|---|
| <table></table> | Table | Wraps the whole table | |
| <tr></tr> | TR – table row | Wraps around a set of elements, defining them as belonging to the same row | colspan, rowspan, headers |
| <th></th> | TH – table header | Defines a header for a column | colspan, rowspan, scope |
| <td></td> | TD – table data | Marks the actual bits of data | |

c.



```

<table class="styled">
  <tr>
    <th>Bird</th>
    <th>Color</th>
    <th>Diet</th>
    <th>Photo</th>
  </tr>
  <tr>
    <td>American Goldfinch</td>
    <td>yellow</td>
    <td>Mostly seeds.</td>
    <td><img src="https://s3-us-west-2.amazonaws.com/s.cdpn.io/10558/american-goldfinch.jpg" alt="american-goldfinch" width="360" height="261" ></td>
```

| BIRD | COLOR | DIET | PHOTO |
|---|---|---|---|
| American Goldfinch | yellow | Mostly seeds. | |
| Bluejay | blue | Omnivorous. | |
| Indigo Bunting | blue | Mostly seeds and insects. | |
| Northern Cardinal | red | Seeds, insects, berries. | |

d.

47. MDN Web docs - stores the syntax and definitions of all HTML tags:https://developer.mozilla.org/en-US/
48. https://html.spec.whatwg.org/