

# Goals:

1. Identify the elements of a webpage
2. Identify and use static HTML code
3. Debug basic HTML code

**CS Standard: Implement a program using a combination of student-defined and third-party functions to organize the computation.**

**Work Time: Students will be following the tutorial and examples provided then they will code an 'About me' me on their own using static HTML elements practiced here.**

# ANATOMY OF A WEBSITE

Website = HTML + CSS + JavaScript

*Think of it like this...*



Nouns

Adjectives

Verbs

# HTML

Stands for **H**ypertext **M**arkup **L**anguage

Creates the structure for *all* web pages on the internet

A file ending in .html lets your browser know that you are coding in html

```
1 <!DOCTYPE html>
2 <html style="height:100%;">
3 <head>
4   <meta http-equiv="Content-Type" content="text/html; charset=utf-8"/>
5   <meta http-equiv="X-UA-Compatible" content="IE=Edge"/>
6   <title>Untitled</title>
7   <!--Adobe Edge Runtime-->
8   <script type="text/javascript" charset="utf-8" src="http://animate.adobeedge.net/scripts/edgeLoad-EDGE-113439313.js"></script>
9   <style>
10     .edgeLoad-EDGE-113439313 { visibility:hidden; }
11   </style>
12   <script>
13     var link1="%reference%eventHTML1%";
14     var link2="%reference%eventHTML2%";
15     AdobeEdge.loadComposition('http://banners.adfox.ru/000000/adfox/000000/');
16     scaleToFit: "none",
17     centerStage: "none",
18     minW: "0px",
19     maxW: "undefined",
20     width: "100%",
21     height: "100%",
22     }, {"dom":{}}), {"dom":{}});
23   </script>
24   <!--Adobe Edge Runtime End-->
25 </head>
26 <body style="margin:0;padding:0;height:100%;">
27   <div id="Stage" class="EDGE-113439313"></div>
28 </body>
29 </html>
```

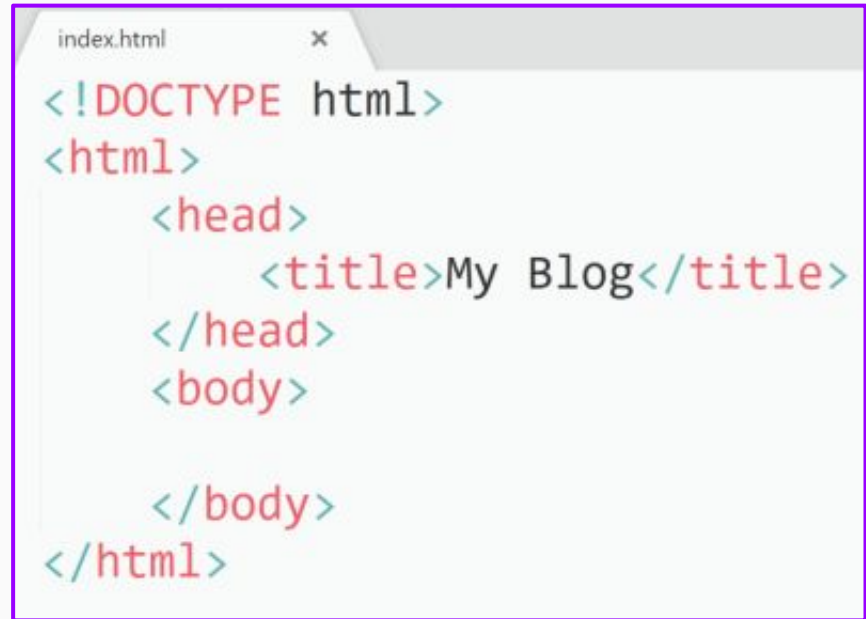


# HTML BOILERPLATE

A **boilerplate** is a section of code that can be reused in different places.

An HTML boilerplate is the foundation of your website. It is also called an HTML shell.

Whenever you create a new HTML document, you will start with the same snippet of code to start structuring your webpage.

A screenshot of a code editor window with a single tab titled 'index.html'. The code is an HTML boilerplate, color-coded with red for opening and closing tags and blue for text. The code is as follows:

```
<!DOCTYPE html>
<html>
  <head>
    <title>My Blog</title>
  </head>
  <body>

  </body>
</html>
```

# HTML BOILERPLATE EXPLAINED

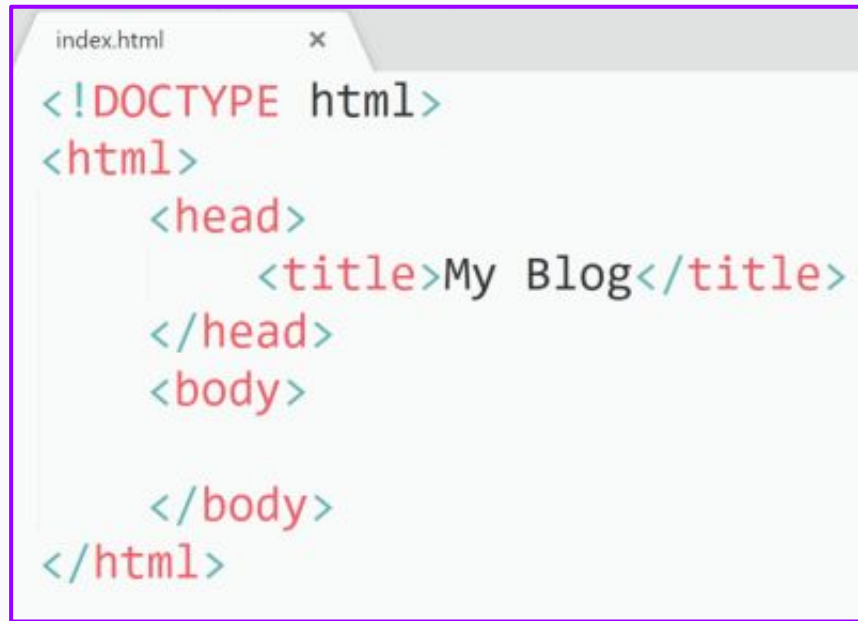
**<!DOCTYPE>** element tells your browser which type of document to expect and how to render code properly.

**<html>** element is the root element of an HTML page.

**<head>** element contains information such as title, scripts, styles, and any meta information your website needs.

**<body>** element contains all of the elements that will be used to structure the webpage and visible page content.

**<title>** element contains the text that will appear on the tab for the webpage on the browser.

A screenshot of a code editor window titled 'index.html'. The code is an HTML boilerplate with syntax highlighting. The structure is as follows: <!DOCTYPE html>, <html>, <head>, <title>My Blog</title>, </head>, <body>, </body>, and </html>. The code is displayed in a light gray background with a purple border.

```
index.html x
<!DOCTYPE html>
<html>
  <head>
    <title>My Blog</title>
  </head>
  <body>

  </body>
</html>
```

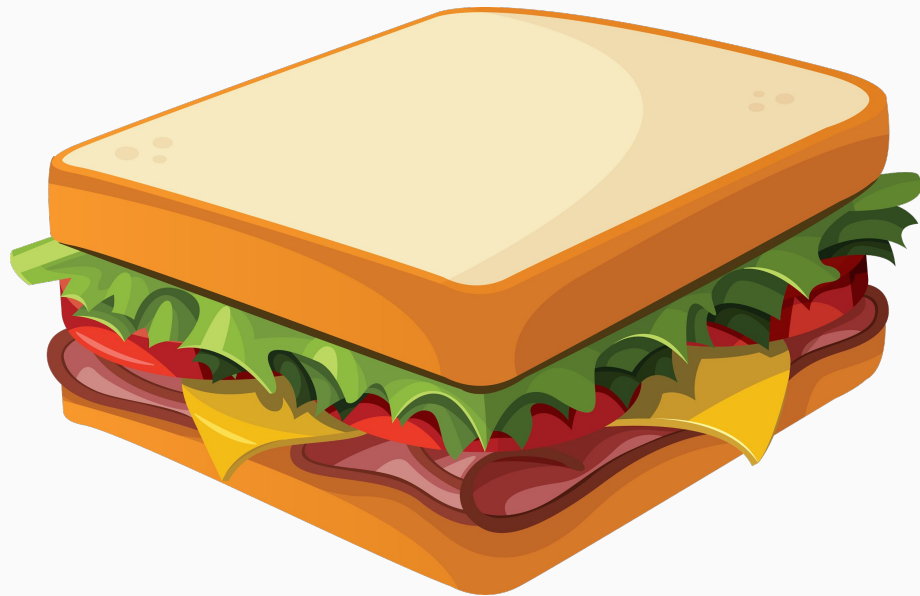
# HTML SYNTAX

# THE ENGLISH LANGUAGE AND HTML SYNTAX

In English, the order of our words and the punctuation we use makes a difference. This is true in coding too!

**Syntax** is the set of rules that make it easier for us to understand each other when we speak or write. These rules usually include word order and punctuation.

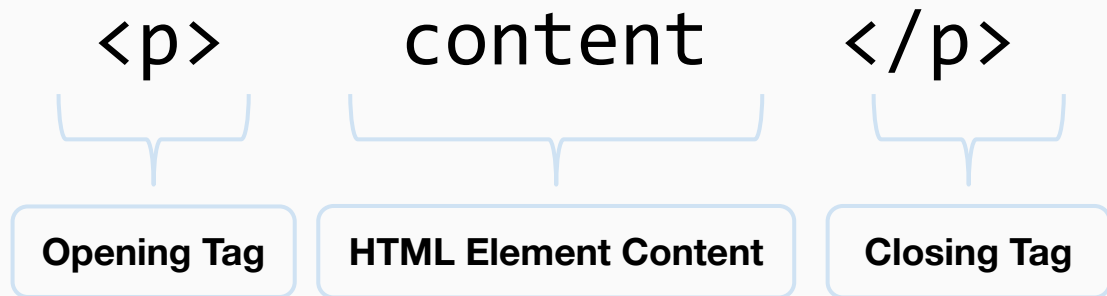
Syntax for HTML elements is kind of like making a sandwich. Order is important! You don't want lettuce outside the bread.





# SYNTAX FOR HTML ELEMENTS & TAGS

An HTML element usually consists of a start tag and an end tag, with the content inserted in between.



# OPENING AND CLOSING ELEMENTS & TAGS

HTML tags are created with angle brackets. We wrap the tag name in these angle brackets. This slide shows an opening tag and closing for the paragraph “p” element . When you open a tag, you also need to close it.

< p >

Opening angle  
bracket

Name of Tag

Closing angle  
bracket

OPENING TAGS

< / p >

Slash

Opening angle  
bracket

Name of  
Tag

Closing angle  
bracket

CLOSING TAGS

# SYNTAX HELPS WRITE CLEAN CODE

Usually, each new element starts on its own line. There are a few exceptions. We'll learn more about those during the guided practice.

All HTML must be inside an <html> tag.

All content on the page is inside the <body> tag.

```
<html>  
  <body>  
    <p>content</p>  
  </body>  
</html>
```

# HTML ATTRIBUTES W/ ANCHOR TAGS

# LINKS & ANCHOR TAGS

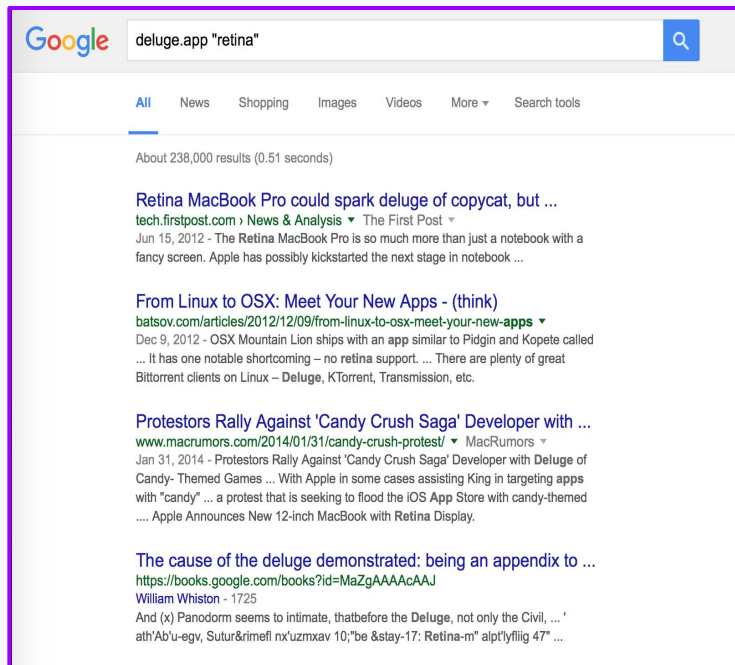
We're going to learn how to create links to other pages using anchor tags.



The **anchor tag** `<a>` allows us to move around on the web. You can use anchor tags to jump around on a web page, a website, to link to files on your computer, and to create links to other websites.

# LINKS ON THE WEB

What are some clues that something is a link on the web?



A screenshot of a Google search results page for the query "deluge.app retina". The search bar at the top shows the query and a magnifying glass icon. Below the search bar are tabs for "All", "News", "Shopping", "Images", "Videos", "More", and "Search tools". The "All" tab is selected. The results section shows "About 238,000 results (0.51 seconds)". Three search results are visible, each with a blue link, a snippet, and a date. The first result is from tech.firstpost.com, the second from batsov.com, and the third from macrumors.com.

Google deluge.app retina

All News Shopping Images Videos More Search tools

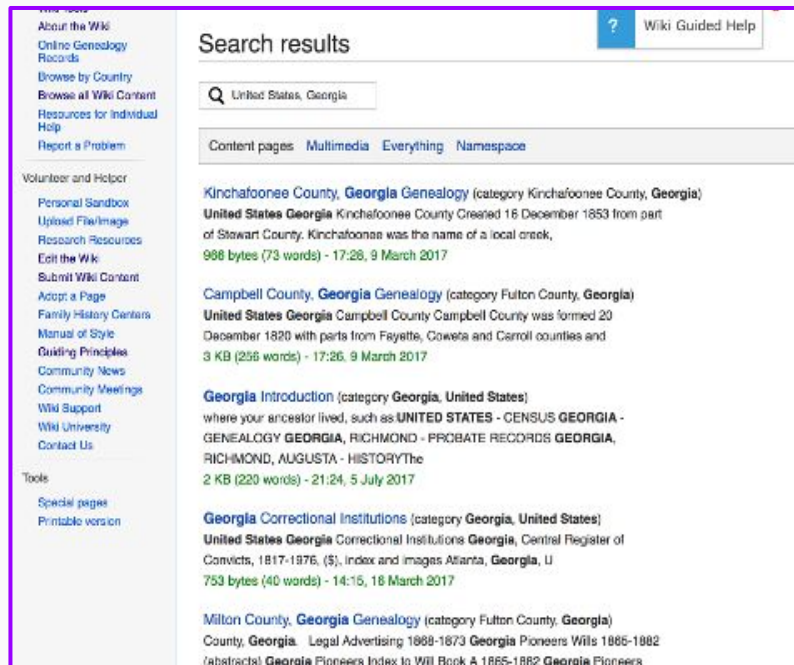
About 238,000 results (0.51 seconds)

[Retina MacBook Pro could spark deluge of copycat, but ...](#)  
tech.firstpost.com › News & Analysis ▾ The First Post ▾  
Jun 15, 2012 - The Retina MacBook Pro is so much more than just a notebook with a fancy screen. Apple has possibly kickstarted the next stage in notebook ...

[From Linux to OSX: Meet Your New Apps - \(think\)](#)  
batsov.com/articles/2012/12/09/from-linux-to-osx-meet-your-new-apps ▾  
Dec 9, 2012 - OSX Mountain Lion ships with an app similar to Pidgin and Kopete called ... It has one notable shortcoming - no retina support. ... There are plenty of great BitTorrent clients on Linux - Deluge, KTorrent, Transmission, etc.

[Protestors Rally Against 'Candy Crush Saga' Developer with ...](#)  
www.macrumors.com/2014/01/31/candy-crush-protest/ ▾ MacRumors ▾  
Jan 31, 2014 - Protestors Rally Against 'Candy Crush Saga' Developer with Deluge of Candy- Themed Games ... With Apple in some cases assisting King in targeting apps with "candy" ... a protest that is seeking to flood the iOS App Store with candy-themed .... Apple Announces New 12-inch MacBook with Retina Display.

[The cause of the deluge demonstrated: being an appendix to ...](#)  
https://books.google.com/books?id=MaZgAAAACAAJ  
William Whiston - 1725  
And (x) Panodorm seems to intimate, thatbefore the Deluge, not only the Civil, ... ' ath'Ab'u-egv, Sutor&imeff nx'uzmxav 10,"be &stay-17: Retina-m" alpt'yfillig 47" ...



A screenshot of a Wiki search results page for the query "United States, Georgia". The search bar at the top shows the query and a magnifying glass icon. To the right of the search bar is a "Wiki Guided Help" button. Below the search bar are tabs for "Content pages", "Multimedia", "Everything", and "Namespace". The "Content pages" tab is selected. The results section shows three search results, each with a blue link, a snippet, and a date. The first result is for "Kinchafoonee County, Georgia Genealogy", the second for "Campbell County, Georgia Genealogy", and the third for "Georgia Introduction".

Wiki Search United States, Georgia Wiki Guided Help

Search results

Content pages Multimedia Everything Namespace

[Kinchafoonee County, Georgia Genealogy](#) (category Kinchafoonee County, Georgia)  
**United States Georgia** Kinchafoonee County Created 16 December 1853 from part of Stewart County. Kinchafoonee was the name of a local creek.  
988 bytes (73 words) - 17:26, 9 March 2017

[Campbell County, Georgia Genealogy](#) (category Fulton County, Georgia)  
**United States Georgia** Campbell County Campbell County was formed 20 December 1820 with parts from Fayette, Coweta and Carroll counties and  
3 KB (256 words) - 17:26, 9 March 2017

[Georgia Introduction](#) (category Georgia, United States)  
where your ancestor lived, such as **UNITED STATES - CENSUS GEORGIA - GENEALOGY GEORGIA, RICHMOND - PROBATE RECORDS GEORGIA, RICHMOND, AUGUSTA - HISTORYThe**  
2 KB (220 words) - 21:24, 5 July 2017

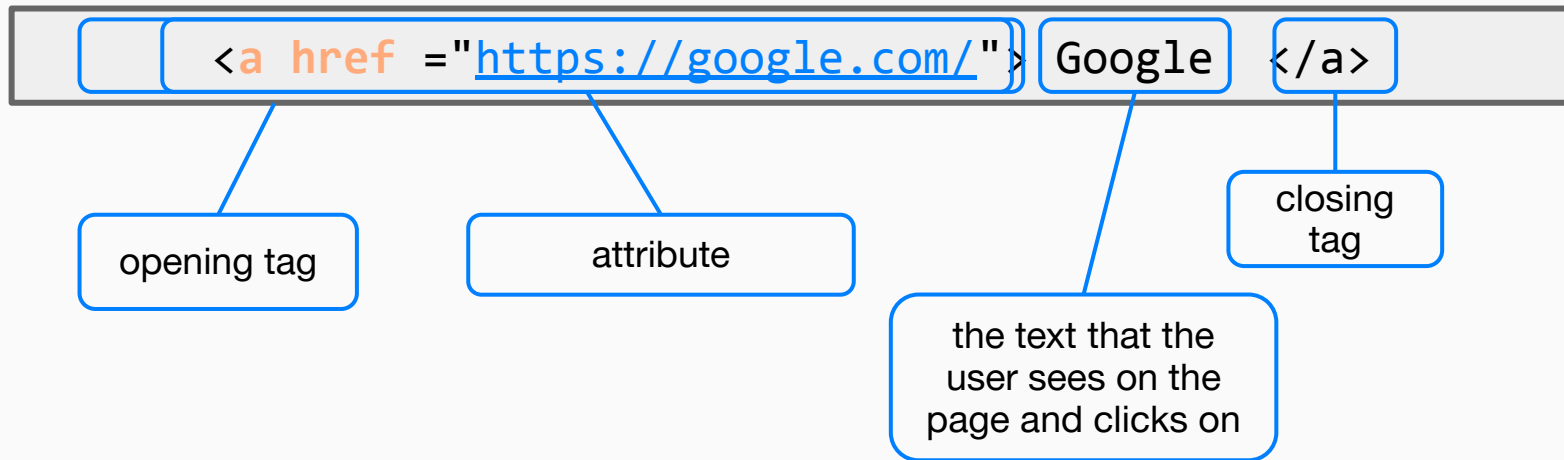
[Georgia Correctional Institutions](#) (category Georgia, United States)  
**United States Georgia** Correctional Institutions **Georgia**, Central Register of Convicts, 1817-1876, (\$), Index and images Atlanta, **Georgia**, U  
753 bytes (40 words) - 14:15, 18 March 2017

[Milton County, Georgia Genealogy](#) (category Fulton County, Georgia)  
County, **Georgia**. Legal Advertising 1888-1873 **Georgia** Pioneers Wills 1885-1882 (abstracts) **Georgia** Pioneers Index in Will Book A 1865-1882 **Georgia** Pioneers

# HTML ATTRIBUTES

All HTML elements can have **attributes**. **Attributes** provide additional information about an element. Attributes are always specified in the opening tag. Attributes usually come in name/value pairs like: name="value".

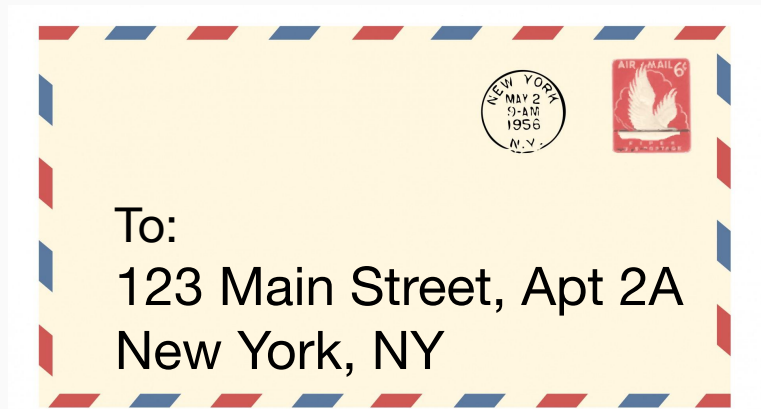
Anchor tags have an **href** attribute. This tells the browser where the link lives on the internet.



# href Attribute

Think of the **href** attribute like the “To:” section on an envelope. The value of this attribute explains where to go, just like an address.

```
<a href="https://Google.com/">Google</a>
```





# Shake Shack Example

What text will the user see highlighted in blue on the webpage?

Where will the user go when they click the highlighted text?

```
<a href="https://www.shakeshack.com">Shake Shack</a>
```

# HTML ATTRIBUTES W/ IMAGE TAGS

# <IMG> TAG & SRC ATTRIBUTE

An **<img> tag** lets you put an image on your website. Image tags have a source attribute (**src**) that tells the browser where the image lives on the internet.



# href Attribute

Think of the **src attribute** like the “From:” section on an envelope.

```

```



# DIFFERENCE BETWEEN ANCHOR TAGS & IMG TAGS

There are three key differences between the image tag and anchor tag.

- Uses **src** attribute
- The tag is **self-closing**.
- No content for an **<img>**. The image itself is the content!

```
<a href="https://google.com">Go to Google</a>
```

```

```

# TABLES & LISTS

# USE OF TABLES IN HTML

Tables are used on websites for two major purposes:

- Arranging information
- Creating a page layout

Using tables to divide the page into different sections is an extremely powerful tool. Almost all major sites on the web are using invisible tables to layout the pages.

Contact	Country
Maria Anders	Germany
Francisco Chang	Mexico
Roland Mendel	Austria
Helen Bennett	UK
Yoshi Tannamuri	Canada
Giovanni Rovelli	Italy

# <TABLE> Tag

Tables are defined by the <table> tag. To begin building a table., you would nest the <table> tag in the <body> of your HTML page.

```
<body>  
    <table>  
    </table>  
</body>
```

The above code does not make a table functional because you have not added the rows, columns, and content, but it provides the basis for a table.



# Adding Column Headers To Our Tables

In order for the columns in our tables to have their own headers, we use the `<th>` tag to define them and nest them into our `<table>` tag.

For example, if we wanted to add four columns and name the headers *one*, *two*, *three* and *four*, we would add the following:

```
<body>
  <table>
    <th> one </th>
    <th> two </th>
    <th> three </th>
    <th> four </th>
  </table>
</body>
```

one	two	three	four
-----	-----	-------	------

By default, table headings are bold and centered.

# Adding Our First Row To Our Tables

In order for us to establish rows in our tables, we use the `<tr>` tag to define them. In the previous example, we established our first row for the column headers. This means we need to wrap them into the `<tr>` tag as pictured below.

```
<body>
  <table>
    <tr>
      <th> one </th>
      <th> two </th>
      <th> three </th>
      <th> four </th>
    </tr>
  </table>
</body>
```

one	two	three	four
-----	-----	-------	------

# Adding Additional Rows and Data for Cells

In order for us to add additional rows to our table, we continue to reuse the `<tr>` tag to continue to define each of the rows.

However, to populate each row cell with data, we nest that cell in `<td>` tags in order for them to appear in their respective column. The `<td>` elements are the data containers of the table.

For example, let's say we wanted to add two rows to our tables and make sure that each of the columns in the row had content, we'd model the code as follows:

```
<body>
<table>
  <tr>
    <th> one </th>
    <th> two </th>
    <th> three </th>
    <th> four </th>
  </tr>
  <tr>
    <td> row 1-1 </td>
    <td> row 2-2 </td>
    <td> row 3-3 </td>
    <td> row 4-4 </td>
  </tr>
  <tr>
    <td> row 1-1 </td>
    <td> row 2-2 </td>
    <td> row 3-3 </td>
    <td> row 4-4 </td>
  </tr>
</table>
</body>
```

one	two	three	four
row 1-1	row 2-2	row 3-3	row 4-4
row 1-1	row 2-2	row 3-3	row 4-4

# Naming Your Table

You can use the **<caption>** tag to give your table a title.

The **<caption>** tag **must be** immediately placed after the opening **<table>** tag.

For example, if we wanted to name this table *Test Table*, we would include a **<caption>** tag as follows:

one	two	three	four
row 1-1	row 2-2	row 3-3	row 4-4
row 1-1	row 2-2	row 3-3	row 4-4

```
<body>
<table>
  <caption> Test Table</caption>
  <tr>
    <th> one </th>
    <th> two </th>
    <th> three </th>
    <th> four </th>
  </tr>
  <tr>
    <td> row 1-1 </td>
    <td> row 2-2 </td>
    <td> row 3-3 </td>
    <td> row 4-4 </td>
  </tr>
  <tr>
    <td> row 1-1 </td>
    <td> row 2-2 </td>
    <td> row 3-3 </td>
    <td> row 4-4 </td>
  </tr>
</table>
</body>
```

# USE OF LISTS IN HTML

Similarly to tables, lists are used on websites to arrange information. In HTML, you can make two types of lists:

- Unordered lists: Lists that have no chronological order where list items are defined by bullet points
- Ordered lists: Lists that follow a chronological order where list items are defined by numbers

## What's The Difference?

**Unordered Lists** - Ordering *doesn't* matter.

- Tin of Tomatoes
- Bacon
- Loaf of Bread
- Mushrooms

**Ordered Lists** - Ordering *does* matter.

1. Put The Kettle On
2. Put The Teabag in The Cup
3. Wait for Kettle To Boil
4. Pour Boiling Water In The Cup

# <ol> and <li> ORDERED LISTS

**<ol>** and **<li>** tags define ordered lists. Ordered lists live within the **<body>** of an HTML document.

**<ol>** elements tells the HTML page that an ordered list is about to be developed.

**<li>** are all of the items you want listed.

As you can see to the right, this code allows the items you list to be named in chronological order.

```
<ol>  
  <li>Hello!</li>  
  <li>Goodbye!</li>  
  <li>So long!</li>  
  <li>Hola!</li>  
</ol>
```

1. Hello!
2. Goodbye!
3. So long!
4. Hola!

# <ul> and <li> UNORDERED LISTS

<ul> and <li> tags define unordered lists. Unordered lists live within the <body> of an HTML document.

<ul> elements tells the HTML page that an unordered list is about to be developed.

<li> are all of the items you want listed.

As you can see to the right, this code allows the items you list to be named in bullet point format.

```
<ul>  
  <li>List item 1</li>  
  <li>List item 2</li>  
  <li>List item 3</li>  
  <li>List item 4</li>  
  <li>List item 5</li>  
</ul>
```

- List item 1
- List item 2
- List item 3
- List item 4
- List item 5

# WHAT DO I NEED TO MAKE THIS TASK?

1. Repl.it
2. HTML
3. Text
4. Images
5. Links (to a website!)

