



Agenda

- What is a browser?
- What is HTML
- Html tags
 - Links
 - Images
 - Headers
 - Tables
- Attributes
- Style properties
- Block and inline elements
- Inline CSS

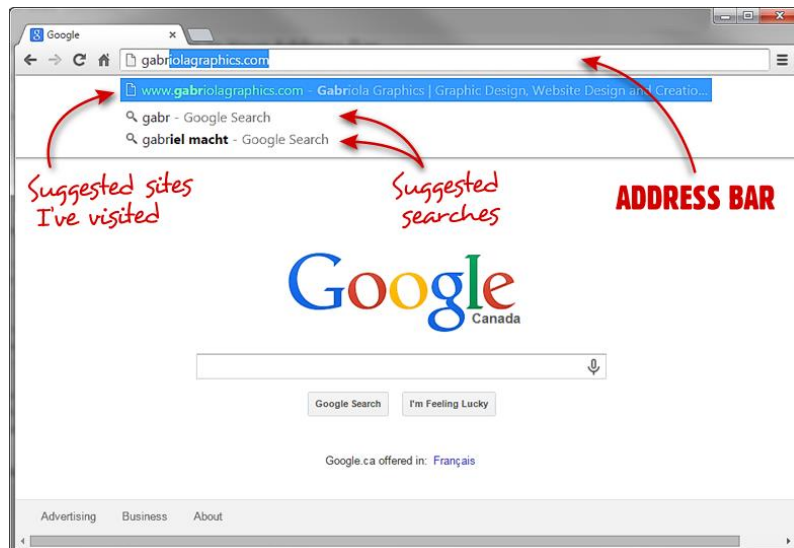
What is a Browser



What is a Browser

- A Browser is a software on our computer that allows us to browse resources on the web
- We can access different **URLs** using the **address bar**

URL: Uniform Resource Locator



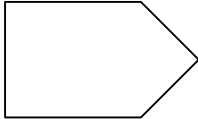
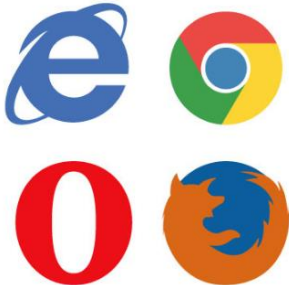
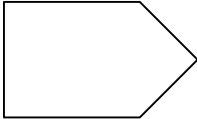
What is a Browser

The browser reads and renders HTML into a visual format

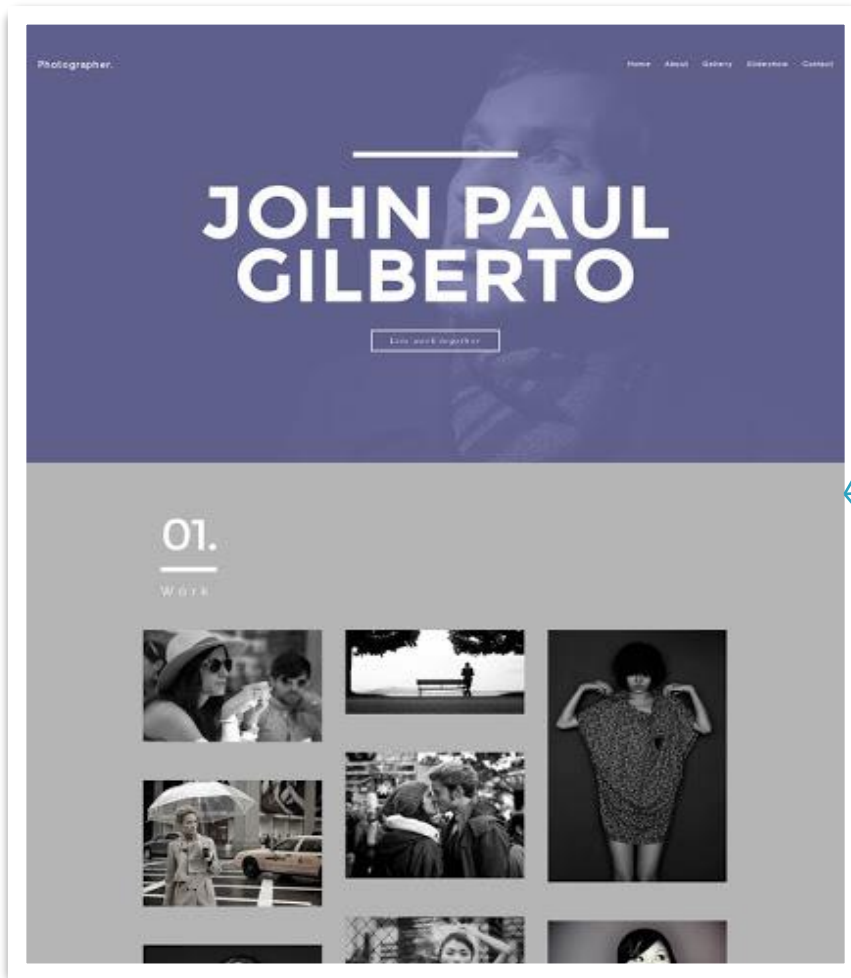
```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<title>Lakeside Amusement Park</title>
</head>
<body>


<p>The Lakeside Amusement Park in Denver is one of the
few remaining family-owned amusement parks in the US.
The Lakeside tower is easily spotted day and night from
the Sheridan Blvd. just South of I-70.
<br clear="left" />
The park offers a variety of rides with many different
levels of thrills. Its Cyclone Coaster has been ranked
as a great classic coaster by the American Coaster Enthusiasts
(ACE). The Merry-Go-Round offers a large selection of different
animals.

The two steam trains which travel around the lake are
from the 1904 St. Louis World Fair. Spinning rides include
the Tilt-A-Whirl, the Spider, and the Matterhorn. Among
the driving rides are the Auto Skooters and the Bumper Boats.
</p>
</body>
</html>
```



HTML CSS JS



HTML = Structure. What is in the page

CSS = Design. How it looks like

Javascript = Interactivity. How it behaves?

What is HTML?

HTML

Hyper Text

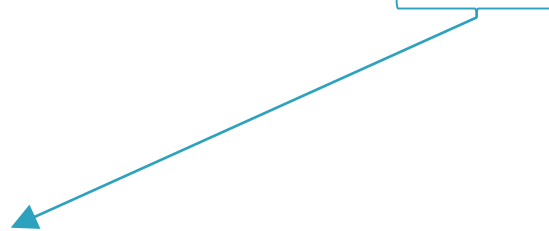
Text which contains links to other texts

The book wheel 1588



What is HTML?

HTML

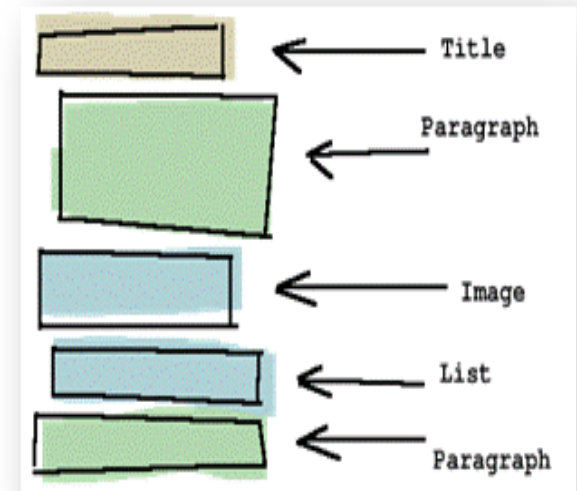


Markup Language

is a system for annotating a document in a way that is syntactically distinguishable from the text.

OR (in day to day language)

A language that uses tags to define elements within a document



What is HTML?

HTML is actually a language that enables us to describe documents textually

Like the following (ugly) document:



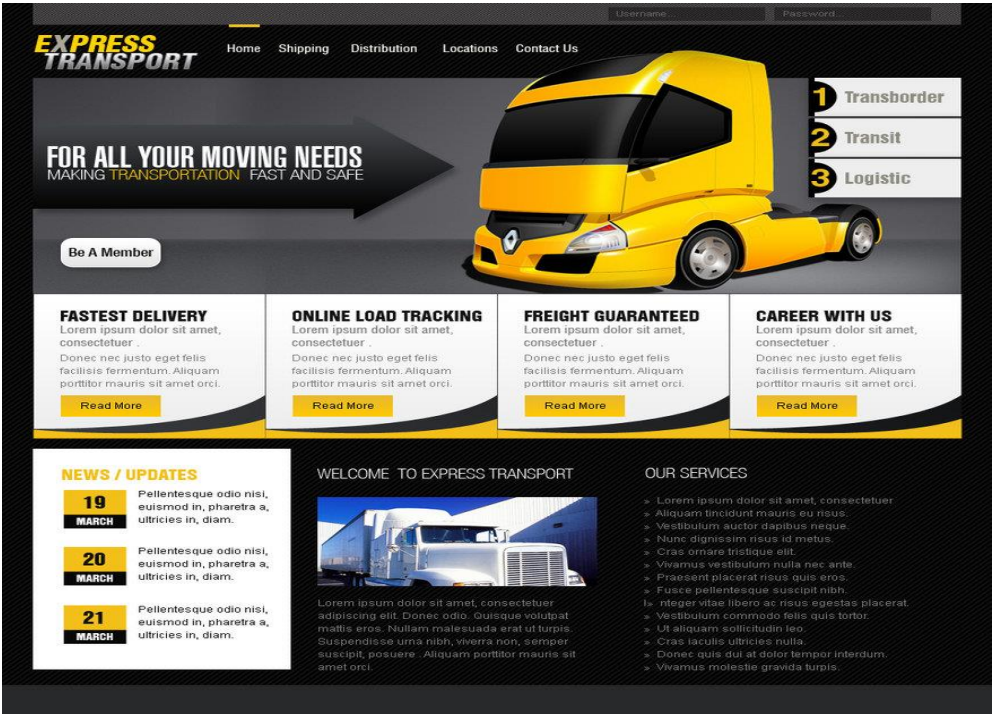
What is HTML?

Or the following (boring) document:



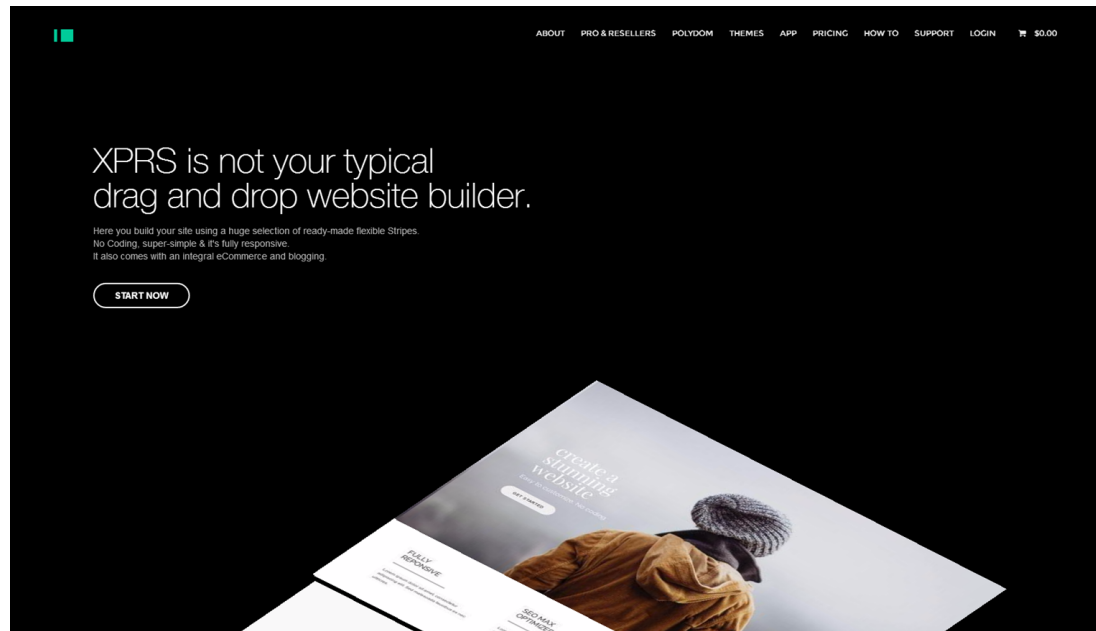
What is HTML?

Or this (outdated design) one



What is HTML?

And even the following (amazing) document



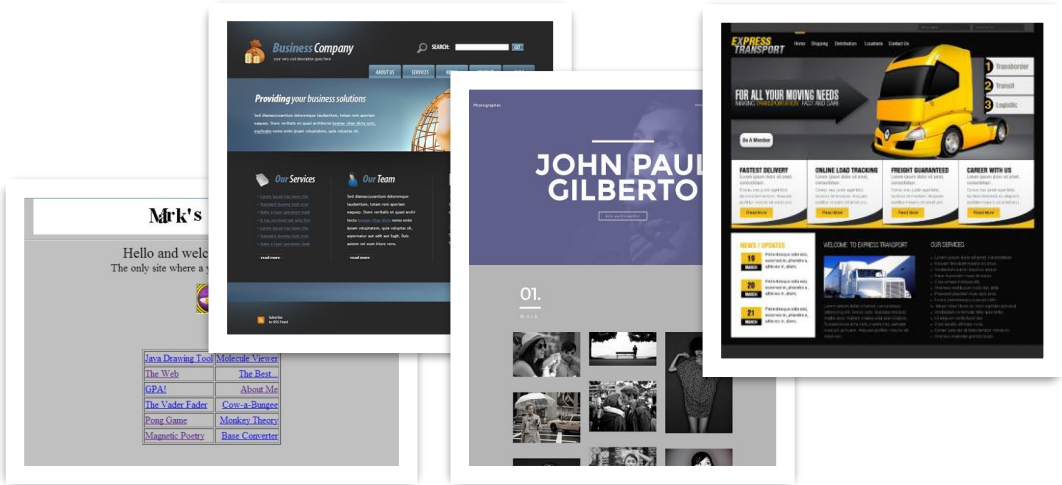
What is HTML?

And every other page online...



What is HTML?

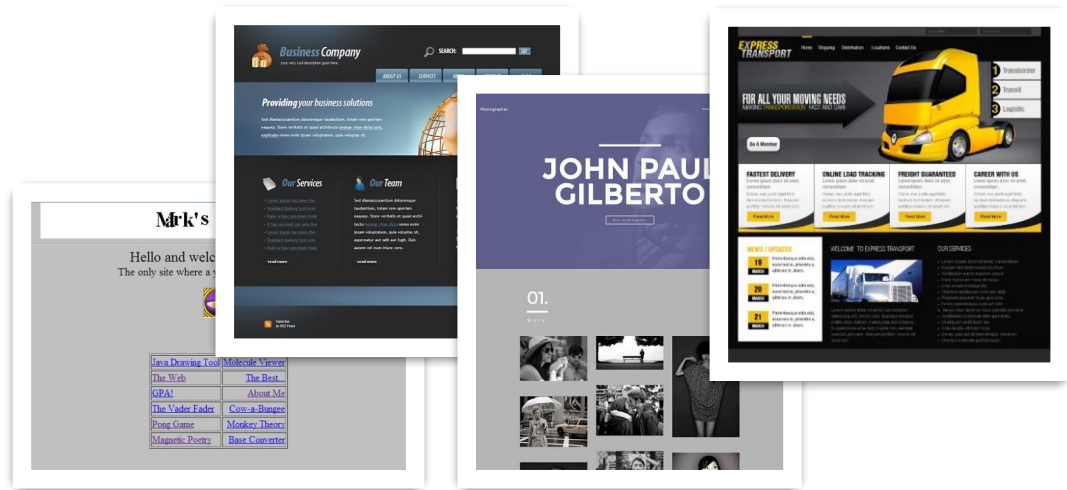
All of these pages are described only by text



What is HTML?

Today we will start learning the tools that will help us create amazing web pages.

We will start with HTML that is in charge of the structure.



HOW?

The three building blocks of every HTML document:



Elements



Attributes



Content

HTML Elements

What are the basic elements of a document?

My title

Usually there is a title

My subtitle

And maybe a subtitle


My paragraph Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed vel faucibus nibh, ut bibendum mauris. Sed vitae urna lorem. Aliquam mattis neque non enim suscipit, non fermentum enim porttitor. Nunc dignissim tempus libero, ut pulvinar purus tincidunt nec. Proin sit amet nibh id orci feugiat varius. Proin scelerisque, sapien ut dictum egestas, nibh sem feugiat sapien, a feugiat velit sem vitae risus. Vivamus cursus, libero sed feugiat lobortis, urna ex volutpat nisi, quis egestas purus metus ac sem. In consequat in velit vel hendrerit. Nunc non nisl id tortor porttitor mollis. Aliquam sagittis ex sit amet ullamcorper faucibus.

And surely there will be some text or a paragraph

HTML Elements

So if we create a basic webpage in a notepad, our notepad text will look like this:

And we need a way to let the computer know that this is a title




My title

My subtitle

My paragraph Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed vel faucibus nibh, ut bibendum mauris. Sed vitae urna lorem. Aliquam mattis neque non enim suscipit, non fermentum enim porttitor. Nunc dignissim tempus libero, ut pulvinar purus tincidunt nec. Proin sit amet nibh id orci feugiat varius. Proin scelerisque, sapien ut dictum egestas, nibh sem feugiat sapien, a feugiat velit sem vitae risus. Vivamus cursus, libero sed feugiat lobortis, urna ex volutpat nisi, quis egestas purus metus ac sem. In consequat in velit vel hendrerit. Nunc non nisl id tortor porttitor mollis. Aliquam sagittis ex sit amet ullamcorper faucibus.

HTML Elements

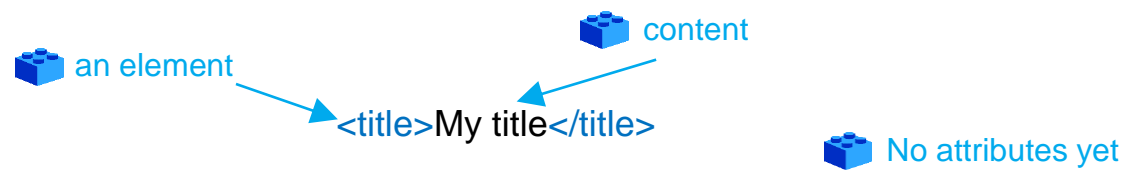
So far we have content



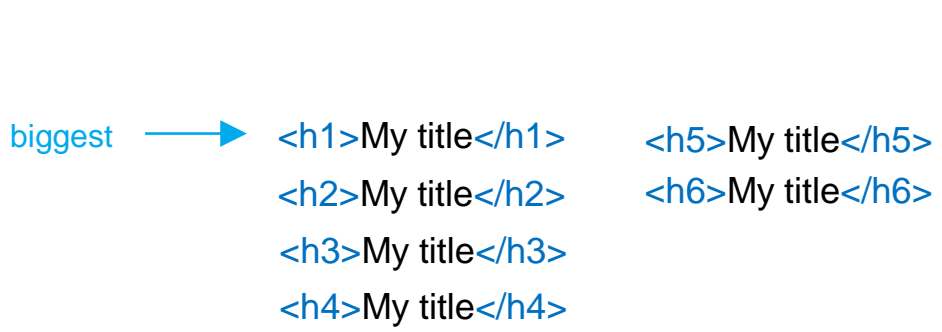
My title
 My subtitle
 My paragraph Lorem ipsum dolor sit amet, consectetur adipiscing elit.
 Sed vel faucibus nibh, ut bibendum mauris. Sed vitae urna lorem. Aliquam
 mattis neque non enim suscipit, non fermentum enim porttitor. Nunc
 dignissim tempus libero, ut pulvinar purus tincidunt nec. Proin sit amet
 nibh id orci feugiat varius. Proin scelerisque, sapien ut dictum
 egestas, nibh sem feugiat sapien, a feugiat velit sem vitae risus.
 Vivamus cursus, libero sed feugiat lobortis, urna ex volutpat nisi, quis
 egestas purus metus ac sem. In consequat in velit vel hendrerit. Nunc
 non nisl id tortor porttitor mollis. Aliquam sagittis ex sit amet
 ullamcorper faucibus.

HTML Elements

In order to define an element (in our case a title element) we need to wrap it with a tag.
This is how it looks:



Actually, the "*title*" tag is reserved for a different use...
In HTML we have the **heading tag**
The heading tag has 6 different sizes (1 is the biggest):



Links

Syntax

We have an opening tag and a closing tag that is prefixed with a "/"

Opening tag → `<h1>My Title</h1>` ← Closing tag

HTML Elements

Back to notepad

Here is where the heading starts

And here is where it ends

We can also define the subtitle as a smaller heading

```
<h1>My title</h1>
<h3>My subtitle</h3>
My paragraph Lorem ipsum dolor sit amet, consectetur adipiscing elit.
Sed vel faucibus nibh, ut bibendum mauris. Sed vitae urna lorem.

Aliquam mattis neque non enim suscipit, non fermentum enim porttitor.
Nunc dignissim tempus libero, ut pulvinar purus tincidunt nec. Proin sit
amet nibh id orci feugiat varius. Proin scelerisque, sapien ut dictum
egestas, nibh sem feugiat sapien, a feugiat velit sem vitae risus.
Vivamus cursus, libero sed feugiat lobortis, urna ex volutpat nisi, quis
egestas purus metus ac sem.

In consequat in velit vel hendrerit. Nunc non nisl id tortor porttitor
mollis. Aliquam sagittis ex sit amet ullamcorper faucibus
```

HTML Elements

A paragraph element is denoted by the **p** tag



Here is where the paragraph starts

Now you've got 7 HTML tags

```
<h1>My title</h1>
<h3>My subtitle</h3>
<p>My paragraph Lorem ipsum dolor sit amet, consectetur adipiscing elit.
Sed vel faucibus nibh, ut bibendum mauris. Sed vitae urna lorem.
```

Aliquam mattis neque non enim suscipit, non fermentum enim porttitor. Nunc dignissim tempus libero, ut pulvinar purus tincidunt nec. Proin sit amet nibh id orci feugiat varius. Proin scelerisque, sapien ut dictum egestas, nibh sem feugiat sapien, a feugiat velit sem vitae risus. Vivamus cursus, libero sed feugiat lobortis, urna ex volutpat nisi, quis egestas purus metus ac sem.

```
In consequat in velit vel hendrerit. Nunc non nisl id tortor porttitor
mollis. Aliquam sagittis ex sit amet ullamcorper faucibus</p>
```

And here is where it ends

HTML Elements

HTML tag: in order to have a well formed HTML document, we will need to add some changes

First we need to declare that this is an HTML document

```
<html>
  <h1>My title</h1>
  <h3>My subtitle</h3>
  <p>My paragraph Lorem ipsum dolor sit amet, consectetur adipiscing
elit. Sed vel faucibus nibh, ut bibendum mauris. Sed vitae urna
lorem.

  Aliquam mattis neque non enim suscipit, non fermentum enim
porttitor. Nunc dignissim tempus libero, ut pulvinar purus
tincidunt nec. Proin sit amet nibh id orci feugiat varius. Proin
scelerisque, sapien ut dictum egestas, nibh sem feugiat sapien, a
feugiat velit sem vitae risus. Vivamus cursus, libero sed feugiat
lobortis, urna ex volutpat nisi, quis egestas purus metus ac sem.

  In consequat in velit vel hendrerit. Nunc non nisl id tortor
porttitor mollis. Aliquam sagittis ex sit amet ullamcorper
faucibus</p>
</html>
```



Nesting: Notice that elements can contain not just text, but other elements as well

HTML Elements

Head: Now we need a place to write some information about the document (meta data), like who wrote it, or what is the document's title etc. This part of the page is invisible.

There is a special tag for that, it is called the head tag

We will just add it under the HTML tag (we will use it later)

```
<html>
  <head></head>
  <h1>My title</h1>
  <h3>My subtitle</h3>
  <p>My paragraph Lorem ipsum dolor sit amet, consectetur adipiscing
elit. Sed vel faucibus nibh, ut bibendum mauris. Sed vitae urna
lorem.

Aliquam mattis neque non enim suscipit, non fermentum enim
porttitor. Nunc dignissim tempus libero, ut pulvinar purus
tincidunt nec. Proin sit amet nibh id orci feugiat varius. Proin
scelerisque, sapien ut dictum egestas, nibh sem feugiat sapien, a
feugiat velit sem vitae risus. Vivamus cursus, libero sed feugiat
lobortis, urna ex volutpat nisi, quis egestas purus metus ac sem.

In consequat in velit vel hendrerit. Nunc non nisl id tortor
porttitor mollis. Aliquam sagittis ex sit amet ullamcorper
faucibus</p>
</html>
```

HTML Elements

Body: In order to differentiate between the meta data of the document and the visible part of it, we use the body tag

```
<html>
  <head></head>
  <body>
    <h1>My title</h1>
    <h3>My subtitle</h3>
    <p>My paragraph Lorem ipsum dolor sit amet, consectetur adipiscing
elit. Sed vel faucibus nibh, ut bibendum mauris. Sed vitae urna
lorem.

    Aliquam mattis neque non enim suscipit, non fermentum enim
porttitor. Nunc dignissim tempus libero, ut pulvinar purus
tincidunt nec. Proin sit amet nibh id orci feugiat varius. Proin
scelerisque, sapien ut dictum egestas, nibh sem feugiat sapien, a
feugiat velit sem vitae risus. Vivamus cursus, libero sed feugiat
lobortis, urna ex volutpat nisi, quis egestas purus metus ac sem.

    In consequat in velit vel hendrerit. Nunc non nisl id tortor
porttitor mollis. Aliquam sagittis ex sit amet ullamcorper
faucibus</p>
  </body>
</html>
```

Voilà!

HTML Elements


We will save this file as mydoc.html

And now we can open it using a special program that was designed to interpret HTML content and render it to the screen

```
<html>
  <head></head>
  <body>
    <h1>My title</h1>
    <h3>My subtitle</h3>
    <p>My paragraph Lorem ipsum sit amet, consectetur adipiscing
elit. Sed vel faucibus. Vivamus cursus, libero sed feugiat
lorem.

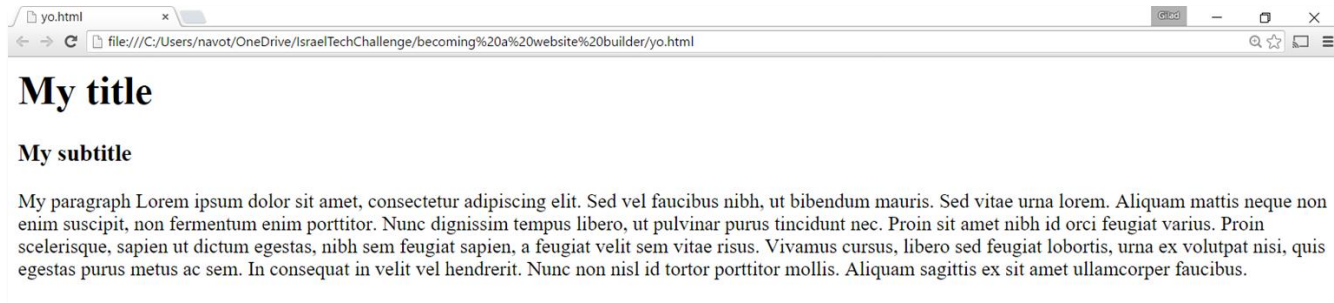
    Aliquam mattis. Nunc non nisl id tortor
porttitor. Nunc non nisl id tortor
tincidunt neque. Ut amet i. pulvinar purus
scelerisque, dictum eget. On sem feugiat sapien, a
feugiat velit sem vitae risus. Vivamus cursus, libero sed feugiat
lobortis, urna ex volutpat nisi, quis egestas purus metus ac sem.

    In consequat in velit vel hendrerit. Nunc non nisl id tortor
porttitor mollis. Aliquam sagittis ex sit amet ullamcorper
faucibus.</p>
  </body>
</html>
```



HTML Elements

And the result



Why is the paragraph presented in one piece?

Any number of spaces, and any number of new lines, count as **one space**.



HTML Elements

Br: One way to control line breaks in an HTML document is using the break tag `< br />`

```
<html>
  <head></head>
  <body>
    <h1>My title</h1>
    <h3>My subtitle</h3>
    <p>My paragraph Lorem ipsum dolor sit amet, consectetur adipiscing
elit. Sed vel faucibus nibh, ut bibendum mauris. Sed vitae urna
lorem. Aliquam mattis neque non enim suscipit, non fermentum enim
porttitor. <br/> Nunc dignissim tempus libero, ut pulvinar purus
tincidunt nec. Proin sit amet nibh id orci feugiat varius.<br/>
Proin scelerisque, sapien ut dictum egestas, nibh sem feugiat
sapien, a feugiat velit sem vitae risus. Vivamus cursus, libero sed
feugiat lobortis, urna ex volutpat nisi, quis egestas purus metus
ac sem.<br/> In consequat in velit vel hendrerit. Nunc non nisl id
tortor porttitor mollis.<br/> Aliquam sagittis ex sit amet
ullamcorper faucibus.</p>
  </body>
</html>
```



The break tag is a "**void tag**", A tag that does not hold content (this is why we don't use it in pairs) – The slash is not mandatory.

HTML Elements

How will we render the following page?

```
<html>
  <head>
    <title>Dinosaurs</title>
  </head>
  <body>
    <h1>Dinosaurs</h1>
    <p>Dinosaurs, dinosaurs,<br/>
    Where have you been?<br/>
    I've only seen you<br/>
    In books that you're in.<br/>
    Dinosaurs, dinosaurs,<br/>
    Why aren't you here?<br/>
    I want to know what<br/>
    Made you all disappear!
    .</p>
  </body>
</html>
```

Dinosaurs

Dinosaurs, dinosaurs,
Where have you been?
I've only seen you
In books that you're in.
Dinosaurs, dinosaurs,
Why aren't you here?
I want to know what
Made you all disappear! .



The `
` tag is a very useful tag for rendering poems

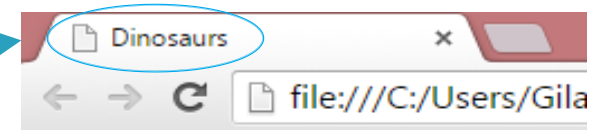
HTML Elements

We added something new to our document.

The title is part of the document's meta data and it will not be visible in the page itself

It will be used by the browser

```
<html>
  <head>
    <title>Dinosaurs</title>
  </head>
  <body>
    <h1>Dinosaurs</h1>
    <p>Dinosaurs, dinosaurs,<br/>
    Where have you been?<br/>
    I've only seen you<br/>
    In books that you're in.<br/>
    Dinosaurs, dinosaurs,<br/>
    Why aren't you here?<br/>
    I want to know what<br/>
    Made you all disappear!
    .</p>
  </body>
</html>
```



Dinosaurs

Dinosaurs, dinosaurs,
Where have you been?
I've only seen you
In books that you're in.
Dinosaurs, dinosaurs,
Why aren't you here?
I want to know what
Made you all disappear! .

HTML Elements

<h1>Questions?</h1>

Links

Let's explore the **HT** in HTML

The link tag (anchor) in HTML is denoted by `<a>`

So, if we want to mark a certain text as link we should wrap it like this:


 A diagram illustrating the structure of an HTML anchor tag. The text `<a>link text` is shown. A blue arrow points from the text "an element" to the opening tag `<a>`. Another blue arrow points from the text "content" to the text "link" between the tags.



Where will we write the link's address?

Attributes: This is what attributes are for
 Attributes allow us to add properties to our elements:

```
<a href="http://www.israeltechallenge.com">link text</a>
```

Target Attribute

Attribute Example:

For additional information please go to

```
<a href="http://www.israeltechallenge.com">our website</a>
```

For additional information please go to [our website](http://www.israeltechallenge.com)

There are many attributes. In the anchor case we also have the **target attribute** that tells the browser whether to open the link in a new window/tab or replace the existing one

For additional information please go to

```
<a href="http://www.israeltechallenge.com" target="_blank">  
our website</a>
```


target="_blank" New window/tab

target="_self" Replace the current page

HTML Elements

This is the general structure of an HTML element

<tagname attribute1="value1" attribute2="value2">element content</tagname>

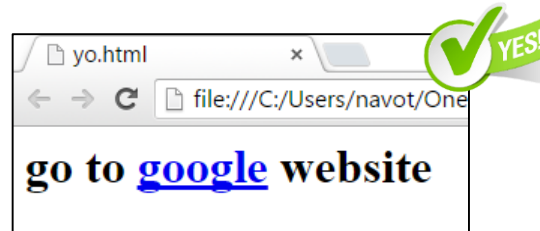


Can hold either text or another element

Practice

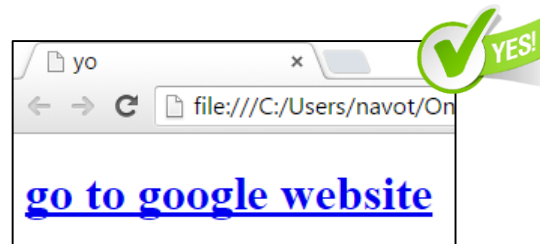
Is this a valid HTML tag?

```
<h1>go to <a href="www.google.com" >google</a> website</h1>
```



And this?

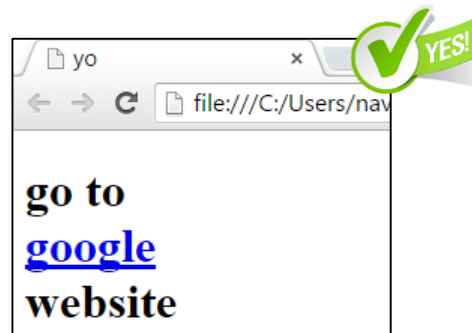
```
<a href="www.google.com"><h1> go to google website </h1></a>
```



HTML Elements

Is this a valid HTML tag?

```
<h1>go to <br/><a href="www.google.com" >google</a> <br/>website</h1>
```



And this?

```
<a href="www.google.com"><h1> go to google website </a></h1>
```



Knowledge Check

<h2> To Do </h2>

What is h2?

What is To Do?

<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco</p>

copy text

<body>





<h1>Title</h1>

</body>

Challenge: <div class="bold">Hello</div>

HTML Elements

Before we explore new tags,
here are some important points to remember

-  HTML tags are not case sensitive: <P> means the same as <p> (we will use lower cased tags)
-  Elements can have as many attributes as needed
-  Elements can be nested ?
-  Each starting tag must have a closing tag unless it is a void element

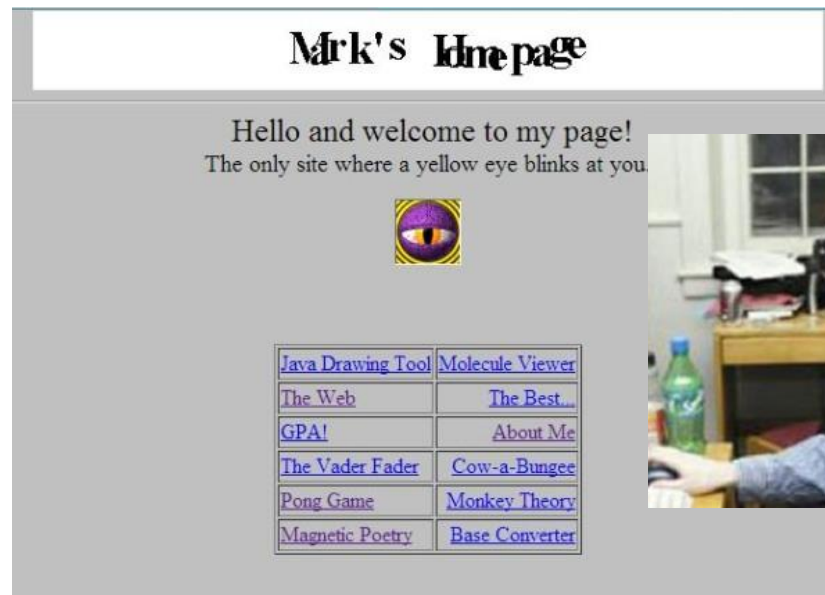
HTML Elements

Let's travel back in time
What year is this?



HTML Elements

Remember the ugly site from the beginning of this lecture?
It is from 1999 ... who is Mark?



HTML Elements

Let's say we want to create this web page using HTML.
Which HTML Elements do you recognize?

<h1> (but with a twist)

<?> horizontal line

Probably <h3>

<?> an image

We can use <p>

<a> (lots of them)


? Background color...

<?> a table

Mrk's Idne page

Hello and welcome to my page!

The only site where a yellow eye blinks at you.



Java Drawing Tool	Molecule Viewer
The Web	The Best
GPA!	About Me
The Vader Fader	Cow-a-Bungee
Pong Game	Monkey Theory
Magnetic Poetry	Base Converter

HTML Elements

What we know so far...

```
<body>
  <h1>Mark's Homepage</h1>
  <h3>Hello and welcome to my page!</h3>
  <p> The only site where a yellow eye blinks at you </p>
  <br/>
  <a href="">Java Drawing Tool</a><a href="">Molecule Viewer</a>
  <br/>
  <a href="">The Web</a><a href="">The Best</a>
  <br/>
  <a href="">GPA!</a><a href="">About Me</a>
  <br/>
  <a href="">The Vader Fader</a><a href="">Cow-a-Bungee</a>
  <br/>
  <a href="">Pong Game</a><a href="">Monkey Theory</a>
  <br/>
  <a href="">Magnetic Poetry</a><a href="">Base Converter</a>
</body>
```

HTML Elements

What we know so far...

```

<body>
  <h1>Mark's Homepage</h1>
  <h3>Hello and welcome to my page!</h3>
  <p> The only site where a yellow eye blinks at you </p>
  <br/>
  <a href="">Java
  <br/>
  <a href="">The
  <br/>
  <a href="">GPA!
  <br/>
  <a href="">The
  <br/>
  <a href="">Pong
  <br/>
  <a href="">Magn
  </body>
        
```

yo
x

← → ↻
file:///C:/Users/navot/OneDrive/IsraelTechChallenge/becoming%20a%20website

Mark's Homepage

Hello and welcome to my page!

The only site where a yellow eye blinks at you

[Java Drawing Tool](#)
[Molecule Viewer](#)

[The Web](#)
[The Best](#)

[GPA!](#)
[About Me](#)

[The Vader Fader](#)
[Cow-a-Bungee](#)

[Pong Game](#)
[Monkey Theory](#)

[Magnetic Poetry](#)
[Base Converter](#)

HTML Elements



Mark's Homepage

Hello and welcome to my page!

The only site where a yellow eye blinks at you

[Java Drawing Tool](#)[Molecule Viewer](#)
[The Web](#)[The Best](#)
[GPA!](#)[About Me](#)
[The Vader Fader](#)[Cow-a-Bungee](#)
[Pong Game](#)[Monkey Theory](#)
[Magnetic Poetry](#)[Base Converter](#)

Mrk's Hnepage

Hello and welcome to my page!
The only site where a yellow eye blinks at you.

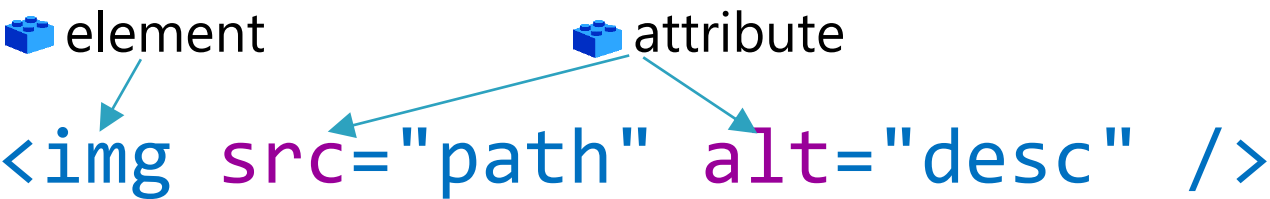


Java Drawing Tool	Molecule Viewer
The Web	The Best...
GPA!	About Me
The Vader Fader	Cow-a-Bungee
Pong Game	Monkey Theory
Magnetic Poetry	Base Converter

HTML Elements

We need some new tags

The image element is a void element denoted by img



HTML Elements

```

```



The src attribute (mandatory) holds the image location:

- An absolute path
 - `http://www.angelfire.com/ny/mez51/blinking_eye.jpg`
 - `C:\Users\navot\IsraelTechChallenge\bwb\blinking_eye.jpg`
- A relative path
 - `./images/blinking_eye.jpg`

HTML Elements

```

```



The alt attribute holds the image description and it is mandatory as well :

What is it for?



So blind people can surf your site



Some people disable images (slow connections or limited displays)



alt stands for alternate text

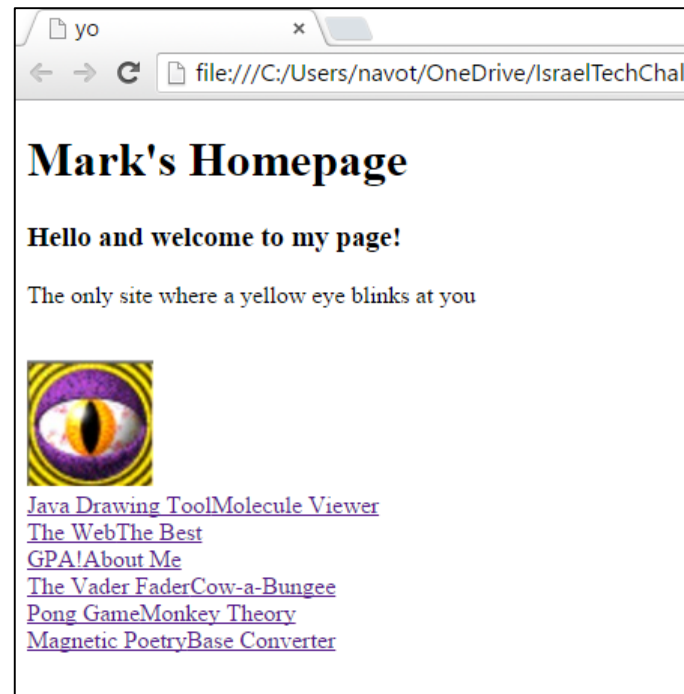
HTML Elements

```

```



The image is located in the same folder as the .html file



HTML Elements

<h1>Questions?</h1>

HTML Elements

Next, the horizontal line

The horizontal line is `
`'s big brother,
Like `
` it is a void element and it is used as a
divider

`<hr/>`

Horizontal Rules



Now you've got 16 HTML tags

HTML Elements

```
<body>
  <h1>Mark's Homepage</h1>
  <hr/>
  <h3>Hello and welcome to my page!</h3>
  <p> The only site where a yellow eye blinks at you </p>
  <br/>
  
  <br/>
  <a href="">Java Drawing Tool</a><a href="">Molecule Viewer</a>
  <br/>
  <a href="">The Web</a><a href="">The Best</a>
  <br/>
  <a href="">GPA!</a><a href="">About Me</a>
  <br/>
  <a href="">The Vader Fader</a><a href="">Cow-a-Bungee</a>
  <br/>
  <a href="">Pong Game</a><a href="">Monkey Theory</a>
  <br/>
  <a href="">Magnetic Poetry</a><a href="">Base Converter</a>
</body>
```

HTML Elements

```
<body>
  <h1>Mark's Homepage</h1>
  <hr/>
  <h3>Hello and welcome to my pa
  <p> The only site where a yell
  <br/>
  
  <a href="">Java Drawing Tool</
  <br/>
  <a href="">The Web</a><a href=
  <br/>
  <a href="">GPA!</a><a href="">
  <br/>
  <a href="">The Vader Fader</a>
  <br/>
  <a href="">Pong Game</a><a hre
  <br/>
  <a href="">Magnetic Poetry</a>
</body>
```


yo

file:///C:/Users/navot/OneDrive/IsraelTechChallenge/becc

Mark's Homepage

Hello and welcome to my page!

The only site where a yellow eye blinks at you

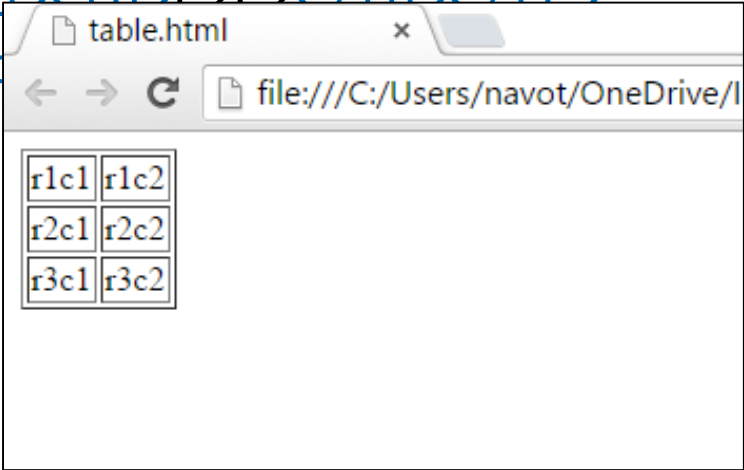


[Java Drawing Tool](#)[Molecule Viewer](#)
[The Web](#)[The Best](#)
[GPA!](#)[About Me](#)
[The Vader Fader](#)[Cow-a-Bungee](#)
[Pong Game](#)[Monkey Theory](#)
[Magnetic Poetry](#)[Base Converter](#)

HTML Elements

Table: The table element is a bit more complex
It is actually a combination of at least three element types

```
<table border="1">  
  <tr><td>r1c1</td><td>r1c2</td></tr>  
  <tr><td>r2c1</td><td>r2c2</td></tr>  
  <tr><td>r3c1</td><td>r3c2</td></tr>  
</table>
```



HTML Elements

The **<tr> element** can only contain a **<td> element**,
Our table data will sit inside the **<td> element**



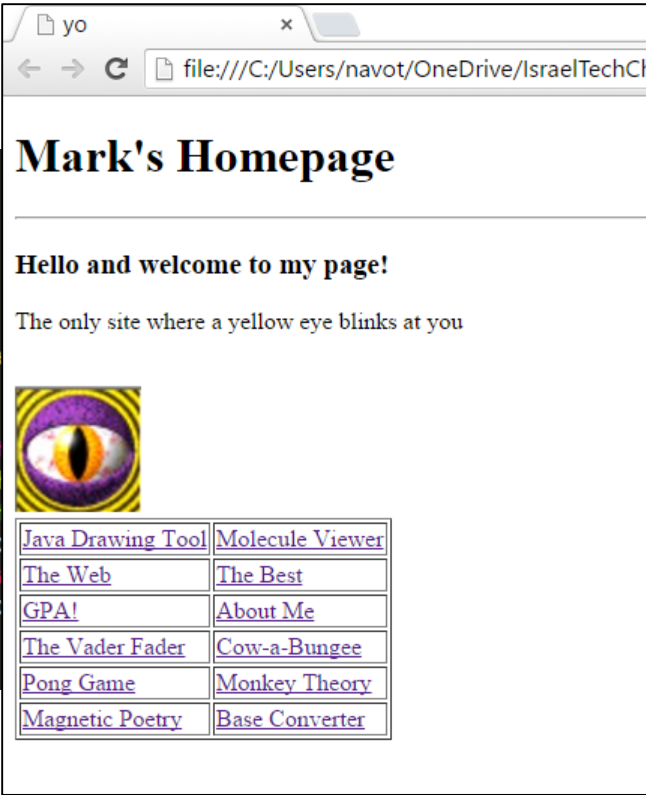
There are many additional attributes and tags that are associated with the table element, at this point in order to keep things simple we will not mention them

HTML Elements

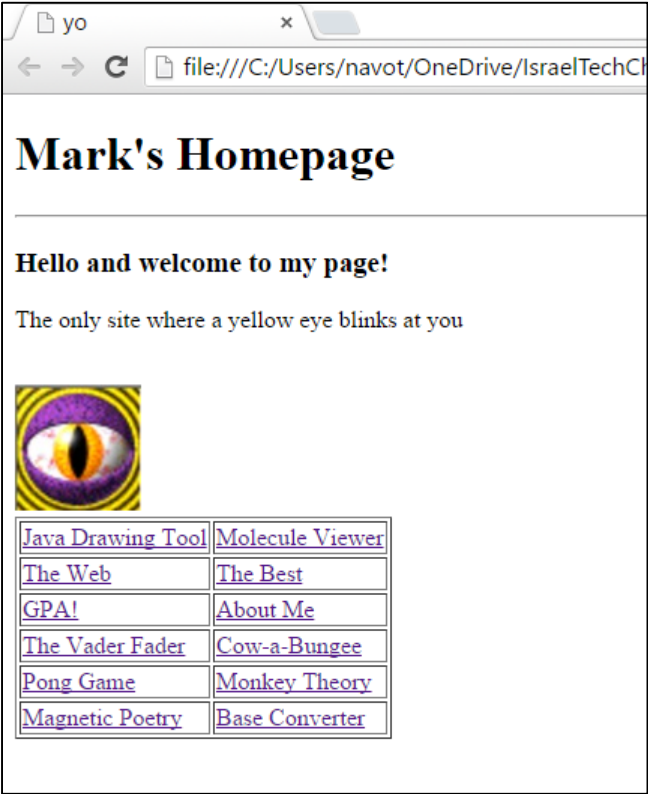
```
<body>
  <h1>Mark's Homepage</h1>
  <hr/>
  <h3>Hello and welcome to my page!</h3>
  <p> The only site where a yellow eye blinks at you </p>
  <br/>
  
  <br/>
  <table border="1">
    <tr><td><a href="">Java Drawing Tool</a></td><td><a href="">Molecule Viewer</a></td></tr>
    <tr><td><a href="">The Web</a></td><td><a href="">The Best</a></td></tr>
    <tr><td><a href="">GPA!</a></td><td><a href="">About Me</a></td></tr>
    <tr><td><a href="">The Vader Fader</a></td><td><a href="">Cow-a-Bungee</a></td></tr>
    <tr><td><a href="">Pong Game</a></td><td><a href="">Monkey Theory</a></td></tr>
    <tr><td><a href="">Magnetic Poetry</a></td><td><a href="">Base Converter</a></td></tr>
  </table>
</body>
```


HTML Elements

```
<body>
  <h1>Mark's Homepage</h1>
  <hr/>
  <h3>Hello and welcome to my page!</h3>
  <p> The only site where a yellow eye blinks at
  <br/>
  
  <br/>
  <table border="1">
    <tr><td><a href="">Java Drawing Tool</a></td></tr>
    <tr><td><a href="">The Web</a></td><td><a href="">The Best</a></td></tr>
    <tr><td><a href="">GPA!</a></td><td><a href="">About Me</a></td></tr>
    <tr><td><a href="">The Vader Fader</a></td><td><a href="">Cow-a-Bungee</a></td></tr>
    <tr><td><a href="">Pong Game</a></td><td><a href="">Monkey Theory</a></td></tr>
    <tr><td><a href="">Magnetic Poetry</a></td><td><a href="">Base Converter</a></td></tr>
  </table>
</body>
```



HTML Elements



We are getting close...

We can say that content wise the pages are similar

HTML Elements

Content ✓

Now that we find out how to describe a document's content using HTML tags, We need a way to describe its style.

Style ?

In our little project we need a way to set the background color and the text alignment, but there are many more style properties we can use

HTML Elements

Style attribute

Style is another attribute that an element can have.

i.e. our body element can have the following style attribute:

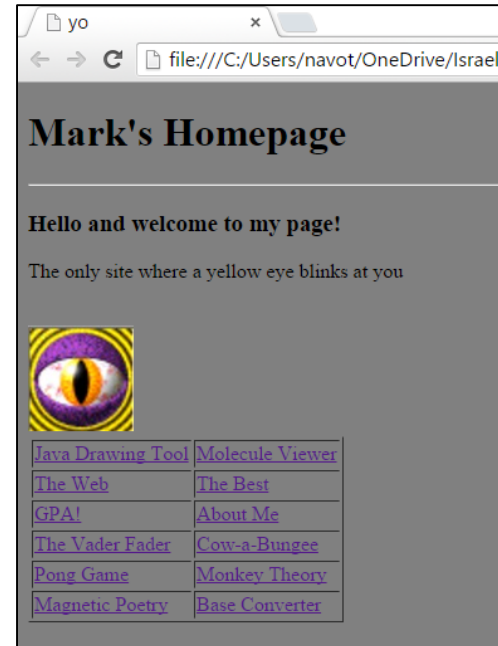
```
<body style="background-color:grey;">  
  .  
  .  
  .  
</body>
```

HTML Elements

```
<body style="background-color:grey;">
```

```
  .
  .
  .
```

```
</body>
```



HTML Elements

Style Syntax

Style attribute has a special syntax

```
style="key1:value1; key2:value2"
```

HTML Elements

Style: text align

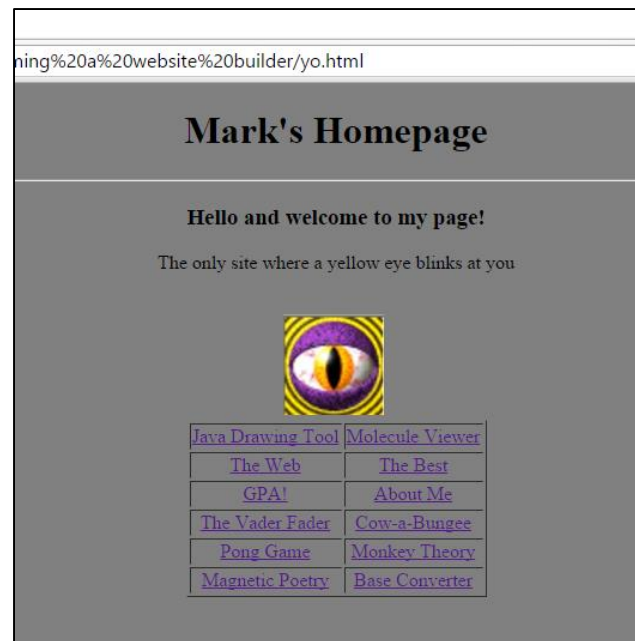
```
<body style="background-color:grey;text-align:center;">
```

```

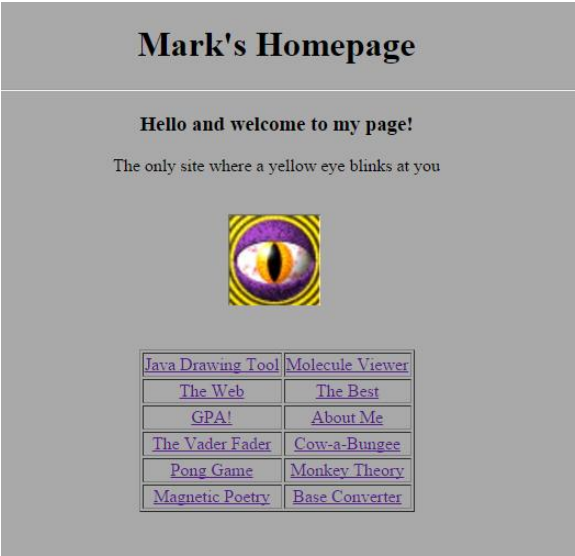
.
.
.

```

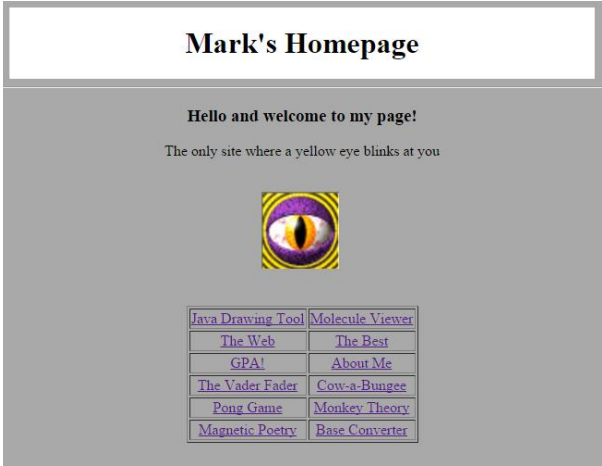
```
</body>
```



HTML Elements

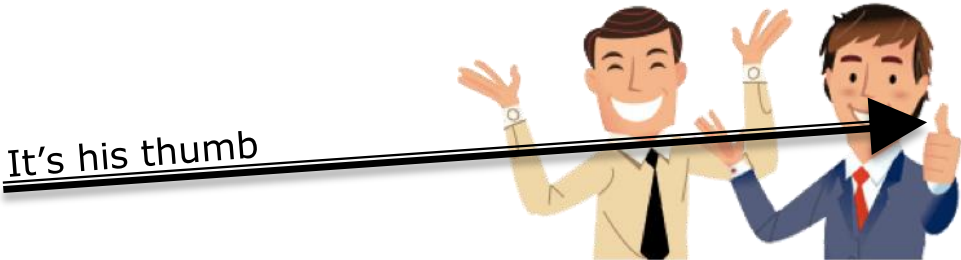


HTML Elements



Some more style tweaks

And we are capable of building a 1999 dated website



HTML Elements

tëch challenge

Find Mark Zuckerberg's website from 1999 online
(or any other backup)





HTML Elements

```

1  <!DOCTYPE html>
2  <html>
3      <!-- My first html document -->
4      <head>
5          <title> yo </title>
6          <meta charset="UTF-8">
7          <meta name="author" content="Mark Zuckerberg">
8      </head>
9      <body style="background-color:darkgrey;text-align:center;">
10         <h1 style="background-color:white;padding:20px;margin: 0px">
11         <hr/>
12         <h3>Hello and welcome to my page!</h3>
13         <p> The only site where a yellow eye blinks at you </p>
14         <br/>
15         
16         <br/><br/><br/>
17         <table border="1" style="margin:auto;">
18             <tr><td><a href="">Java Drawing Tool</a></td><td><a href="">Molecule Viewer</a></td></tr>
19             <tr><td><a href="">The Web</a></td><td><a href="">The Best</a></td></tr>
20             <tr><td><a href="">GPA!</a></td><td><a href="">About Me</a></td></tr>
21             <tr><td><a href="">The Vader Fader</a></td><td><a href="">Cow-a-Bungee</a></td></tr>
22             <tr><td><a href="">Pong Game</a></td><td><a href="">Monkey Theory</a></td></tr>
23             <tr><td><a href="">Magnetic Poetry</a></td><td><a href="">Base Converter</a></td></tr>
24         </table>
25     </body>
26 </html>

```

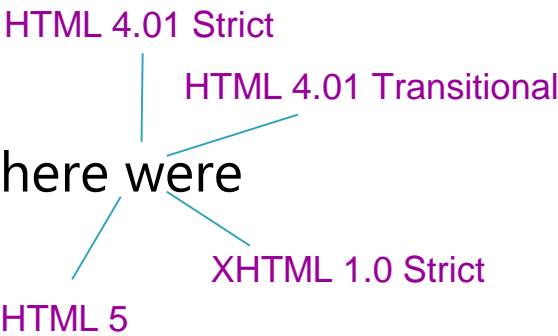
Few things to notice

-  Indentation
-  Comments
-  Doctype
-  charset

HTML Elements

```
<!DOCTYPE html>
```

There is not just one type of HTML, there were actually many.



All these types of HTML are defined in their respective W3C specifications

- ! a doctype declaration will make a lot of guessing unnecessary, and will thus trigger a "standard" rendering mode
- ! Will allow you to validate your document using an HTML validator

<https://validator.w3.org/>

HTML Elements

```
<meta charset="UTF-8">
```

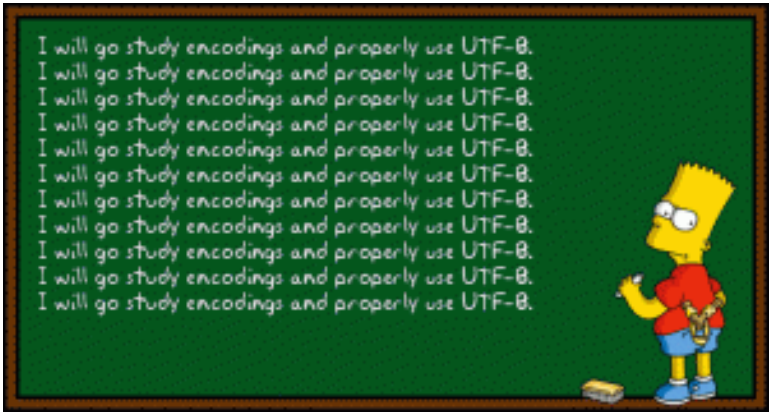
To display an HTML page correctly, a web browser must know the character set (character encoding) to use

By using the utf-8 charset we are allowing our webpage to contain more than 10,000 different character encodings

Wrong encoding...

Ó+àñòâóòò :
äðóíà «ñeyðíay Çãâçãã»,
Äëùñòð Õàíäãã,
í@âéí,
E_õã Êâíêí,
íëëäíà,
Yëëë,
ðííàí íóñàäëòíà,
íàäãäãäã íàðëëíà,
Èðñàí,
íòëðòòëë äíäà – äðóíà «ðäíäíí 12» è äðóäëë...

Òàëëäë äàñ íæëäãäëò íàðëóð-òíó, äðäíñêëðíäíííóë íëòíí, ó+àñòëëë éó+ðëð òàíóäãäëùòò ëííäíà.

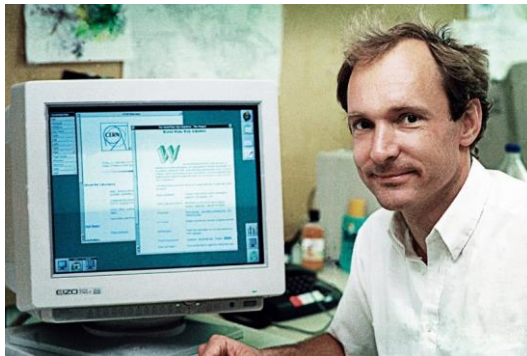


HTML Elements

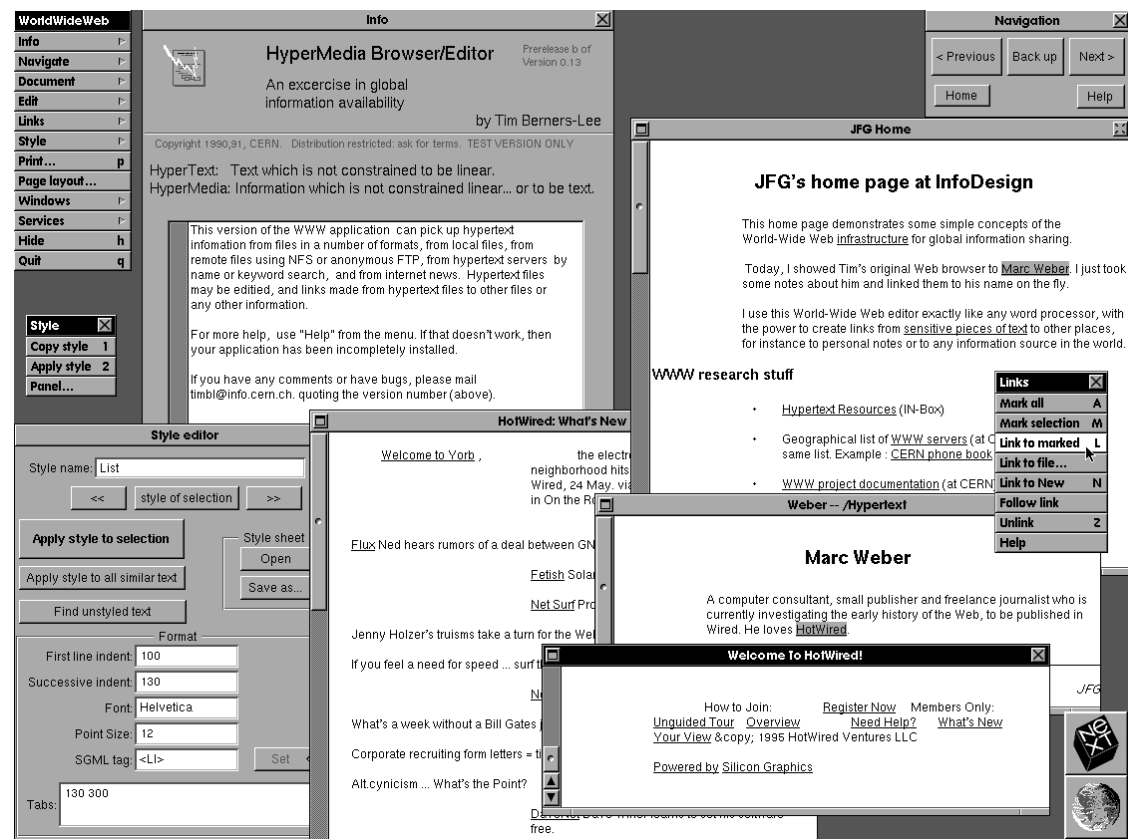
Getting to know the people behind the code

Tim Berners-Lee

Tim Berners-Lee was the primary author of HTML, assisted by his colleagues at CERN, an international scientific organization based in Geneva, Switzerland. Tim Berners-Lee is currently the **Director of the World Wide Web Consortium**, the group that sets technical standards for the Web.



Example of First Documents



HTML Elements

<h1>Questions?</h1>

HTML Elements

Default style: Every HTML element has a default style (background color is white and text color is black). Changing the default style of an HTML element can be done with the style attribute.



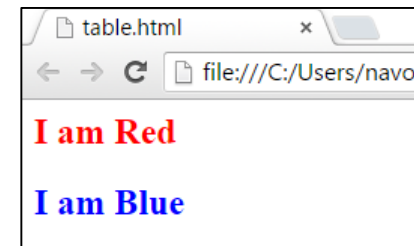
The HTML style attribute has the following **syntax** :

```
style="property:value; property2:value2;"
```

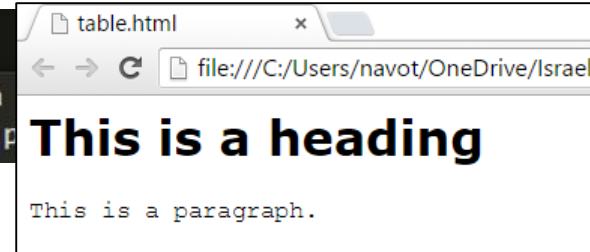
HTML Elements

Some examples

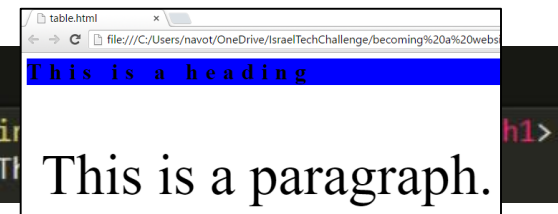
```
table.html
1 <h2 style="color:red">I am Red</h2>
2 <h2 style="color:blue">I am Blue</h2>
```



```
table.html
1 <h1 style="font-family:verdana">This is a
2 <p style="font-family:courier">This is a p
```



```
table.html
1 <h1 style="background-color:blue;letter-spaci
2 <p style="margin-left:20px;font-size:80px;">Th
```

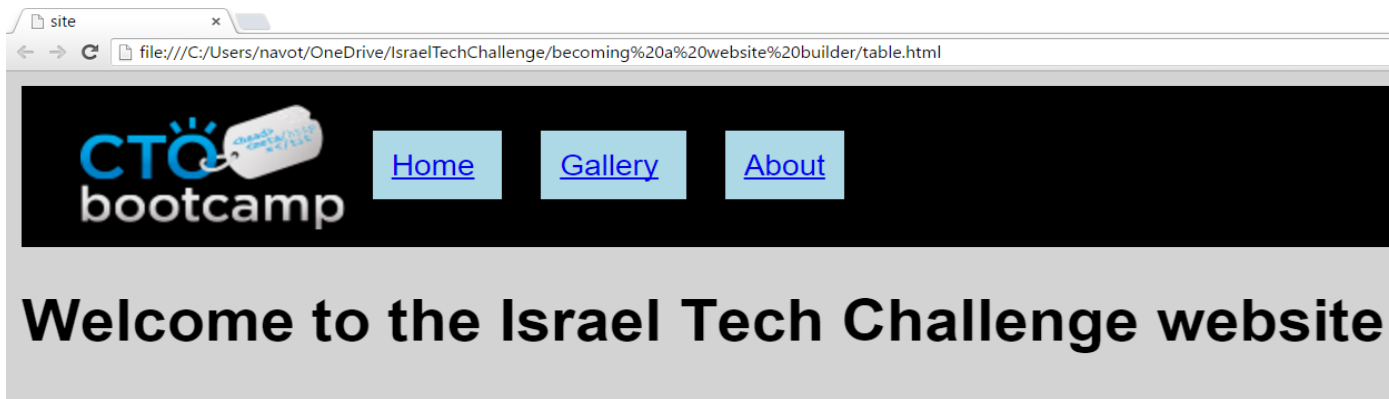


HTML Elements

<h1>Questions?</h1>

HTML Elements

Using the tags we learned so far, can we create the following website ?

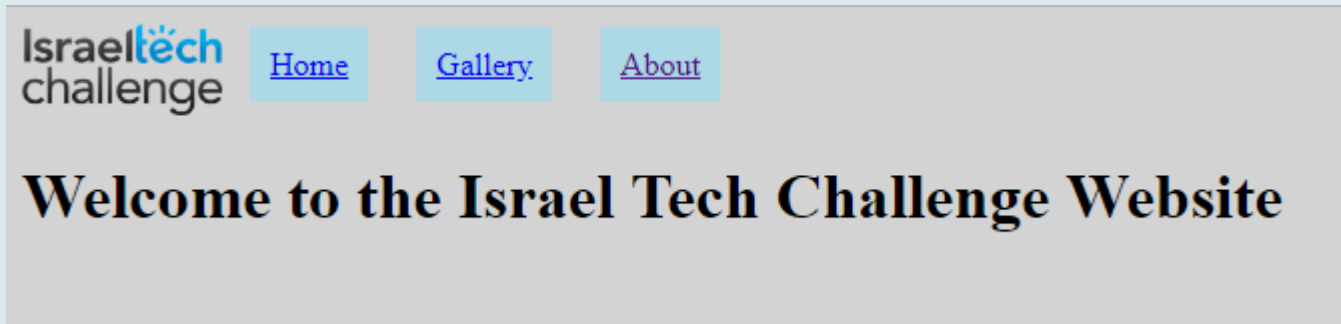


Almost...

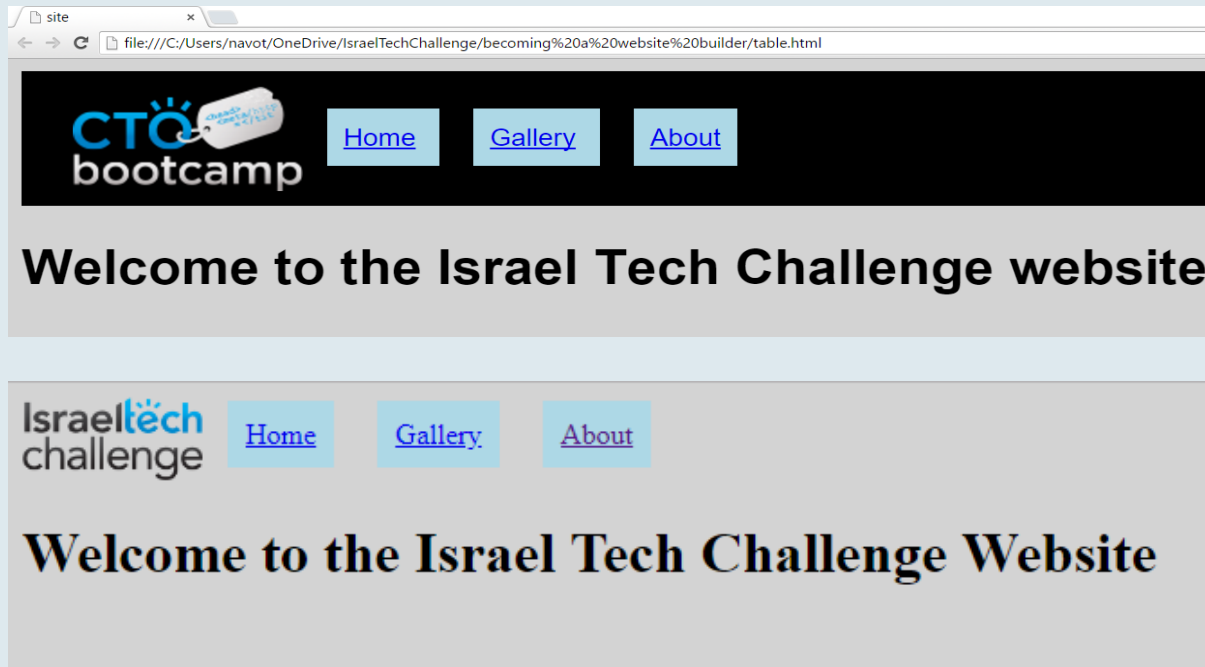
What we have so far

What we can do for now is:

```
<body style="background-color: lightgrey">
  
  <a href="./home.html" style="margin:10px;background-color:lightblue;padding:10px;">Home</a>
  <a href="./gallery.html" style="margin:10px;background-color:lightblue;padding:10px;">Gallery</a>
  <a href="./about.html" style="margin:10px;background-color:lightblue;padding:10px;">About</a>
  <h1 style="font-family:ariel">Welcome to the Israel Tech Challenge Website</h1>
</body>
```



Result



We don't have a way to set the background color of a specific region like the menu above.

In order to do that we need a way to define a group of elements.

HTML Elements

Grouping Tags – Div

```
<div>
  <a href="http://www.google.com">google</a>
  <a href="http://www.w3.org">w3c</a>
</div>
```

The <div> element is often used as a container for other HTML elements.

The <div> element has no required attributes, but **style** and **class** are common.

The <div> element can be used to style blocks of content

HTML Elements

Grouping Tags – Span

```
<span>
  <a href="http://www.google.com">google</a>
  <a href="http://www.w3.org">w3c</a>
</span>
```

The element is often used as a container for other HTML elements.

The element has no required attributes, but **style** and **class** are common.

The element can be used to style adjacent peices of content

HTML Elements

Grouping Tags – Div vs Span

```
<div>  
  <a href="http://www.google.com">google</a>  
  <a href="http://www.w3.org">w3c</a>  
</div>
```

```
<span>  
  <a href="http://www.google.com">google</a>  
  <a href="http://www.w3.org">w3c</a>  
</span>
```

What is the difference?

HTML Elements

Display – Block

```
<div>  
<h1> - <h6>  
<p>
```

These are also
block elements

A block-level element always starts on a new line and takes up the full width available (stretches out to the left and right as far as it can)

The `<div>` element is a **block-level element**.

HTML Elements

Display – Inline

``
`<a>`
``

These are also
inline elements

An inline element does not start on a new line and only takes up as much width as necessary.

The `` element is a **inline-level element**.


HTML Elements

Inline vs block element

div: I am a block element

span: I am an inline element

Inline vs block element

HTML 

CSS

span: I am an inline element

HTML Elements

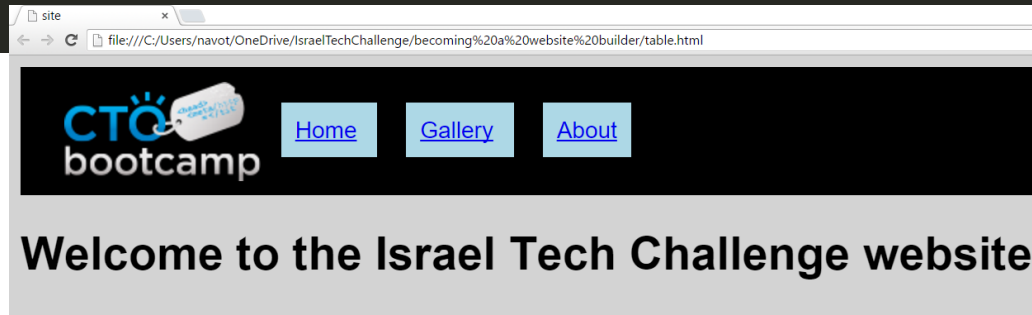
Inline vs block element

Block Element

inline element inline element

HTML Elements

```
<body style="background-color:lightgrey;">
  <div style="background-color:black;color:white;font-family:Arial;padding:10px 30px;">
    
    <span style="margin:10px;background-color:lightblue;padding:10px;">
      <a href="./home.html">Home</a>
    </span>
    <span style="margin:10px;background-color:lightblue;padding:10px;">
      <a href="./gallery.html">Gallery</a>
    </span>
    <span style="margin:10px;background-color:lightblue;padding:10px;">
      <a href="./about.html">About</a>
    </span>
  </div>
  <div>
    <h1 style="font-family:arial;">Welcome to the Israel Tech Challenge website</h1>
  </div>
</body>
```



HTML Elements



Now you've got a lot of HTML tags

Indentation

Indentation is mandatory. It helps us read the HTML structure and understand the hierarchy.

```
<html>
  <head>
    <title>Dinosaurs</title>
  </head>
  <body style="background-color:grey;">
    <h1>My title</h1>
    <h3>My subtitle</h3>
    <div>
      <a href="http://www.israel.com" target="_self">link text</a>
      <p>My paragraph consectetur elit. Sed vel faucibus.</p>
      
    </div>
    <table border="1">
      <tr><td>r1c1</td><td>r1c2</td></tr>
      <tr><td>r2c1</td><td>r2c2</td></tr>
    </table>
  </body>
</html>
```

Top level element

Indentation states descendency:
h1 is nested under the body

Warning:
You cannot submit non indented code!

HTML Elements

<h1>Questions?</h1>

HTML Elements

▶ Motivation:

- Why do we learn html?

▶ You needed to understand:

- How our browser works

▶ You need to remember:

- N/A

▶ You need to be able to do:

- Write basic HTML pages using the tags we learned

Cheat Sheet

Html tag structure:

```
<tagName attr1="val1" style="key1:value1; key2:value2">element content</tagName>
```



Can hold either text or another element

HTML document structure

```
<!DOCTYPE html>
<html>
  <head>
    <title>Dinosaurs</title>
  </head>
  <body style="background-color:grey;text-align:center; ">
    <h1>My title</h1>
    <h3>My subtitle</h3>
    <div>
      <a href="http://www.israeltechallenge.com" target="_blank" target="_self">link text</a>
      <p>My paragraph <br/> Lorem ipsum dolor sit amet, <br/> consectetur elit. Sed vel faucibus.</p>
      
    </div>
    <span><span> text 1 </span> <span> text 2 </span> </span>
    <table border="1">
      <tr><td>r1c1</td><td>r1c2</td></tr>
      <tr><td>r2c1</td><td>r2c2</td></tr>
    </table>
  </body>
</html>
```

Display:
Block



New window/tab Same tab



Display:
inline

br (line break) is a void tag: <voidTag attr1="val1" attr2="val2"/>

div: I am a block element

span: I am an inline element