Introduction to
HTML and CSS

What is HTML?

HTML stands for **Hyper Text Markup Language**. It is a language of World Wide Web (www). It is a standard text formatting language which is used to create and display pages on the Web. It makes the text more interactive and dynamic. It can turn text into images, tables, links.

```html
<!DOCTYPE html>
<html>
<body>
<h2>HTML Iframes example</h2>
<p>Use the height and width attributes to specify the size of the iframe:</p>
<iframe src="https://www.google.com/" height="300" width="400"></iframe>
</body>
</html>
```
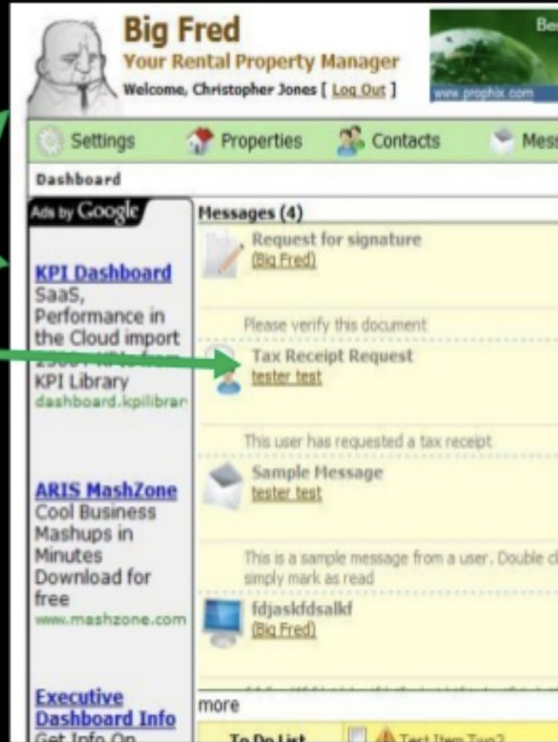
CONCEPTS OF HTML

HTML controls:

- Layout
- Image Placement
- Links

HTML BASICS


```
<div class="PageHeader">
    <div style="float:left">
        <img id="ct100_imgHeader" src="../Images
    </div>
    <div style="float:left">
        <span id="ct100_lblTitle" class="Title">
        <span id="ct100_lblSubtitle" class="Subt
        <div class="User">
            <span id="ct100_lblWelcome">Welcome,
            [ <a id="ct100_lnkLogOut" href="java
        </div>
    </div>
    <div style="float:right;width:468px;height:6
        <script type="text/javascript"><!--
            google_ad_client = "pub-557528004000
            /* 468x60, created 3/11/09 */
            google_ad_slot = "5349837388";
            google_ad_width = 468;
            google_ad_height = 60;
            //-->
        </script>
        <script type="text/javascript"
        src="http://pagead2.googlesyndicatio
        </script>
    </div>

</div>
```

Big Fred
Your Rental Property Manager
Welcome, Christopher Jones [Log Out]
www.prophix.com

HTML BASICS

- <u>Elements</u> are used to describe text
- An element is comprised of:
  - An opening tag
  - A closing tag
  - Content
- Tags are denoted by the greater and less than signs < >

Element

 The text will appear bold

Opening Tag   Content   Closing Tag

LAYOUT ELEMENTS

- <html> starts your page
- <head> classifies your page
- <body> contains your visible page
- <div> starts a new block or section of the page
- <span> is a generic wrap for a line of text
  - Used for more complex text styles
- <h1> … <h6> creates heading and subheadings

1. Select **"Save As..."** to change the extension to `.html`. Expand the **"Save As..."** dialog to see the additional options and then manually change the file's extension to .html.

2. Save the document with the following format:

   `filename.html`
   - For example: lab1.html

Remember to save your document in a place that you can find it again. One way to do this is to create a folder called yourlastname_firstwebpage on your desktop or in your roaming hard drive.

PLANNING YOUR SITE

- Think about what divisions you will need

- Start with the highest level: the body

- Then divide up your page

- Starting with the biggest divisions, down to the smallest

Title

Menu

Main Area

Content

Footer
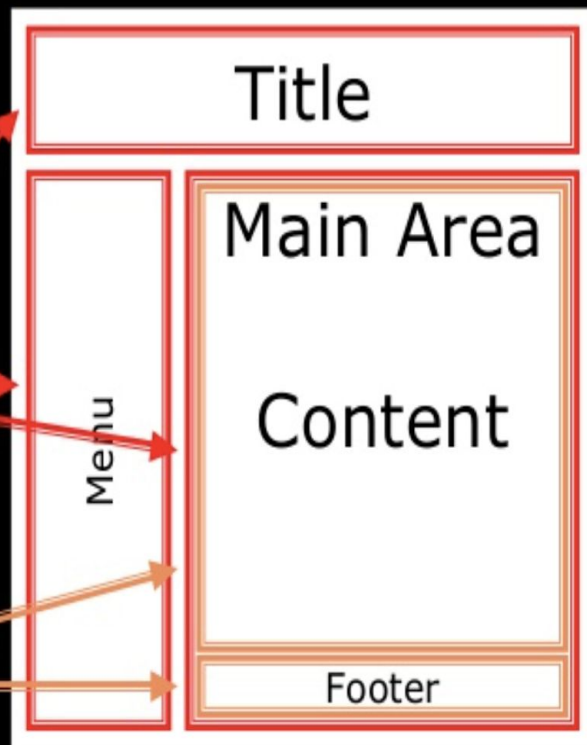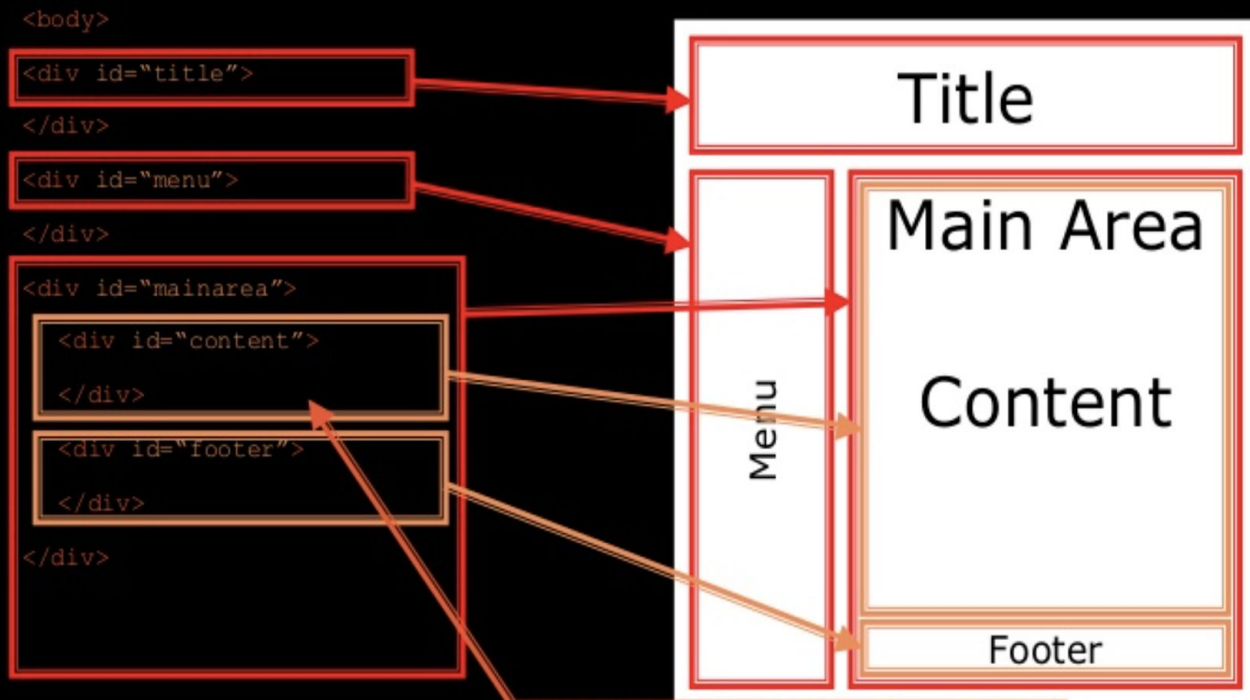
PREPARING YOUR STYLE

```
<head>

<style type="text/css">

    div {
        border: solid 1px;
    }
    #title
    {

    }

    #menu
    {

    }
```

```
#mainarea
    {

    }
    #content
    {

    }
    #footer
    {

    }
</style>
</head>
```

Adds a simple thin black border around each division

This is just for clarity while editing and we will remove this after we're done

Notice that instead of using a period (.) we use the hash symbol (#) to reference the id name of an element
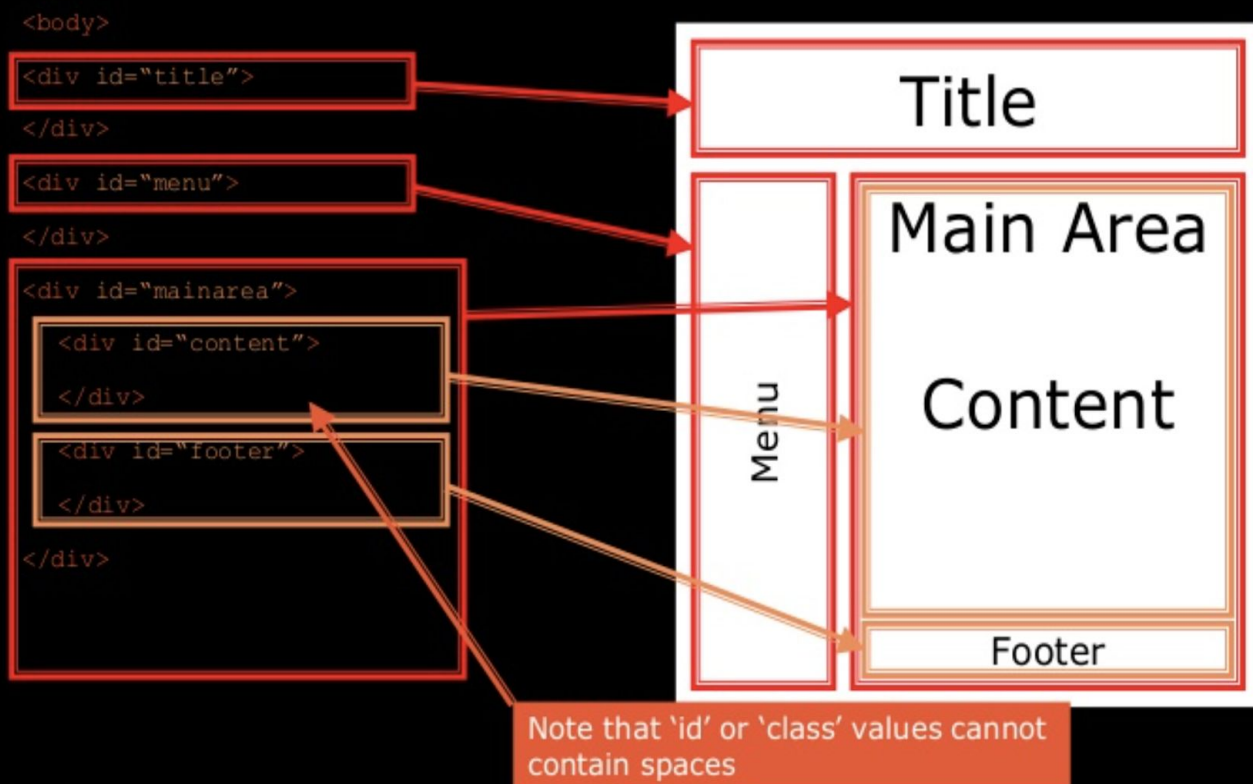
What is CSS?

CSS stands for **Cascading Style Sheets.** It is a style sheet language which is used to describe the look and formatting of a document written in markup language. It provides an additional feature to HTML.

Following are the different variations of CSS:

- CSS1
- CSS2
- CSS2.1
- CSS3
- CSS4

```
<style>
body {
    background-color: linen;
}
h1 {
    color: red;
    margin-left: 80px;
}
</style>
```

```
<head>

<style type="text/css">

    div {
        border: solid 1px;
        }
    #title
    {
    }

    #menu
    {
    }
```

```
#mainarea
    {
    }
    #content
    {
    }
    #footer
    {
    }
    </style>
</head>
```

Adds a simple thin black border around each division

This is just for clarity while editing and we will remove this after we're done

Notice that instead of using a period (.) we use the hash symbol (#) to reference the id name of an element

POSITIONING YOUR DIVISIONS

- By default, `<div>`s take up the entire width of this page and resize the length to fit your content
- You can force the size your `<div>` using pixels or ratios

  e.g.   `height: 100px;`

   `width: 50%;`

- And, you can tell a division stay on one side

  e.g.   `float: left;`

                 `float: right;`

FORMATTING YOUR DIVISIONS

- You can space your `<div>`s by adding margins

  ```
  margin: 5px;

  margin-top: 10px;
  ```

- Or padding

  ```
  padding: 5px;

  padding-left: 20px;
  ```

- Or borders

  ```
  border: solid 5px
          green;
  ```

FORMATTING YOUR DIVISIONS
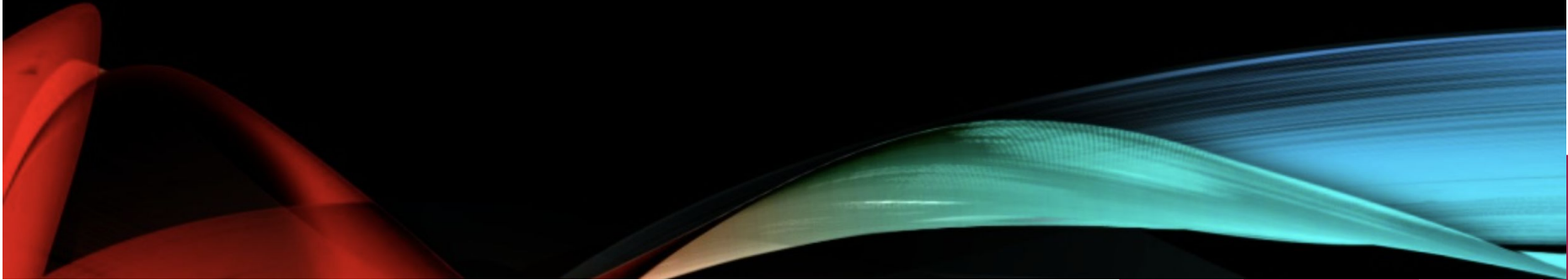
```
<head>

<style type="text/css">

  div
  {
          border: solid 1px;
          margin: 5px;
          padding: 5px;

  }

  #title
  {
          height: 50px;

  }

  #menu
  {
          width: 150px;
          float: left;
          height: 400px;

  }
```

```
#mainarea
{
    margin-left: 180px;
    margin-top: 10px;

}


#content
{


}

#footer
{

    height: 30px;
    text-align: right;

}
```

```
    </style>

</head>
```
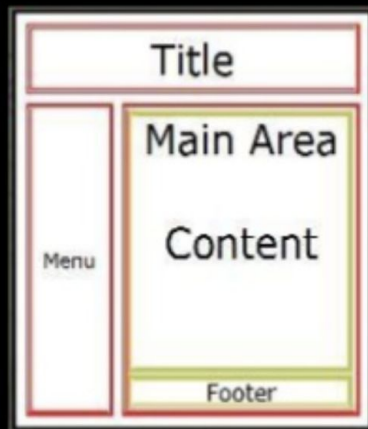
LINKS, IMAGES AND VIDEO

The cool stuff!

- Adding an image is easy!

- `<img src="K9.jpg"/>`
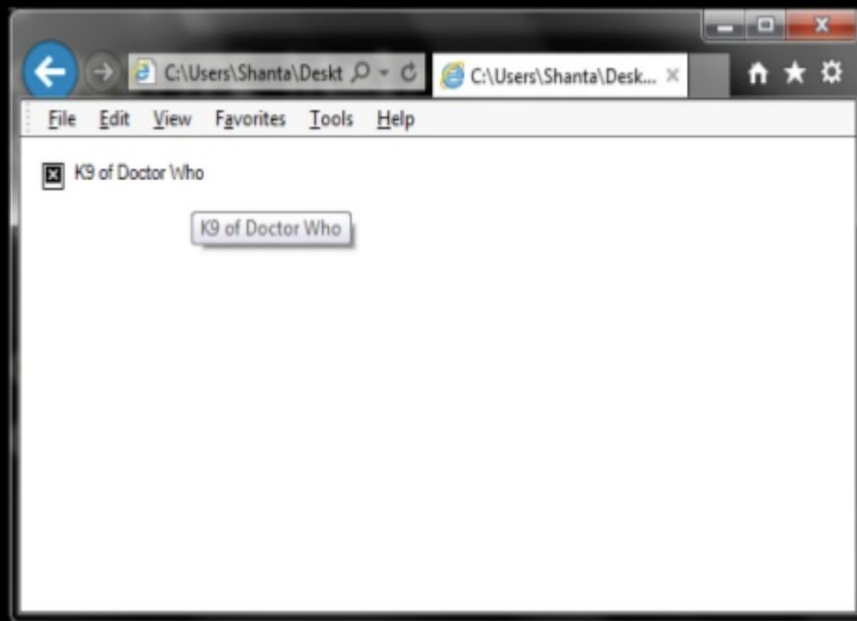
- Sometimes files can be located in a sub-folder of a website

- `<img src="Images/K9.jpg"/>`

- Or on other sites

- `<img src="http://shanta.ca/Images/K9.jpg"/>`

- The `alt` tag provides textual context if the image is missing

- The `title` tag provides a *tooltip* for the user when they place their cursor over it

- `<img src="K9.jpg" alt="K9 of Doctor Who" title="K9 of Doctor Who" />`

FLOATING IMAGES

- You can position images using the float style

```
<img src="graph.jpg"
  alt="Graph"
  style="float:left;"/>
```

```
<img src="graph.jpg"
  alt="Graph"
  style="float:right;"/>
```

This is called an in-line style.

Use this for specific tags (like image) and for extremely individual changes.

Image is one of the only exceptions that we will allow for in-line style in the HTML.
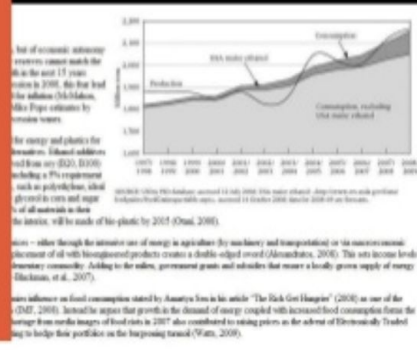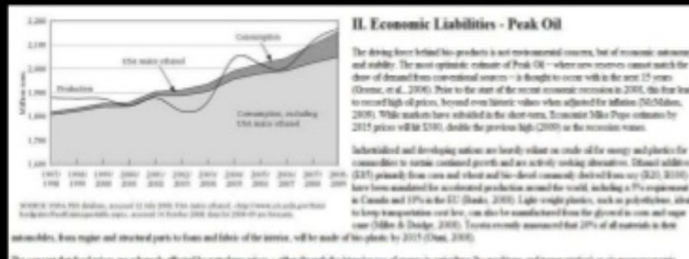
- You can change the size of the image using the `width` and `height` tags

```
<img src="K9.jpg" alt="K9"/>

<img src="mertz.jpg"
  alt="Mertz" width="40"/>

<img src="mertz.jpg"
  alt="Mertz" width="100"
  height="200"/>
```

Normal

Small

Stretched

BACKGROUNDS

- Background for an entire page

```
<style type="text/css">
body
{
background: url(floral.jpg);
}
</style>
```

The driving force behind bio-products is not environmental concern, but of economic autonomy and stability. The most optimistic estimate of Peak Oil – where new reserves cannot match the draw of demand from conventional sources – is thought to occur with in the next 15 years (Greene, et al., 2006). Prior to the start of the recent economic recession in 2008, this fear lead to record high oil prices, beyond even historic values when adjusted for inflation (McMahon, 2009). While markets have subsided in the short-term, Economist Mike Pope estimates by 2015 prices will hit $300, double the previous high (2009) as the recession wanes.

Industrialized and developing nations are heavily reliant on crude oil for energy and plastics for commodities to sustain continued growth and are actively seeking alternatives. Ethanol additives (E85) primarily from corn and wheat and bio-diesel commonly derived from soy (B20, B100) have been mandated for accelerated production around the world, including a 5% requirement in Canada and 10% in the EU (Banks, 2008). Light-weight plastics, such as polyethylene, ideal to keep transportation cost low, can also be manufactured from the glycerol in corn and sugar cane (Miller & Doidge, 2008). Toyota recently announced that 20% of all materials in their automobiles, from engine and

- Links can be to internal, external site or jump to a section on your page via an **anchor**
- We create a link by wrapping text or an image with the `<a>` tag

`<a href="http://www.w3schools.com/">`Visit W3Schools!`</a>` ← external link

`<a href="mypage2.html">`Page Two`</a>` ← internal

- We can create anchors by creating an empty `<a>` tag and providing it with an identifier

```
<a id="name"/>
```

- And link to it using the identifier with a # symbol

```
<a href="#name">Jump to Anchor called name</a>
```

LINK STYLES

- Links have four states

```
a:link { color:#ff0000; }    /* unvisited link */
a:visited { color:#00ff00; } /* visited link */
a:hover { color:#ff00ff; }   /* mouse over link */
a:active { color:#0000ff; }  /* selected link */
```

http://www.w3schools.com/css/tryit.asp?filename=trycss_link

There are two methods of placing video on a website using the `<iframe>` and `<video>` tags.

```
<iframe width="420" height="315"
   src="http://www.youtube.com/embed/Sqiff0WFWvs" frameborder="0"
   allowfullscreen>

</iframe>

<video width="320" height="240" controls="controls">

   <source src="movie.mp4" type="video/mp4">

</video>
```

EXTERNAL CSS FILES

- Today, we've only put the CSS in the <head> portion of your .html file. Typically, you would have an additional file
- Extension is .CSS

Insert the following line of code into the head of each of your HTML files:

<link rel="stylesheet" type="text/css" href="mystyle.css">*

*This assumes that the file is called "mystyle.css

THANK YOU

Intro to HTML and CSS

Quiz link : https://forms.gle/4DnUPEMs29jGNv997