

INTRODUCTION TO HTML

1

At the end of this lesson, students should be able to:

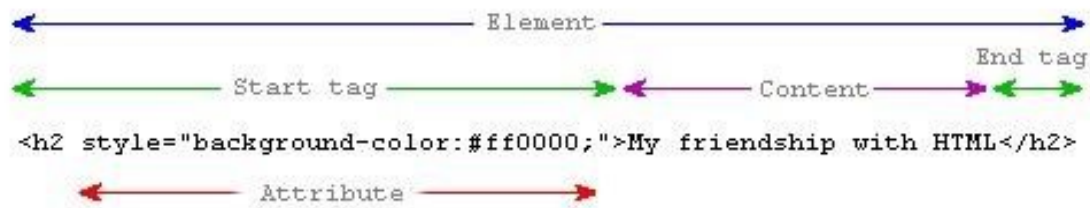
- 🔧 Describe the concept and structure of HTML
- 🔧 Write HTML pages using basic Tags, Formatting, Links, Tables, Lists, Forms, Images Syntax.
- 🔧 Identify components of a simple Web application.

1 Introduction

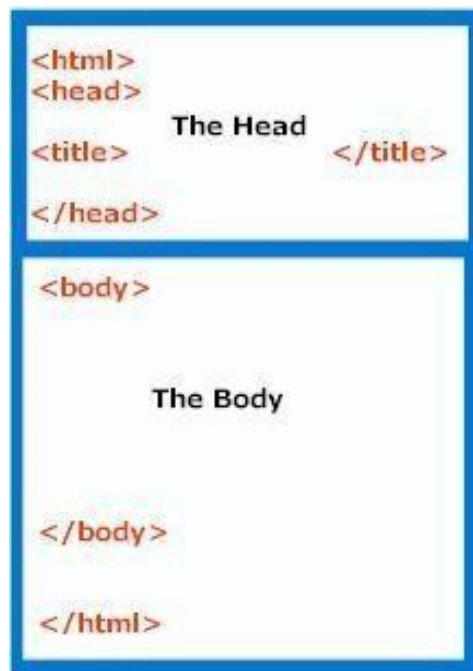
HTML stands for Hyper Text Markup Language. It provides a means to create a structured document by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It allows images and objects to be embedded and can be used to create interactive forms. It is written in the form of HTML elements consisting of "tags" surrounded by angle brackets within the web page content. It can embed scripts in JavaScript and PHP which allow interactivity on HTML webpages.

1.1 INTRODUCTION TO HTML

HTML is written in plain text. That means you can use any simple text editor to create a HTML document. Even if you're using a program to create websites, such as Dreamweaver, a basic knowledge of HTML can help you design and modify your website better. HTML **element** is an individual component of an HTML document. For example, the *title* element represents the title of the document. Generally elements consist of a '**start tag**' <> with or without one or more **attributes**, some content and an '**end tag**' </>.



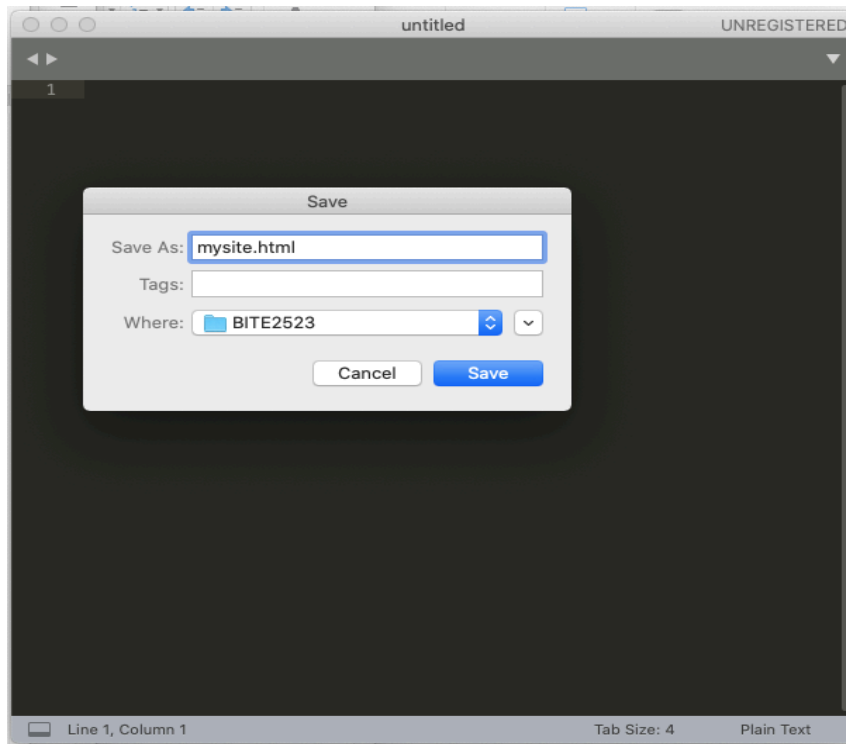
All HTML documents are divided into two main parts: the head and the body as shown below.



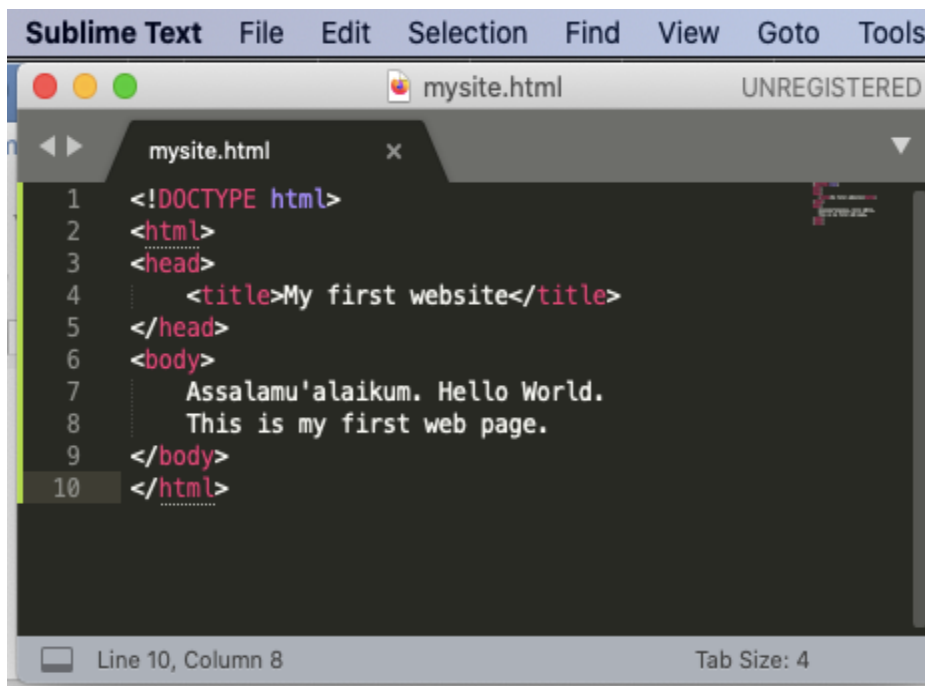
You are going to code your first HTML page. Create a **folder using your name** and save it. (You must avoid using blank space for your folder and file names). This folder will be used to store all the files you create during this lab.

1.1.1 First HTML Webpage.

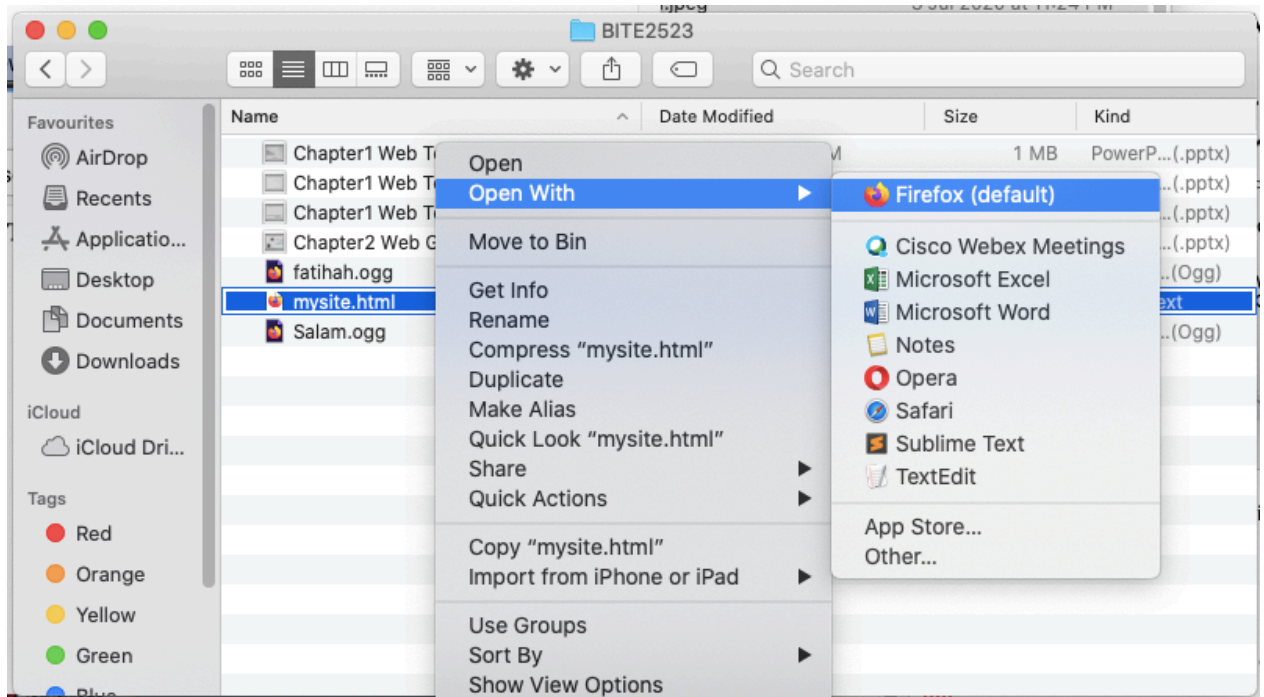
1. Open a text editor such as **Notepad**, **Notepad++** or **Sublime**. Save the file as '**mysite.html**'. Choose 'All Files' for the **Save as type** drop-down list if you are using Notepad.



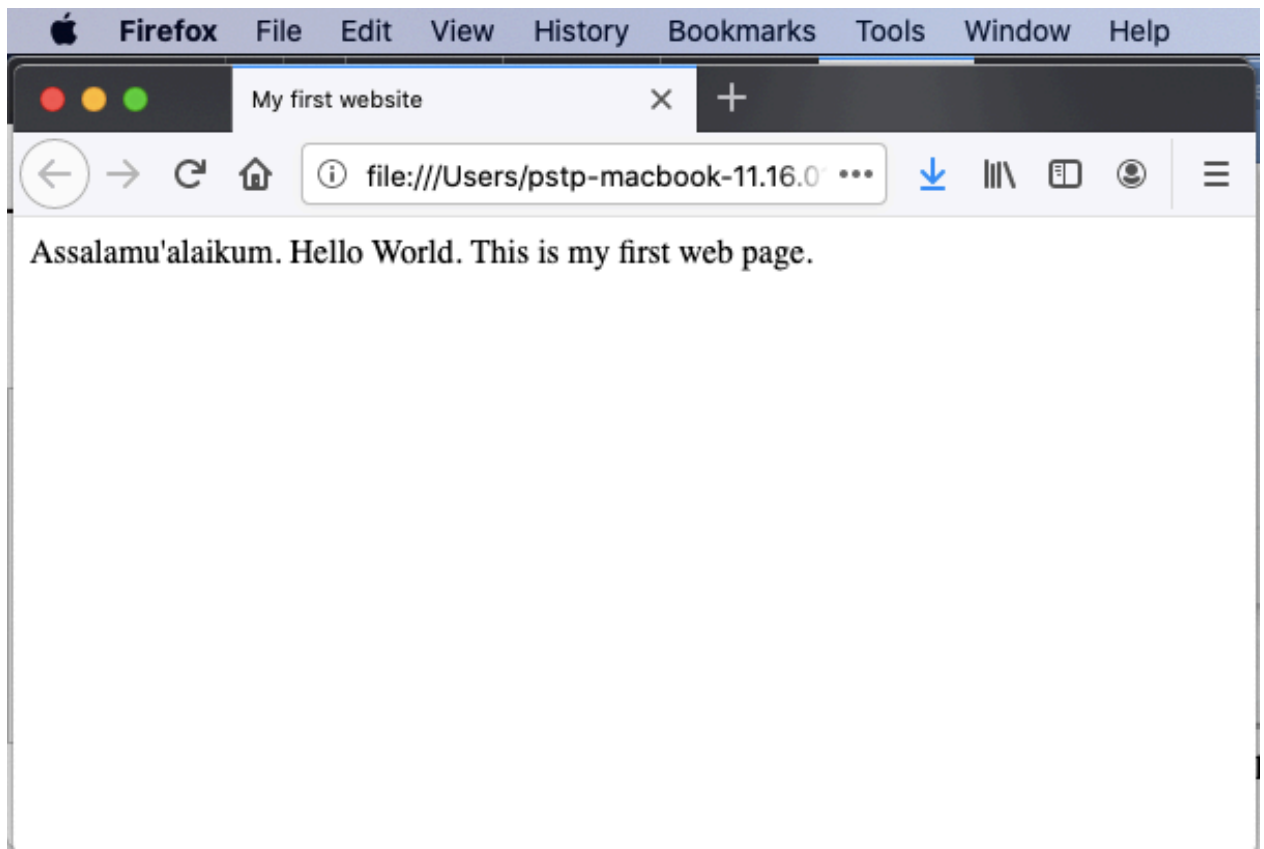
2. Key-in the following HTML codes and save your document.



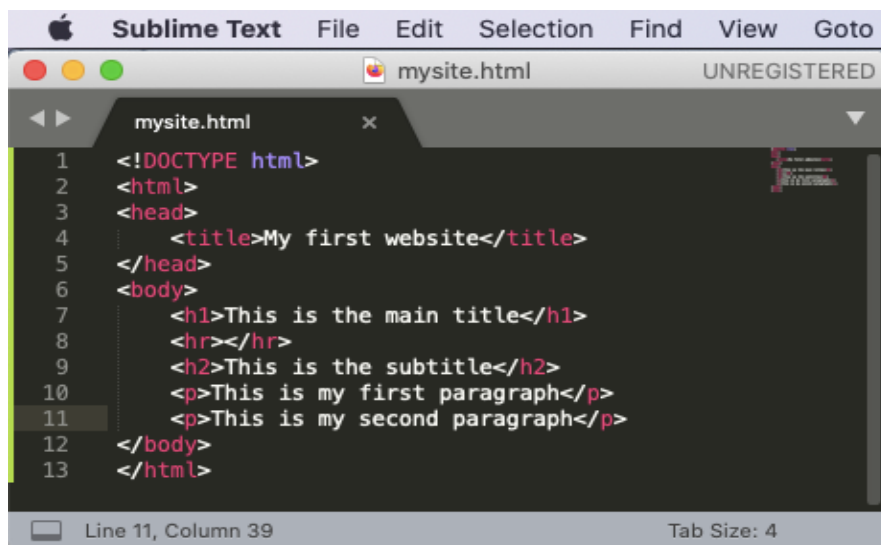
- Find your `mysite.html` file in your file directory. Right click on the filename. Choose Open With a Web browser of your choice (e.g. Firefox).



- Your first web page will be displayed. Congratulations! You have successfully completed your first web page.



5. Let's take a closer look at the HTML code. This is a HTML5 document. HTML5 document must start with a document type declaration: `<!DOCTYPE html>`.
6. The HTML document itself begins with `<html>` tag and ends with `</html>` tag.
7. The visible part of the HTML document is between `<body>` and `</body>`.
8. The `<html>` and `</html>` tags tell your browser that this is the start of an HTML document. Header information is not displayed in the browser window. However, the text between the `<title>.... </title>` tags is the title of your document. Title is the text that appears in the title bar at the top (tab) of the browser window. The `<body>` pair tags specify the document's content that will be displayed in your browser.
9. Now you are going to add more content. Key in the following HTML codes.

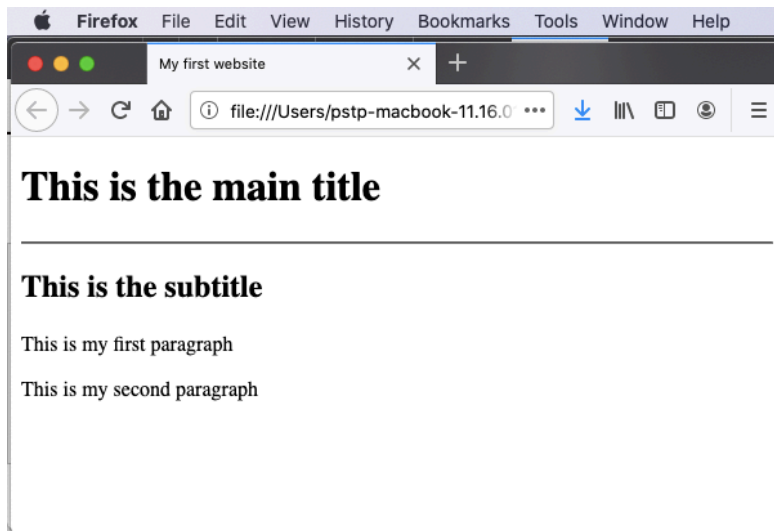


The screenshot shows the Sublime Text editor with a file named 'mysite.html' open. The code is as follows:

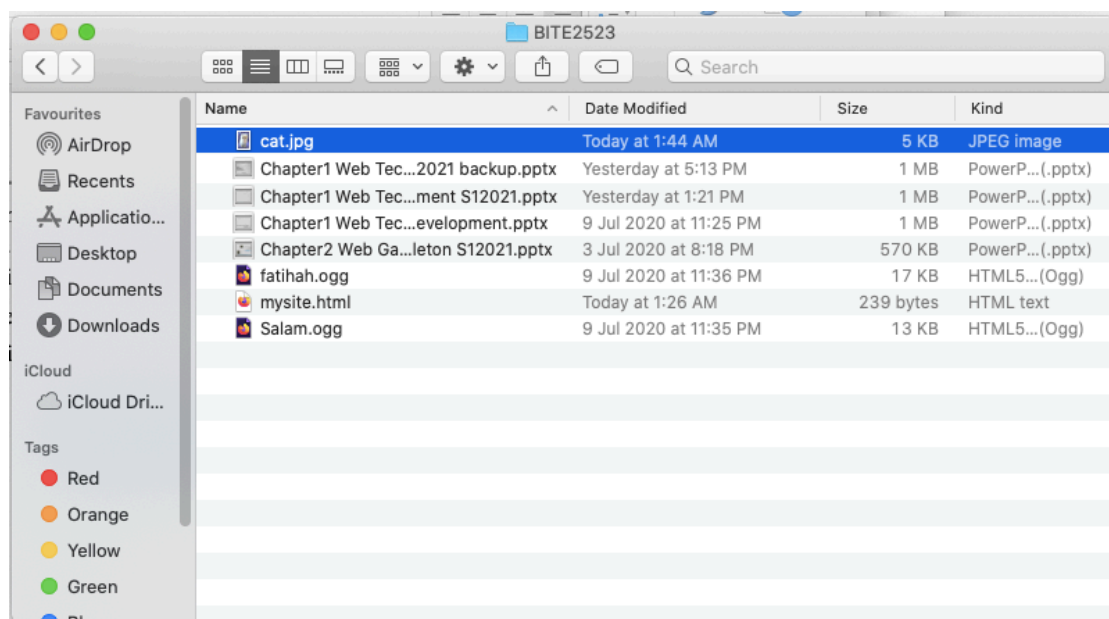
```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>My first website</title>
5 </head>
6 <body>
7   <h1>This is the main title</h1>
8   <hr></hr>
9   <h2>This is the subtitle</h2>
10  <p>This is my first paragraph</p>
11  <p>This is my second paragraph</p>
12 </body>
13 </html>
```

The status bar at the bottom indicates 'Line 11, Column 39' and 'Tab Size: 4'.

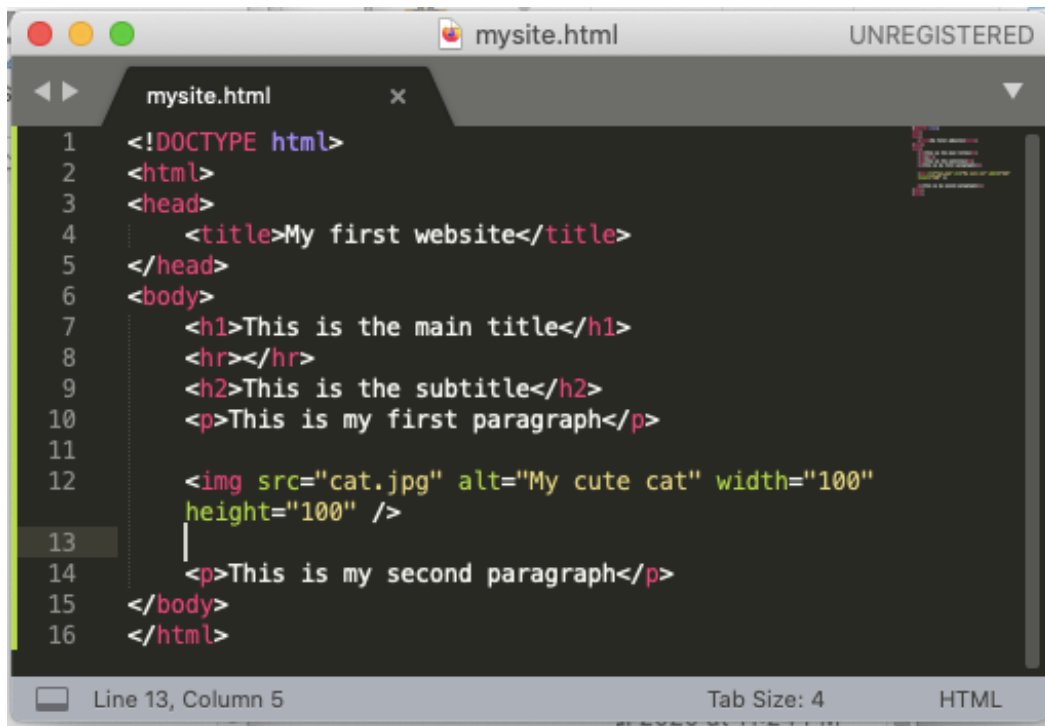
10. Save your HTML document and refresh your browser. You will get the following result.



11. You have added headings for your content `<h1>` and `<h2>`, horizontal line `<hr>` and some paragraphs `<p>`.
12. To display an image on your webpage, you must first make sure an image file is located inside your working folder. If not, search for an image and save onto your working folder.



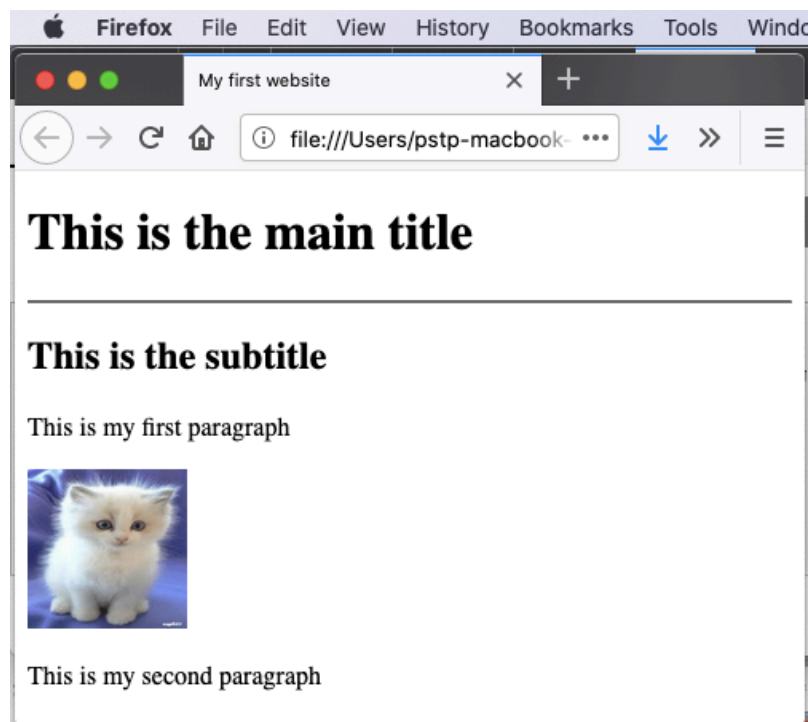
13. Add the following code into your HTML document.



```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>My first website</title>
5 </head>
6 <body>
7   <h1>This is the main title</h1>
8   <hr></hr>
9   <h2>This is the subtitle</h2>
10  <p>This is my first paragraph</p>
11
12  
14  <p>This is my second paragraph</p>
15 </body>
16 </html>
```

Line 13, Column 5 Tab Size: 4 HTML

14. Save your HTML file and refresh your browser. You will get the result below.

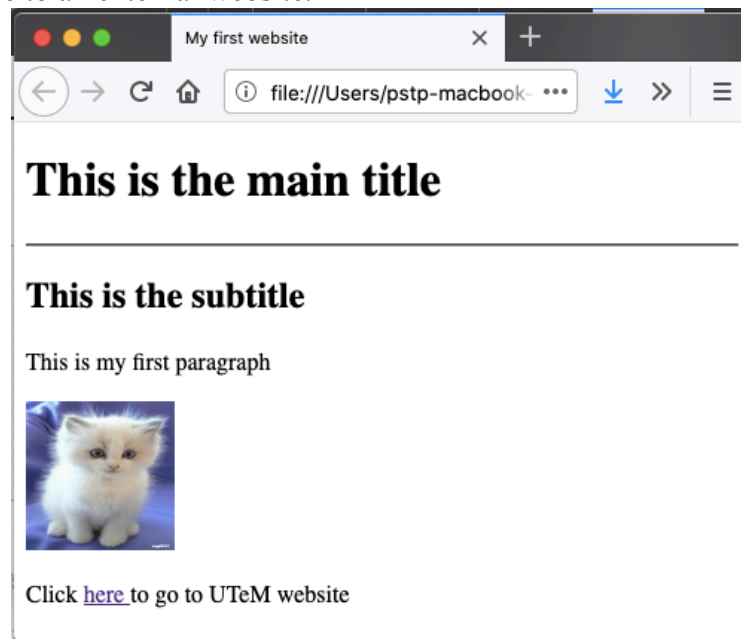


15. Notice that the `` tag has `alt`, `width` and `height` attributes which generally used for elements formatting. The `alt` attribute is for specifying alternative text if the image doesn't exist than the text provided will be displayed. The `width` and `height` attributes are to specify the width and height of the image.

16. Hyperlinks are found in nearly all Web pages. Links allow users to click their way from page to page. To create your first hyperlink, insert this code below.

```
mysite.html UNREGISTERED
mysite.html
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>My first website</title>
5 </head>
6 <body>
7   <h1>This is the main title</h1>
8   <hr></hr>
9   <h2>This is the subtitle</h2>
10  <p>This is my first paragraph</p>
11
12  
13
14  <p>Click <a href="https://www.utm.edu.my">here</a>to go to UTeM website</p>
15 </body>
16 </html>
```

17. Save your file and refresh your browser. The following is the result when a text is placed between the `<a>` pair tags. The word **here** becomes a link. Click the link to navigate to an external website.



1.1.2 Tables

1. Understand: tables have rows and columns. Use `<TABLE>` tags to create a table. Use `<TR>` tags for rows, and `<TD>` tags for columns. Note that a column is in a row, and the number of columns in each row must be the same.
2. Creating a table with two rows:


```

<table border= "1">
    <tr><td> first row </td></tr>
    <tr><td> second row </td></tr>
</table>

```

3. Creating a table with two columns:

```

<table border= "1">
    <tr>
        <td> first column</td>
        <td> second column</td>
    </tr>
</table>

```

4. Filling in colours to a 2 x 2 table:

```

<table>
    <tr>
        <td bgcolor= yellow> which</td>
        <td bgcolor= red> state's</td>
    </tr>
    <tr>
        <td bgcolor= red> flag</td>
        <td bgcolor= yellow> is this??</td>
    </tr>
</table>

```

5. Setting the width of the table (set the table width to 500 pixels):

```

<table width= "500">

```

6. Setting the table width according to browser size (set the table width as the same width of the browser):

Try: resize your browser and see what happens

```
<table width = "100%">
```

7. Setting the size of column width and row height:

```
<tr height= "10">  
<td width = "200"> row height 10, column width 200</td>  
</tr>
```

8. You might want to have a title in your column and row. For example column for name and extension phone number as the table.

List of Extension Number for Staff

Name	Extension Number
Kamal Azaini	3021
Suraya Ahmad	3050
Mazuin Zaini	3040

In HTML, use <th> to create a title for the column.

```
<table border= "1">  
  <tr> <th > name </th> <th> ext. number </th> </tr>  
  <tr> <td> kamal azaini</td> <td> 3021 </td> </tr>  
  <tr> <td> suraya ahmad </td> <td> 3050 </td> </tr>  
  <tr> <td> mazuin zaini </td> <td> 3040 </td> </tr>  
</table>
```

9. Inserting colspan attributes:

```
<table border="2" >  
  <tr> <td colspan="2"> production </td> </tr>  
  <tr> <td> muhaimin </td> <td> 632 </td> </tr>
```

```

<tr> <td> muadzmin </td> <td> 259 </td> </tr>
<tr> <td> izzat </td> <td> 365 </td> </tr>

</table>

```

10. Inserting rowspan attributes:

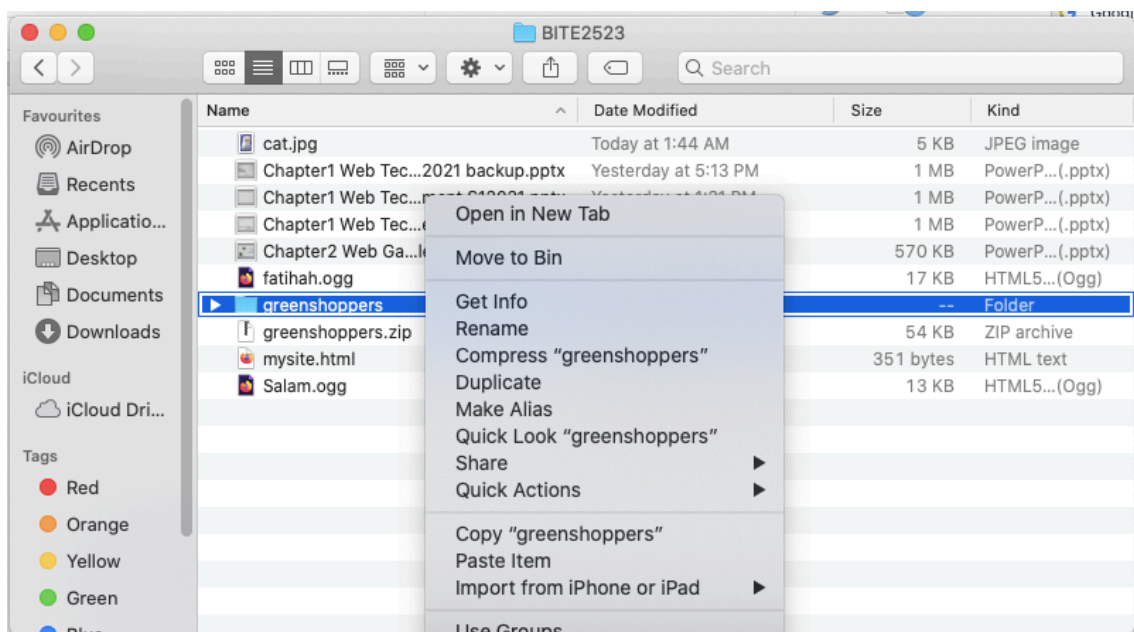
```

<table border="1">
  <tr>
    <td rowspan="3"> production </td>
    <td> muhaimin </td> <td> 632 </td>
  </tr>
  <tr>
    <td> muadzmin </td> <td> 259 </td>
  </tr>
  <tr>
    <td> izzat </td> <td> 365 </td>
  </tr>
</table>

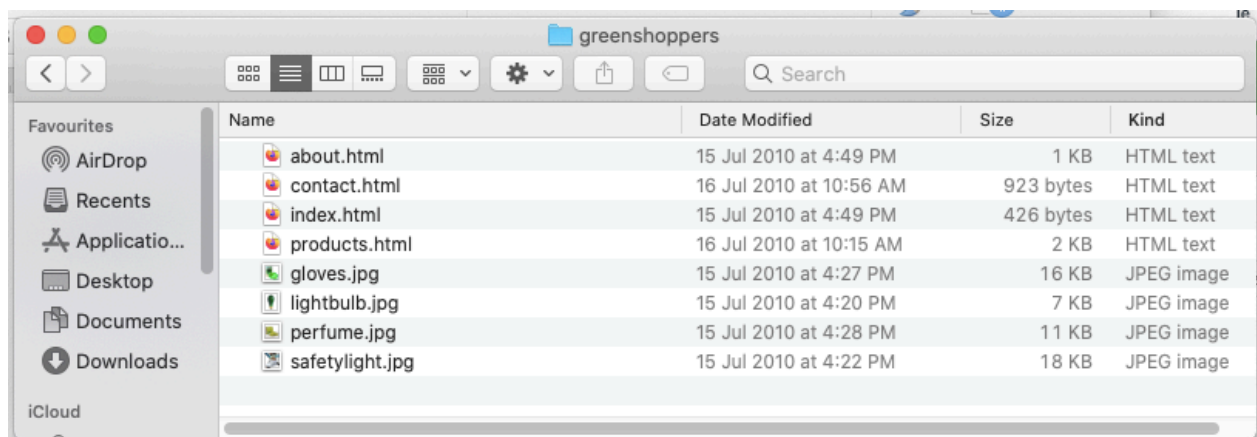
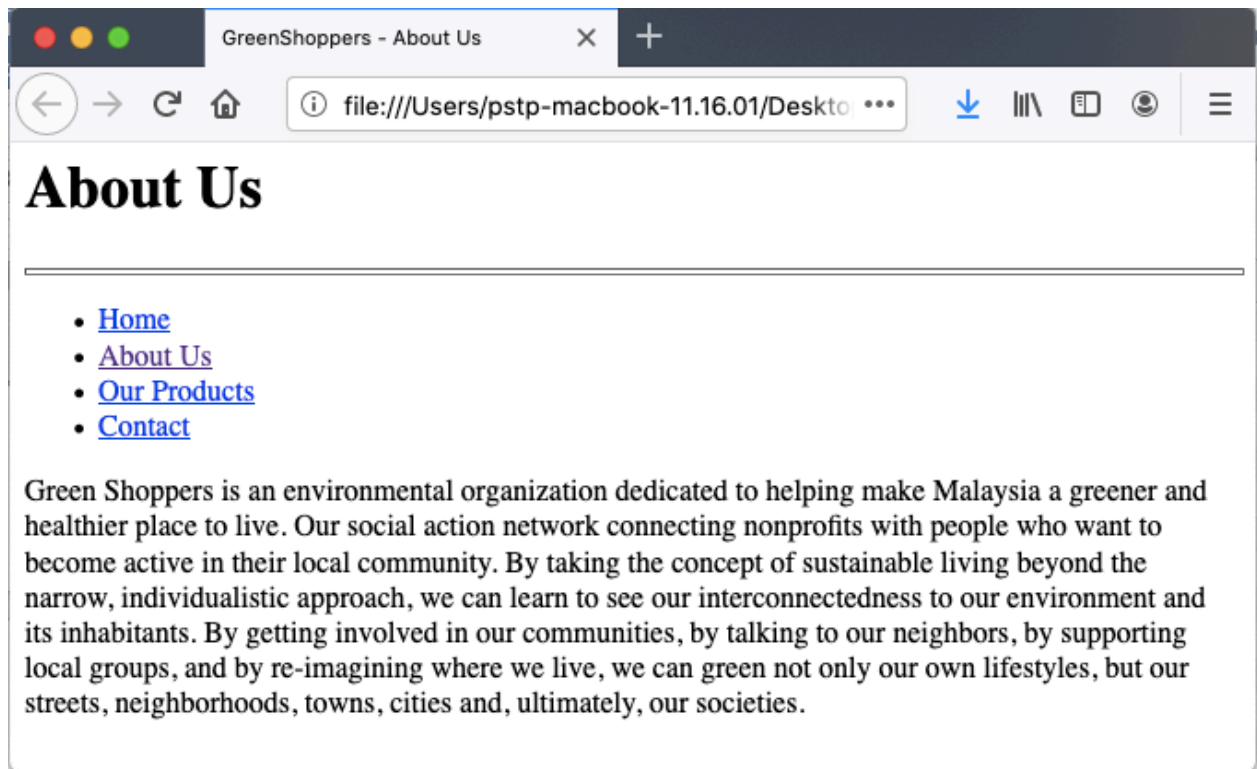
```

1.1.3 More standard HTML Elements

In this exercise, you will need a zip file called greenshopper.zip. Download the file into your working folder. Then, unzipped the file.



1. Find an **index.html** file in the greenshopper folder. Right clicked the file and open with your chosen browser. Click the other links provided in the webpage. Examine how the links are created. Notice that each link displays a new HTML file. In other words, each link connects to a new webpage.



2. Open the **about.html** code in your text editor and examine that the hyperlinks are formatted in lists with `` pair tags. Modify the unordered list tags `` into ordered list instead `` and refresh your browser to see the changes.

```

about.html UNREGISTERED
1 |
2 <html><head>
3 <title>GreenShoppers - About Us</title>
4
5 </head>
6 <body>
7 <h1>About Us </h1>
8 <hr style="width: 100%; height: 2px;">
9 <ul>
10 <li><a href="index.html">Home</a></li>
11 <li><a href="about.html">About Us</a></li>
12 <li><a href="products.html">Our Products</a></li>
13 <li><a href="contact.html">Contact</a></li>
14 </ul>
15 Green Shoppers is an environmental organization dedicated to helping
16 make Malaysia a greener and healthier place to live. Our social action
17 network connecting nonprofits with people who want to become active in
18 their local community. By taking the concept of sustainable living
19 beyond the narrow, individualistic approach, we can learn to see our
20 interconnectedness to our environment and its inhabitants. By getting
21 involved in our communities, by talking to our neighbors, by supporting
22 local groups, and by re-imagining where we live, we can green not only
23 our own lifestyles, but our streets, neighborhoods, towns, cities and,
24 ultimately, our societies.&nbsp;
25 </body></html>
Line 1, Column 1 Tab Size: 4 HTML

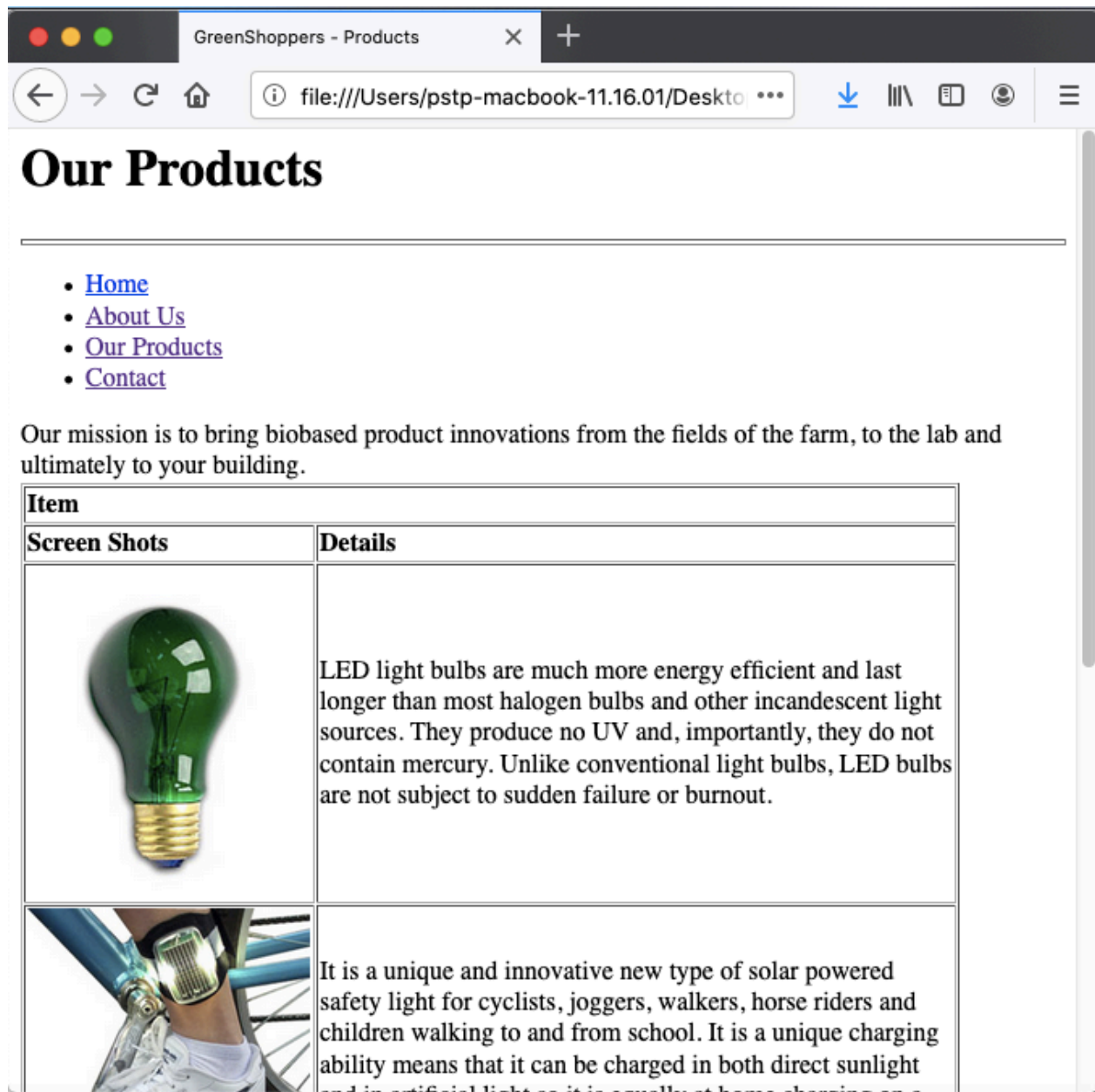
```

3. Open the **products.html** code and observe how tables are formatted based on the number of rows `<tr>` tags and columns `<td>` tags.

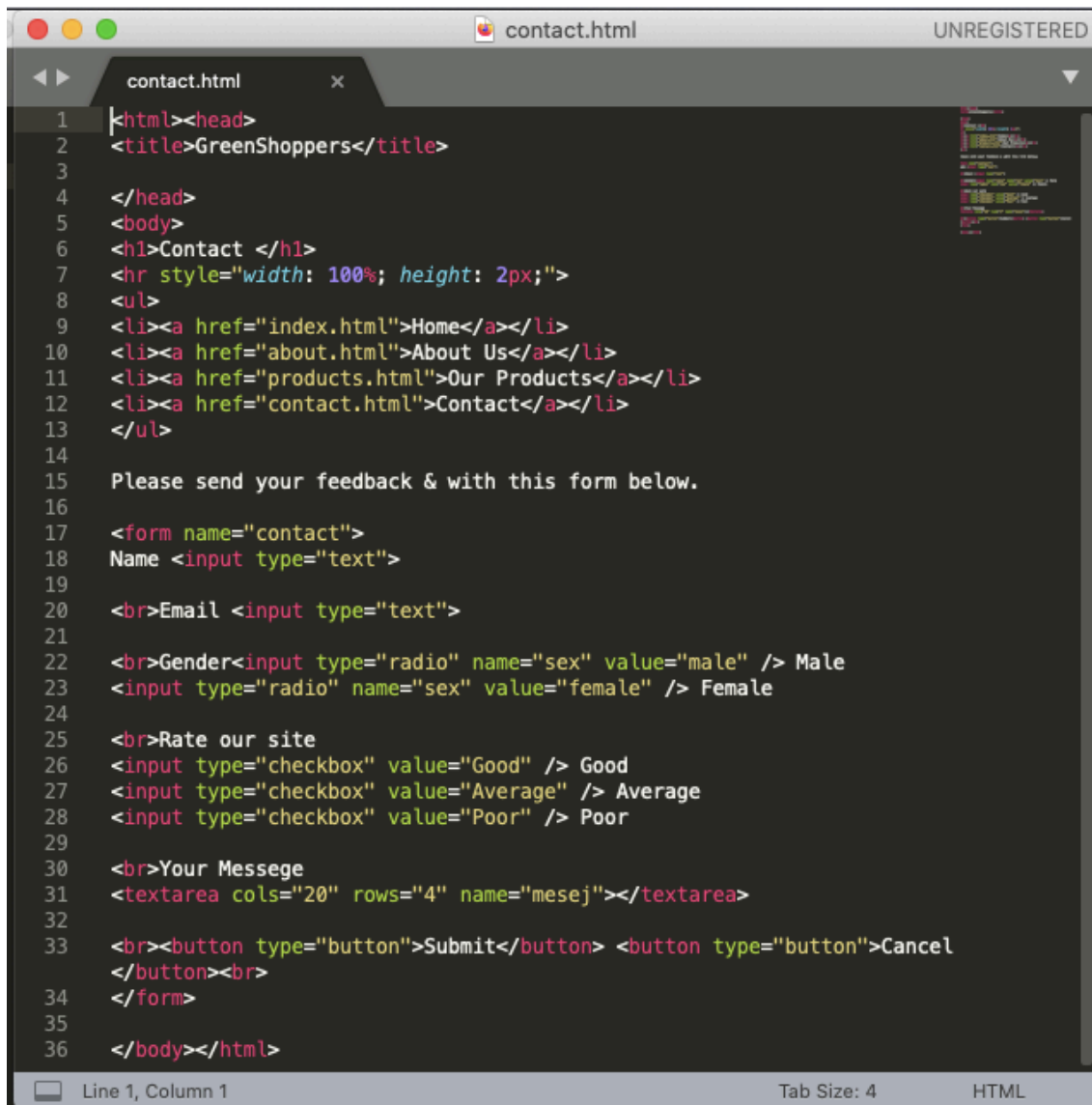
```

products.html UNREGISTERED
13 Our mission is to bring biobased product innovations from the fields of
14 the farm, to the lab and ultimately to your building.
15 <table style="text-align: left; width: 90%;" border="1" cellpadding="1" cellspacing="1">
16 <tr>
17 <td colspan="2" rowspan="1"><strong>Item</strong></td>
18 </tr>
19 <tr>
20 <td><strong>Screen Shots<br>
21 </strong></td>
22 <td><strong>Details</strong></td>
23 </tr>
24 <tr>
25 <td></td>
26 <td>LED light bulbs are much more energy efficient and last
27 longer than most halogen bulbs and other incandescent light sources.
28 They produce no UV and, importantly, they do not contain mercury.
29 Unlike conventional light bulbs, LED bulbs are not subject to sudden
30 failure or burnout.</td>
31 </tr>
32 <tr>
33 <td></td>
34 <td>It is a unique and innovative new type of solar powered
35 safety light for cyclists, joggers, walkers, horse riders and children
36 walking to and from school. It is a unique charging ability means that
37 it can be charged in both direct sunlight and in artificial light so it
38 is equally at home charging on a windowsill or an office or school
39 desk. </td>
40 </tr>
41 <tr>
42 <td></td>
43 <td>The Green Tips household gloves are manufactured from
44 high quality natural rubber.The rubber tappers receive a fair trade
45 wage, and so in the making of these gloves it is good for people and
46 good for the planet.<br>
47 Latex is a biodegradable product and the packaging can be composted. </td>

```

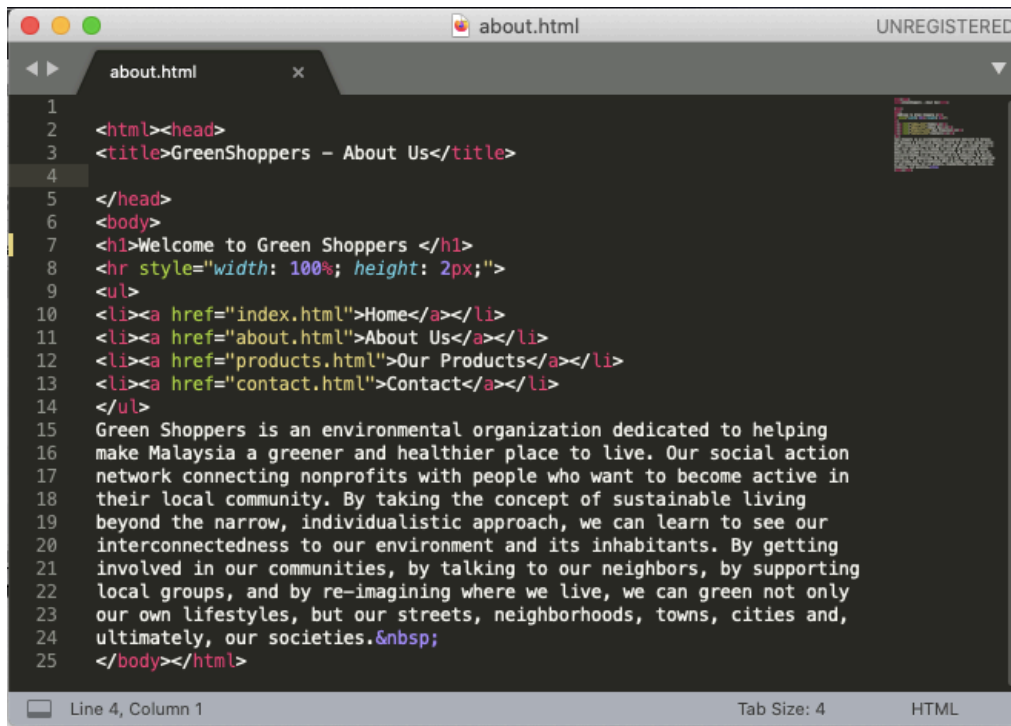


- Open the **contact.html** code and study how forms objects are inserted in the HTML document.



```
1 <html><head>
2 <title>GreenShoppers</title>
3
4 </head>
5 <body>
6 <h1>Contact </h1>
7 <hr style="width: 100%; height: 2px;">
8 <ul>
9 <li><a href="index.html">Home</a></li>
10 <li><a href="about.html">About Us</a></li>
11 <li><a href="products.html">Our Products</a></li>
12 <li><a href="contact.html">Contact</a></li>
13 </ul>
14
15 Please send your feedback & with this form below.
16
17 <form name="contact">
18 Name <input type="text">
19
20 <br>Email <input type="text">
21
22 <br>Gender<input type="radio" name="sex" value="male" /> Male
23 <input type="radio" name="sex" value="female" /> Female
24
25 <br>Rate our site
26 <input type="checkbox" value="Good" /> Good
27 <input type="checkbox" value="Average" /> Average
28 <input type="checkbox" value="Poor" /> Poor
29
30 <br>Your Messege
31 <textarea cols="20" rows="4" name="mesej"></textarea>
32
33 <br><button type="button">Submit</button> <button type="button">Cancel
34 </button><br>
35 </form>
36 </body></html>
```

5. To add forms, you must first start with the `<form>` tag. Nested inside it are form objects such as text field `<input>` with attribute `type text`, radio buttons `<input>` with attribute `type radio`, check boxes `<input>` with attribute `type checkbox`, text area `<textarea>` and buttons `<button>`.
6. Change the heading of the about.html and refresh the browser to check the output.



```
1
2 <html><head>
3 <title>GreenShoppers - About Us</title>
4
5 </head>
6 <body>
7 <h1>Welcome to Green Shoppers </h1>
8 <hr style="width: 100%; height: 2px;">
9 <ul>
10 <li><a href="index.html">Home</a></li>
11 <li><a href="about.html">About Us</a></li>
12 <li><a href="products.html">Our Products</a></li>
13 <li><a href="contact.html">Contact</a></li>
14 </ul>
15 Green Shoppers is an environmental organization dedicated to helping
16 make Malaysia a greener and healthier place to live. Our social action
17 network connecting nonprofits with people who want to become active in
18 their local community. By taking the concept of sustainable living
19 beyond the narrow, individualistic approach, we can learn to see our
20 interconnectedness to our environment and its inhabitants. By getting
21 involved in our communities, by talking to our neighbors, by supporting
22 local groups, and by re-imagining where we live, we can green not only
23 our own lifestyles, but our streets, neighborhoods, towns, cities and,
24 ultimately, our societies.&nbsp;
25 </body></html>
```

Line 4, Column 1 Tab Size: 4 HTML

