جامعة الأمير سلطان
PRINCE SULTAN
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IS311 Web Development

Week 02 - Lecture 03

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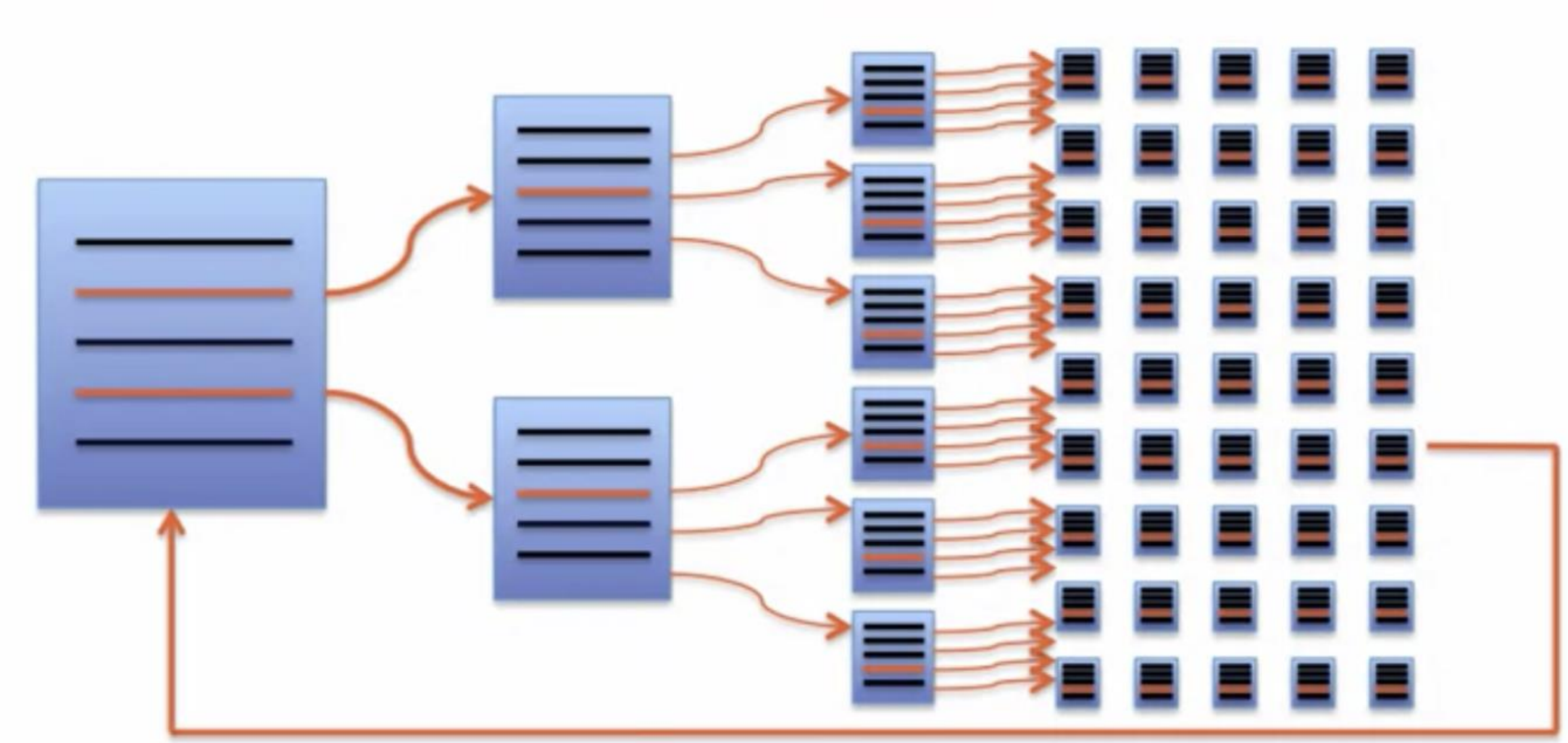
HTML – Hyper Text Markup Language

- Standard markup language for creating Web pages
- Describes the structure of a Web page
- A series of elements
- Tells the browser how to display page

HyperText

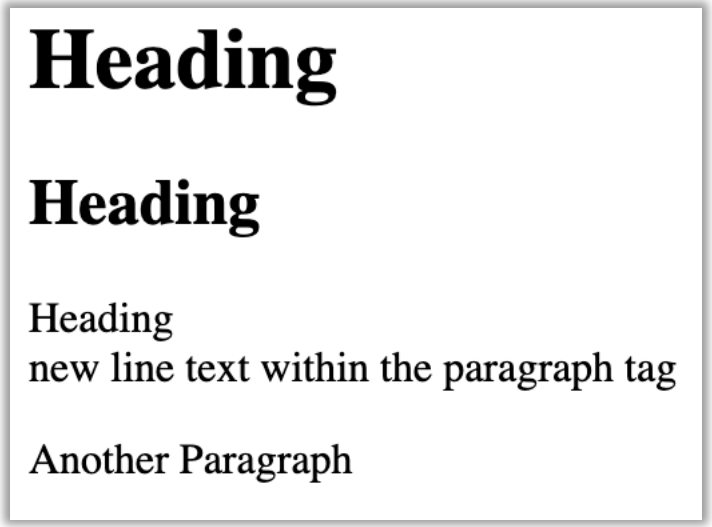


HyperMedia

Markup

- Identifies the contents with different tags like title, paragraph, image, etc.

```
<h1>Heading</h1>
<h2>Heading</h2>
<p>Heading <br> new line text within the paragraph tag</p>
<p>Another Paragraph</p>
```



Language

- Syntax
- Follow certain rules and how code is interpreted
- Not very strict language
- Language of visual formating of contents on the web pages

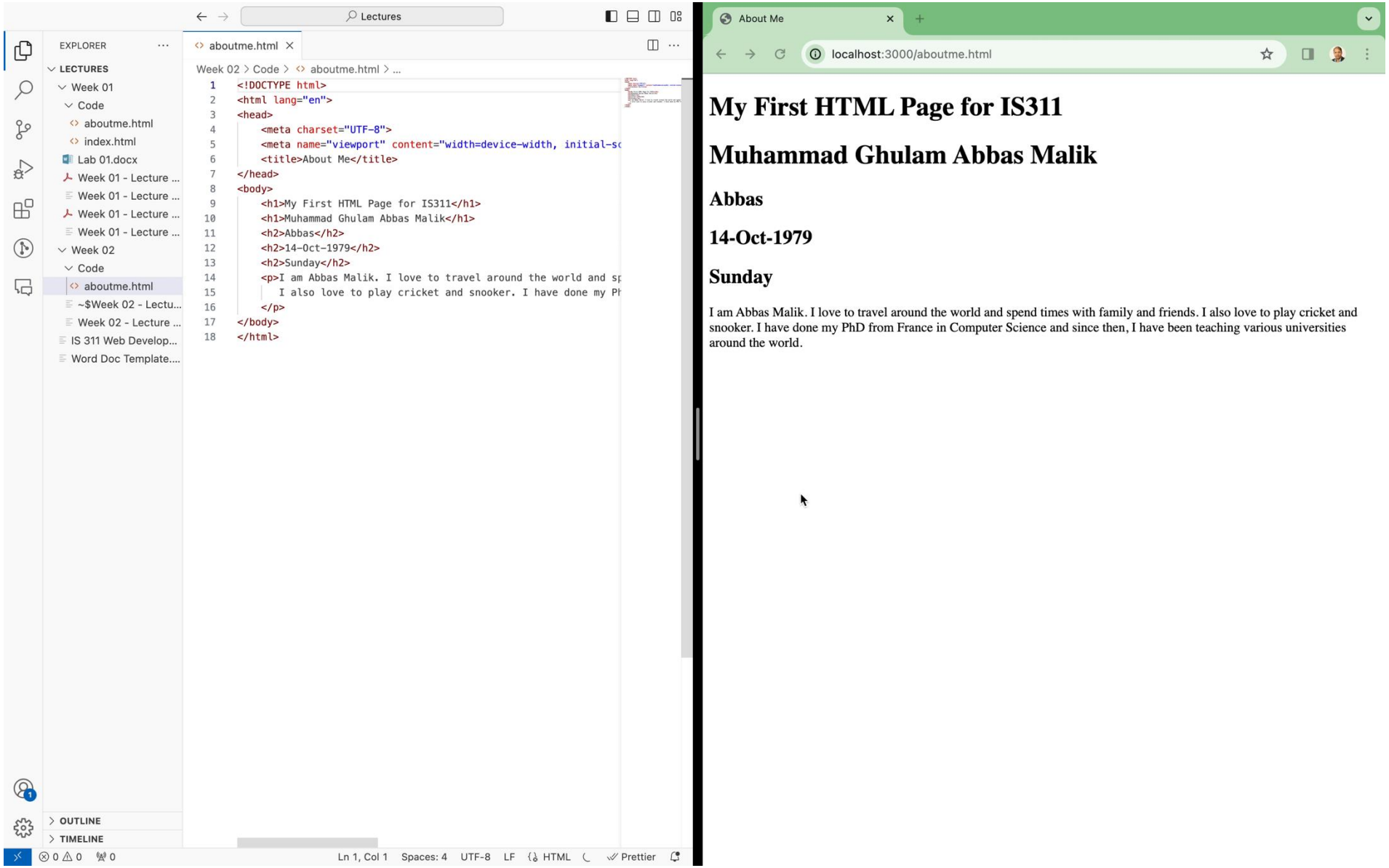
HTML Page Structure

```
<html>
  <head>
    <title>Page title</title>
  </head>
  <body>
    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>
    <p>This is another paragraph.</p>
  </body>
</html>
```

First Page

Title
About Me
localhost:3000/aboutme.html
My First HTML Page for IS311
Muhammad Ghulam Abbas Malik
Abbas
14-Oct-1979
Sunday
I am Abbas Malik. I love to travel around the world and spend times with family and friends. I also love to play cricket and snooker. I have done my PhD from France in Computer Science and since then, I have been teaching various universities around the world.

HTML Syntax not Strick



Web Technologies

Structrue

Style

Behavior

```
<!doctype html>
<html>
<head>
<title>HTML is Structure Only (Before)</title>
</head>
<body>
<h1>HTML is Structure Only</h1>
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit.
Recusandae temporibus esse suscipit nisi ad.</p>
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Ad,
doloribus eos perspiciatis.</p>
<footer>
<hr>
<p>Tech Support: yeah.right@server-is-down.com</p>
</footer>
</body>
</html>
```

HTML is Structure Only

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Recusandae temporibus esse suscipit nisi ad.

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Ad, doloribus eos perspiciatis.

Tech Support: yeah.right@server-is-down.com

HTML

CSS

JavaScript

```
<!doctype html>
<html>
<head>
<title>HTML is Structure Only (After)</title>
</head>
<body>
<h1 style="color: green; font-size: 60px; text-align: center;">HTML is Structure Only</h1>
<p style="margin: 0 100px 0 100px; font-size: 1.5em;">Lorem ipsum dolor sit amet, consectetur
adipisicing elit. Recusandae temporibus esse suscipit nisi ad.</p>
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Ad, doloribus eos perspiciatis.</p>
<footer>
<hr>
<p style="text-align: center;"
onclick="alert('EMAILING US IS USELESS');">
Tech Support: yeah.right@server-is-down.com
</p>
</footer>
</body>
</html>
```

HTML is Structure Only

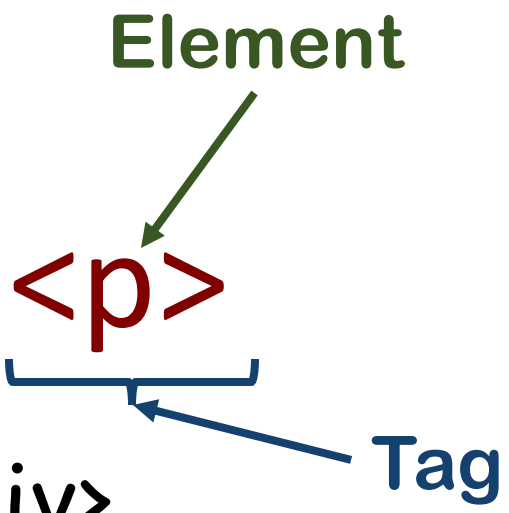
Lorem ipsum dolor sit amet, consectetur adipisicing elit. Recusandae temporibus esse suscipit nisi ad.

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Ad, doloribus eos perspiciatis.

Tech Support: yeah.right@server-is-down.com

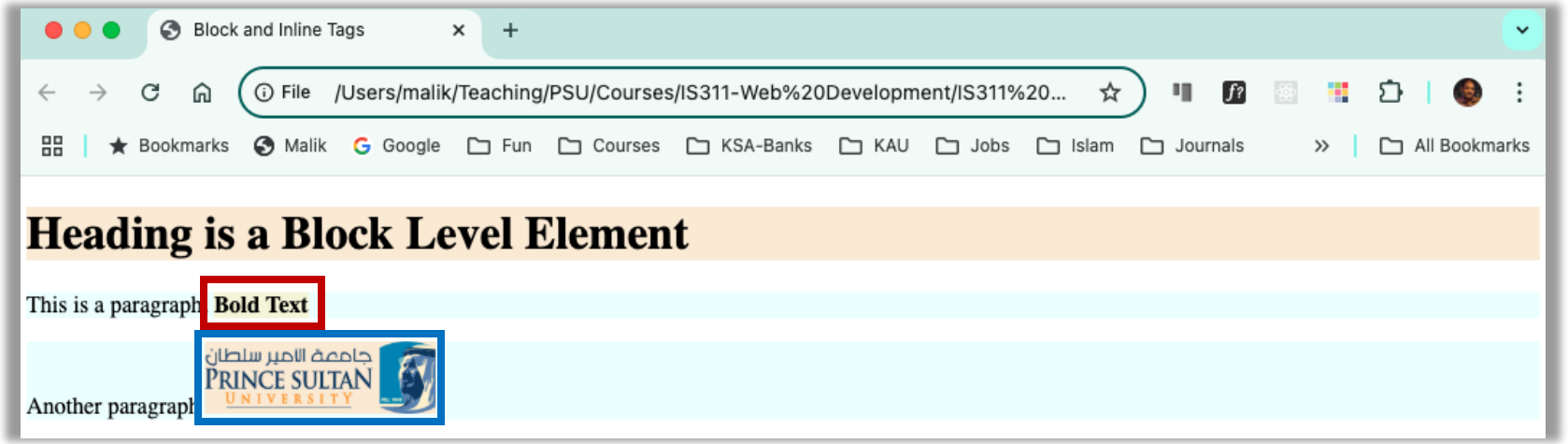
HTML

HTML Elements and Tags



- Start and End Elements
- Selfclosing Elements
- Block Level Elements - <p>, <h1>, , …
  - Rendered on its own line
- Inline Elements - , <a>, …
  - Rendered in the same line
- Block level element cannot be nested in Inline

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Block and Inline Tags</title>
7  </head>
8  <body>
9      <h1 style="background-color: antiquewhite;">Heading is a Block Level Element</h1>
10     <p style="background-color: azure;">This is a paragraph. <b style="background-color: beige;">Bold Text</b></p>
11     <p style="background-color: azure;">Another paragraph <img src="images/Prince Sultan Univeristy.png" height="50px" alt="PSU"
       style="background-color: antiquewhite;"></p>
12 </body>
13 </html>
```



HTML 5 – Semantic Elements/Tags

- header, footer, figcaption, article, section, …
- Heading tags: h1, h2, h3, h4, h5, h6
- nav, main, …
- Important for search engin optimization (SEO)

HTML 5 – Semantic Elements/Tags

```
<header><h1>Header part</h1></header>
<section>
        <article>
                <figure>
                        <img>
                        <figcaption></figcaption>
                </figure>
        </article>
</section>
<footer><p>Footer part</p></footer>
```

HTML Document

<!DOCTYPE html>

- A document type declaration
- Document starts with <html> and ends with </html>
- Two parts: Header and Body (visible)
- Header starts at <head> and ends at </head>
- Body starts at <body> and ends at </body>

HTML Heading <h#> </h#>

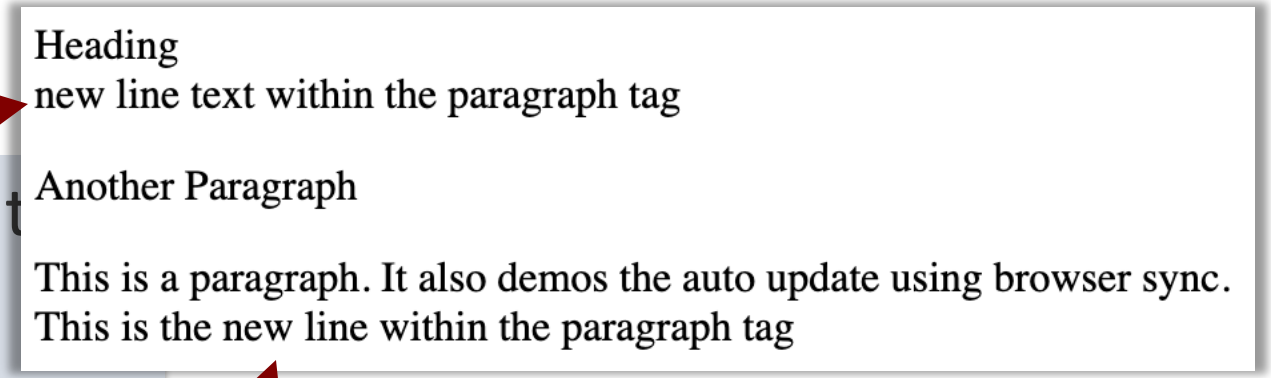
- Headings are defined with <h1> to <h6> tags
- Block level element

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport"
content="width=<device-width>,
initial-scale=1.0">
<title>Headings</title>
</head>
<body>
<h1>Heading 1</h1>
<h2>Heading 2</h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 6</h6>
</body>
</html>
```

HTML Paragraphs

- Defined with <p> tag

```
<p>Heading <br> new line text within t
paragraph tag</p>
<p>Another Paragraph</p>
<p>This is a paragraph. It also demos the
auto update using browser sync.<br>
This is the new line within the paragraph
tag</p>
```


Heading
new line text within the paragraph tag

Another Paragraph

This is a paragraph. It also demos the auto update using browser sync.
This is the new line within the paragraph tag

Links <a>

- <a> tag is used to create a hyper link between different pages/contents

```
<a href="headings.html">Heading Tag Page</a>
```

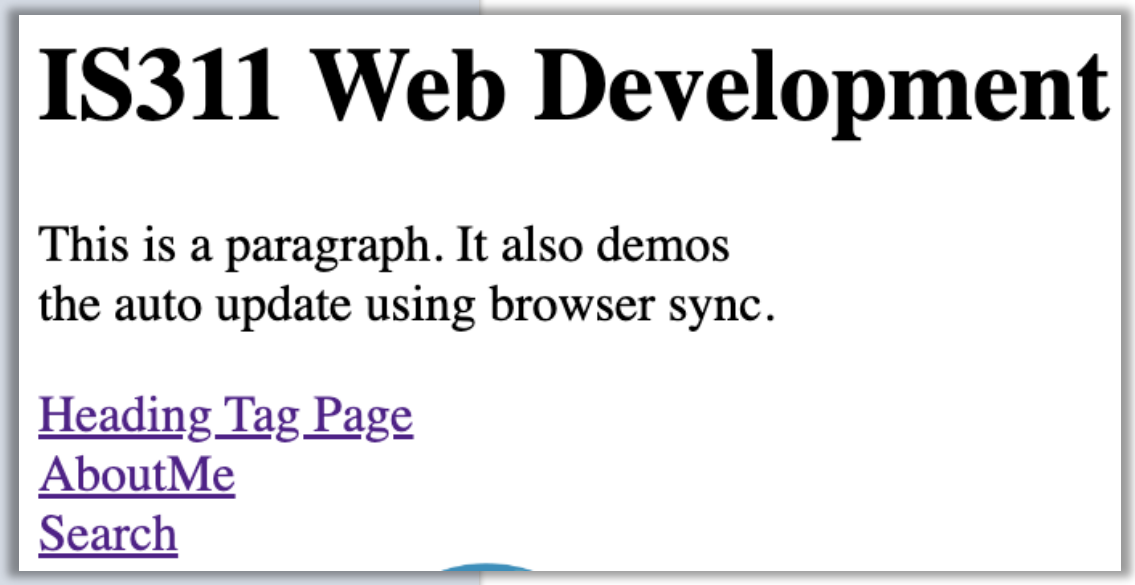
- href: hyper reference – define linked page.
- Use to create hyper link between pages or resources whether local or on Internet

Links <a>

```
<a href="headings.html">Heading Tag Page</a>
```

```
<a href=”https://www.google.com">Search</a>
```

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>IS311 - Web Development</title>
</head>
<body>
<h1>IS311 Web Development</h1>
<p>This is a paragraph. It also demos <br>
the auto update using browser sync.</p>
<a href="headings.html">Heading Tag Page</a>
<br>
<a href="aboutme.html">AboutMe</a>
<br>
<a href="https://www.google.com">Search</a>
</body>
</html>
```

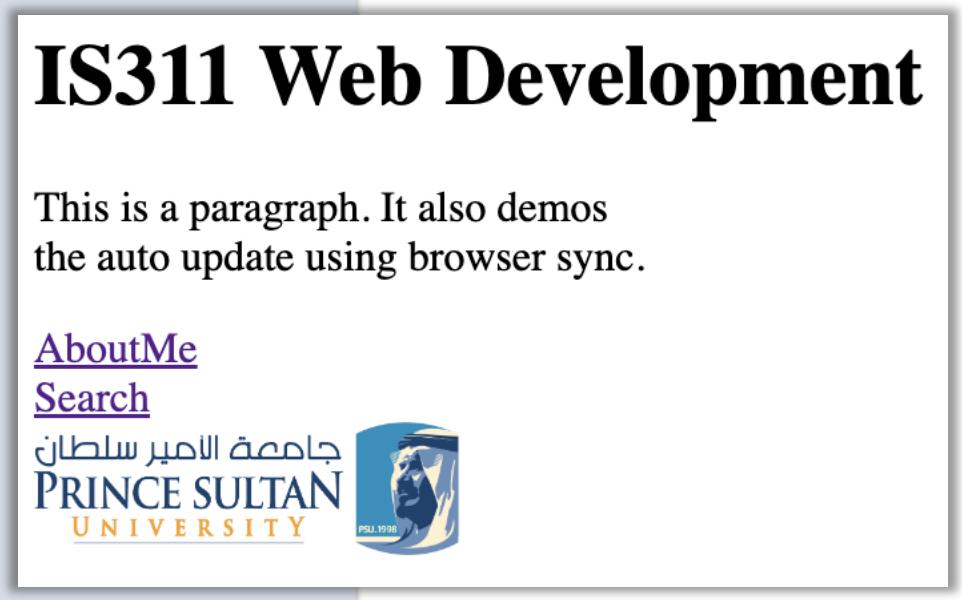


Image

- <img> tag to display an image on a page

```
<img src="images/Prince Sultan Univeristy.png" height="50dp">
```

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>IS311 - Web Development</title>
</head>
<body>
<h1>IS311 Web Development</h1>
<p>This is a paragraph. It also demos <br>
the auto update using browser sync.</p>
<a href="aboutme.html">AboutMe</a>
<br>
<a href="https://www.google.com">Search</a>
<br>
<a href="http://www.psu.edu.sa">
<img src="images/Prince Sultan Univeristy.png" height="50dp">
</a>
</body>
</html>
```



Comments

- <!-- your comments here -->
- Meaning full comments are helpful to understand the code and explain the logic of the code

https://www.w3schools.com/tags/tag_comment.asp

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>IS311 - Web Development</title>
</head>
<body>
<h1>IS311 Web Development</h1>
<p>This is a paragraph.</p>
<!-- Practice of hyper links -->
<a href="aboutme.html">AboutMe</a>
<br>
<a href="https://www.google.com">Search</a>
<br>
<!-- Practice of hyper links using image -->
<a href="http://www.psu.edu.sa">
<img src="images/Prince Sultan Univeristy.png" height="50dp">
</a>
</body>
</html>
```

HTML 5 Reference

- https://www.w3schools.com/tags/
- Can find the details of all the tags of HTML
- We will be using this documentation/reference in our lectures for details about the various tags.
- You can also read this to understand and see examples of tags of your interest.

References

- https://www.w3schools.com/html/
- http://xahlee.info/js/html5_non-closing_tag.html
- https://www.w3schools.com/tags/