

ENSF 381

Full Stack Web Development

Lecture 04:

HTML Essentials

Slides: Ahmad Abdellatif, PhD

Instructor: Novarun Deb, PhD

Outline

- Introduction to HTML.
- Paragraphs.
- Headings.
- Divisions.

What is HTML?

- The standard markup language used for creating documents intended for presentation in a web browser.
- It defines the content and structure of web page.
- The server sends HTML documents to the web browser, which then renders the documents into multimedia web pages.

Creating your first HTML file

1. Open a text editor: Notepad, TextEdit, or any code editor like Visual Studio Code, Atom, or Sublime Text

2. Write HTML code:

```
<!DOCTYPE html>
<html>
<head>
<title>ENSF381</title>
</head>
<body>

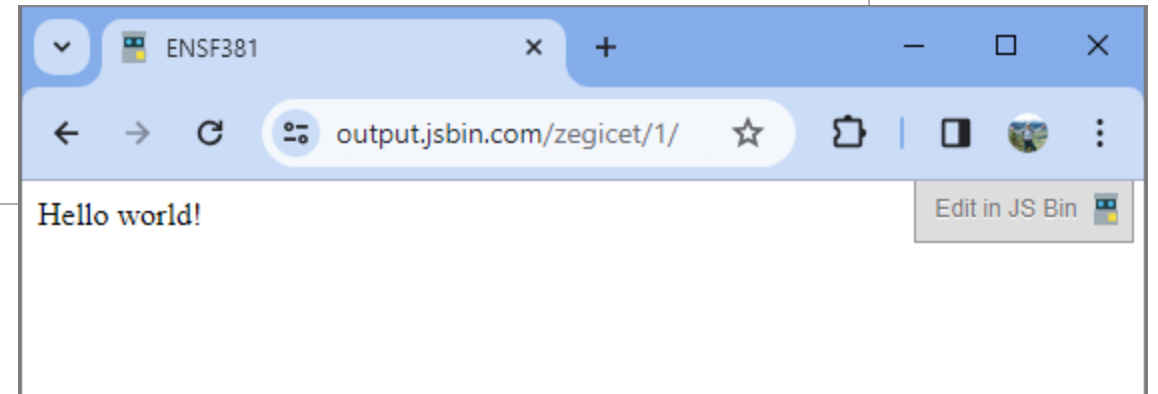
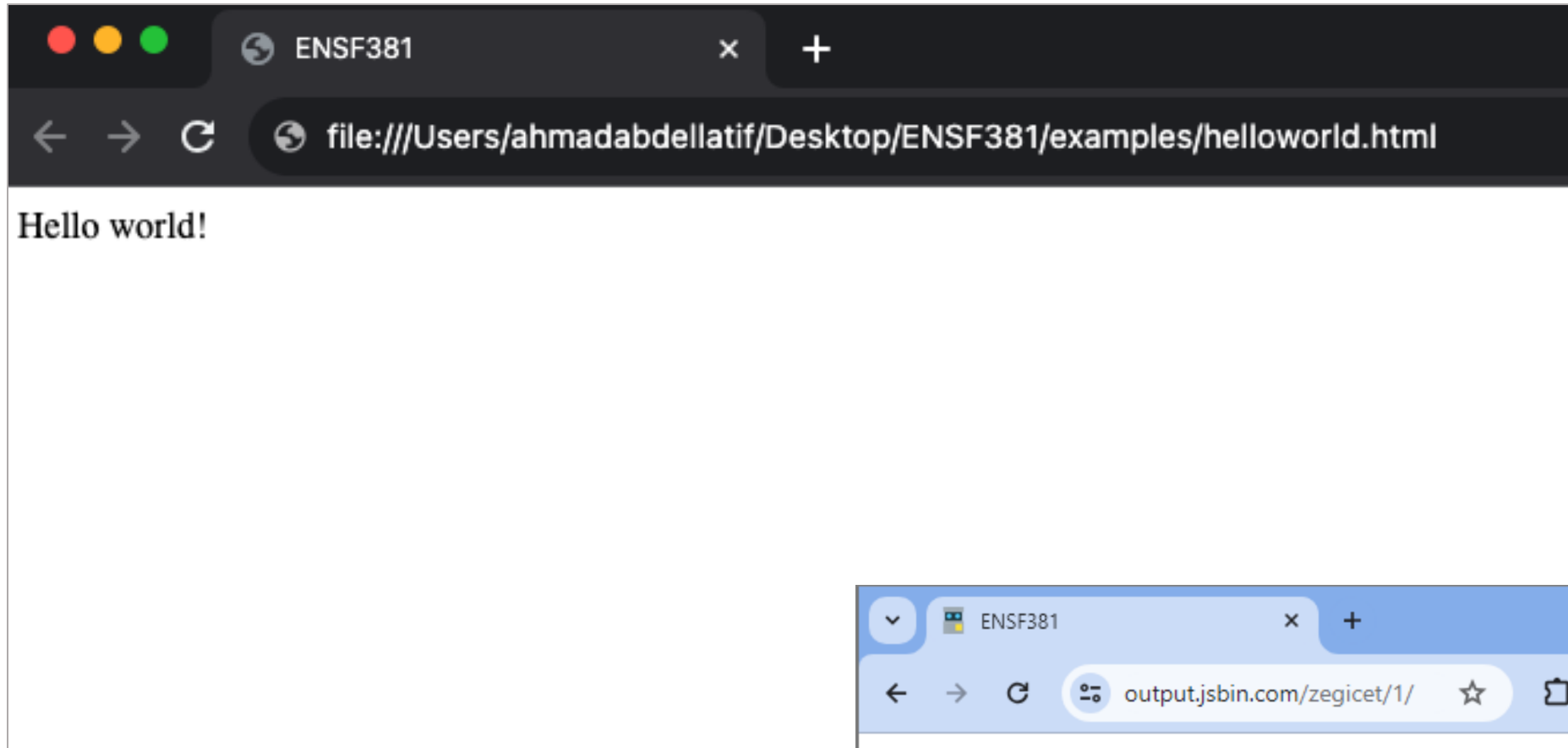
Hello world!

</body>
</html>
```

Creating your first HTML file

- 3. Save the File:** save your file with an .html extension.
- 4. Choose a Location:** save the file in a location where you can easily access it.
- 5. Open in a Web Browser:** double-click on the HTML file you just created. It should open in your default web browser, displaying the content you wrote in the HTML file.

Output



HTML elements

An HTML element is a fundamental building block of an HTML document, defining the structure and content of the page.

`<start tag> content </end tag>`



The element begins with a start tag, which is the name of the HTML element enclosed in angle brackets (<>).

HTML elements

An HTML element is a fundamental building block of an HTML document, defining the structure and content of the page.

`<start tag> content </end tag>`



The element concludes with an end tag, similar to the start tag but with a forward slash before the element name.

HTML elements

An HTML element is a fundamental building block of an HTML document, defining the structure and content of the page.

`<start tag> content </end tag>`



The content is the actual information or markup that the element represents.

HTML Syntax

`<!DOCTYPE html>` → Defines that this document is an HTML5 document

`<html>` → The root element of an HTML page

`<head>` → Contains meta information about the HTML page

`<title>ENSF381</title>` → The title for the HTML page

`</head>`

`<body>`

Hello world! → The content for the HTML page

`</body>`

`</html>`

Paragraphs

- The paragraph element in HTML is represented by the `<p>` tag.
- Used to define paragraphs of text in a web page.
- Commonly used to structure textual content on a webpage and provide a straightforward way to separate and organize blocks of text.
- Automatically **adds space before and after the content** it encloses, creating a visual separation from surrounding elements.

Structuring text without <p> – Example

```
<!DOCTYPE html>
<html>
<head>
<title>ENSF381</title>
</head>
<body>
```

Welcome to the ENSF381 course.

We will be learning full-stack web development.

```
</body>
</html>
```

Structuring text without <p> – Example

A screenshot of a web browser window. The address bar at the top shows a file path: file:///Users/ahmadabdellatif/Desktop/ENSF381/examples/paragraph1.html. Below the address bar, the main content area displays a single line of text: "Welcome to the ENSF381 course. We will be learning full-stack web development." The browser interface includes back, forward, and refresh buttons on the left side of the address bar.

← → ↻ file:///Users/ahmadabdellatif/Desktop/ENSF381/examples/paragraph1.html

Welcome to the ENSF381 course. We will be learning full-stack web development.

Structuring text using <p> – Example

```
<!DOCTYPE html>
<html>
<head>
<title>ENSF381</title>
</head>
<body>

<p>Welcome to the ENSF381 course.</p> <p>We will be
learning full-stack web development.</p>

</body>
</html>
```

Structuring text using <p> – Example



Headings

- Headings are defined using the `<h1>` to `<h6>` elements.

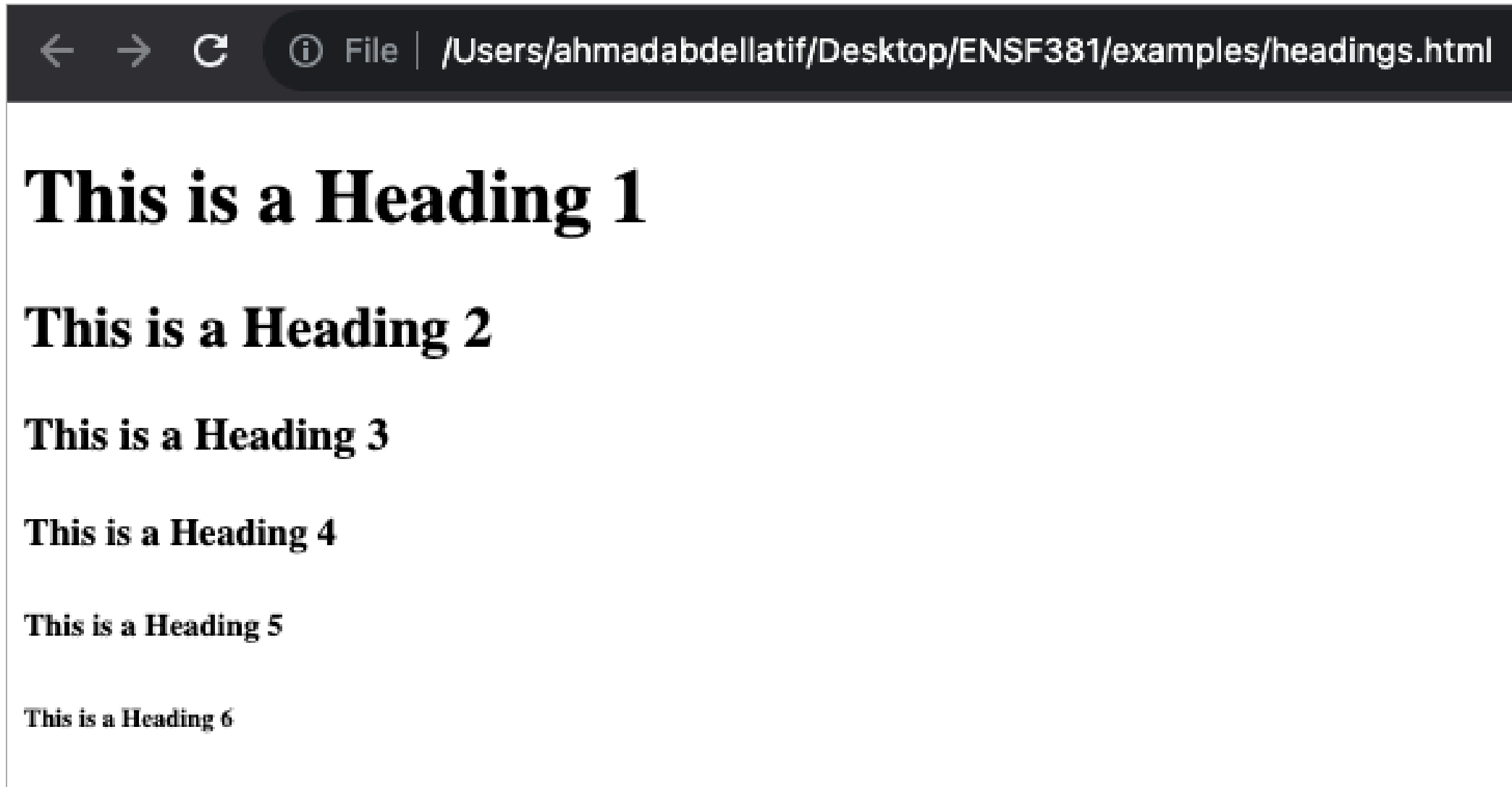
Headings - example

```
<!DOCTYPE html>  
<html>  
<head>  
<title>ENSF381</title>  
</head>  
<body>
```

```
<h1>This is a Heading 1</h1>  
<h2>This is a Heading 2</h2>  
<h3>This is a Heading 3</h3>  
<h4>This is a Heading 4</h4>  
<h5>This is a Heading 5</h5>  
<h6>This is a Heading 6</h6>
```

```
</body>  
</html>
```

Headings - output



Headings

- Headings are defined using the `<h1>` to `<h6>` elements.
- Represent different levels of headings, with `<h1>` being the highest level (most important) and `<h6>` being the lowest level.
- The choice of heading level depends on the hierarchical structure of your content. `<h1>` is typically used for the main title of the page.
- It is important to use headings in a meaningful and hierarchical way to provide structure and improve accessibility for users.

Division (<div>) element

- A generic container or division that is used to group together and structure content on a web page.
- The tag `div` stands for division.
- Serves as a container for other HTML elements.

<div> - example

```
<!DOCTYPE html>
<html>
<head>
<title>ENSF381</title>
</head>
<body>

<div>
  Welcome to the ENSF381 course.
</div>

</body>
</html>
```

<div> - example



Question...

What are the use cases for the `<div>` element?

- **Structural Organization:** create logical divisions and structure within a webpage.

<div> - example 2

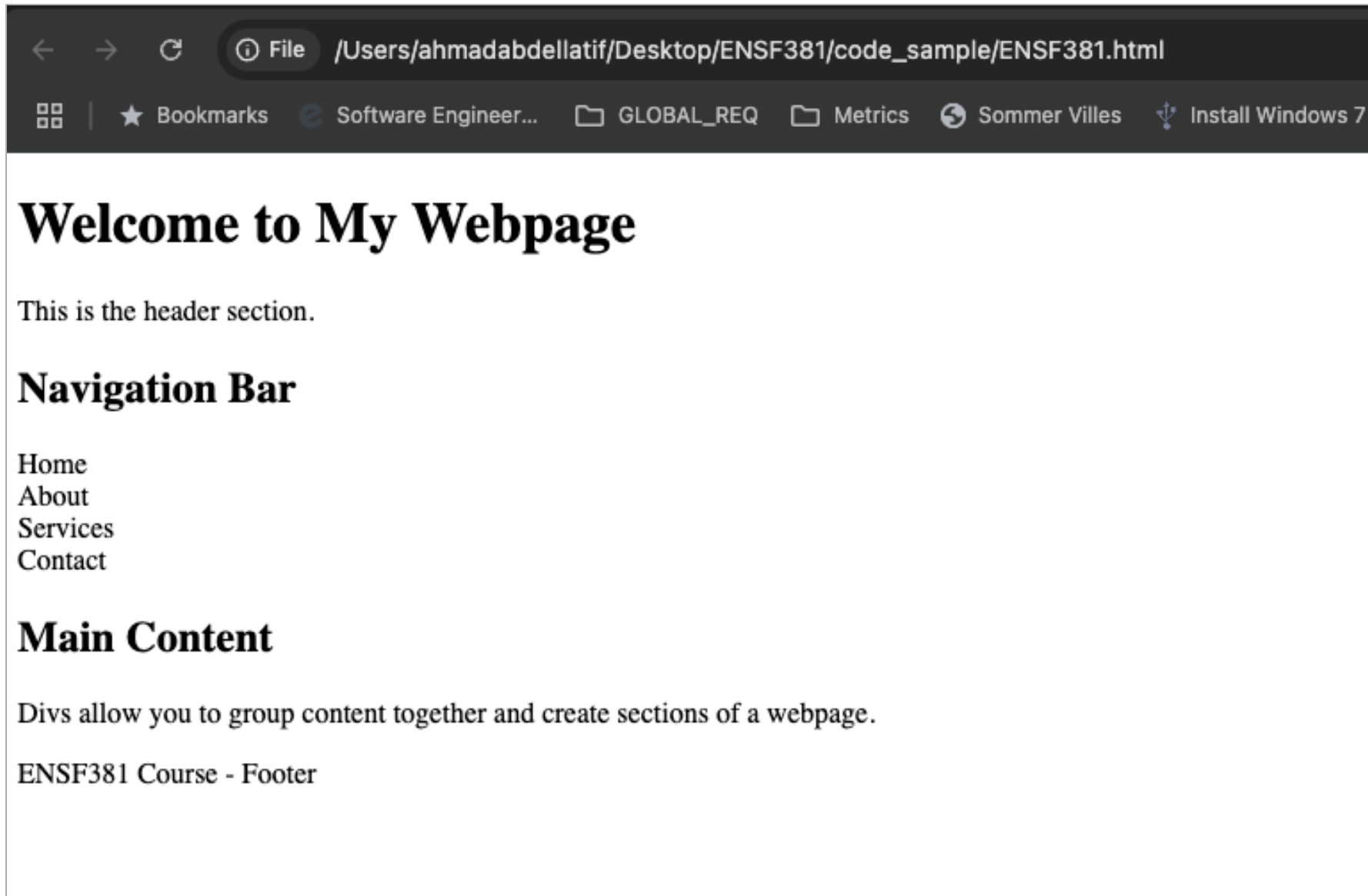
```
<!DOCTYPE html>
<html>
<head>
  <title>ENSF381-Divs</title>
</head>
<body>
  <div>
    <h1>Welcome to My Webpage</h1>
    <p>This is the header section.</p>
  </div>

  <div>
    <h2>Navigation Bar</h2>
    <div>Home</div>
    <div>About</div>
    <div>Services</div>
    <div>Contact</div>
  </div>

  <div>
    <h2>Main Content</h2>
    <p>Divs allow you to group content together and create sections of a webpage.</p>
  </div>

  <div>
    <p>ENSF381 Course – Footer </p>
  </div>
</body>
</html>
```


<div> - example 2



Question...

What are the use cases for the `<div>` element?

- **Structural Organization:** create logical divisions and structure within a webpage.
- **Styling:** apply styles and positioning to these containers as needed using CSS.
- **JavaScript Interactions:** used as containers for JavaScript interactions (e.g., dynamic content updates).

Break lines and comments

- `
` is a line break tag.
- The `br` tag has **no closing tag**.
- The `<!-- comment -->` tag is added to the HTML source file.
- The comment tags are **not displayed** in the browser.

Break lines and comments

```
<!DOCTYPE html>
<html>
<head>
<title>ENSF381</title>
</head>
<body>
```

```
<!-- This is a comment that does not displayed in the browser -->
```

```
Welcome to the ENSF381 course. <br> We will be learning full-
stack web development.
```

```
<!-- Here is another comment -->
</body>
</html>
```

Break lines and comments



A screenshot of a web browser interface. The address bar at the top shows navigation icons (back, forward, refresh) and a file path: `file:///Users/ahmadabdellatif/Desktop/ENSF381/examples/brs.html`. Below the address bar, the main content area displays two lines of text: "Welcome to the ENSF381 course." followed by "We will be learning full-stack web development." on the next line.

Welcome to the ENSF381 course.
We will be learning full-stack web development.

Index page (index.html)

- The standard name for the default document to be served.
- When a browser requested a URL pointing to a directory on the server (e.g., `http://example.com/folder/`), the server needed a way to know which file to serve by default.
- The term “index” suggests a starting point or an entry point, much like the index of a book.
- “index.html”, “default.html”, and “default.htm” also are possible on Windows servers.

Questions

