

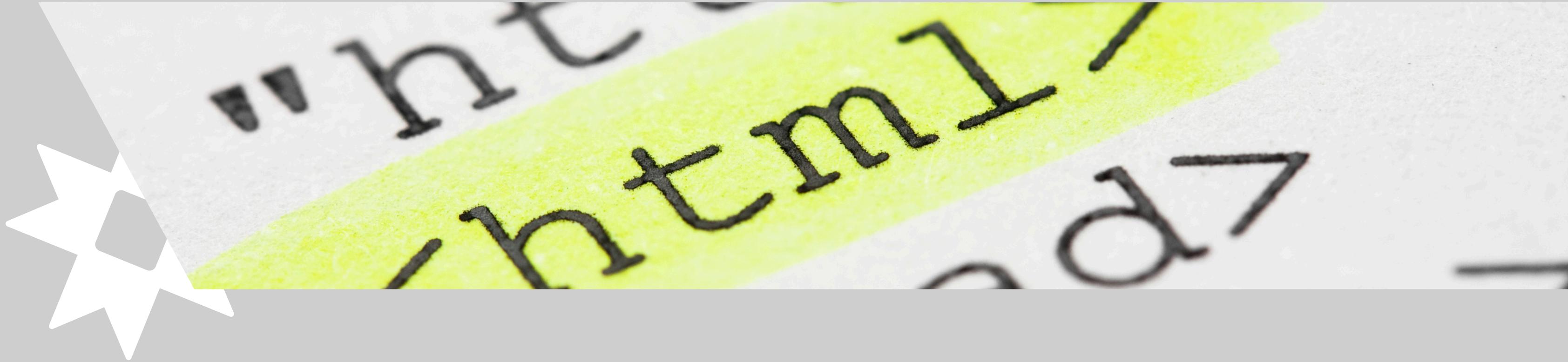
# HTML Basics



# Objectives

By the end of this chapter, you should be able to:

- Describe what HTML is and its role in web development.
- Recognize the basic layout of an HTML document and its key components.
- Create and format web content using common HTML elements and appropriately apply attributes.
- Design basic HTML forms to capture user input and understand the use of various form elements.



# Introduction to HTML

# What is HTML?



**HTML** stands for HyperText Markup Language. It is the standard language used to create web pages and web applications.

Introduced in 1991, it has evolved through various versions, with HTML5 being the latest standard.

# Why is HTML Important?



- Serves as the foundation for all web content, allowing the structuring of text, images, links, and multimedia.
- Browsers read HTML to render web pages as intended by the developers.
- Proper use of HTML enhances search engine optimization (SEO) and accessibility for users with disabilities.

# **Key Features of HTML**

- **Descriptive Tags:** HTML consists of tags that describe the content they enclose, making it easy to understand the structure.
- **Hyperlinking:** Facilitates linking to other web pages and resources, enhancing navigation.
- **Multimedia Support:** Allows integration of images, audio, video, and other media types.



# The Structure of an HTML Document

# Basic Structure of an HTML Document

```
html
```

```
<!DOCTYPE html>
<html>
  <head>
    <title>Page Title</title>
  </head>
  <body>
    <h1>This is a Heading</h1>
    <p>This is a paragraph of text on the page.</p>
  </body>
</html>
```

# Components

## 1. **<!DOCTYPE html>**

- This declaration informs the web browser about the version of HTML being used (HTML5 in this case). It helps the browser render the page correctly.

## 2. **<html> element**

- The root element of an HTML page. All other HTML elements are nested within this tag.

# Components (cont')

## 4. <head> section

- Contains meta-information about the document, such as:
  - <title>: The title of the web page, displayed in the browser tab.
  - <meta> tags: Provide metadata such as character set, author, and description (for SEO).
  - Links to CSS stylesheets and JavaScript files can also be included here.

# Components (cont')

## 5. <body> section

- Encloses the content of the webpage that users interact with.

This content can include:

- Headings (<h1> to <h6>): Used to create titles and subtitles.
- Paragraphs (<p>): Blocks of text.
- Other content types like images (<img>), links (<a>), lists (<ul>, <ol>), etc.

# Example Breakdown of Body Content

## Headings:

html

```
<h1>Main Title</h1>
<h2>Subheading</h2>
```

# Example Breakdown of Body Content

## Paragraphs:

html

```
<p>This is a sample paragraph that explains the content of the web page.</p>
```

# Example Breakdown of Body Content

## Links:

html

```
<a href="https://www.example.com">Visit Example</a>
```

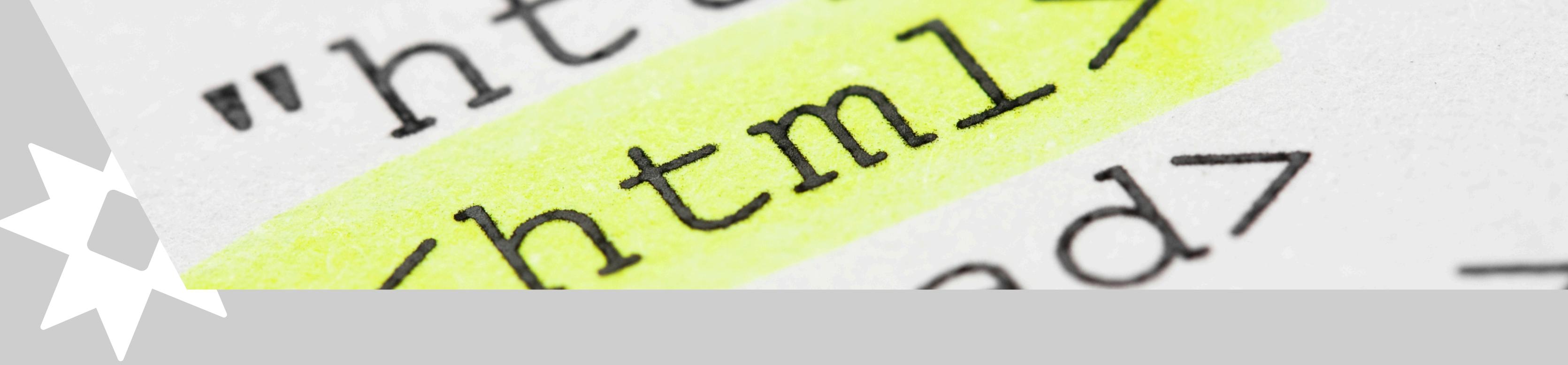
# Example Breakdown of Body Content

## Images:

html

```

```



# Common HTML Elements

# Headings

- Headings are used to create a hierarchy in content.
- Tags: HTML provides six levels of headings:
  - <h1>: Main heading (largest and most important)
  - <h2>: Subheading
  - <h3>: Smaller subheading, and so forth up to <h6>

## Example:

html

```
<h1>This is the Main Title</h1>
<h2>This is a Subheading</h2>
```

# Paragraphs

- Paragraphs contain text content.
- Tag: <p></p> is used to define a paragraph.

## Example:

```
html
```

```
<p>This paragraph contains text information and is a basic block of content on the page.</p>
```

# Links

- Links allow users to navigate to other pages or sites.
- Tag: <a href="URL">Link Text</a> creates a hyperlink.
- Attributes:
  - href: Specifies the URL.
  - target: Determines where to open the linked document (e.g., \_blank for a new tab).

## Example:

```
html
```

```
<a href="https://www.example.com" target="_blank">Visit Example</a>
```

# Images

- Images enhance visual content on a webpage.
- Tag:  displays an image.
- Attributes:
  - src: Source of the image file.
  - alt: Alternative text for accessibility and if the image fails to load.

## Example:

```
html
```

```

```

# Lists

- Ordered List: Creates a numbered list.
- Tag: <ol><li>Item</li></ol>

## Example:

```
html
<ol>
  <li>First Item</li>
  <li>Second Item</li>
</ol>
```

# Lists

- Unordered List: Creates a bulleted list.
- Tag: <ul><li>Item</li></ul>

## Example:

```
html  
<ul>  
  <li>Bullet Point One</li>  
  <li>Bullet Point Two</li>  
</ul>
```



# HTML Attributes

# What are HTML Attributes?

- Attributes provide additional information about HTML elements and are defined within the opening tag.

# Common Types of Attributes

- Global Attributes
  - Attributes applicable to all HTML elements:
  - class: Assigns one or more class names for styling with CSS.
  - id: Assigns a unique identifier to an element.
  - style: Adds inline CSS styles directly to an element.

## Example:

html

```
<div id="header" class="main-header" style="background-color: blue;">Welcome</div>
```

# Common Types of Attributes

- Specific Attributes
  - Hyperlink Attributes
    - href: Specifies the URL for <a> tags.
    - target: Specifies how to open the linked document.

## Example:

html

```
<a href="https://www.example.com" target="_blank">Open Example</a>
```

# Common Types of Attributes

- Image Attributes
  - src: Defines the path to the image file.
  - alt: Provides alternative text for the image.

## Example:

```
html
```

```

```

# Common Types of Attributes

- Form Attributes
  - Input Attributes
    - type: Specifies the type of input (text, email, password, etc.).
    - placeholder: Provides a hint to the user about what to enter.
    - required: Indicates that an input must be filled out before submitting the form.

## Example:

```
html
```

```
<input type="text" placeholder="Enter your name" required>
```

# Best Practices for Using Attributes

- Use meaningful values for id and class to improve maintainability.
- Always include alt text for images to enhance accessibility.
- Validate URLs in href attributes to ensure they direct users correctly.

# Summary

This chapter has covered the following:

## 1. HTML Definition

- HTML is the fundamental language for structuring web content.

## 2. Document Structure

- An HTML document includes a declaration, root element, metadata, and body content.

## 3. Key Elements

- Common elements are headings, paragraphs, links, images, and lists.

## 4. Attributes

- Attributes enhance elements with additional information; best practices include using semantic tags and descriptive text for accessibility.