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Full Stack Web Development Program

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Day 6 - Introduction to HTML5

Titles

- Overview of HTML5 and its Tags
- Differentiate between HTML and HTML5
- Understanding HTML5 Tags
- HTML5 APIs
- Document Object Model (DOM)
- HTML5 – canvas
- HTML5 SVG



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Learning Objectives

By the end of this module, you will be able to:

- Develop a solid understanding various tags in HTML
- Familiar with difference between the HTML and HTML5
- Analyze a given web page's DOM structure to identify
- Create various shapes using canvas tag



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Exploring HTML5

New Features and Enhancements

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HTML5

- HTML5, or Hypertext Markup Language 5, is the latest version of the standard markup language used to create web pages and web applications.
- It's an evolution of HTML, the language used to structure and present content on the World Wide Web.
- HTML5 was developed by the *World Wide Web Consortium (W3C)* and the *Web Hypertext Application Technology Working Group (WHATWG)* to improve the capabilities and functionality of web pages.



HTML5 (contd.)

- HTML5 was designed to cut out the need for those non-standard proprietary technologies.
- With this new version of HTML, you can create web applications that work offline.
- Support high-definition video and animations and know where you are geographically located.



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What is new in HTML5?

Making **code easier** to read for users and screen readers

Reducing the overlap between HTML, CSS, and JavaScript

Promoting design **responsiveness** and **consistency** across browsers

Supporting multimedia without the need for **Flash or other plugins**

HTML5 supports graphic elements using the tags `<svg>` and `<canvas>`

HTML5 included number, time, date, and calendar form components.

In HTML5, semantic elements (header, footer, article, and section) are present.

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New Tags in HTML5

Tags	Description
<header>	It is used inside the body tag. It is used to write the headings for our page. It is a block-level element.
<footer>	It is used inside the body tag. It is used to write the footers for our page. It is a block-level element.
<section>	It is used to define the section of the webpage, such as chapters, headers, footers, or any other section. It is similar to the div tag.
<article>	It is used to define the articles in our web page. It is also a block-level element.

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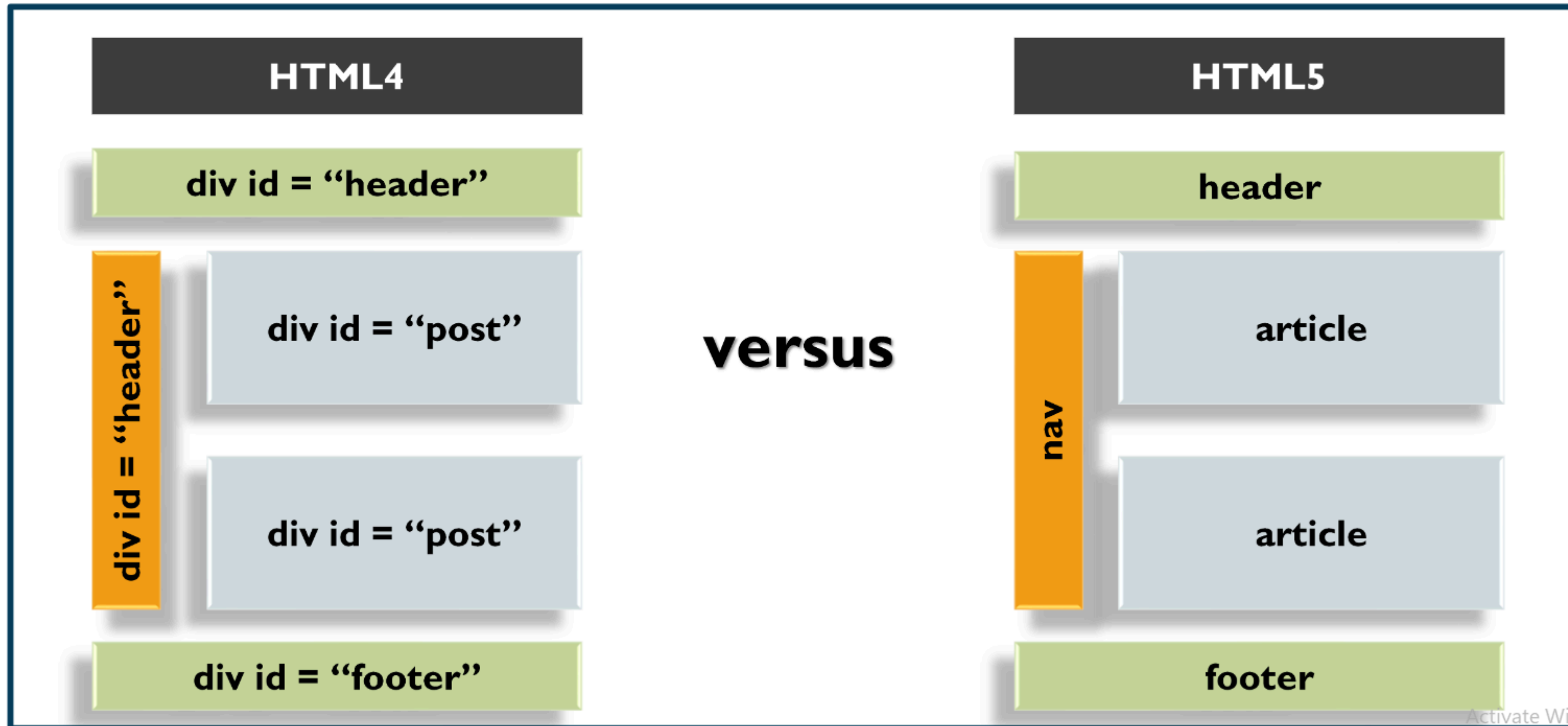


New Tags in HTML5 (contd.)

Tags	Description
Semantic	<header>, <footer>, <section> and <article> tags are semantic elements. These are block-level elements.
New input types	Number, date, time, calendar are the new input form types added.
graphic	Scalable Vector Graphics (<svg>) and <canvas> elements are added.
style	Audio and video are added to your web page using <audio> and <video> elements.

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HTML4 vs. HTML5



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HTML4 vs. HTML5 (contd.)

HTML4	HTML5
It does not support APIs.	It supports APIs.
It is not mobile-friendly.	It is mobile-friendly.
It does not have drag and drop effects.	It has drag and drop effects.
It does not have an integral SVG.	It has integral SVG.
It uses cookies to store the data.	It uses the local storage APIs to store data.
Adding audio and video are not possible.	Adding audio and video are possible with <code><audio></code> and <code><video></code> tags.



HTML5 Tags

Tags	Description
<header>	The heading element is a block-level element used inside the body tag to write the headings for the web page.
<footer>	A block-level element used to create footer in a webpage.
<section>	It is similar to the div tag but is used to define specific sections of a webpage, such as chapters, headers, and footers.
<article>	A block-level element used to define articles in webpages.

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HTML5 Tags: <datalist> Tag

The <datalist> tag in HTML5 is used with the <input> element to display predefined options or suggestions for user input. Forms often use it to allow users to select an option from a list while they type.

Example:

```
<input list="browsers" >
<datalist id="browsers">
  <option value="Edge">
    <option value="Firefox">
    <option value="Chrome">
    <option value="Opera">
    <option value="Safari">
  </datalist>
</datalist>
<mark>web development</mark>
<progress></progress>
```

Output:



Dropdown options appear as the user types or select from the list.

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HTML5 Tags: <audio> and <video> Tags

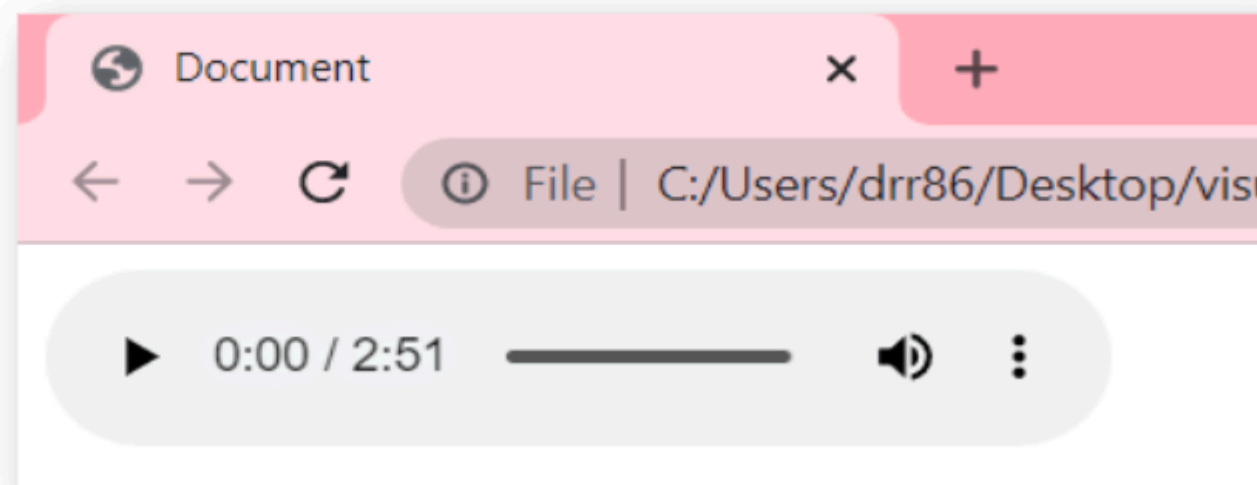
The <audio> tag allows direct embedding of audio content, offering an integrated playback experience without external plugins or players, while the <video> tag, an HTML5 element, achieves the same for video content, ensuring a standardized experience.

- To utilize the <audio> and <video> tag, you specify audio sources (e.g., MP3, WAV, OGG, MP4, WebM, Ogg) within <source> elements under <audio> or <video> tag.
- This ensures compatibility across various browsers.
- Adding the controls attribute enables user-friendly playback controls like play, pause, volume, volume adjustment, and progress tracking

Example:

```
<audio controls>
  <source src="hey.mp3" type="audio/mpeg" />
  Your browser does not support the audio element.
</audio>
```

Output:



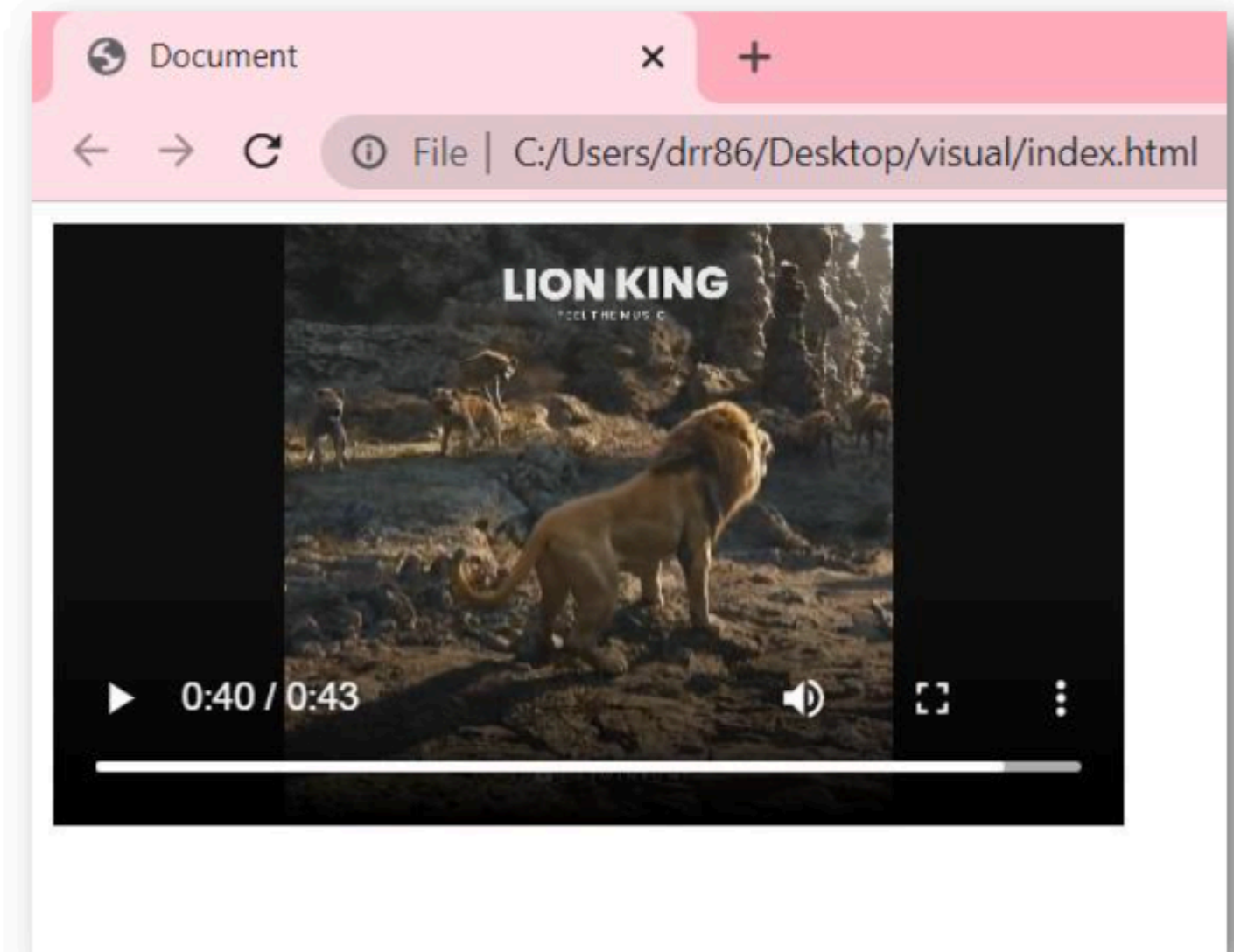
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HTML5 Tags: <audio> and <video> Tags(contd.)

Example:

```
<video controls width="400px">  
  <source src="Lion King.mp4" type="video/mp4" />  
  Your browser does not support the audio element.  
</video>
```

Output:



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