



CET-223

Web Technologies

Experiment # 02

Experiment Title

HTML5 Multimedia Integration and Tables: Audio Video Elements & Tables

Assessment of CLO(s): 03

Performed on _____

Student Name:			
Roll No.		Group	
Semester		Session	

Total (Max)	Performance (03)	Viva (03)	File (04)	Total (10)
Marks Obtained				
Remarks (if any)				

Experiment evaluated by

Instructor's Name	Engr. Bilal Iqbal		
Date		Signature	

Objective:

- Understand what HTML5 is and how it enhances web development.
- Learn how to embed multimedia elements (audio and video) using HTML5.
- Understand how to create and structure tables using HTML.
- Explore attributes and options for multimedia control.

HTML5

Html5 is advance version of HTML and some new tags were added which are discussed bellow:

New HTML5 Elements

The most interesting new HTML5 elements are:

- New **semantic elements** like <header>, <footer>, <article>, and <section>.
- New **attributes of form elements** like number, date, time, calendar, and range.
- New **graphic elements**: <svg> and <canvas>.
- New **multimedia elements**: <audio> and <video>.

New HTML5 API's (Application Programming Interfaces)

The most interesting new API's in HTML5 are:

- HTML Geolocation
- HTML Drag and Drop
- HTML Local Storage
- HTML Application Cache
- HTML Web Workers
- HTML SSE

Removed Elements in HTML5

Removed Element	Use Instead
<acronym>	<abbr>
<applet>	<object>
<basefont>	CSS
<big>	CSS
<center>	CSS
<dir>	
	CSS
<frame>	
<frameset>	
<noframes>	
<strike>	CSS, <s>, or
<tt>	CSS

New Semantic/Structural Elements

Tag	Description
<article>	Defines an article in the document
<figcaption>	Defines a caption for a <figure> element
<footer>	Defines a footer for the document or a section
<header>	Defines a header for the document or a section
<main>	Defines the main content of a document
<nav>	Defines navigation links in the document
<section>	Defines a section in the document
<progress>	Defines the progress of a task

HTML5 Semantic Elements

Semantics is the study of the meanings of words and phrases in a language.

Semantic elements = elements with a meaning.

A semantic element clearly describes its meaning to both the browser and the developer.

Examples of **non-semantic** elements: <div> and - Tells nothing about its content.

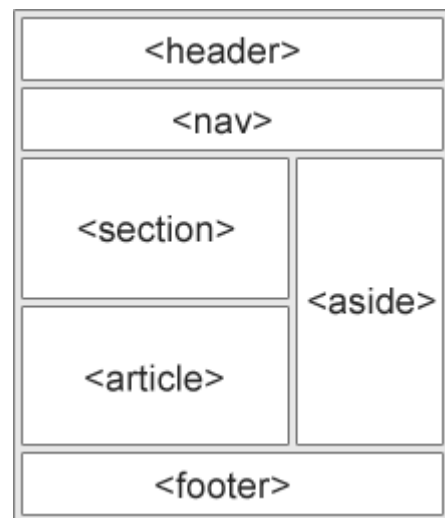
Examples of **semantic** elements: <form>, <table>, and <article> - Clearly defines its content.

New Semantic Elements in HTML5

Many web sites contain HTML code like: <div id="nav"><div class="header"><div id="footer"> to indicate navigation, header, and footer.

HTML5 offers new semantic elements to define different parts of a web page:

- <article>
 - The <article> element specifies independent, self-contained content.
- <aside>
- <details>
- <figcaption>
 - The purpose of a figure caption is to add a visual explanation to an image.
- <figure>
- <footer>
 - The <footer> element specifies a footer for a document or section.
- <header>
 - The <header> element specifies a header for a document or section.
- <main>
- <mark>
- <nav>
 - The <nav> element defines a set of navigation links.
- <section>
 - The <section> element defines a section in a document.
- <summary>
- <time>



Embedding Audio in HTML5

1. Create an HTML document named audio_example.html.
2. Embed an audio file using the <audio> tag. Include controls for play, pause, and volume.
3. Test using an external or online audio file (e.g., MP3).

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Audio Example</title>
</head>
<body>
  <h1>HTML5 Audio Example</h1>
  <audio controls>
    <source src="audio.mp3" type="audio/mpeg">
    Your browser does not support the audio element.
  </audio>
</body>
</html>
```

Embedding Video in HTML5

1. Create an HTML document named video_example.html.
2. Embed a video file using the <video> tag with controls (play, pause, fullscreen).
3. Experiment with different attributes like autoplay, loop, and muted.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Video Example</title>
</head>
<body>
  <h1>HTML5 Video Example</h1>
  <video width="400" controls>
    <source src="video.mp4" type="video/mp4">
    Your browser does not support the video tag.
  </video>
</body>
</html>
```

Advanced Video Controls

1. Add the following attributes to the video.
 - autoplay: Automatically plays the video when the page loads.
 - loop: Repeats the video after it ends.
 - muted: Mutes the video by default.
2. Modify your video_example.html to include these attributes.

```
<video width="400" controls autoplay loop muted>
  <source src="video.mp4" type="video/mp4">
  Your browser does not support the video tag.
</video>
```

Creating Tables in HTML5

1. Create an HTML document named table_example.html.
2. Create a table with three columns: Name, Age, and Occupation.
3. Add at least three rows of data.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Table Example</title>
</head>
<body>
  <h1>HTML5 Table Example</h1>
  <table border="1">
    <tr>
      <th>Name</th>
      <th>Age</th>
      <th>Occupation</th>
    </tr>
    <tr>
      <td>John</td>
      <td>30</td>
      <td>Developer</td>
    </tr>
    <tr>
      <td>Jane</td>
      <td>25</td>
      <td>Designer</td>
    </tr>
    <tr>
      <td>Mark</td>
      <td>35</td>
      <td>Manager</td>
    </tr>
  </table>

```

```
        </tr>
    </table>
</body>
</html>
```

Merging Cells in Tables

1. Create a new table with merged cells using colspan and rowspan attributes.
2. Experiment with combining columns and rows.

```
<table border="1">
  <tr>
    <th>Name</th>
    <th>Age</th>
    <th>Occupation</th>
  </tr>
  <tr>
    <td rowspan="2">John</td>
    <td>30</td>
    <td>Developer</td>
  </tr>
  <tr>
    <td>32</td>
    <td>Team Lead</td>
  </tr>
  <tr>
    <td colspan="2">Jane</td>
    <td>Designer</td>
  </tr>
</table>
```

Lab Task:

1. Create a web page named as E-Learning Lecture Tutorials web page should contain Video tag and audio tag (at least 3 videos and audio). Attached the output and the code.
2. Create your Time Table. Attached the output and the code.