The `<audio>` element in HTML is used to embed audio content (sound files) into a web page. It allows users to listen to audio directly in their browser without needing external plugins (in most cases).[1]

Basic Structure:

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

- `<audio>`: The container element for the audio.
- `<source>`: Specifies the audio file and its type. You can include multiple `<source>` elements for different audio formats (for browser compatibility).
- `controls`: Adds default browser audio controls (play/pause, volume, etc.). This is generally recommended for usability.
- The text between the opening and closing `<audio>` tags is displayed if the browser doesn't support the `<audio>` element.

Key Attributes:

- `src` (Source): Specifies the URL of the audio file.[2] This can be used directly on the `<audio>` tag if you only have one audio source. However, using `<source>` elements is generally preferred for better browser compatibility.
- `controls`: Adds default browser audio controls.[3] It's a boolean attribute (just its presence is enough).
- `autoplay`: Starts playing the audio automatically as soon as it's loaded.[4] **Use with caution!** Autoplaying audio can be annoying for users.[5] It's often better to let the user initiate playback.
- `loop`: Repeats the audio when it finishes playing.[6] It's a boolean attribute.
- `muted`: Mutes the audio.[7] It's a boolean attribute.
- `preload`: Specifies how much of the audio should be loaded before playback.[8]
    - `auto`: The browser decides.
    - `metadata`: Only the metadata (information about the audio) is loaded.
    - `none`: The audio is not preloaded.
- `volume`: Sets the audio volume (a number between 0.0 and 1.0).[9]

Using `<source>` Elements (Recommended):

Using `<source>` elements inside the `<audio>` tag allows you to provide multiple audio files in different formats. The browser will choose the first format it supports. This is crucial for cross-browser compatibility.

```
<audio controls>
    <source src="audio.mp3" type="audio/mpeg">
    <source src="audio.ogg" type="audio/ogg; codecs=vorbis">
    <source src="audio.wav" type="audio/wav">
    Your browser does not support the audio element.
</audio>
```

The `<video>` element in HTML is used to embed video content into a web page. It allows users to watch videos directly in their browser without needing external plugins (in most cases).

Basic Structure:

```
<video controls width="640" height="360">
    <source src="video.mp4" type="video/mp4">
    <source src="video.webm" type="video/webm">
    Your browser does not support the video element.
</video>
```

- `<video>`: The container element for the video.
- `<source>`: Specifies the video file and its type. You can include multiple `<source>` elements for different video formats (for browser compatibility).
- `controls`: Adds default browser video controls (play/pause, volume, fullscreen, etc.). This is generally recommended for usability.
- `width` and `height`: Specify the dimensions of the video player.
- The text between the opening and closing `<video>` tags is displayed if the browser doesn't support the `<video>` element.

Key Attributes:

- **`src` (Source):** Specifies the URL of the video file. This can be used directly on the `<video>` tag if you only have one video source. However, using `<source>` elements is generally preferred for better browser compatibility.
- **`controls`:** Adds default browser video controls. It's a boolean attribute (just its presence is enough).
- **`autoplay`:** Starts playing the video automatically as soon as it's loaded. **Use with caution!** Autoplaying video can be annoying for users. It's often better to let the user initiate playback.
- **`loop`:** Repeats the video when it finishes playing. It's a boolean attribute.
- **`muted`:** Mutes the video. It's a boolean attribute.
- **`poster`:** Specifies an image to display while the video is loading or before the user starts playback.
- **`preload`:** Specifies how much of the video should be loaded before playback.
    - `auto`: The browser decides.
    - `metadata`: Only the metadata (information about the video) is loaded.
    - `none`: The video is not preloaded.
- **`width` and `height`:** Specify the dimensions of the video player in pixels. It's generally recommended to control dimensions with CSS for responsiveness.

Using `<source>` Elements (Recommended):

Using `<source>` elements inside the `<video>` tag allows you to provide multiple video files in different formats. The browser will choose the first format it supports. This is crucial for cross-browser compatibility.

```html
<video controls width="640" height="360" poster="video_poster.jpg">
    <source src="video.mp4" type="video/mp4">
    <source src="video.webm" type="video/webm">
    <source src="video.ogv" type="video/ogg">
    Your browser does not support the video element.
</video>
```