HTML Multi Media : By Gagan Baghel

⇒ Images , Links : we already Done with these Stuff.

1. Audio in HTML

The `<audio>` element allows us to embed and play sound files like **music, podcasts, sound effects, and voice recordings** directly in a web page.

1.1 Basic Syntax

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

✅ Explanation:

- `<audio controls>` : Adds play, pause, and volume controls.

- `<source>` : Provides different formats for browser compatibility.

- **Fallback text**: Shown when the browser does not support `<audio>` .

1.2 Supported Audio Formats

Different browsers support different formats, so it's best to include multiple formats.

Format	File Extension	Browser Support
MP3	`.mp3`	✅ Chrome, Firefox, Safari, Edge
OGG	`.ogg`	✅ Firefox, Chrome, Edge

WAV	.wav	✅ Most browsers, but larger file size

1.3 Audio Attributes

Attribute	Description
controls	Adds built-in audio player controls.
autoplay	Starts playing automatically (must be muted for modern browsers).
loop	Repeats the audio once it finishes.
muted	Starts the audio in a muted state.
preload	Determines when audio should be loaded (auto , metadata , none).

Example with Autoplay, Loop, and Muted

```html
<audio autoplay loop muted>
  <source src="background-music.mp3" type="audio/mpeg">
</audio>
```

✅ **Use case**: Background music for a game or a website.

1.4 Preloading Audio (preload Attribute)

Value	Description
auto	Loads the entire audio file before playing.
metadata	Loads only metadata (duration, size, etc.).
none	Does not preload (best for performance).

Example: Preloading Metadata

```html
<audio preload="metadata">
  <source src="song.mp3" type="audio/mpeg">
</audio>
```

✅ **Use case**: Saves bandwidth by loading only essential data.

2. Video in HTML

The `<video>` element allows embedding **videos** directly into a webpage without needing third-party plugins.

2.1 Basic Syntax

```
<video controls width="600">
  <source src="video.mp4" type="video/mp4">
  <source src="video.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>
```

✅ **Explanation**:

- `<video controls>` : Adds **play, pause, volume, and fullscreen** controls.

- `<source>` : Includes **multiple formats** for browser compatibility.

- **Fallback text**: Displays when the browser does not support `<video>` .

2.2 Supported Video Formats

Different browsers support different formats, so providing multiple formats ensures maximum compatibility.

Format	File Extension	Browser Support
MP4	.mp4	✅ Chrome, Firefox, Safari, Edge
OGG	.ogg	✅ Firefox, Chrome
WebM	.webm	✅ Chrome, Firefox, Edge

2.3 Video Attributes

Attribute	Description
controls	Displays play, pause, volume, and fullscreen options.
autoplay	Starts playing automatically (muted by default).
loop	Restarts the video after it finishes.
muted	Starts video with no sound.
poster	Specifies an image to display before the video loads.

Example: Video with Poster and Autoplay

```html
<video controls autoplay loop muted poster="thumbnail.jpg" width="600">
  <source src="video.mp4" type="video/mp4">
</video>
```

✅ **Use case**: Auto-playing background videos on a landing page.

2.4 Embedding Videos (YouTube & Vimeo)

Instead of hosting large video files, you can **embed YouTube or Vimeo** videos.

Example: Embedding YouTube Video

```
-------- 1st way ------------
⇒ write down the following syntax manually.

<iframe width="560" height="315"
  src="https://www.youtube.com/embed/VIDEO_ID"
  frameborder="0" allowfullscreen>
</iframe>


------- 2nd way ---------------
1. open youtube & play any video
2. click on share icon
3. click on first option embed.
```

4. copy the code, available on right side.
5. paste in your html file as it is.

```html
<iframe width="560" height="315" src="https://www.youtube.com/embed/ZGNBOzKrc1U?si=rynBGFZ5w-LoSwZc" title="YouTube video player" frameborder="0" allow="accelerometer; autoplay; clipboard-write; encrypted-media; gyroscope; picture-in-picture; web-share" referrerpolicy="strict-origin-when-cross-origin" allowfullscreen></iframe>
```

✅ **Benefits**:

- Faster loading (YouTube handles video compression).

- Saves **server bandwidth**.

- Supports **automatic subtitles**.

Additional Extra Topics :

1. Add QR Code

```
! add the qr code in the web page
not only add as a image
? we have a qr but we can scan it
we add the functionality that
if u scan that QR, it behave's like a
real qr code and u can redirect
the user anywhere
* for example :
u have a phone pe qr → scan this
he will redirect to the phone pe app  ⇒ payment
agree or not ??
```

```
→
<img
  src=" https://api.qrserver.com/v1/create-qr-code/?size=150×150&data=htt
ps://www.instagram.com"
  alt=""
/>
```

2. Add Google Map

how we can add the google map in the web page ??

```
<!-- 1st way  →
 <iframe src="https://www.google.com/maps/embed?pb=!1m18!1m12!1m3!1
d448196.52629668376!2d76.76357783356833!3d28.643684634738104!2m
3!1f0!2f0!3f0!3m2!1i1024!2i768!4f13.1!3m3!1m2!1s0x390cfd5b347eb62d%3A0
x37205b715389640!2sDelhi!5e0!3m2!1sen!2sin!4v1731686907239!5m2!1sen!
2sin" width="600" height="450" style="border:0;" allowfullscreen="" loading
="lazy" referrerpolicy="no-referrer-when-downgrade"></iframe>

 <!-- 2nd way  →
<a href="https://maps.app.goo.gl/SbRnwf3Apknpw21×7">
   Open the delhi google map
</a>
```