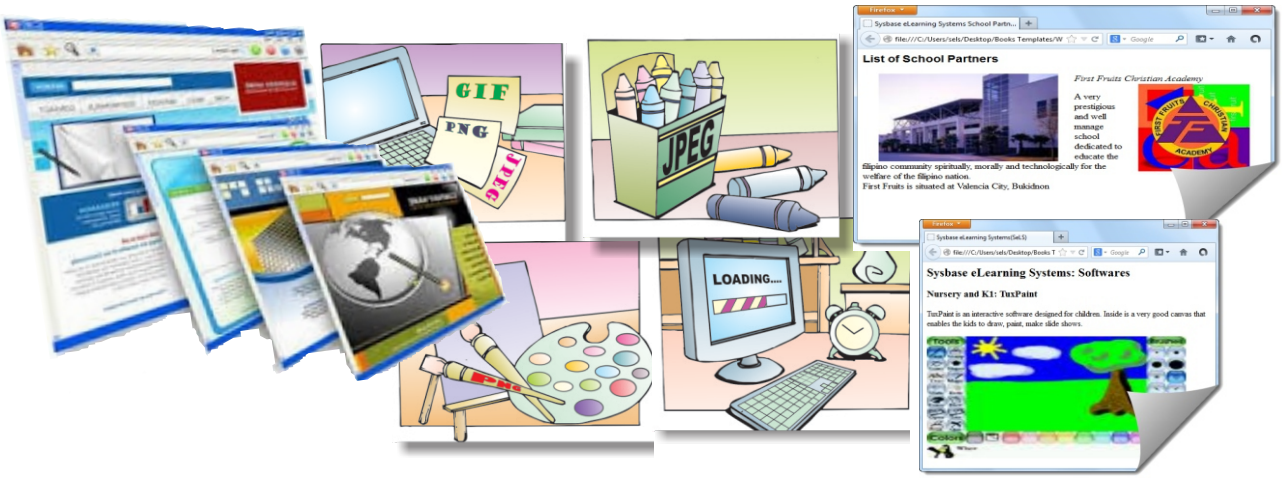
Chapter 12

One of the things that has made the Web so popular is that you can add graphics, sound, animations, and movies to your Web pages. This chapter will introduce you the world of multimedia and to integrated them to your pages.



Audio, Video and other Multimedia Elements

Learning Objectives

After completing this lesson, you should be able to:

- identify the different multimedia elements;
- link to audio and video files in HTML;
- configure your audio and video files using HTML codes;
- add a Google Search box to your page; and
- create an Image map.

Multimedia

Lesson 1

Do you want to add multimedia and other extra touches to your Web pages? This lesson shows you how to use HTML to integrate audio, video, Java, and more to enliven your pages and attract visitors.

Multimedia Elements

The term multimedia encompasses all kinds of dynamic visual and audio data, including graphics, sound, animation, and movies. You can incorporate multimedia elements into your own HTML pages, but first it is useful to understand how such elements work on the Web.

Ways to Use Multimedia

You can use media files in a variety of ways on your Web page. Media can create an ambiance for the site, enhance your site's message, illustrate a product or service, or simply entertain. When choosing a media file and format to add to your page, always consider the main target audience for your pages. Be sure to include information about the multimedia elements on your page in case the user needs to install special programs or plug-ins to view them.

Plug-Ins and Players

Plug-ins

Plug-ins are specialized applications that work with the browser to play media files, typically focusing on a particular file format. If users do not have the right plug-in to play your file, they can easily download it, install it, and use it as part of their Web browser. First introduced by Netscape, plug-ins are now popular among all the browsers. For example, you can install a Flash Player plug-in to allow your browser to play Flash multimedia files.

Video and Audio File Formats

There are a number of different video and audio file formats, or codecs, that are supported by HTML5. There are three main video and five main audio codecs that u can use, along with the browsers that supports them:

- WebM uses the .webm file extension and is supported by Firefox 4+, Chrome 6+, Opera 11+, Internet Explorer 9+, and Android 2.3+.
- Ogg Theora uses either the .ogg or .ogv file extension and is supported by Firefox 3.5+, Chrome 5+, and Opera 10.5+.
- MP4 (H.264) uses the .mp4 or .m4v file extension and is supported by Safari 3+, Chrome 5-?, Internet Explorer 9+, iOS, and Android 2+.
- audio MP3 uses the .mp3 file extension and is supported by Safari 5+, Chrome 6+, Internet Explorer 9+, and iOS.
- audio WAV uses the .wav file extension and is upported by Firefox 3.6+, Safari 5+, Chrome 8+, and Opera 10.5+.
- audio AAC uses the .aac file extension and is supported by Safari 3+, Internet Explorer 9+, iOS 3+, and Android 2+.

Embedded Files

You can integrate a multimedia file directly onto your page by embedding the file. When the user accesses the page, the file plays as part of the page content.

Streaming Media

With streaming media, the user can immediately start viewing or hearing the file as the rest of it continues to download. The data starts downloading into a buffer and then the media player begins playing the file.

Media Players

Media players are separate programs designed to handle many types of media files. Often called all-in-one players, media players can work both separately and alongside browsers to play multimedia files encountered on and off the Web. Popular media players include Microsoft's Windows Media Player, Apple's QuickTime player, and RealNetworks' RealPlayer. Users can download copies of these popular media players from the Internet. You can help your users by providing links to download locations.

Inserting Multimedia

Lesson 2

Do you want to add multimedia and other extra touches to your Web pages? This topic shows you how to use HTML to integrate audio and video to enliven your pages and attract visitors.

Multimedia Elements

The term multimedia encompasses all kinds of dynamic visual and audio data, including graphics, sound, animation, and movies. You can incorporate multimedia elements into your own HTML pages, but first it is useful to understand how such elements work on the Web.

Ways to Use Multimedia

You can use media files in a variety of ways on your Web page. Media can create an ambiance for the site, enhance your site's message, illustrate a product or service, or simply entertain. When choosing a media file and format to add to your page, always consider the main target audience for your pages. Be sure to include information about the multimedia elements on your page in case the user needs to install special programs or plug-ins to view them.

Plug-Ins and Players

Plug-ins

Plug-ins are specialized applications that work with the browser to play media files, typically focusing on a particular file format. If users do not have the right plug-in to play your file, they can easily download it, install it, and use it as part of their Web browser. First introduced by Netscape, plug-ins are now popular among all the browsers. For example, you can install a Flash Player plug-in to allow your browser to play Flash multimedia files.

Embedded Files

You can integrate a multimedia file directly onto your page by embedding the file. When the user accesses the page, the file plays as part of the page content. For example, you might embed a video file to play in an area on the Web page. Depending on the file type and setup, the file may play immediately when the user displays the page or when the user activates a button or other feature on the page.

Streaming Media

With streaming media, the user can immediately start viewing or hearing the file as the rest of it continues to download. The data starts downloading into a buffer and then the media player begins playing the file. Adding streaming media to your page is similar to linking or embedding a file, but instead of referencing the actual file, you define a metafile that contains information about the target file's location.

Media Players

Media players are separate programs designed to handle many types of media files. Often called all-in-one players, media players can work both separately and alongside browsers to play multimedia files encountered on and off the Web. Popular media players include Microsoft's Windows Media Player, Apple's QuickTime player, and RealNetworks' RealPlayer. Users can download copies of these popular media players from the Internet. You can help your users by providing links to download locations.

Finding Media Players

PLAYER	WEBSITE
Windows Media Player	www.microsoft.com/downloads
Quick Time	www.apple.com/quicktime
Flash Player	www.adobe.com/flashplayer
Adobe Reader	www.adobe.com/adobereader/download
RealPlayer	www.real.com

Linking to Audio and Video Files

Lesson 3

You can insert links on your Web page that, when clicked, download and play an audio or video file. When you link to a file, the file may open within the Web browser or in a separate application window, depending on the configuration of your computer. Linking is the least complicated way to deliver multimedia files to your Web page visitors.

To link audio or video file to your webpage, use the tag below :

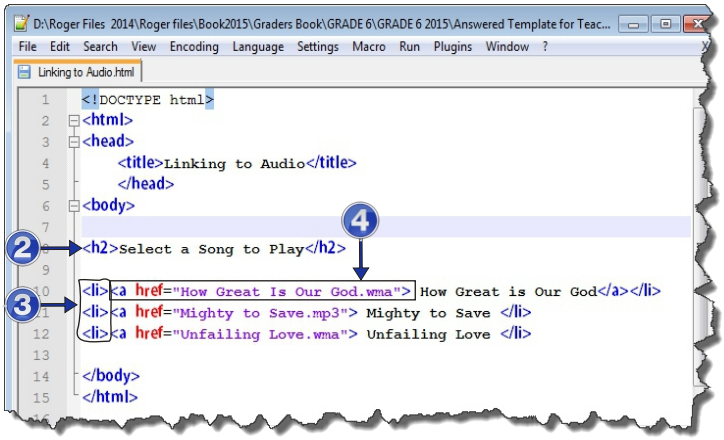
<A HREF="location and audio filename"></A>

Add A Link Audio Files

1. Lunch the Notepad++.
2. Create a song playlist with "Select a Song to Play" header.
3. Display the following songs in a list using <li> attribute.
4. For the first song, type <A HREF="HowGreatisourGod.wma"> How Great </A>
5. For the second song, type <A HREF = "Mightytosave.mp3"> Mighty to Save </A>
6. For the third song, type <A HREF = "UnfailingLove.wma"> Unfailing Love </A>
7. Save your document.

When publishing your HTML page to a Web server, make sure you upload the audio or video file along with the HTML document.

HTML Code



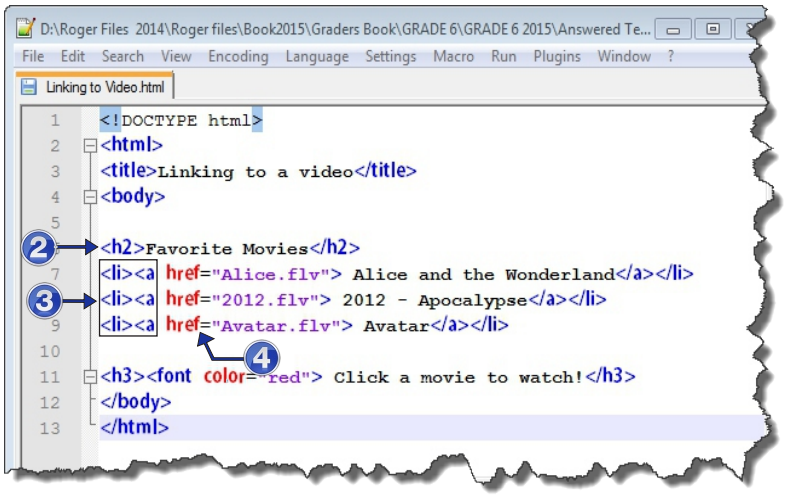
Output

Add A Link Video Files

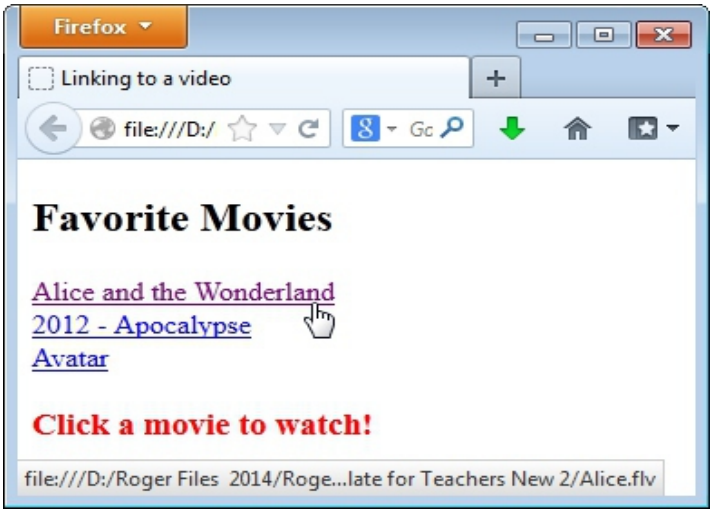
1. Lunch the Notepad++.
2. Create a list of your Favorite movies with "Favorite Movies" header.
3. Display the following songs in a list using <li> attribute.
4. For the first movie, type <A HREF = "Alice .flv"> Alice in the Wonderland </A>

   For the second movie, type <A HREF = "2012.flv"> 2012-
5. Apocalypse </A>
6. For the third movie, type <A HREF = "Avatar.flv"> The Avatar </A>
7. Save your document.

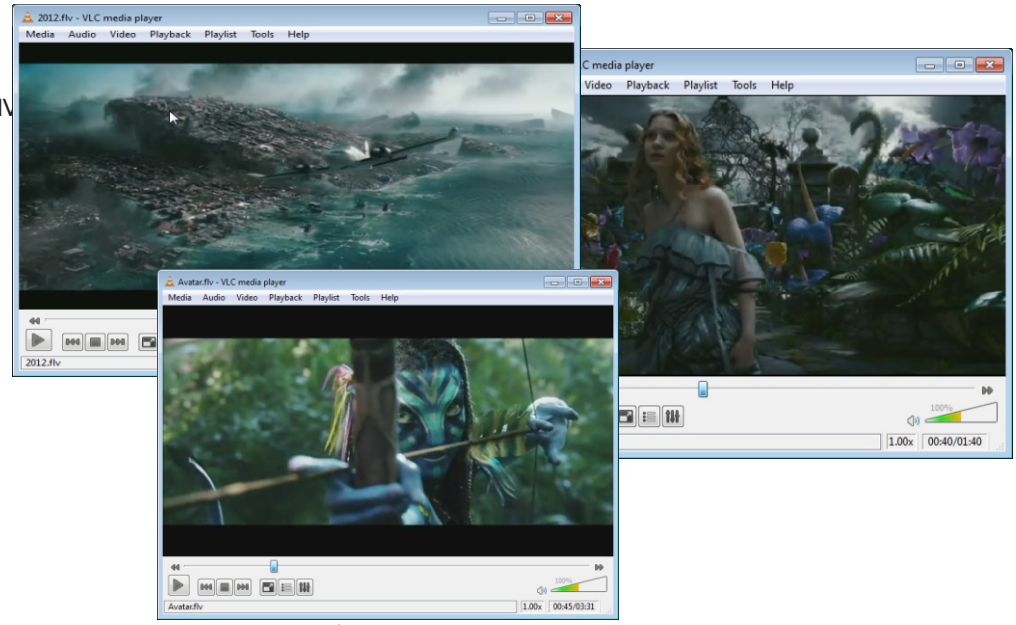
HTML Code



Output



Multimedia files also hav their own formats with different extensions like: .swf, .wav, .mp3,.mov and .mp4.



Embedding a Video File

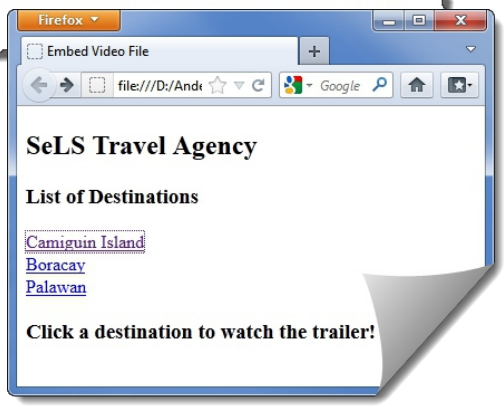
You can use the <EMBED> tag to add an embedded video clip to your HTML page. Embedded videos play directly on your page. Playback controls also appear on the page, allowing the user to start and stop the video.

You can control the size of the window in which an embedded video file appears.+

HTML Code

```
<!DOCTYPE html>
<html>
 <title>Embed Video File</title>
 <body>
<h2>SeLS Travel Agency</h2>
<h3>List of Destinations</h3>
<li><a href="Camiguin.html">Camiguin Island</a></li>
<li><a href="Boracay.html">Boracay</a></li>
<li><a href="Palawan.html">Palawan</a></li>
 <h3>Click a destination to watch the trailer!</h3>
 </body>
</html>
```

Output



To embed a video file to your webpage you have to use this tag below :

<video SRC="location and video filename" autoplay="autoplay" />

If you want the video to play immediately when the page loads, type **AUTOSTART="true"** in the EMBED tag.

If you want the video to play continuously, type **LOOP="true"** in the EMBED tag.

When you open the HTML document, the Web browser displays the embedded video window and playback controls on the page.

The embedded controls enable you to play, pause, stop, rewind, and fast-forward the video.

HTML Code

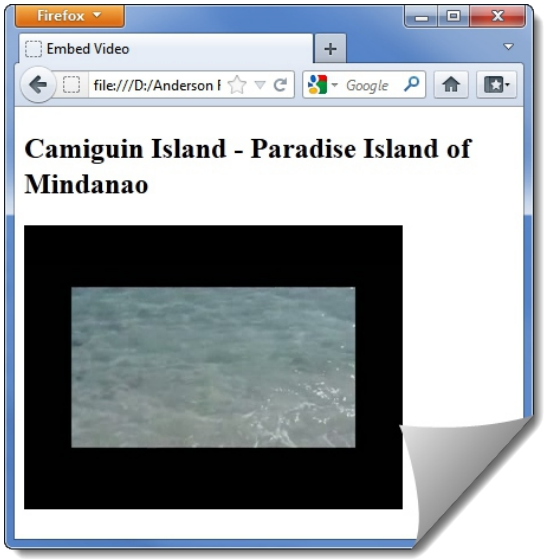
```
<!DOCTYPE HTML>
<html>
 <title>Embed Video</title>
 <body>

  <h2>Camiguin Island - Paradise Island of Mindanao</h2>

<video SRC="camiguin.ogv"
       autoplay="autoplay" />

 </body>
</html>
```

Output



Embedding an Audio File

You can add an embedded sound to your HTML page using the <EMBED> tag. You can surround the <EMBED> tag with <OBJECT> tags to make your code compatible with more Web browsers.

You can adjust the space in which the sound controls appear in the page.

To embed an audio file, you need to use the tag below:

<OBJECT HEIGHT="250" WIDTH="300" DATA="Unfailing Love.ogg" ></OBJECT>

You can perform a Web search to find the class IDs for other popular plug-ins.

HTML Code

```
<!DOCTYPE HTML>
<html>
 <title>Embed an Audio File</title>
 <body>
<h2>SeLS Travel Agency</h2>
<h3>Testimonials per Desination</h3>
<li><a href="Cam_Testimonies.html">Camiguin Testimonies</a></li>
<li><a href="Bor_Testimonies.html">Boracay Testimonies</a></li>
<li><a href="Pal_Testimonies.html">Palawan Testimonies</a></li>
 <h3>Select then click a destination to listen!</h3>
 </body>
</html>
```

Output

Embed an Audio File

SeLS Travel Agency

Testimonials per Desination

- Camiguin Testimonies
- Boracay Testimonies
- Palawan Testimonies

Select then click a destination to listen!

HTML CODE

```
<!DOCTYPE HTML>
<html>
 <title>Embed Audio</title>
 <body>

  <h2>Camiguin Island - Paradise Island of Mindanao</h2>
  <h4>Compiled Testimonies of Camiguin Trips</h4>

<OBJECT HEIGHT="250" WIDTH="300" DATA="Unfailing Love.ogg" ></OBJECT>

 </body>
</html>
```

Output

Embed Audio

Camiguin Island - Paradise Island of Mindanao

Compiled Testimonies of Camiguin Trips

Embedding a Flash Movie File

You can add a Flash animation to your Web page. Using an ActiveX control number along with the OBJECT element, you can instruct the browser to load and play the Flash file.

To embed a flash animation file, you need to use the tag below:

<OBJECT HEIGHT="200" WIDTH="400" DATA="FlyWithUs.swf"></OBJECT>

HTML Code

```
<!DOCTYPE HTML>
<html>
 <title>Embed Flash Animation</title>
 <body>
<center>
  <h2>SeLS Travel Agency</h2>
<OBJECT HEIGHT="200" WIDTH="400" DATA="FlyWithUs.swf"></OBJECT>
  <h4>Fly with Us with Pleasure!</h4>
 </center>
 </body>
</html>
```

Output

Embed Flash Animation

SeLS Travel Agency

Fly with Us with Pleasure!

Embedding a Video Clip from Youtube

You can embed a video that is stored on a hosting service such as YouTube by inserting HTML into your Web page. The video appears on the page the same way as a video that is stored locally with your HTML files.

To host images at YouTube, you can sign up for a free account at www.youtube.com and use the service's uploading tool.

To embed an audio file, you need to use the tag below:

<iframe width="560" height="315" src="http://www.youtube.com/embed/mhQaHTer1dg" frameborder="0" allowfullscreen></iframe>

where width and height values for the desired screen size and the "**http://www.youtube.com/embed/mhQaHTer1dg**" is the processed link from Youtube.

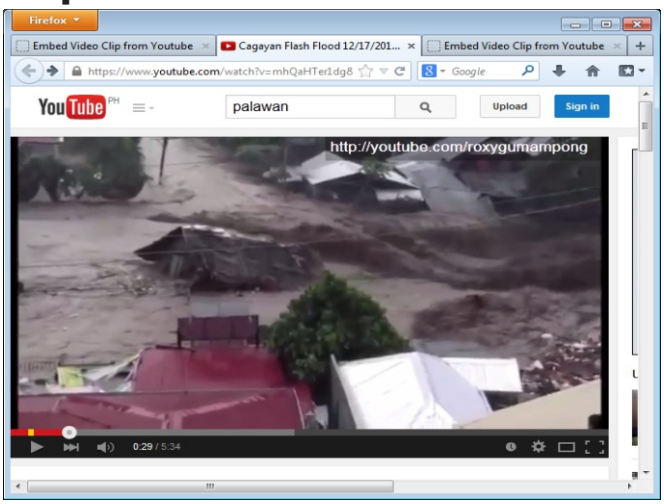
HTML Code

```
<!DOCTYPE HTML>
<html>
 <title>Embed Video Clip from Youtube</title>
 <body>
  <h2>SeLS Travel Agency</h2>
  <h3>Breaking News! Cagayan de Oro Flash Flood</h2>

<iframe width="560" height="315"
src="http://www.youtube.com/embed/mhQaHTer1dg"
frameborder="0" allowfullscreen></iframe>

  <h4>Save CDO Now!</h4>
  </body>
</html>
```

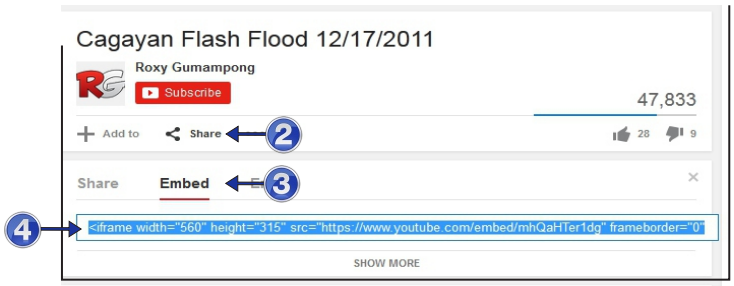
Output

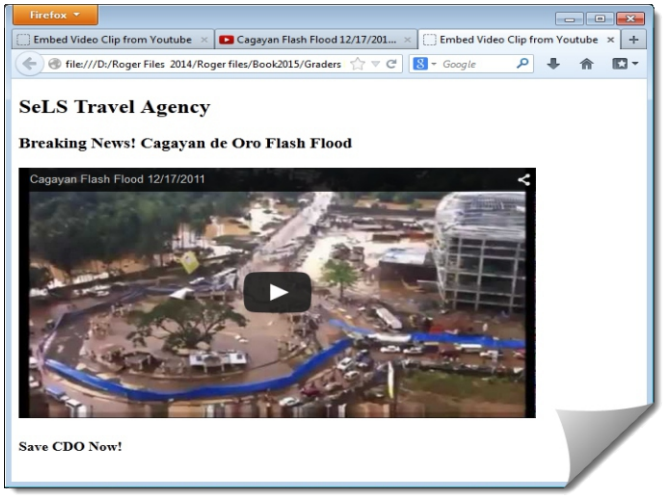


Get Exact URL Link

Below are the steps on how to get the exact link of a certain youtube video that you would like to embed in your webpage.

1. Go to Youtube.com page and look for your video that you would like to embed in your webpage.
2. Click Share,
3. Click Embed.
4. Copy the link below and paste it to your html file.





Adding a Google Search Box to your Web page

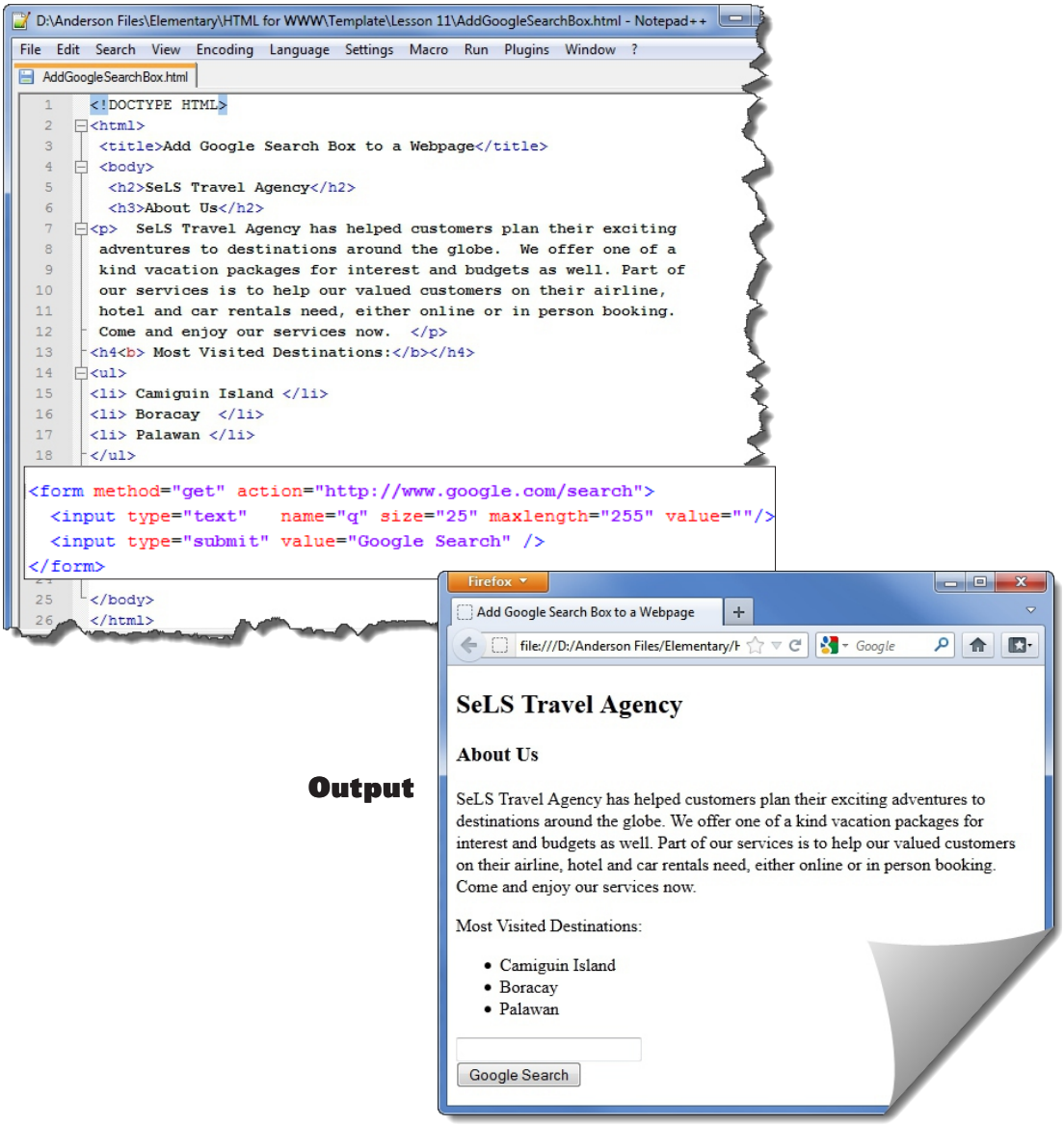
Lesson 4

You can make it easy for your visitors to perform searches from your Web page by adding a Google search box. When a user types keywords into the box and clicks a Submit button, a Google results page appears. You can customize the search box to display results from your Web site only.

1. To embed an audio file, you need to use the tag below:

```
<form method="get" action="http://www.google.com/search">
        <input type="text"   name="q" size="25" maxlength="255" value=""/><br/>
        <input type="submit" value="Google Search" />
</form>
```

HTML Code



Output

Creating Image Map

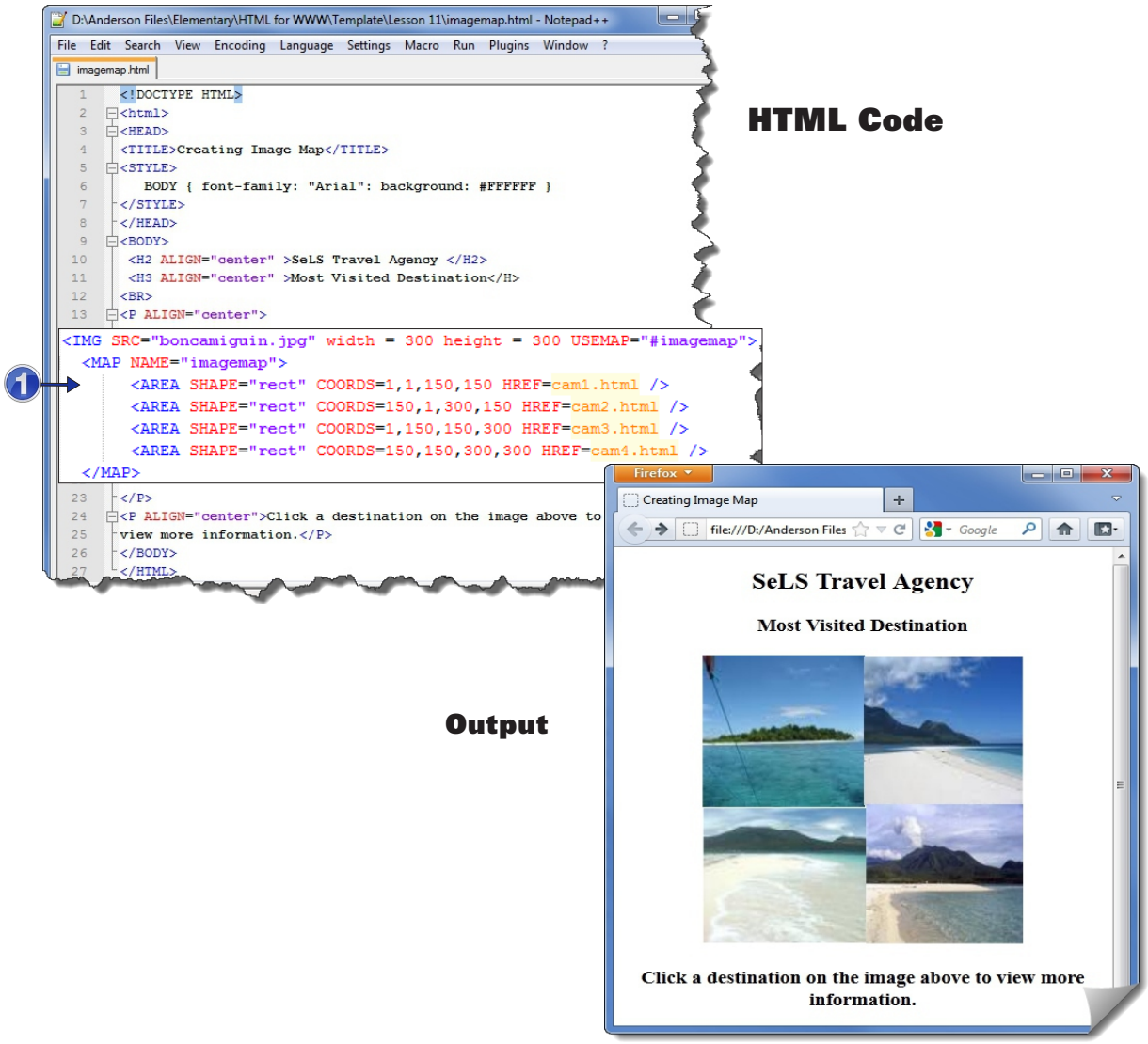
You can create an image map that links users to different pages based on where they click on the image. For example, you might use an image map as a navigational tool for your Web site. The key to creating a good image map is finding an image with distinct areas to click.

You can define each clickable area on the map using three shape values: rect (for rectangle), circle (for circle), and poly (for polygon, or an irregular shape), also specify each region's area screen coordinates.

1 To embed a video file, you need to use the tag below:

```
<IMG SRC="boncamiguin.jpg" width = 300 height = 300USEMAP="#imagemap">

<MAP NAME="imagemap">
        <AREA SHAPE="rect" COORDS=1,1,150,150 HREF=cam1.html />
        <AREA SHAPE="rect" COORDS=150,1,300,150 HREF=cam2.html />
        <AREA SHAPE="rect" COORDS=1,150,150,300 HREF=cam3.html />
        <AREA SHAPE="rect" COORDS=150,150,300,300 HREF=cam3.html />
</MAP>
```



Adding a Single Video to Your Web Page

In order to add a video to your Web page in HTML5, you need to use the new video element. Doing so couldn't be simpler

To add a single video to your Web page:

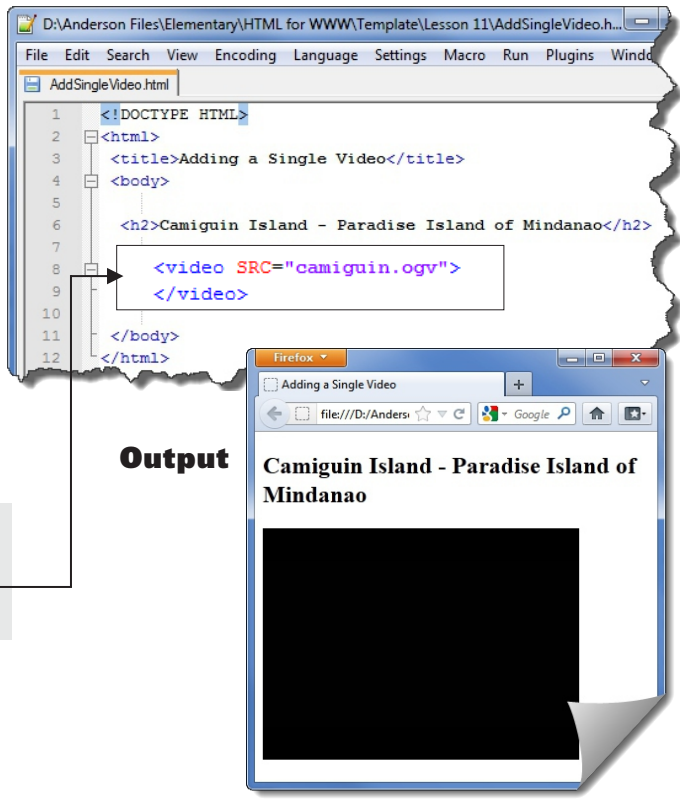
1. Obtain your video resource.
2. Type **<video src=**"myVideo.ext"**> </video>**, where *myVideo.ext* is the location, name, and extension of the video file.

And that's it!

```
<video src="camiguin.ogv">

</video>
```

HTML Code



Output

Exploring Video and its Attributes

What other attributes can you use with the video element? As you can see below, there are quite a number of attributes, which gives you a lot of flexibility with your video.

Video Attributes:

Attributes	Desription
▪SRC	Specifies the URL to the video file.
▪autoplay	Automatically starts playing the video as soon as it can
▪controls	Adds the browser's default control set to the video.
▪muted	Mutes the video's audio (not currently supported by any browser).
▪loop	Plays the video in a loop.
▪poster	Specifies an image file to display (instead of the first frame of the video) when it loads. Takes a URL to the required image file.
▪width	The width of the video in pixels.
▪height	The height of the video in pixels.
▪preload	Hints to the browser how much of the video it is to load. It can take three different values: **none** doesn't load anything. **metadata** loads only the video's metadata (e.g., length and dimensions). **auto** lets the browser decide what to do (this is the default setting).

Adding a Single Audio File to Your Web Page

Let's move on to actually placing an audio file in your Web page. The process is very similar to adding a video, but this time you'll use the audio element.

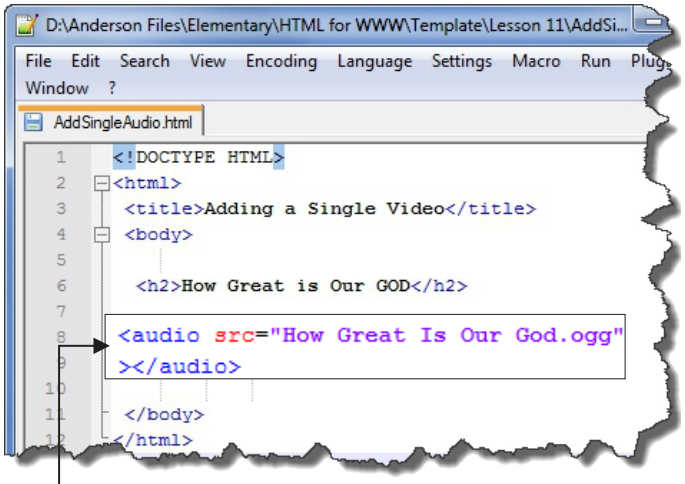
To add a single audio file to your Web page:

1. Obtain your video resource.
2. Type **<audio src**="myAudio.ext"> **</audio>**, where *myAudio.ext* is the location, name, and extension of the audio file.

And that's it!

```
<audio  src="How Great Is Our God.ogg" >
                    </audio>
```

HTML Code



Output

Exploring Audio Attributes

As with the video element, there are a number of attributes that you can use with the audio element.

Audio Attributes:

Attributes	Desription
▪ SRC	Specifies the URL to the audio file.
▪ autoplay	Automatically starts playing the audio as soon as it can.
▪ controls	Adds the browser's default control set to the audio.
▪ muted	Mutes the audio (not currently supported by any browser).
▪ loop	Plays the audio in a loop.
▪ preload	Hints to the browser how much of the audio it is to load. It can take three different values: **none** doesn't load anything. **metadata** loads only the audio's metadata (e.g., length). **auto** lets the browser decide what to do (this is the default setting).

Adding Controls and Autoplay to Your Video

So far, I've shown you the simplest possible method for adding video to your Web page, and the video in that example will not even start playing, because we haven't told it to. The short code sample in "Adding a Single Video to Your Web Page" won't add any controls to the video, but you can do so easily enough.

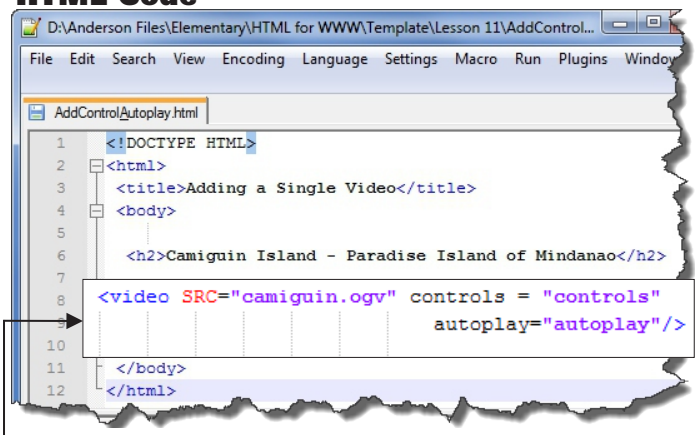
The **controls** & **autoplay** attributes informs the browser to add a set of default control to the video. browser to add a set of default controls to the video. This is how the code act.

To add controls & autoplay to a video:

1. Obtain your video resource.
2. Type **<video src**="myVideo.ext"
3. type **controls** = "controls",
4. Type **autoplay** = "autoplay"; where *autoplay* makes the video automatically play when its load or open.
5. Type the final/>.

```
<video src="camiguin.ogv"
        controls = "controls"
        autoplay="autoplay"     />
```

HTML Code



Output (for controls)

Output (for autoplay)

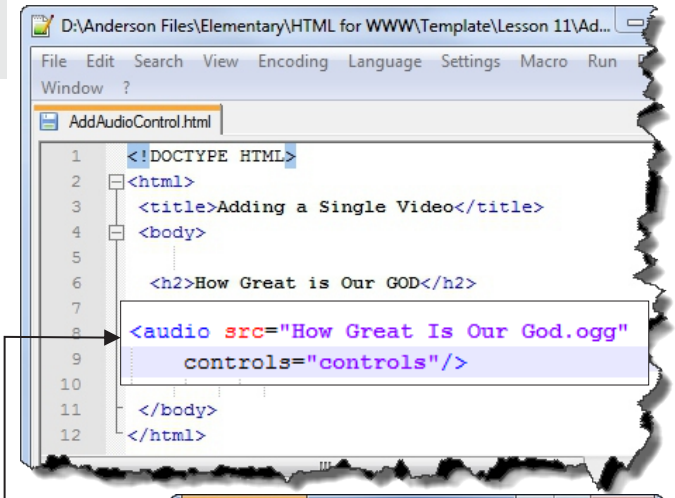
Adding a Single Audio File with Controls to Your Web Page

As the preceding example showed, it's quite easy to add a single audio file to your Web page. But this doesn't actually display anything, since an audio file is not visual, so you need to add some controls by using the controls attribute.

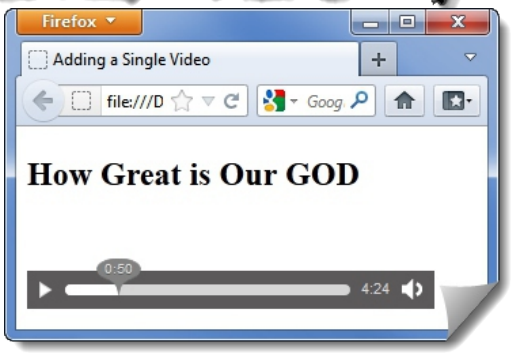
To add a single audio file with controls to your Web page:

1. Obtain your video resource.
2. Type **<audio src**="How Great is Our God.ogg" **controls**="controls".
3. Type to finish/>.

HTML Code



Output



Looping a Video and Specifying a Poster Image

As well as setting your video to play automatically, you can also set it to play continuously until stopped.(This isn't recommended, though think of your poor users!)

Note: however, that the loop attribute is not supported by Firefox.But you can open it in a Google Chrome browser instead.

Normally, the browser will display the first frame of the video on loading. You may want to change this and specify your own image, which you can do via a poster image.

To add controls & autoplay to a video:

1. Obtain your video resource.
2. Type **<video src**="camiguin.ogv" **loop**="loop" **controls**="controls"
3. **poster**="camiguin.jpg"
4. Type to finish/>.

HTML Code

```
<!DOCTYPE HTML>
<html>
 <title>Adding a Single Video</title>
 <body>

  <h2>Camiguin Island - Paradise Island of Mindanao</h2>

<video SRC="camiguin.ogv" controls = "controls"
loop ="loop"
poster="camiguin.jpg"/>

 </body>
</html>
```

Output

Adding Autoplay to Audio in a Loop

Using the **autoplay** attributes, and specify that the audio file is to start playing on load is quite simple. You can also indicate that you want the audio to play in a loop by using the **loop** attribute.

Note: loop attribute doesn't supported by Firefox. But you can open it in a Google Chrome browser instead.

To add autoplay and make the audio play automatically and loop:

1. Obtain your video resource.
2. Type <audio src="How Great is Our God.ogg" controls= "controls"
3. Type **autoplay**="autoplay"
4. Type **loop**="loop"
5. Type to finish/>.

HTML Code

```
<!DOCTYPE HTML>
<html>
 <title>Adding a Single Video</title>
 <body>

  <h2>How Great is Our GOD</h2>

<audio src="How Great Is Our God.ogg"
    controls="controls" autoplay="autoplay"
    loop="loop"     />

 </body>
</html>
```

HTML Code

Chapter 12: Audio, Video and other Multimedia Elements Part 2 HTML

One of the things that has made the Web so popular is that you can add graphics, sound, animations, and movies to your Web pages. This chapter will introduce you the world of multimedia and to integrated them to your pages.

Objectives

After completion of all the computer laboratory activities in this chapter, the student will be able to integrate audio, video and other multimedia element on the web page.

Score

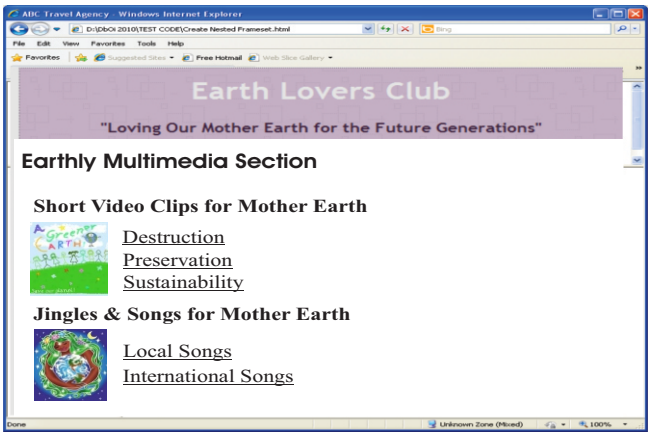
Lab 12.1 Earthly Section

Estimated Completion time: 45-55 Minutes

Directions:

1. Open the Web page **Mother Earth.html**.
2. Complete the page by inserting Images and creating links for all audio and video clips. Work files are located in the work files folder.
3. Apply the links for audio and video clips as shown.
4. Your output should look like the one on your right.
5. Save the document as **EarthlySection.html** and preview it in your browser.

Preview:

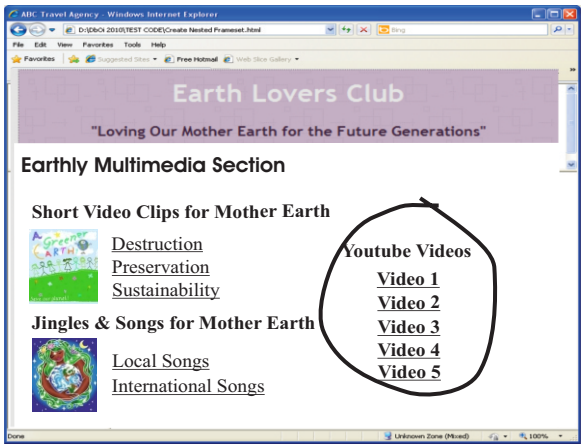


Score

Lab 12.2 U-tube for the Earth

Estimated Completion time: 40-50 Minutes

Directions:

1. Launch **Notepad ++**.
2. Open your previous HTML document **EarthlySection.html**.
3. Add at least 5 links from Youtube videos, link colors should be in green.
4. Save the HTML document as **U-tubeEarth.html**.

Preview: