

COMSC-030

Web Site Development- Part 1



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Chapter 12

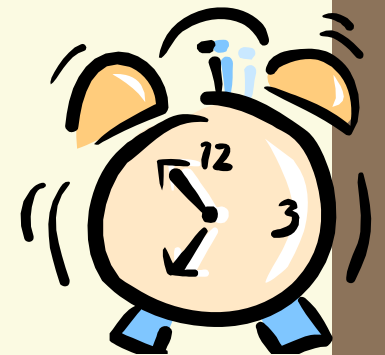
12

Adding Sounds and Videos

You can make your Web pages more exciting by adding multimedia elements. This chapter shows you how to add sound and video files to your HTML pages.

Chapter 12 Topics: Adding Sounds and Videos

- Understanding Multimedia Elements
- Understanding Plug-ins and Players
- Link to Audio or Video Files
- Embed an Audio File
- Embed a Video File
- Embed a Flash Movie
- Set Up Background Audio



Understanding Multimedia Elements

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- The term **multimedia** encompasses all kinds of dynamic visual and audio data on the Internet and computers in general.
- Graphic **sounds**, **animation**, and **movies** are all examples of multimedia elements.
- You can incorporate your own multimedia elements on your HTML pages.
- Before attempting to add your own multimedia elements, first make sure you **understand how such elements** work among Web pages, as well as how such elements will affect the person viewing the page.

Ways to Use Multimedia

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- You can use **media files** in a variety of ways on your Web page.
- Media can create an ambience 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 target audience**.
- Be sure to include information about the multimedia elements on your page in case the user wants to turn them off or is unable to view to play them.

Delivering Media Files

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- You can deliver multimedia files to the users viewing your pages in several ways.
- You can **link** to an external media file, **embed** the file into your page, or **stream** the file.
- The method you choose depends on the way in which you want the user to interact with the file.
- Regardless of the method, you must specify the location of the file, and include the file on the server in which you publish your Web page.

External Media Files

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- One way to incorporate a multimedia element into your page is to supply **a link to an external media file.**
- For example, you might allow a **visitor to click** a link and download a slide show of your vacation pictures or download a music file of your latest song.
- If the user decides to access the file, the browser helps him or her determine how to conduct the download and where to store the file.

Embedded Files

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- You can integrate a multimedia file directly onto your page by **embedding the file**.
- When the user activates the file, it plays as part of the Web page.
- 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

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- 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, yet instead of referencing the actual file, you define **a meta file** that contains information about the target file's location.

Understanding Plug-ins and Players (pg 186)

- A wide variety of media formats exists on the Internet but in order to actually play these formats, the end user needs to a **plug-in** or **media player**.
- When determining what type of media file you want to include with your page, think about how **your target audience** will interact with the file.
- Do they need a **special plug-in** or player program to play the file? If so, you need to add information on your page about the requirement along with access to the actual media file.

Understanding Plug-ins and Players

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Plug-ins

- Plug-ins are **specialize application** that work along with the browser to play a media file, typically focusing on a particular file format.
- If a user does not have a particular plug-in for the type of file, you offer, they can easily download it, install it and use it as part of their Web browser.

Adobe
Flash
Player

Adobe
Shockwave
Player

Understanding Plug-ins and Players (pg 186)

Media Players

- Media players are separate programs designed to handle numerous 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 Windows Media Player, Real Player and Apple's QuickTime player.**
- Users can download copies of these popular media players from the Internet, or you can provide links to the sites.

Understanding Plug-ins and Players (pg 187)

Dueling HTML Elements

- Establishing standards for Web page development is an ongoing task for the W3C.
- Currently, two popular elements exist for showing multimedia files on Web pages, the **EMBED** and **OBJECT** elements.
- Microsoft added **ActiveX** controls to the **OBJECT element**.
- Today's browser versions support different types degrees of these elements.
- For the widest support, many developers combine the **OBJECT** element with non-standard **EMBED** element.

Understanding Plug-ins and Players (pg 186)

Embed with ActiveX Controls

- Another way you can embed video clips into your pages is using ActiveX **controls** along with the **<OBJECT>** element.
- ActiveX uses a **CLASSID** attribute control number to define which data type the browser loads for playback.
- The **CLASSID attribute** for QuickTime, for example, is different number than that for Windows Media Player.
- Once you define the proper player, you can set the parameters for the clip's playback.

Understanding Plug-ins and Players (pg 187)

Finding Media Players and Plug-Ins

Windows
Media
Player

Apple's
QuickTime

RealPlayer

Adobe
Acrobat
Reader

Adobe
Flash
Player

Adobe
Shockwave
Player

Link to Audio or Video Files

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- You can insert **links** on your Web page that, when clicked, downloaded and play an audio or video file.
- When you link to a file, the file opens to play in a separate window.
- **Linking** is the easiest way to deliver multimedia files to your Web page visitor.
- When publishing your HTML page to a Web server, make sure you **upload** the audio or video file along with the document.

Link to Audio or Video Files

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Link to Audio or Video Files

1. Type the text you want to use as a link.
2. Type **** in front of the link text, replacing the ? with the location and name of the audio or video file to which you want to line.
3. Type **** at the end of the link text.

Link to Audio or Video Files

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Link to Audio or Video Files

http://www.w3schools.com/html/tryit.asp?filename=tryhtml_sound_mp3link

Edit and Click Me »

```
<!DOCTYPE html>
<html>
<body>

<h2>Linking To a Song</h2>

<p><a href="horse.mp3">Click here to play the sound</a></p>

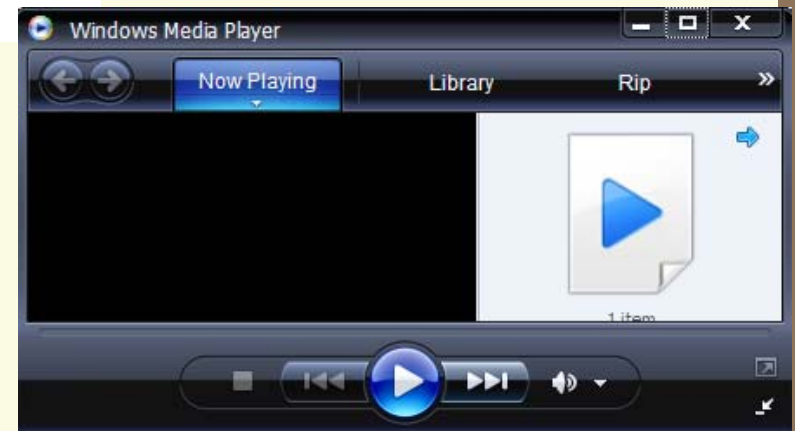
</body>
</html>
```

Your Result:

Linking To a Song

[Click here to play the sound](#)

When the user activates the link, the Web browser attempts to play the audio or video file.



Source: w3schools.com

Link to Audio or Video Files (pg 189)



Does my page need to include information about the file available for downloading?

- It is always **good practice** to give your Web page visitors all the information they need to know in order to download and view any type of multimedia file
- For example, include a brief description of the file, list the file type and size, and provide a link to any plug-ins or media players the user might need in order to play the file.

Link to Audio or Video Files (pg 189)



What happens if the link is broken?

- If users attempt to activate a link to an inactive URL, their Web browser displays an **error message**.
- Always, check your links as part of the Web page maintenance after the page is published.
- Be careful not to move any referenced files or you will need to rewrite the link to the correct file.

Embed an Audio File

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- You can add an embedded sound to your HTML page using the **<EMBED>** tag.
- Embedded sound play directly from your page.
- **Playback control** appear on the page allowing the user to start and stop the sound.
- You can control the size of the sound controls that appear with an embedded sound file.
- For example, you can set the width at 170 pixels and the height as 25 pixels to create easy-to-ready playback controls.

Embed an Audio File

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Embed an Audio File

1. Type **<EMBED SRC="?">** where you want to insert sound controls on the page, replacing the ? with the location and name of the audio file.
2. Within the **<EMBED>** tag, type **WIDTH="?"** and **HEIGHT="?"** replacing ? in both attributes with the width and height values you want to use for the size of the controls

Embed an Audio File

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Embed an Audio File

http://www.w3schools.com/html/tryit.asp?filename=tryhtml_soundmidiembed

```

Edit and Click Me »

<!DOCTYPE html>
<html>
<body>

<embed height="100" width="100" src="horse.mp3"></embed>
<p>If you cannot hear the sound, your computer or browser doesn't support
the sound format.</p>
<p>Or, you have your speakers turned off.</p>

</body>
</html>

```

Your Result:



The embedded sound controls act like regular controls for playing, pausing, and stopping the sound.

If you cannot hear the sound, your computer or browser doesn't support the sound format.

Or, you have your speakers turned off.

Source: [w3schools.com](http://www.w3schools.com)

Embed an Audio File

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- To keep the sound from playing immediately when the page loads, type **AUTOSTART="false"** in the EMBED tag.
- To make the sound play continuously, type **LOOP="true"** in the EMBED tag.

Embed an Audio File

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What audio file formats are common on the Web?

Audio file formats come in several flavors, and some formats are more popular on the Web than others. Here is a list of common audio formats supported by most browsers, plug-ins and media players.

Format	File Extension
MPG3	.mp3
MIDI (Musical Instrumental Digital Interface)	.mid
RealAudio	.rm
WAV	.wav
WMA (Windows Media Audio)	.wma

What audio file formats are common on the Web?



http://www.w3schools.com/html/html_media.asp

Sound Formats

Format	File	Description
MIDI	.mid .midi	<p>The MIDI (Musical Instrument Digital Interface) is a format for electronic music devices like synthesizers and PC sound cards. MIDI files do not contain sound, but digital musical instructions (notes) that can be played by electronics (like your PC's sound card).</p> <p>Click here to play The Beatles.</p> <p>Since MIDI format only contains instructions (notes), MIDI files are extremely small. The example above is only 23K in size but it plays for nearly 5 minutes. MIDI is supported by many software systems over a large range of platforms. MIDI is supported by all the most popular Internet browsers.</p>
RealAudio	.rm .ram	<p>The RealAudio format was developed for the Internet by Real Media. The format also supports video. The format allows streaming of audio (on-line music, Internet radio) with low bandwidths. Because of the low bandwidth priority, quality is often reduced.</p>
Wave	.wav	<p>The Wave (waveform) format is developed by IBM and Microsoft. It is supported by all computers running Windows, and by all the most popular web browsers (except Google Chrome).</p>
WMA	.wma	<p>The WMA format (Windows Media Audio), compares in quality to MP3, and is compatible with most players, except the iPod. WMA files can be delivered as a continuous flow of data, which makes it practical for use in Internet radio or on-line music.</p>
MP3	.mp3 .mpga	<p>MP3 files are actually the sound part of MPEG files. The MPEG format was originally developed for video by the Moving Pictures Experts Group. MP3 is one of the most popular sound formats for music. The encoding system combines good compression (small files) with high quality. Expect future software systems to support it.</p>

Source: w3schools.com

Embed a Video File

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- You can use the **<EMBED>** tag to add an embedded video clip to your HTML page.
- Embedded video player 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 video window that appears with an embedded video file.
- For example, you can set the width at 320 pixels and the height at 240 pixels.

Embed a Video File

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Embed a Video

1. Type **<EMBED SRC="?">** where you want to insert the video window on the page, replacing ? with the location and name of the video file.
2. Within the **<EMBED>** tag, type **WIDTH="?"**
HEIGHT="?", replacing ? in both attributes with the width and height values you want to use for the size of the window.

Embed a Video File

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Embed a Video

http://www.w3schools.com/html/tryit.asp?filename=tryhtml_videoembed

Edit and Click Me »

```
<!DOCTYPE html>
<html>
<body>

<h2>Playing the Object</h2>

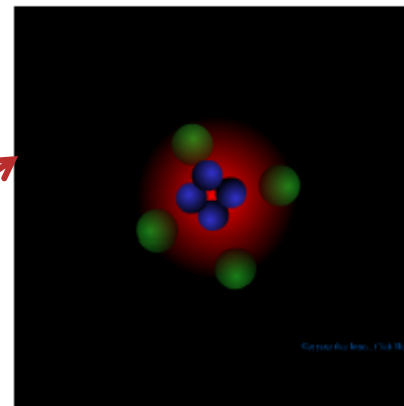
<embed src="intro.swf" width="200" height="200"><p>If you cannot see
this, your computer doesn't support the format</p>

</body>
</html>
```

The Web browser displays the embedded video window and playback controls on the page.

Your Result:

Playing the Object



If you cannot see this, your computer doesn't support the form

Embed a Video File

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Embed a Video

- To make the video play immediately when the page launch loads, type **AUTOSTART="true"** in the EMBED tag.
- To keep the video from playing immediately when the page loads, type **AUTOSTART="false"** in the EMBED tag.
- To make the video play continuously, type **LOOP="true"** in the EMBED tag.

Embed a Video File

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What video file formats are commonly found on the Web?

- Here is a list of **common video formats** supported by many browsers, plug-ins and media players.

Format	File Extension
AVI (Audio/ Video Interleave)	.avi
QT (Apple QuickTime)	.qt
MOV (QuickTime)	.mov
MPG (Motion Picture Experts Group)	.mpg
RV (Real Video)	.rv

What video file formats are commonly found on the Web?



http://www.w3schools.com/html/html_media.asp

Video Formats



The MP4 format is the new and upcoming format for internet video. It is supported by YouTube, Flash players and HTML5.

Format	File	Description
AVI	.avi	The AVI (Audio Video Interleave) format was developed by Microsoft. The AVI format is supported by all computers running Windows, and by all the most popular web browsers. It is a very common format on the Internet, but not always possible to play on non-Windows computers.
WMV	.wmv	The Windows Media format is developed by Microsoft. Windows Media is a common format on the Internet, but Windows Media movies cannot be played on non-Windows computer without an extra (free) component installed. Some later Windows Media movies cannot play at all on non-Windows computers because no player is available
MPEG	.mpg .mpeg	The MPEG (Moving Pictures Expert Group) format is the most popular format on the Internet. It is cross-platform, and supported by all the most popular web browsers.
QuickTime	.mov	The QuickTime format is developed by Apple. QuickTime is a common format on the Internet, but QuickTime movies cannot be played on a Windows computer without an extra (free) component installed.
RealVideo	.rm .ram	The RealVideo format was developed for the Internet by Real Media. The format allows streaming of video (on-line video, Internet TV) with low bandwidths. Because of the low bandwidth priority, quality is often reduced.
Flash	.swf .flv	The Flash (Shockwave) format was developed by Macromedia. The Shockwave format requires an extra component to play. But this component comes preinstalled with web browsers like Firefox and Internet Explorer.
Mpeg-4	.mp4	Mpeg-4 (with H.264 video compression) is the new format for the internet. In fact, YouTube recommends using MP4. YouTube accepts multiple formats, and then converts them all to .flv or .mp4 for distribution. More and more online video publishers are moving to MP4 as the internet sharing format for both Flash players and HTML5.

Source: w3schools.com

Embed a Flash Movie

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- 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 with the necessary information to load and play the **Adobe Flash file..**

Embed a Flash Movie

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Embed a Flash Movie

1. Type `object width="400" height="40"`
`classid="clsid:d27cdb6e-ae6d-11cf-96b8-`
`444553540000"`
2. Type `codebase=`
`"http://fpdownload.macromedia.com/pub/shockw`
`ave/cabs/flash/swflash.cab#version=8,0,0,0">`
3. Type `<param name="SRC" value="bookmark.swf">`
4. Type a closing `</OBJECT>`

Embed a Flash Movie

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Embed a Flash Movie

http://www.w3schools.com/html/tryit.asp?filename=tryhtml_flashobject

Edit and Click Me »

```
<!DOCTYPE html>
<html>
<body>

<object width="400" height="40"
classid="clsid:d27cdb6e-ae6d-11cf-96b8-444553540000"
codebase="http://fpdownload.macromedia.com/pub/shockwave/cabs/flash/swflash.cab#version=8,0,0,0">
<param name="SRC" value="bookmark.swf">
<embed src="bookmark.swf" width="400" height="40"></embed>
</object>

</body>
</html>
```

Your Result:

Don't Forget to Bookmark This

When the user displays your page, the embedded Flash movie plays.

Set Up Background Audio

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- Because the **<BGSOUND>** element is not part of the HTML standard, you may not want to assign this coding unless you know the majority of your Web page audience uses **Internet Explorer** as their browser of choice.
- You can assign audio clip to play in the background while users visit your page.
- Internet Explorer, both Windows and Mac versions, supports a non-standard tag for playing a sound file automatically when a user displays your page.

Set Up Background Audio

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Set Up Background Audio

1. Type **<BGSOUND SRC="?">** on your page replacing the ? with the location and name of the audio file.