

ANNOUNCEMENTS

- ❖ Midterm #2 grades have been posted.

FAVICON

- ❖ Icon that appears next to the websites' URL in the address bar.
- ❖ Example: <http://www.umd.edu/>
- ❖ You also see them when you bookmark a page
- ❖ The icon is represented by a file named favicon.ico
- ❖ In the resources section of the class web page you can find a link to a favicon generator
- ❖ To place the favicon in your page insert the following html tag in the head section of your html file

`<link rel="shortcut icon" href="favicon.ico" />`

- ❖ **Example:** FaviconExample.html

ROUND CORNERS

- ❖ You can achieve round corners by using and setting the background of a div area.
- ❖ You can generate the corners using a image editing software (e.g., Photoshop) or by using some online generators (see Resources section for some links)
- ❖ **Example:** [RoundedCorners/roundCorners.html](#)
- ❖ Currently Mozilla-based browsers support a property for generating rounded corners. This will be part of CSS3.
- ❖ **Example:** [MozillaRoundedCorners/MozillaRoundedCorners.html](#)

MULTIMEDIA

- ❖ Several video file formats. For example:
 - ❖ Macromedia Flash
 - ❖ MPEG (MPEG-4)
 - ❖ QuickTime
 - ❖ Windows Media
 - ❖ Others
- ❖ Each has its advantages and disadvantages
- ❖ Two main approaches to access video, audio, animation:
 - ❖ **File Downloading** (HTTP streaming/HTTP delivery)
 - ❖ **Streaming**

MULTIMEDIA

❖ File Downloading

- ❖ Entire file must be downloaded to your computer before starting to viewing the media (video, audio, animation, etc.). You have to wait before viewing the media
- ❖ This approach is relatively easy and cheap to implement via either
 - ❖ hyperlink to the file. When the user selects the link the appropriate player will start processing the media file
 - ❖ Embedding – media appears in a portion of the web page rather than in a separate application.

❖ Streaming

- ❖ File is sent in a stream and user can start viewing the media almost immediately.
- ❖ Streaming allows for broadcasting of live events (webcasting).
- ❖ Streaming services can be expensive
- ❖ Example:

http://webclust1.liquidcompass.cc/sos4cust/WTOP/audio_player.php?id=WTOP

❖ Progressing Downloading

- ❖ File is downloaded but the user can start viewing the media once a portion of the file has been downloaded

MULTIMEDIA

- ❖ Due to its cost and simplicity file downloading (HTTP Streaming Video) is the option you may frequently use.
- ❖ To deploy HTTP Streaming video
 - ❖ Create a media file
 - ❖ Upload the file to the web server
 - ❖ Make a hyperlink or embed the media in your page
- ❖ In order to embed media we use the html object tag. Each media file (e.g., quicktime, mpeg, etc.) follows a particular configuration illustrated in the following examples:
- ❖ Important: In firefox you must make sure you have the appropriate plugin (<https://addons.mozilla.org/en-US/firefox/browse/type:7>)
- ❖ For our examples, we needed to install the windows media plugin
- ❖ **Example:** EmbeddingAVI.html
- ❖ **Example:** EmbeddingWMV.html
- ❖ **Example:** EmbeddingQuicktimeV1(V2).html
- ❖ **Example:** EmbeddingFlash.html

PLACING YOUR VIDEOS ON THE WEB

- ❖ Transfer the video your computer.
 - ❖ Video software mentioned below can help you in this process (“Capturing Video”).
- ❖ Edit video if necessary. Example of video editing software:
 - ❖ PowerDirector
 - ❖ ShowBiz DVD
 - ❖ Ulead VideoStudio
 - ❖ Nero Ultra Edition
- ❖ Export video in a web-compatible format like Quicktime, Windows Media, etc.
- ❖ Place the video in your web site.

RECURSION

- ❖ A recursive function is one that “calls itself”.
- ❖ One approach to see this process is to visualize that, instead of the function calling itself, the function calls another function that performs the same task as the original one.
- ❖ Nature has several examples of recursive phenomena.
- ❖ A typical recursive example is the computation of the factorial.
- ❖ Definition of factorial (non-recursive)

$$n! = n * n-1 * n-2 * ... 1$$

Definition of factorial (recursive)

$$n! = n * (n-1)!$$

- ❖ Let's implement a recursive factorial function.
- ❖ Computation of the fibonacci series is another example of recursion
- ❖ Let's draw a call tree that illustrates the set of calls that are taking place.