Note: Some slides were taken from Anita Raja’s PowerPoint Presentation. She is an Assistant Professor of Software and Information Systems at The University of North Carolina at Charlotte.
Frames

- The purpose of frames is to allow developers to divide a browser window into independent pieces.
- These pieces are sometimes called “frame windows.”
- A frame document is made up of many documents:
  - a container document that defines the number of frames
  - one or more XHTML documents that will fill the frames
Frames

- Divide window into separate sections like `<div>`
- Each section displays the contents of a separate XHTML document
- Frames may:
  - Have scroll bars
  - Be resized
Frames

For your XHTML document to support frames, include this DTD in your XHTML container:

```xml
<!DOCTYPE html PUBLIC
  "-//W3C//DTD XHTML 1.0 Frameset//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">
```
First define a layout or frameset document:

```html
<html>
  <head>
  </head>
  <frameset>
  </frameset>
</html>
```
Frames

- Define structure using the **frameset** element
  - **rows** attribute
  - **cols** attribute

- Units are:
  - Percentage of window size
  - Number of pixels
  - Relative value
Frames

- Percentage of window size:
  `<frameset rows="30%, 40%, 30%">`  
  `</frameset>`

- Number of pixels:
  `<frameset cols="80, 160, 50">`  
  `</frameset>`
Frames

- Relative value:
  
  <frameset cols="80, *, 80">
  
  </frameset>
Frames

- Frames can be nested

```html
<frameset cols="50%, 50%">
  <frameset rows="50%, 50%">
    <frameset rows="33%, 33%, 33%">
    </framesetset>
  </frameset>
</frameset>
```
Frames

- `<frameset>` only specifies structure, not content
- Content requires the `<frame>` tag
- Each `<frame>` tag may have seven attributes
Frames

<frame>

■ src – The URL of the HTML document that will appear in the frame

■ id – Assigns a name to the frame so it can be referenced by links in other frames

■ marginwidth and marginheight – The size in pixels of the frame’s margins
Frames

- **scrolling**
  - yes – The frame will always have scroll bars
  - no – The frame will never have scroll bars
  - auto – The frame lets the browser decide

- **noresize** – The user cannot drag the frame edges to resize the frame

- **frameborder=0** – hides the frame’s borders
Frames

- Include one `<frame>` tag for each frame:

  `<frameset rows="50%, 50%">
    <frame id="upper" src="fred.html" />
    <frame id="lower" src="sam.html"/>
  </frameset>`
Frames

- `<noframes>` element in case user’s browser doesn’t support frames:

  ```html
  <frameset ...
  <frame ...>
  <noframes>This Web page ...
  </noframes>
  </frameset>
  ```
Frames

- Linking between frames:
  - Click link in one frame
  - See result in another frame
- Add `target` attribute to `<a>` tag:
  ```html
  <a href="…" target="left_frame">
  Click here to …
  </a>
  ```
- Otherwise content appears in current frame
Frames

- Eliminating frames
- Frameset hierarchy
  - Browser tracks framesets
  - Browser window is at the “top”
  - First `<frameset>` defined is “down” one level ...
Frames

- Replace the entire frameset:
  - set target to _top:

    `<a href="..." target="_top">...</a>`

- Open in a new browser window:
  - set target to _blank:

    `<a href="..." target="_blank">...</a>`