

# HTML (Frames)

# Considerations for a Web Site

- ▶ A Web site grows in size and complexity, each page is dedicated to a particular topic or group of topics.
  - ▶ one page might contain a list of hypertext links
  - ▶ one page might display contact information for the company or organization
  - ▶ one page might describe the business philosophy
- ▶ As more pages are added to a Web site, a designer may want to display information from several pages at the same time.
- ▶ Such considerations contributed to the creation of **frames**.

# Advantages to Using Frames

- ▶ Frames can give more flexibility in designing your Web presentation.
- ▶ You can place information in different Web pages, removing redundancy.
- ▶ Frames can make your site easier to manage.
- ▶ Frames allows you to update only a few files rather than the whole.
- ▶ Web designers advocate creating both framed and non-framed versions for a Web site and giving users the option of which one to use.

# Disadvantages to Using Frames

- ▶ The browser has to load multiple HTML files before a user can view the contents of the site increasing the waiting time for potential customers.
- ▶ Some older browsers cannot display frames.
- ▶ Some users simply do not like using frames.
- ▶ Some web authors feel that frames are too constricting, limiting flexibility in designing the layout of a Web page.
- ▶ There is concern that frames can use up valuable screen space.
- ▶ The source code is removed from the user.

# Frames

- ▶ A **frame** is a section of the browser window capable of displaying the contents of an entire Web page. For example:
  - ▶ the frame on the left may display the contents of a Web page containing a list of hyperlinks
  - ▶ the frame on the right may display a Web page with product information

# An Example of Frames

This figure shows a common use of frames: displaying a table of contents in one frame, while showing individual pages from the site on the another.





# Activating a Hyperlink within Frames

This figure shows a list of hyperlinks that remain on the screen while the user navigates through the contents of the site.



# Planning Your Frames

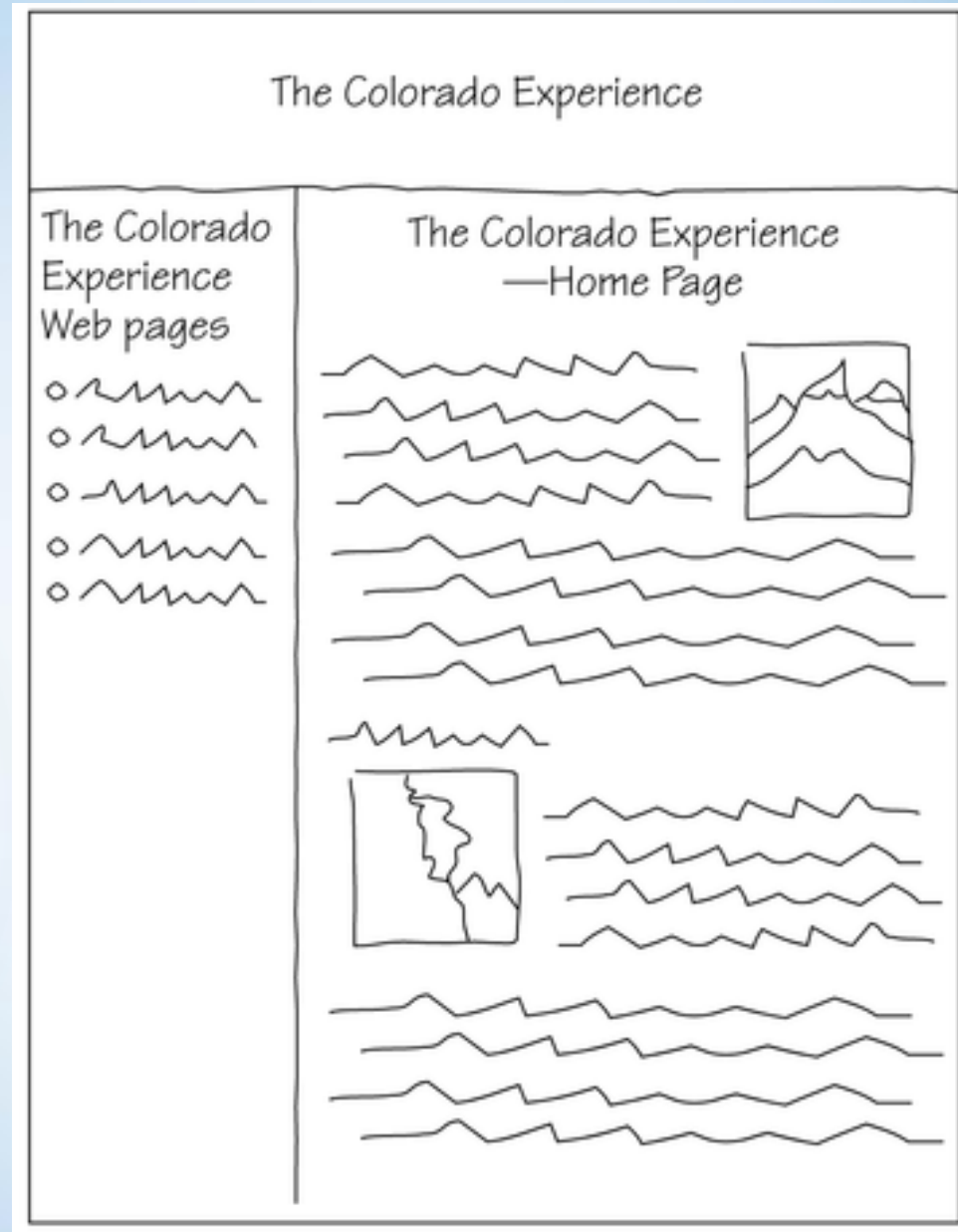
- ▶ Before you start creating your frames, it is a good idea to plan their appearance and how they are to be used. There are several issues to consider:
  - ▶ What information will be displayed in each of the frames?
  - ▶ How do you want the frames placed on the Web page?
  - ▶ What is the size of each frame?
  - ▶ Which frames will be static, that is, always showing the same content?
  - ▶ Which frames will change in response to hyperlinks being clicked?
  - ▶ What Web pages will users first see when they access the site?
  - ▶ Should users be permitted to resize the frames to suit the needs?



# An Example of a Frame Layout

**This figure shows an example of a frame layout.**

**It is recommended to draw an example of what you would like your Web page to look like before you get started.**



# Creating a Frame Layout

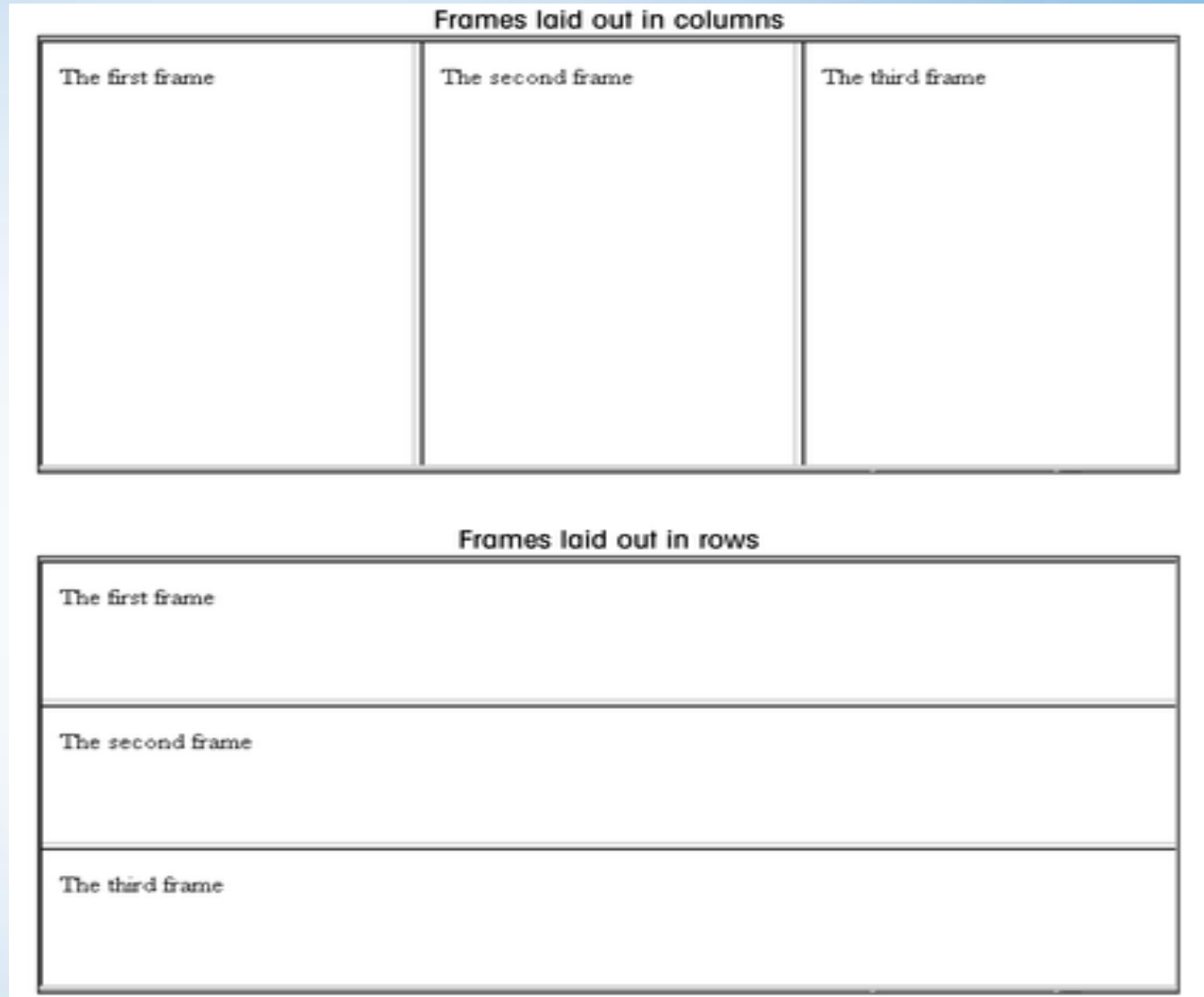
- ▶ The **<frameset>** tag is used to store the definitions of the various frames in the file. These definitions will typically:
  - ▶ include the size and location of the frame
  - ▶ include the Web pages the frames display
- ▶ The **<frameset>** code does not include an opening and closing **<body>** tag.
  - ▶ the reason for this is that this HTML file displays the contents of other Web pages; technically, it is not a Web page

# Specifying Frame Size and Orientation

- ▶ To create a frame layout, you will use the rows and cols attributes of the **<frameset>** tag.
  - ▶ the rows attribute creates a row of frames
  - ▶ the cols attribute creates a column of frames
- ▶ A **frameset** is defined by rows or columns, but not both.
- ▶ You must choose to layout your frames in either rows or columns.

# Frames Defined in either Rows or Columns

**This figure shows frame layouts in either rows or columns.**



# The Frame Syntax

- ▶ The syntax for creating a row or column frame layout is:
  - ▶ `<frameset rows="row height 1, row height 2, row height 3, . . .">`
    - ▶ **row height** is the height of each row
- or
- ▶ `<frameset cols="column width 1, column width 2, column width 3, . . .">`
  - ▶ **column width** is the width of each column

# Row and Column Sizes

- ▶ Row and column sizes can be specified in three ways:
  - ▶ in pixels
  - ▶ as a percentage of the total size of the frameset
  - ▶ by an asterisk (\*)



# Defining Rows and Columns Using an Asterisk (\*)

- ▶ The asterisk instructs the browser to allocate any unclaimed space in the frameset to the particular row or column.
  - ▶ for example, the tag `<frameset rows="160,*">` creates two rows of frames.
- ▶ Specify at least one of the rows or columns of your `<frameset>` tag with an asterisk to ensure that the frames fill up the screen.
- ▶ You can use multiple asterisks.
- ▶ The browser divides the remaining display space equally among the frames with the asterisks.
  - ▶ for example, the tag `<frameset rows="*,*,*">` creates three rows of frames with equal heights.

# Frames of Different Sizes

**This figure shows frames of different sizes.**

<p>The first frame</p> <p><b>160 pixels wide</b></p>	<p>The second frame</p> <p><b>25% of the width of the display area</b></p>	<p>The third frame</p> <p><b>whatever space is left</b></p>
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**< FRAMESET COLS ="160,25%,\*" >**

# Creating Two Rows of Frames

**In this code, the top row is used for the company logo, and the second row is used for the remaining content of the Web page.**

**A frame that is 85 pixels high should provide enough space to display the logo. The rest of the display area is occupied by the second row.**

```
<html>
<head>
<title>The Yale Climbing School</title>
</head>
<frameset rows="85,*">
</frameset>
</html>
```

**tag creates two rows of frames: the first 85 pixels high and the second occupying the remaining display area**

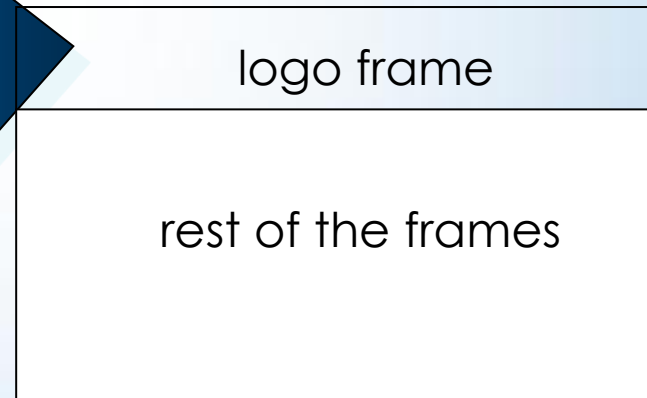
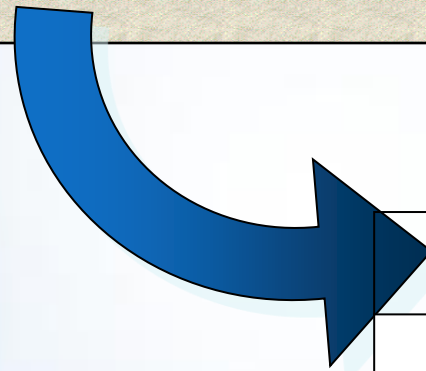
# Specifying a Frame Source

- ▶ To specify a source for a frame, use the **<frame>** tag with the syntax:  
**<frame src="URL">**
- ▶ The URL is the filename and location of the page that you want to load.
- ▶ You must insert the **<frame>** tag between the opening and closing **<frameset>** tags.

# Logo and Placement



**This figure shows a preview of the YCS logo and its placement.**



# Inserting a Frame for the Head.htm File

Because this is the first `<frame>` tag, the browser displays `head.htm` in the first frame row.

Note that using the comment tag and indenting the `<frame>` tag a few spaces helps make your HTML code easier to follow and interpret.

```
<html>
<head>
<title>The Yale Climbing School</title>
</head>
<frameset rows="85,*">
  <!-- Company Logo -->
  <frame src="head.htm">
</frameset>
</html>
```

source for the first  
frame





# Nesting `<frameset>` Tag

- ▶ Remember that a frameset is defined by rows or columns, but not both.
- ▶ To create frames using both rows and columns, one frameset must be nested inside another.
- ▶ The interpretation of the rows and cols attributes changes slightly.
  - ▶ for example, a row height of 25% does not mean 25% of the display area, but rather 25% of the height of the frame into which that row has been inserted (or nested)

# Creating a Nested Set of Frames in the Second Frame Row

**This specifies a width of 140 pixels for the first column, and whatever remains in the display area will be allotted to the second column.**

```
<html>
<head>
<title>The Yale Climbing School</title>
</head>
<frameset rows="85,*">
  <!-- Company Logo -->
  <frame src="head.htm">
    <!-- Nested Frames -->
    <frameset cols="140,*">
    </frameset>
  </frameset>
</html>
```

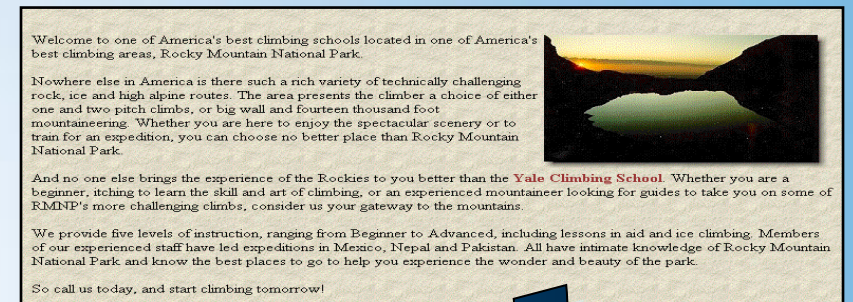
two columns of frames  
nested in the second  
frame row

# Nested Frames

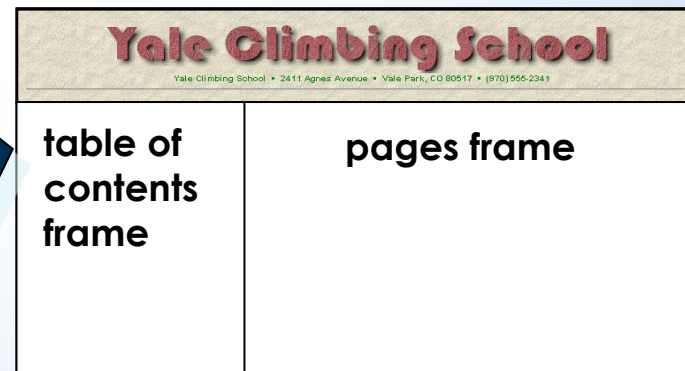
links.htm



home.htm



This figure shows the content of two pages and their placement on the Web page.



# Sources for the Two Frames in the Second Row

This figure shows the code for two new frames. It is not necessary to indent the code, however, it can make the code easier to read and interpret.

the YCS home page  
will appear in the  
fourth frame

```
<html>
<head>
<title>The Yale Climbing School</title>
</head>
<frameset rows="85,*">
  <!-- Company Logo -->
  <frame src="head.htm">
  <!-- Nested Frames -->
  <frameset cols="140,*">
    <!-- List of YCS Links -->
    <frame src="links.htm">
    <!-- YCS Home Page -->
    <frame src="home.htm">
  </frameset>
</frameset>
</html>
```

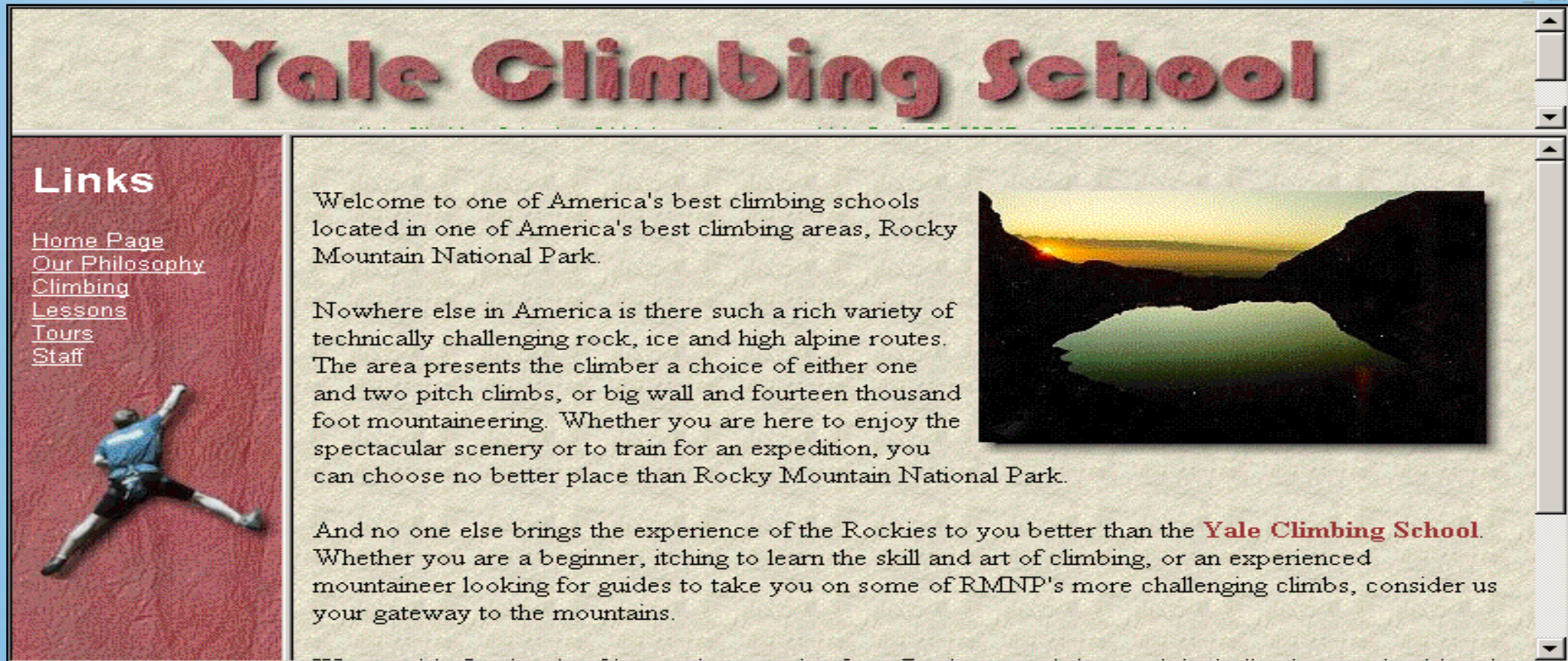
the table of contents  
will appear in the  
third frame



# Result of Web Site with Nested Frames

25

Creati  
Prepa





# Web Site with Frames

The design of the frame layout could use some refinement.

The appearance of scroll bars may or may not be appropriate for the web pages.

heading extends beyond the frame border, causing a vertical scroll bar to be displayed

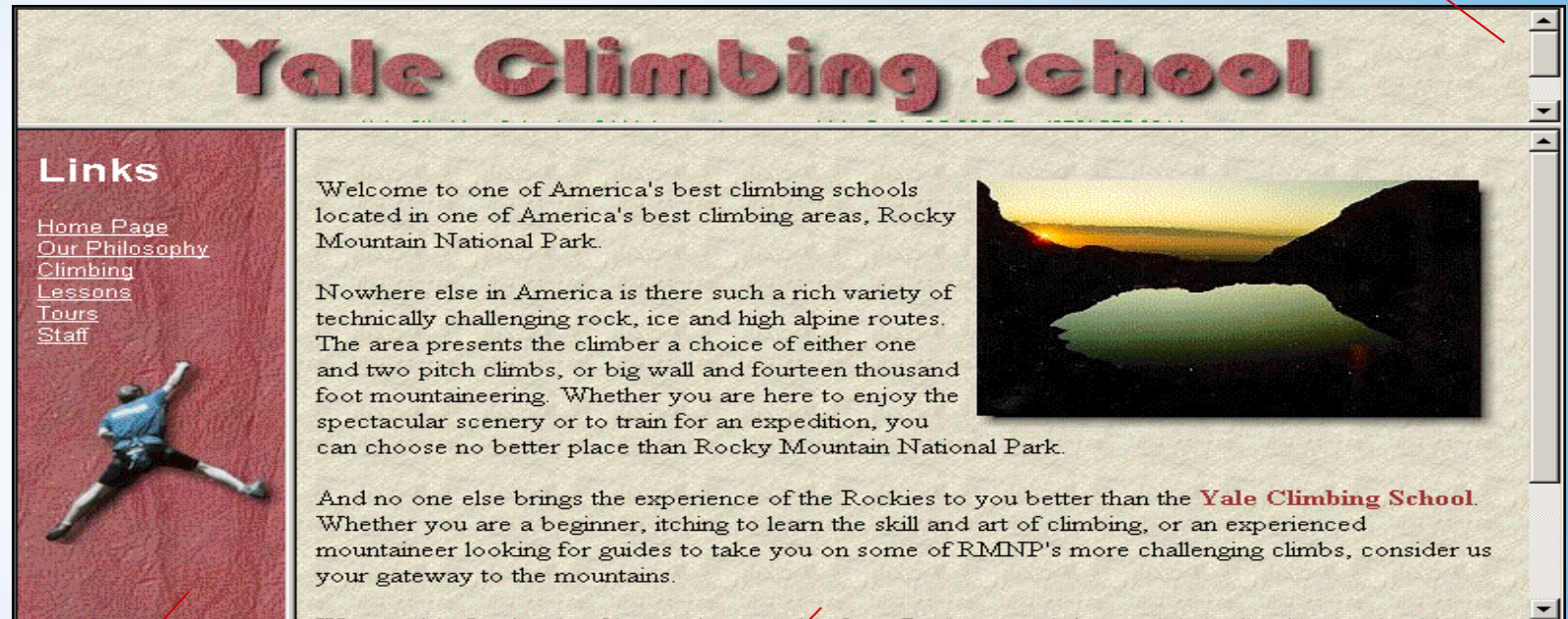


table of contents  
frame

home page frame



# Controlling the Appearance of Your Frames

- ▶ You can control three attributes of a frame:
  - ▶ scroll bars
  - ▶ the size of the margin between the source document and the frame border
  - ▶ whether or not the user is allowed to change the size of the frame

# Controlling the Appearance of Scroll Bars

- ▶ By default, scroll bars are displayed when the content of the source page cannot fit within the frame.
- ▶ You can override the default setting using the **scrolling** attribute.
- ▶ The scrolling syntax is: **<frame src="URL" scrolling="scrolling">**
  - ▶ **scrolling** can either be "yes" (to always display scroll bars) or "no" (to never display scroll bars)
- ▶ If you don't specify a setting for the scrolling attribute, the browser displays scroll bars when necessary.

# Removing the Scroll Bars from the Logo Frame

If the complete text cannot be displayed after removing the scroll bars from a frame, you will need to modify the frame margin.

set the scrolling attribute  
to "no" to remove the  
scroll bars

```
<frameset rows="85,*">
  <!-- Company Logo -->
  <frame src="head.htm" scrolling="no">
  <!-- Nested Frames -->
  <frameset cols="140,*">
    <!-- List of YCS Links -->
    <frame src="links.htm">
    <!-- YCS Home Page -->
    <frame src="home.htm">
  </frameset>
</frameset>
```

# Controlling Frame Margins

- ▶ The following should be consider for frame margins:
  - ▶ the browser determines the amount of space between the content of the page and the frame border
  - ▶ occasionally, the browser sets the margin between the border and the content too large
  - ▶ the margin should be big enough to keep the source's text or images from running into the frame's borders
  - ▶ the margin should not take up too much space, because you typically want to display as much of the source as possible

# Specifying Margins Syntax

- ▶ The syntax for specifying margins for a frame is: **<frame src="URL" marginheight="value" marginwidth="value">**
  - ▶ **marginheight** is the amount of space, in pixels, above and below the content of the page in the frame
  - ▶ **marginwidth** is the amount of space to the left and right of the page
- ▶ If you specify only one, the browser assumes that you want to use the same value for both.
- ▶ Setting margin values is a process of trial and error as you determine what combination of margin sizes looks best.

# Specifying the Margin Sizes for the Frames

**The margin height is set to 0 pixels.**

**The frame margin width is set to 10 pixels, to keep the page from running into the borders of its frame.**

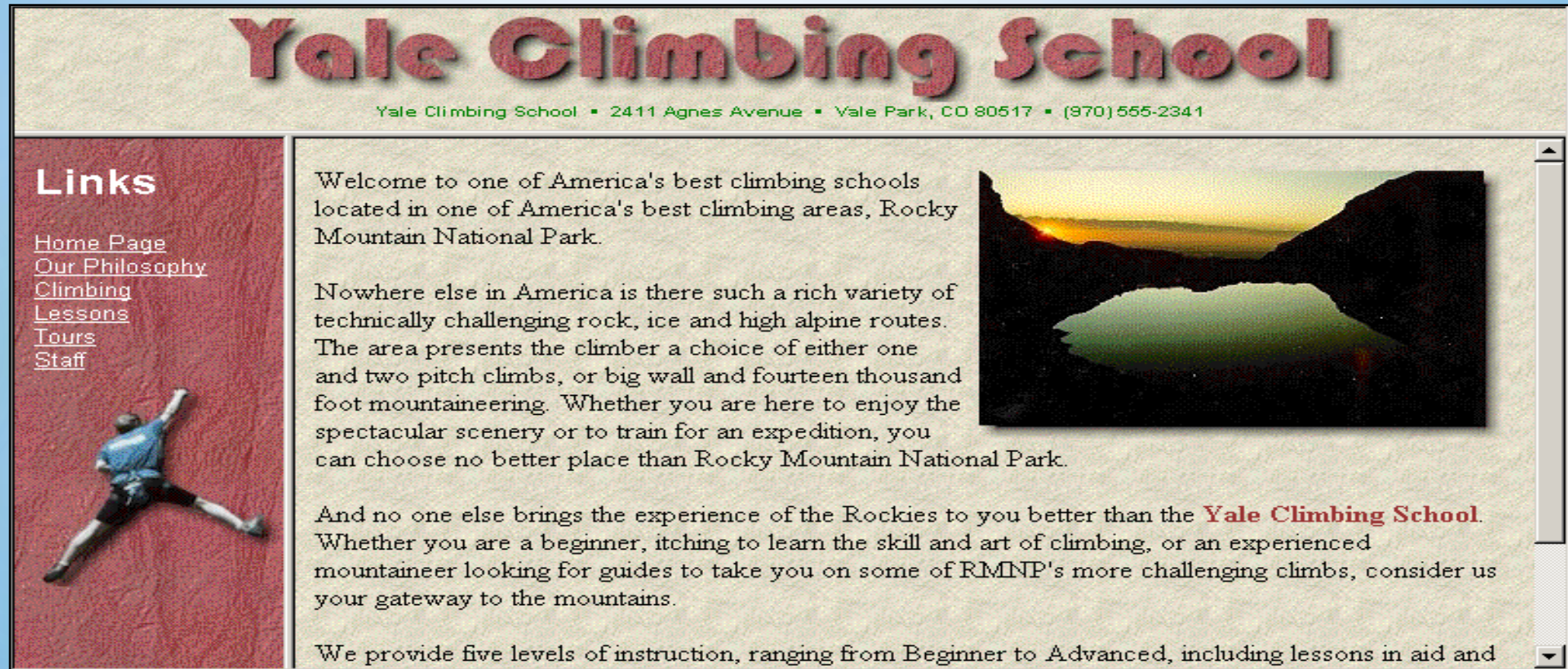
height of the margin text for  
the logo frame will be 0  
pixels

```
<frameset rows="85,*">
  <!-- Company Logo -->
  <frame src="head.htm" scrolling="no" marginheight="0">
  <!-- Nested Frames -->
  <frameset cols="140,*">
    <!-- List of YCS Links -->
    <frame src="links.htm">
    <!-- YCS Home Page -->
    <frame src="home.htm" marginheight="0" marginwidth="10">
  </frameset>
</frameset>
```

height of the margin for the home  
page will be 0 pixels and the width  
of the margin will be 10 pixels



# Result of Web Site with Resized Frame Margins



# Controlling Frame Resizing

- ▶ By default, users can resize frame borders in the browser by simply dragging a frame border.
- ▶ Some Web designers prefer to freeze, or lock, frames, so that users cannot resize them.
  - ▶ this ensures that the Web site displays as the designer intended
- ▶ The syntax for controlling frame resizing is: **<frame src="URL" noresize>**
- ▶ The **noresize** attribute is included within the **<frame>** tag to prevent users from modifying the size of the frame.



# Inline frame- <iframe>

- ▶ **iFrame** is used to display a web page within a web page.

## Set Height and Width

- ▶ The height and width attributes are used to specify the height and width of the iframe.
- ▶ The attribute values are specified in pixels by default, but they can also be in percent (like "80%").

```
<iframe src="demo.html" width="200" height="200"></iframe>
```

## Remove the Border

- ▶ The frameborder attribute specifies whether or not to display a border around the iframe.
- ▶ Set the attribute value to "0" to remove the border.

```
<iframe src="demo_iframe.html" frameborder="0"></iframe>
```

# Inline frame- <iframe>

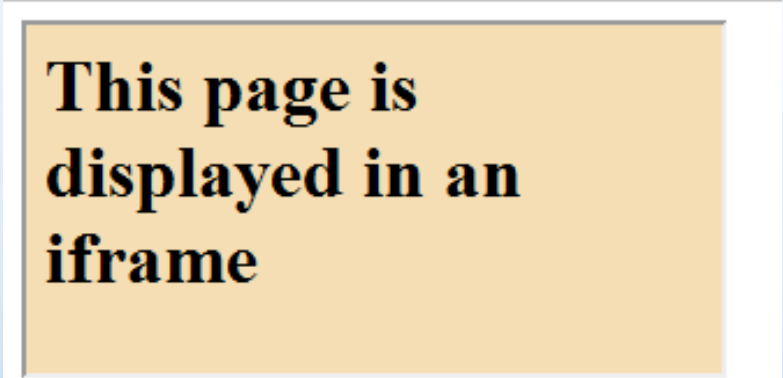
## Use iframe as a Target for a Link

- ▶ An iframe can be used as the target frame for a link.
- ▶ The target attribute of a link must refer to the name attribute of the iframe:

```
<iframe src="demo_iframe.htm" name="iframe_a"></iframe>
```

```
<p><a href="http://sct.emu.edu.tr/it/itec229" target="iframe_a">
```

```
ITEC 229</a></p>
```

A screenshot of a web browser window. Inside the browser, there is a yellow rectangular area with a black border. Inside this area, the text "This page is displayed in an iframe" is written in a bold, black, serif font, arranged in three lines.

**This page is  
displayed in an  
iframe**

*Thank U*