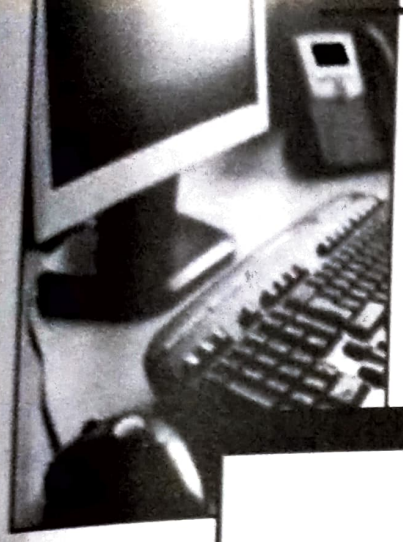


Chapter 9
Frames

Learning Objectives

- ❑ INTRODUCTION
- ❑ HOW FRAMES WORK
- ❑ THE <FRAMESET> TAG ATTRIBUTES
- ❑ THE <FRAME> TAG ATTRIBUTES
- ❑ THE < NOFRAMES > ELEMENT
- ❑ NESTING OF FRAMES
- ❑ INLINE FRAMES
- ❑ TARGETING FRAMES
- ❑ TARGET ATTRIBUTE

9.1 INTRODUCTION

Frames divide a browser window into two or more separate mini-windows or panes, each displaying a different HTML document. One of the primary advantages that frames offer is that you can load and reload single pane without having to reload the entire content of the browser window. In frames, one portion of the window is always visible while others scroll through longer content.The collection of frames in the browser window is known as a *frameset*.

Features of Frames:

1. Frames open up navigational possibilities, and they can be used to unify information from several sites onto one page.
2. Frames have one portion of the window always visible while others scroll through longer content.
3. Frames can divide the browser window horizontally as well as vertically.

corresponding pages in the other sub-region. By this, index will never go out of sight while browsing the document.

A frameset divides the window into rows and columns like tables. The simplest of framesets might just divide the screen into two rows, whereas a complex frameset could use several rows and columns. There is also a special kind of frame called an *iframe* which is a single window that can sit anywhere inside a page.

Disadvantages of frames:

- Frames are not appropriate for smaller devices because their screen is not big enough to be divided up.
- The output of the web page with frames depends upon the screen resolution of different display devices.
- The browser's *back button* might not work as per the visitors expectations.
- Few browsers do not support frame technology.
- It is difficult for content in frames to be bookmarked or found by search engines.
- You need to have a separate web page for each frame in the browser window, which means your site will be made up of more pages, making maintenance more difficult.
- It's much harder for users with screen readers to navigate pages that use frames.

Due to above mentioned reasons frames are not very prominently used these days.

.2 HOW FRAMES WORK

When you view a page with frames in a browser, you are actually looking at everal HTML documents at once. Actually a web page with frames is a frameset ocument, which is an HTML document and in which each frame is drawn in such way that a HTML document is displayed in each frame. When the browser sees that his is a frameset document, it draws out the frames as instructed in the document and hen pulls the separate HTML documents.

There are three tags for the implementation of frames in the HTML document. et's have a brief introduction to them. However, we will discuss them in detail in next ections.

1. <frameset>: The **< frameset >** element is used instead of the **< body >** element, as this defines the rows and columns your page is divided into. However, the frameset document uses the **<head>** element. This sets framesets apart from all other web pages.<frameset> tag have the attributes like **rows** and **cols** to divide the window into rows and columns respectively.

is contained within the **<frameset>** element. The primary job of the **<frame>**element is to specify which HTML document to display; however, you can control other features of a frame.

3. **<noframes>:** The **<noframes>** element provides a message for users whose browsers do not support frames. Minimal content is there within the **<noframes>** element. It is similar to the alternative text provided in image elements.

To get a better idea of how frames work, here is the code for the frameset.

Example 9.1: Demonstration of frames.

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Frames</title>
</head>
    <frameset rows="20%,60%,20%">
    <frame name="top" src="top_frame.html " />
    <frame name="middle" src="middle_frame.html " />
    <frame name="bottom" src=" bottom_frame.html " />
    <noframes>
<body>
This document is using frames and your browser does not support them.
</body>
</noframes>
</frameset>
</html>
```

Output:

In example 9.1, it can be seen that the < body > element has been replaced with the < frameset > element. There should be no markup between the closing < /head > tag and the opening <frameset > tag, other than a comment if you want to include one. <frameset> element have attributes rows and cols which specifies the number of rows and columns respectively. The empty < frame > elements are contained in the <frameset> element which indicates the URL of the pages that are to be loaded in the different frames. Also, there is <noframes> element which specifies the text that will be displayed in the browser which do not support frames (just like alt text in <img> element). Above example shows three different html pages to be displayed in a single page with frames.

9.3 THE <FRAMESET> TAG ATTRIBUTES

Following are important attributes of the <frameset> tag:

1. Cols

Cols attribute specifies how many columns are there in the frameset and the size of each column. The width of each column can be specified in four different ways:

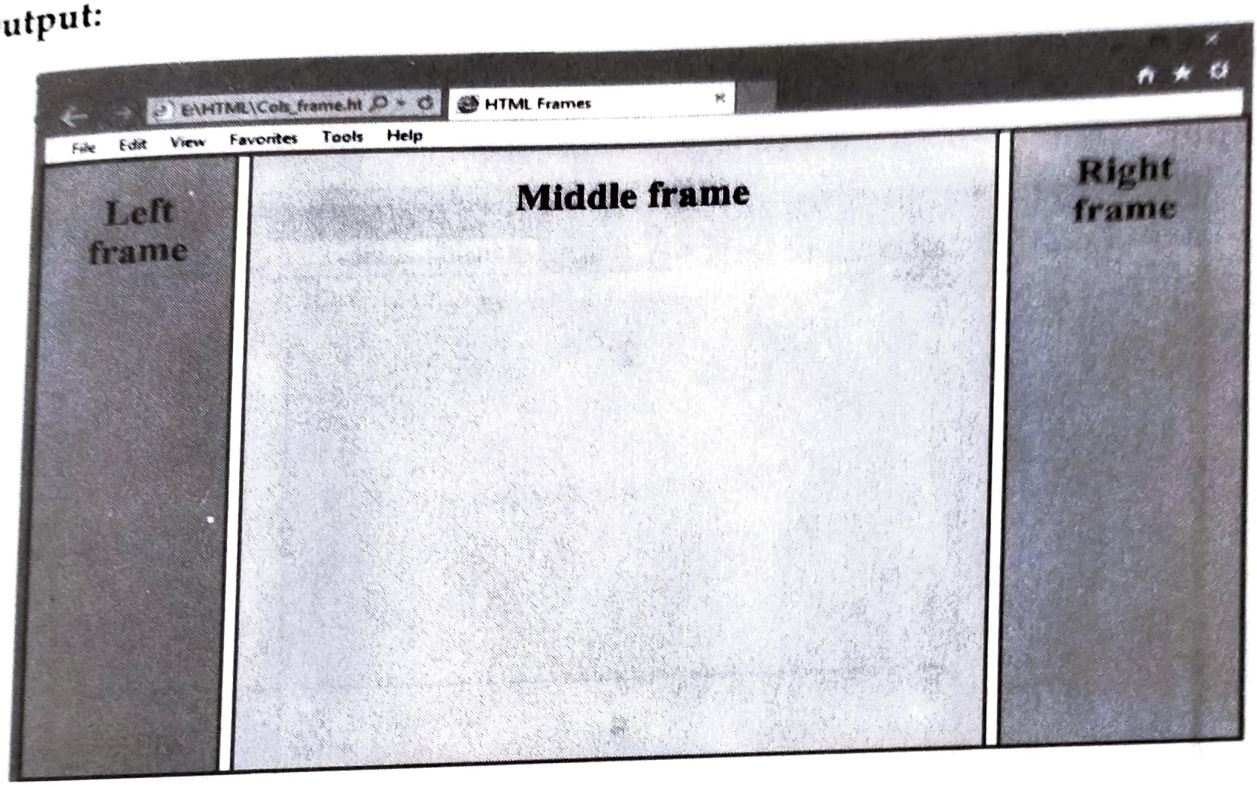
- **Absolute values in pixels**. For example to create three vertical frames, use *cols="200, 500,100"*.
- **A percentage of the browser window**. For example, to create three verticalframes, use *cols="20%, 60%,20%"*.
- **Using a wildcard symbol**. For example, to create three vertical frames, use*cols="20%, *,20%"*. In this case wildcard takes remainder of the window.
- **As relative widths of the browser window.** For example, to create three vertical frames, use *cols="5*,3*,2*"*. This is an alternative to percentages.You can use relative widths of the browser window. Here the window is divided in tenths: the first column takes up half of the window, the second takes three by tenth, and the third takes one fifth rows.

Example 9.2: Demonstration of cols attribute with width being specified using wild cards

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Frames </title>
</head>
    <frameset cols="*,60%,*">
    <frame name="left" src="top_frame.html ">
    <frame name="middle" src="middle_frame.html ">
    <frame name="right" src=" bottom_frame.html ">
    <noframes>
<body>
```

```
This document is using frames and your browser does not support them.
</body>
</noframes>
</frameset>
</html>
```

Output:



2. Rows:

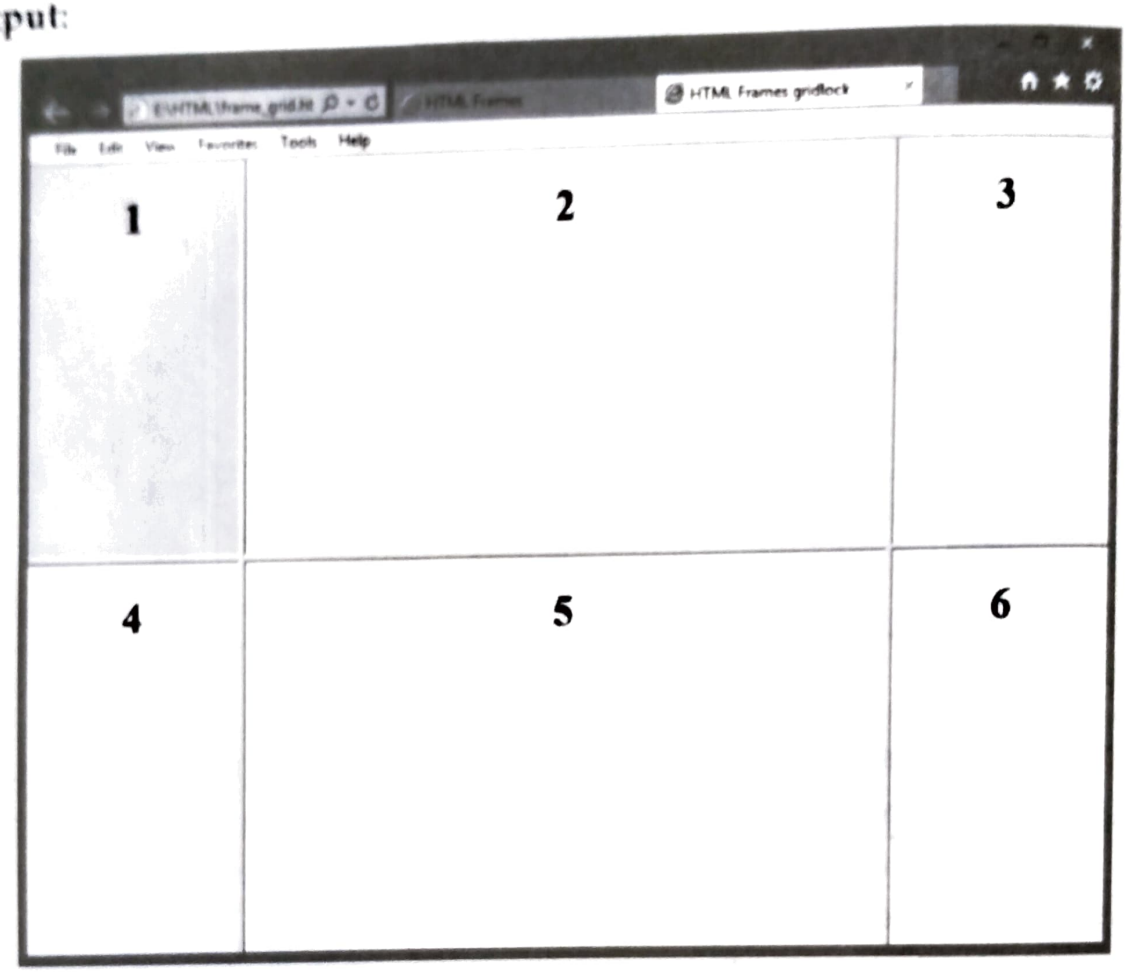
This attribute works just like the cols attribute and takes the same values, but it is used to specify the rows in the frameset. For example to create two horizontal frames, use *rows="20%, 80%"*. The height of each row can be specified in the same manner as explained above for columns.

Example 9.3: Making a grid of frames

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Frames gridlock </title>
</head>
<frameset rows= "*, *"
cols="20%,60%,20%">
<frame src="1.html " >
<frame src="2.html ">
<frame src= " 3.html " >
<frame src="4.html " >
```

```
<frame src= "5.html ">
<frame src=" 6.html ">
<noframes>
<body>
This document is using frames and your browser does not support them.
</body>
</noframes>
</frameset>
</html>
```

Output:



3. Border

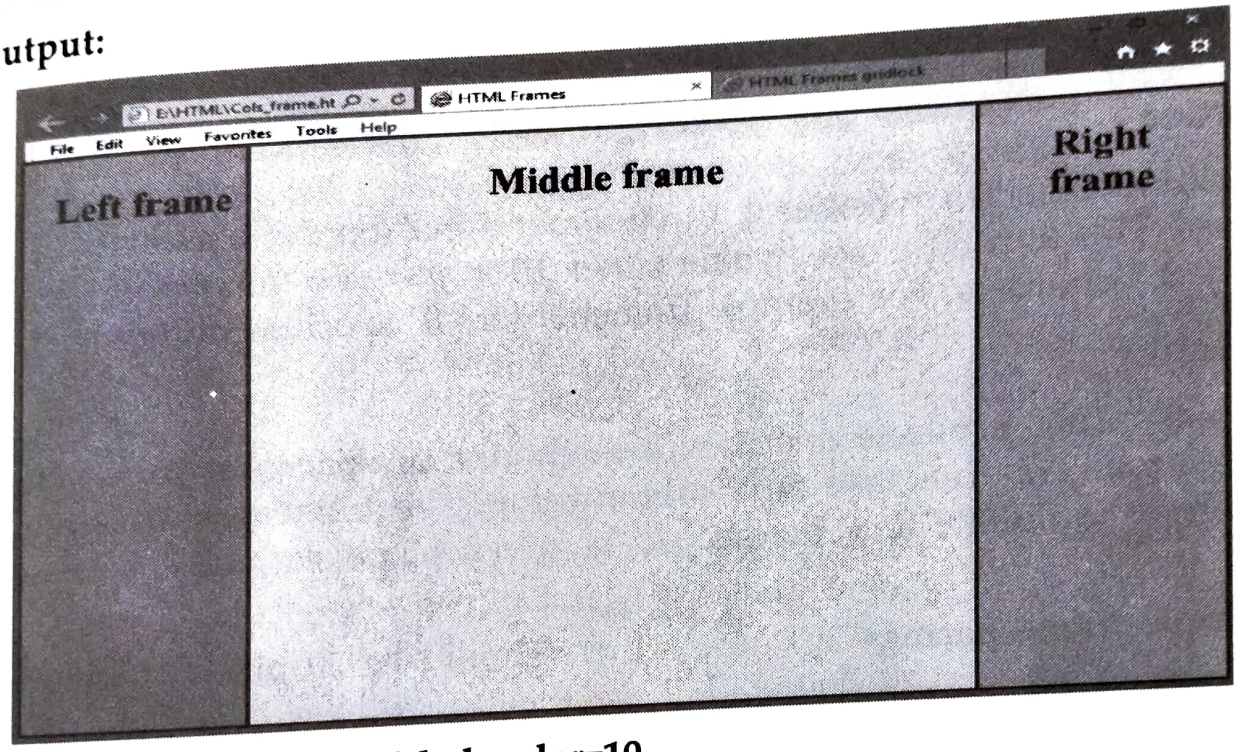
This attribute specifies the width of the border of each frame in pixels. For example border="5". A value of zero means no border.

Example 9.4: Frames with border=0

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Frames </title>
</head>
    <frameset cols="20%,60%,20%" border="0">
    <frame name="left" src="top_frame.html ">
```

```
    <frame name="middle" src="middle_frame.html ">
    <frame name="right" src=" bottom_frame.html ">
    <noframes>
<body>
This document is using frames and your browser does not support them.
</body>
</noframes>
</frameset>
</html>
```

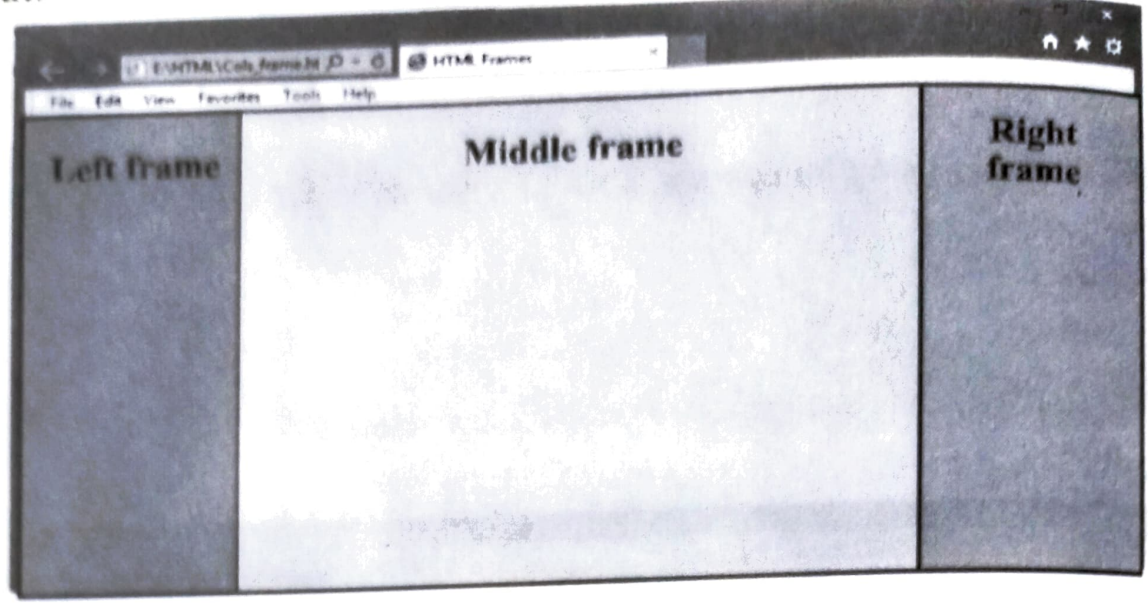
Output:



Example 9.4: Frames with border=10

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Frames </title>
</head>
    <frameset cols="20%,60%,20%" border="10">
    <frame name="left" src="top_frame.html ">
    <frame name="middle" src="middle_frame.html ">
    <frame name="right" src=" bottom_frame.html ">
    <noframes>
<body>
This document is using frames and your browser does not support them.
</body>
</noframes>
</frameset>
</html>
```

Output:



4. Frameborder

This attribute specifies whether a three-dimensional border should be displayed between frames. This attrubute takes value either 1(for *yes)* or 0 (for *no)*. By default, the frames display 3 D borders. For example frameborder="0" specifies no border.

5. Framespacing

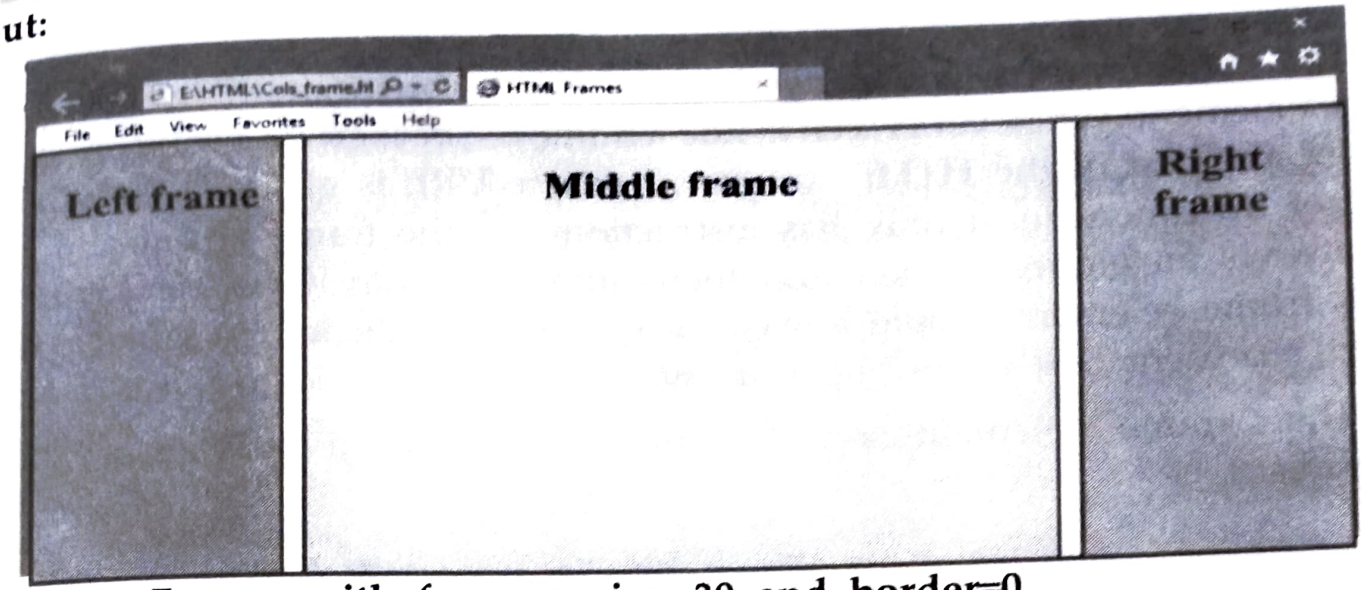
The framespacing attribute specifies the amount of space between frames in a <frameset> element. This can take any integer value. The framespacing attribute only works in Internet Explorer.The value should be given in pixels and the default value is 2.

For example framespacing="20" means there should be 20 pixels spacing between each frames.

Example 9.5: Frames with framespacing=10 and border=0

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Frames </title>
</head>
    <frameset cols="20%,60%,20%" border="0" framespacing="10">
    <frame name="left" src="top_frame.html ">
    <frame name="middle" src="middle_frame.html ">
    <frame name="right" src=" bottom_frame.html ">
    <noframes>
<body>
This document is using frames and your browser does not support them.
</body>
</noframes>
</frameset>
</html>
```

Output:



Example 9.5: Frames with framespacing=30 and border=0

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Frames </title>
</head>
    <frameset cols="20%,60%,20%" border="0" framespacing="30">
    <frame name="left" src="top_frame.html ">
    <frame name="middle" src="middle_frame.html ">
    <frame name="right" src=" bottom_frame.html ">
    <noframes>
<body>
This document is using frames and your browser does not support them.
</body>
</noframes>
</frameset>
</html>
```

Output:

9.4 THE <FRAME> TAG ATTRIBUTES:

The content which is displayed in the frames of the frameset is specified by the <frame> element. Whatever is seen inside a frame the background color or other designing of page are part of the HTML document whose URL is given in the <frame> tag.The frameset document itself only has instructions for the frame layout and functionality. It is always an empty element,and therefore should not have any content. However each < frame >element should always carry one attribute, src, to indicate the page that should represent that frame.There are no CSS styles related to the < frame > element.

The < frame > element can carry any of the universal attributes and the following attributes:

1. src

This attribute is used to give the file name that should be loaded in the frame. Its value can be any URL. For example, src="/middle_frame.html" will load an HTML file available in root directory. It means that you should have a page named middle_frame.html in your root directory.

However, the value of src attribute will mostly be a file on your server, but it can also contain the URL to specify another sites.

2. name

The name attribute allows you to give a name to a frame. It is used to indicate which frame a document should be loaded into. The name is used when you create links in one frame that load pages into a second frame, in which case the second frame needs a name to identify itself as the *target* of the link. Frame targets of the links are explained in our next section.

For example, name = "top_frame"

3. frameborder

This attribute specifies whether or not the borders of that frame are shown; it overrides the value given in the frameborder attribute on the <frameset> tag if one is given, and the possible values are the same. It can take values either 1 or 0.

4. Setting Margins

Margin is the space between the frame border and the contents of the frame. Browsers automatically add a little space between the edge of the frame and its contents, just as they do for a web page in the browser. You can control the margin amount inside each frame by adding extra space or setting the contents flush to the frame's edge. Margins can be set in two ways:

- **marginwidth:** This attribute allows you to specify the width of the space between the left and right of the frame's borders and the frame's content. The value is given in pixels.

  For example, margin-width:"

- **marginheight:** This attribute allows you to specify the height of the space between the top and bottom of the frame's borders and its contents. The value is given in pixels.

  For example, marginheight="20".

Example 9.6: Demonstration of the effect of marginheight and marginwidth

```
<!DOCTYPE html>
<html>
<head>
<title>HTML Frames</title>
</head>
   <frameset rows="*,*">
   <frame name="top" marginheight="20" marginwidth="30"src="image.html " >
   <frame name="bottom" marginheight="0" marginwidth="0"src=" image.html ">
   <noframes>
<body>
This document is using frames and your browser does not support them.
</body>
</noframes>
</frameset>
</html>
```

Output: