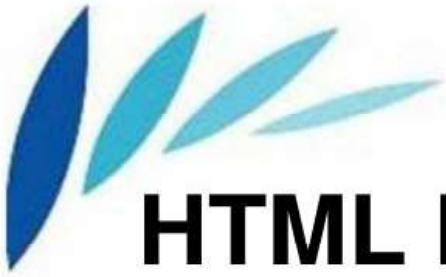# CHAPTER 13
Designing for the World Wide Web

Developing for the Web

- In 2001, there were more than 2,000 published books with the word "Internet" in their title. In 2003 there were more than 6,000. In 2006, there were more than 10,000. In 2010, a search at Amazon.com showed 43,196 books with the word "Internet" in their title!

HTML Is a Markup Language

- HTML stands for Hypertext Markup Language.

- HTML provides tags for inserting media into HTML documents: the **<IMG> tag** for inline images; the **<AUDIO>** and **<VIDEO> tags** for multi- media; and the **<EMBED>** and **<OBJECT> tags**

- **The Desktop Workspace**

  the area of the screen available for your web page, called the **viewport**, will always be less than the full display, and it is not controllable by the designer.

- **The Small-Device Workspace**

  Such as tablets, e-readers, netbooks, PDAs, and smartphones, and they follow known rules when laying out web pages for smaller viewports.
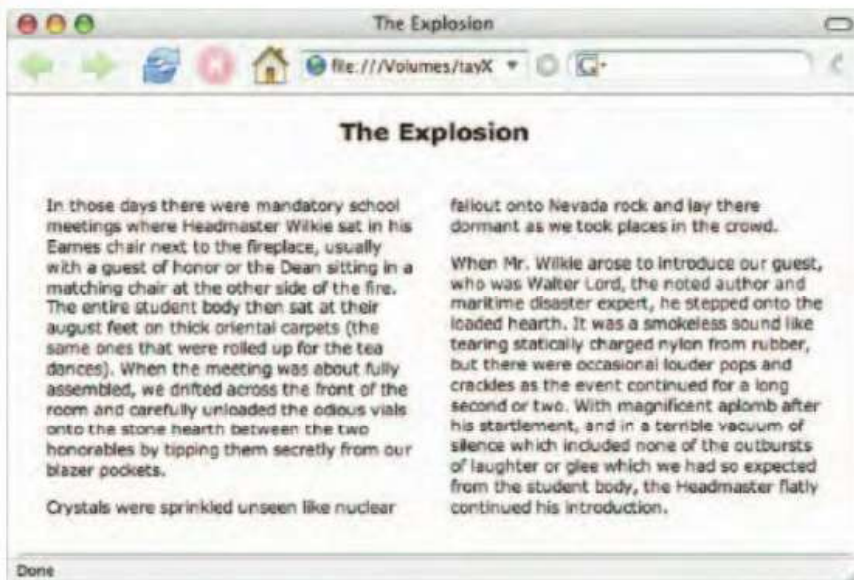
Text for the Web

- User preferences in the browser may alter the way text in your document looks and flows.

- Using CSS, you can specify your "preference" for font face and many text attributes, but the viewer's browser ultimately determines if and how these styles are displayed.

Making Columns of Text
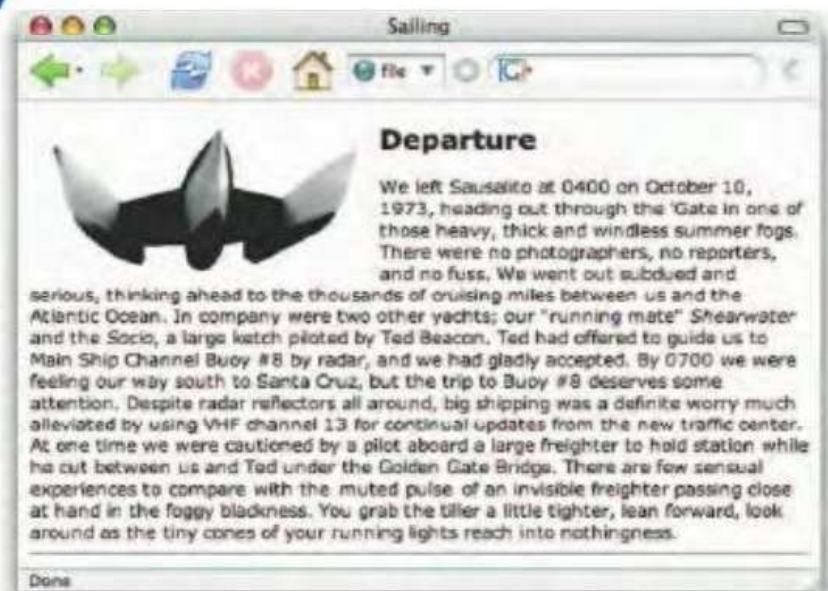


```
<HTML>
<HEAD>
<TITLE>The Explosion</TITLE>
</HEAD>
<BODY>
<DIV ALIGN="center">
<H2>The Explosion</H2>
</DIV>
<TABLE BORDER="0"
CELLSPACING="20">
<TR VALIGN="TOP">
<TD WIDTH="40%">
... text for Column 1 goes here ...
</TD>
<TD WIDTH="40%">
... text for Column 2 goes here ...
</TD>
</TR>
</TABLE>
<HR>
</BODY>
</HTML>
```

Using the <TABLE> tag,
you can organize your text into columns.

Flowing Text Around Images


```
<HTML>
<HEAD>
<TITLE>Sailing</TITLE>
</HEAD>
<BODY>
<IMG SRC="gbsky.gif" ALIGN="left"
HSPACE="15"VSPACE="5">
<H2>Departure</H2>
... text goes here ...
<BR CLEAR="left">
<hr>
</BODY>
</HTML>
```

You can flow text around an image by using the ALIGN attribute of the <IMG> tag.

Images, text, and sound can be mixed in an HTML document. Note the use of escape sequences for special characters and an image map for navigation.

Anescape sequence begins with an ampersand and ends with asemicolon.

Images for the Web

- What are the most common graphics file formats in use on the Web today?

Browsers recognize four image formats—GIF, PNG, JPEG, and SVG

These formats use built-in compression algorithms to reduce file size.

GIF and PNG Images

- GIF images are limited to 8 bits of color depth (256 colors).

- PNG was developed as a new "open" format (not requiring fees) to replace GIF.

- But PNG does not support animation. It only uses the RGB color model, PNG images may not print well.

JPEG Images

- Lossy means that information in the original image is lost in the compression process and cannot be retrieved.

JPEG Images

- Lossy means that information in the original image is lost in the compression process and cannot be retrieved.

GIF or JPEG?

Both images at the top were saved in the JPEG format. The resulting compressed images at the bottom show the "lossy" and "blocky" nature of compressed JPEGs.

The photo at top left is 71K in size when saved as a GIF and only 27K saved as a JPEG (bottom left). The drawing at top right is 17K when saved as a GIF and 46K as a JPEG (bottom right).

Backgrounds

Background Coloring:

•Color controls for the entire page are attributes of the <BODY> tag and are set using CSS: body {background-color: #0000FF;}

•For white text on a blue background, the CSS code would be: body {color: #FFFFFF;}

Sound for the Web

- As the Web has developed, sound has become more important, and most browsers allow embedding of sounds into documents using the tag.

Text can be included in the tag that will be ignored unless the user's browser cannot understand the <AUDIO> tag:

```
<audio src="LizLaugh.aiff" preload autoplay controls loop>
Sorry, your browser does not support the HTML audio element.
</audio>
```

The <A> anchor tag and <EMBED> tag can also be used to play sound files:

```
Click <a href="LizLaugh.aiff">here</a> to play sound file.
<embed src="Mozart.mid" autostart="true" loop="false" width="120" height="50" hidden></embed>
```

Animation on a web page

- Limit animated GIFs to small images, and use a more capable plug-in for animations over larger areas.

- Flash provides animation on the Web.

Video for the Web

•Play video using the <VIDEO> tag.