Week 14: Tables

251514 WEB PROGRAMMING ESSENTIALS

Learning Objectives

- By the end of this session students should be able to;
  - Use table elements
  - Use table headers and footers
  - Group columns
  - Style table borders
  - Apply padding, margins, and floats to tables
  - Style table background colors
  - Apply table styles

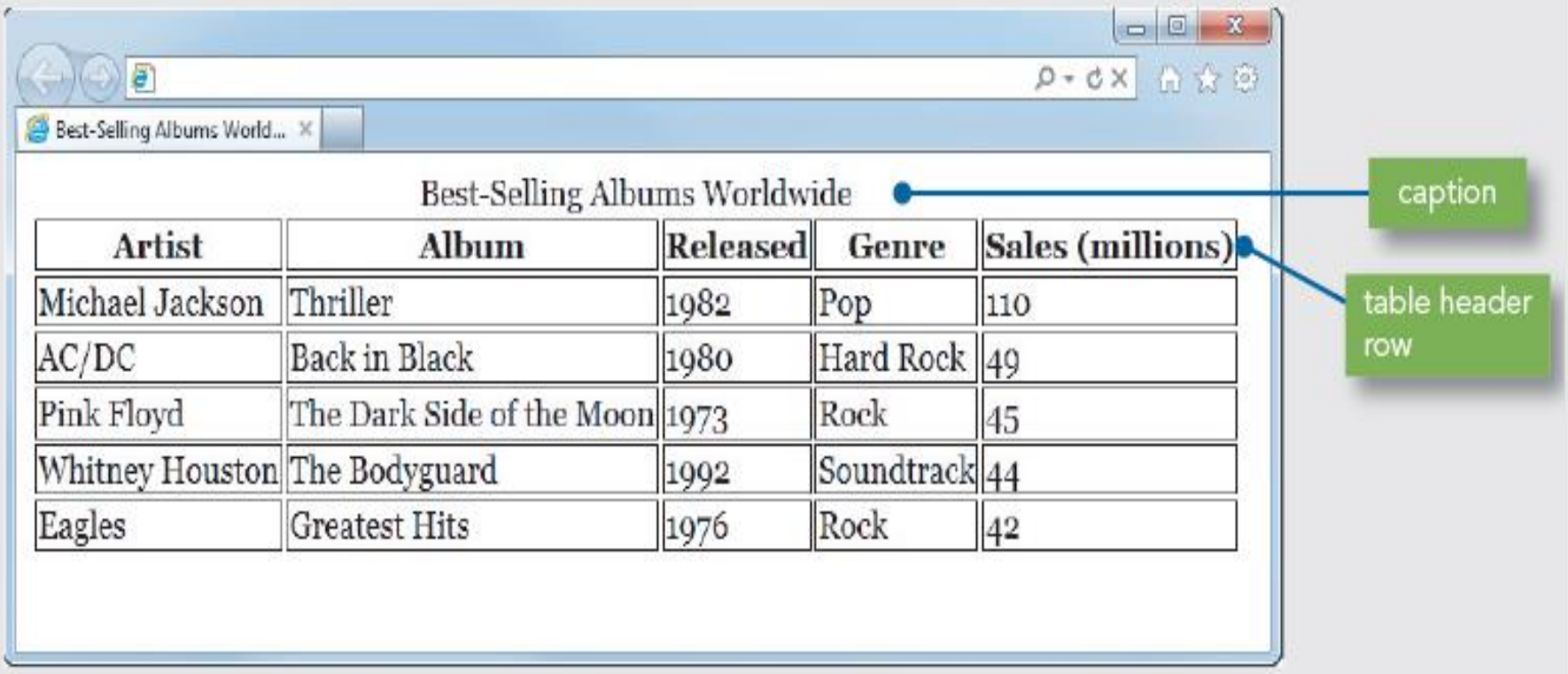
Using Table Elements

- The HTML table elements allow the arrangement of data into rows of cells and columns
- The table element <table> contains the table information, which consists of:
  - Header element <th>
  - Row element <tr>
  - Data cell alignment <td>

ELEMENT	DESCRIPTION
table	Establishes the table; contains all other elements that specify caption, rows, and content
tr	Table row; contains the table cells
td	Table data cell; contains the table data
th	Table header cell; contains header information for a column of data
caption	Provides a short description of the table's contents
thead	Signifies table header
tbody	Signifies table body
tfoot	Signifies table footer
col	Specifies column properties
colgroup	Specifies multiple column properties

Table 10-1: HTML Table Elements

© 2015 Cengage Learning®



Artist	Album	Released	Genre	Sales (millions)
Michael Jackson	Thriller	1982	Pop	110
AC/DC	Back in Black	1980	Hard Rock	49
Pink Floyd	The Dark Side of the Moon	1973	Rock	45
Whitney Houston	The Bodyguard	1992	Soundtrack	44
Eagles	Greatest Hits	1976	Rock	42

Figure 10-1: Basic HTML table

© 2015 Cengage Learning®

Collapsing Table Borders

- Tables are more legible with the table borders collapsed
- Use the border-collapsed property

```
table {border-collapse: collapse;}
```

Artist	
Michael Jackson	Thriller
AC/DC	Back in I
Pink Floyd	The Darl Moon
Whitney Houston	The Bod
Eagles	Greatest

default borders

Artist	
Michael Jackson	Thriller
AC/DC	Back in I
Pink Floyd	The Darl Moon
Whitney Houston	The Bod
Eagles	Greatest

collapsed borders

Figure 10-2: Table with borders collapsed

© 2015 Cengage Learning®

Spanning Columns

- The colspan attribute lets you create cells that span multiple columns

```
<td class="title" colspan="5">
Best-Selling Albums Worldwide</td>
```

Figure 10-3: Table with a column span

© 2015 Cengage Learning®

Spanning Rows

- The rowspan attribute lets you create cells that span multiple rows

```
<td class="title" rowspan="6">
Best-Selling Albums Worldwide</td>
```

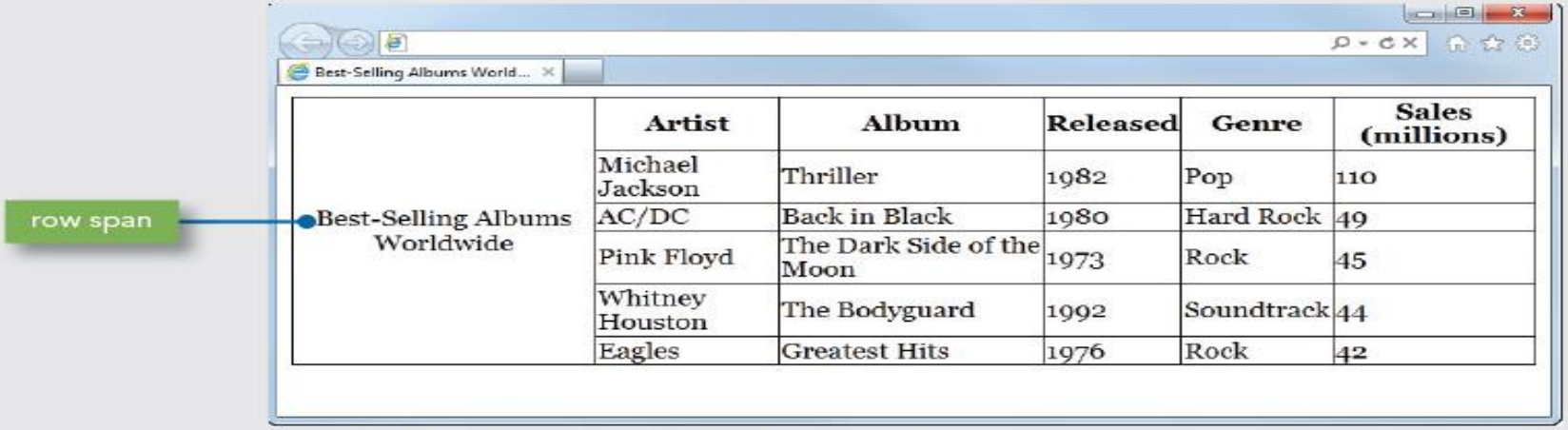


Figure 10-4: Table with row span

© 2015 Cengage Learning®

Using Table Headers and Footers

- Rows can be grouped into head, body, and footer sections using the <thead>, <tbody>, and <tfoot> elements
- You can style these table sections with CSS

```
thead {
font-family: arial;
background-color: #ccddee;
}
tfoot {
background-color: #ddccee;
font-family: times, serif;
font-size: .9em;
font-style: italic;
}
```

Table 1-2: Best-Selling Albums Worldwide

Artist	Album	Released	Genre	Sales (millions)
Michael Jackson	Thriller	1982	Pop	110
AC/DC	Back in Black	1980	Hard Rock	49
Pink Floyd	The Dark Side of the Moon	1973	Rock	45
Whitney Houston	The Bodyguard	1992	Soundtrack	44
Eagles	Greatest Hits	1976	Rock	42

Note: A number of issues make exact figures difficult to calculate, as historical data before the 1980s and from developing countries is incomplete.

Source: http://en.wikipedia.org/wiki/List_of_best-selling_albums_worldwide

Figure 10-5: Table with styled headers and footers

© 2015 Cengage Learning®

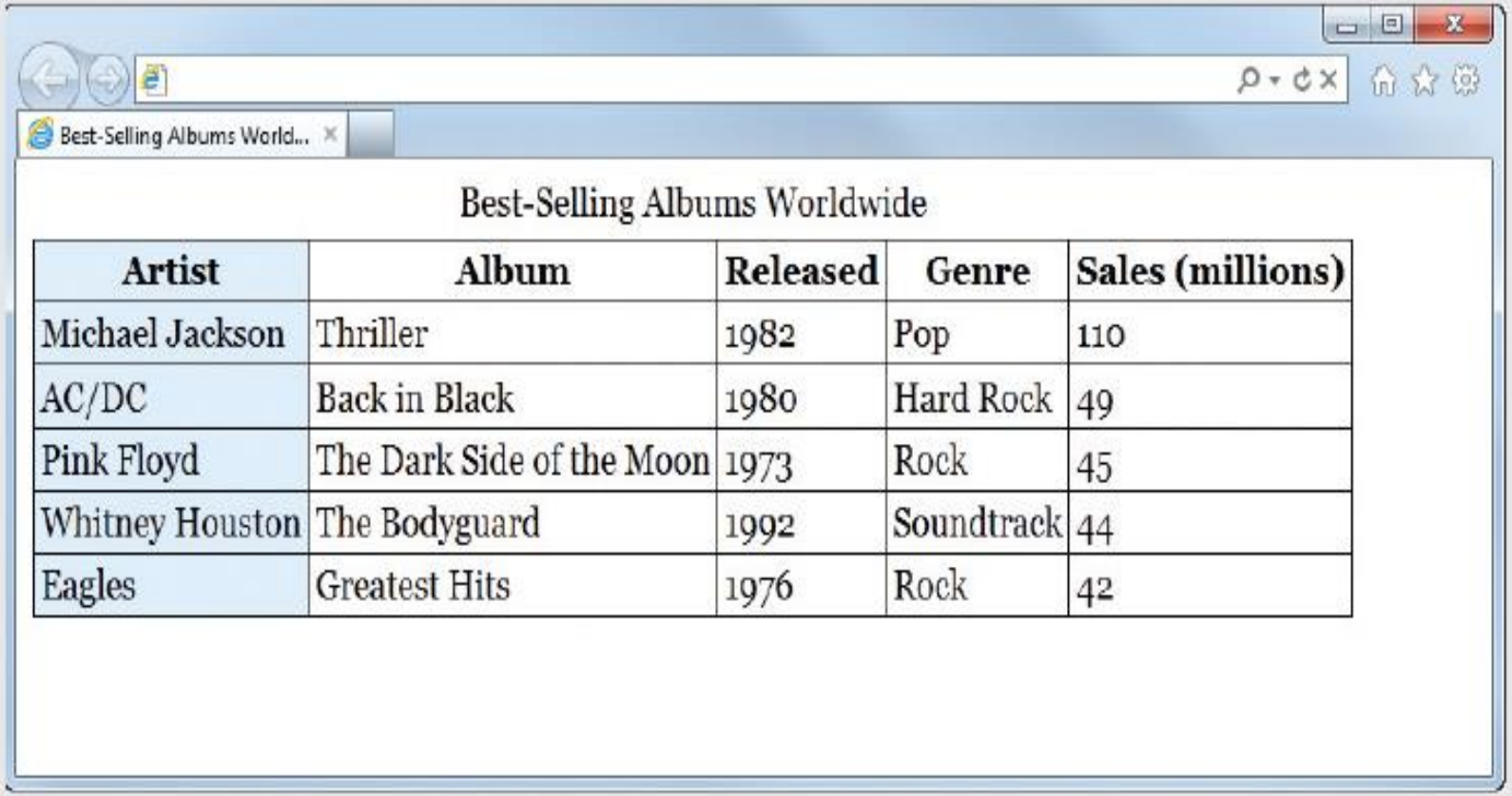
Grouping Columns

- The <colgroup> and <col> elements allow you to apply style characteristics to groups of columns or individual columns
- The <colgroup> element has a span attribute that lets you set the number of columns specified in the group
- The <col> element lets you specify style characteristics for individual columns

Artist	Album	Released	Genre	Sales (millions)
Michael Jackson	Thriller	1982	Pop	110
AC/DC	Back in Black	1980	Hard Rock	49
Pink Floyd	The Dark Side of the Moon	1973	Rock	45
Whitney Houston	The Bodyguard	1992	Soundtrack	44
Eagles	Greatest Hits	1976	Rock	42

Figure 10-6: Applying styles to column groups

© 2015 Cengage Learning®



Artist	Album	Released	Genre	Sales (millions)
Michael Jackson	Thriller	1982	Pop	110
AC/DC	Back in Black	1980	Hard Rock	49
Pink Floyd	The Dark Side of the Moon	1973	Rock	45
Whitney Houston	The Bodyguard	1992	Soundtrack	44
Eagles	Greatest Hits	1976	Rock	42

Figure 10-7: Selecting one column and applying a background color

© 2015 Cengage Learning®

Styling the Caption

- You can position the caption on the top or bottom of the table using the caption-site property
- You can also apply other style properties to enhance the caption text:

```
caption {text-align: left;
font-style: italic;
padding-bottom: 10px;
}
```

Figure 10-8: Styled caption

© 2015 Cengage Learning®

Styling Table Borders

- By default, table borders are turned off
- You can add borders using CSS
- Borders can be applied to the whole table, to individual rows, and to individual cells

Styling Table Borders

- To create a table with an outside border only:

```
table {
border: solid 1px black;
border-collapse: collapse;
}
```

Figure 10-9: Table with outside border only

© 2015 Cengage Learning®

Styling Table Borders

- To specify borders for each cell, use a separate style rule:

```
table {
border: solid 1px black;
border-collapse: collapse;
}
th, td {
border: solid 1px black;
}
```

Best-Selling Albums Worldwide

Artist	Album	Released	Genre	Sales (millions)
Michael Jackson	Thriller	1982	Pop	110
AC/DC	Back in Black	1980	Hard Rock	49
Pink Floyd	The Dark Side of the Moon	1973	Rock	45
Whitney Houston	The Bodyguard	1992	Soundtrack	44
Eagles	Greatest Hits	1976	Rock	42

Figure 10-10: Table with outside borders and cell borders

© 2015 Cengage Learning®

Styling Table Borders

- You can also style individual rows or cells and apply cell borders

```
th {
border-bottom: solid thick blue;
background-color: #ccddee;
}
```

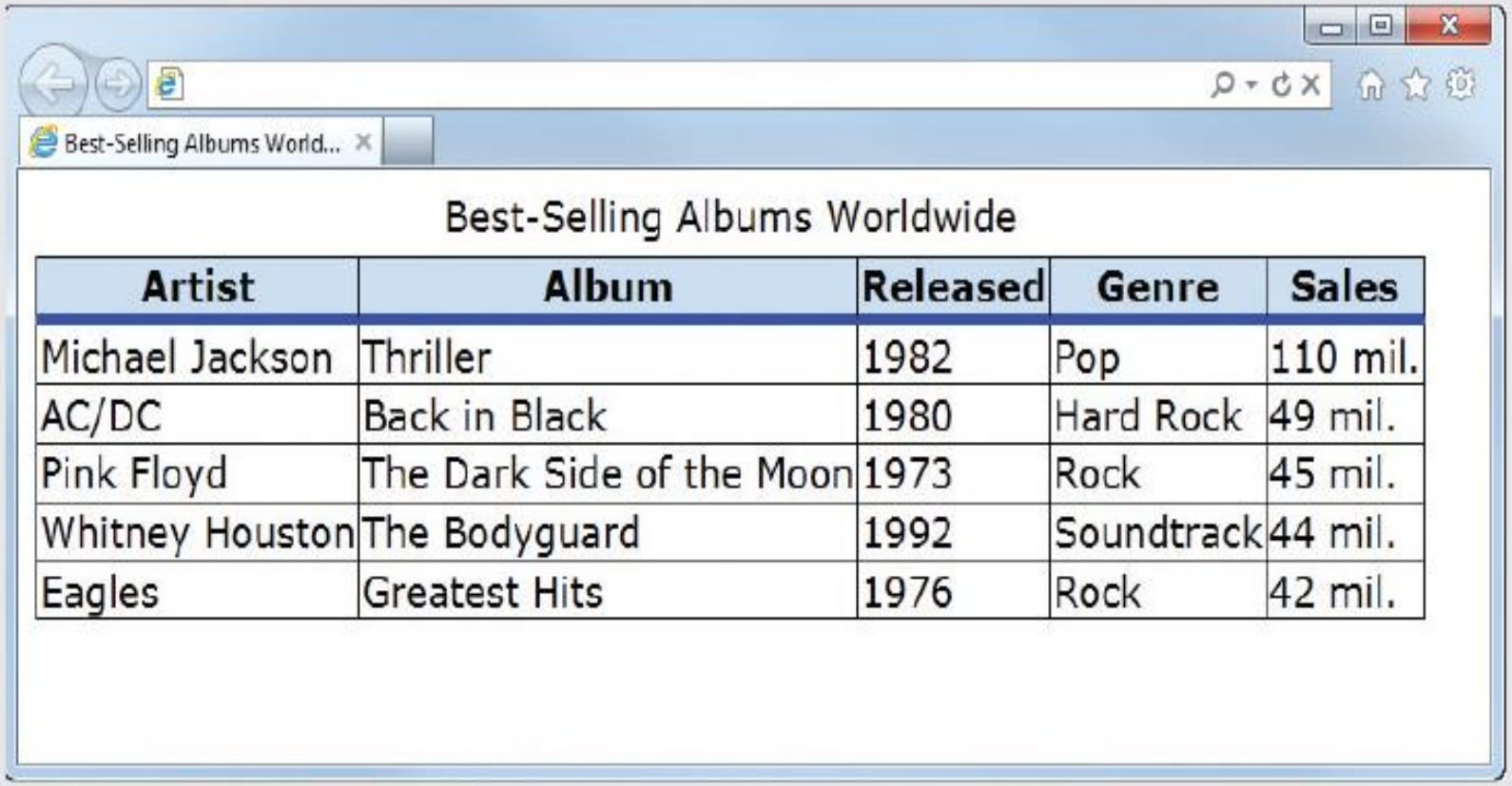


Figure 10-11: Table header row with custom bottom border

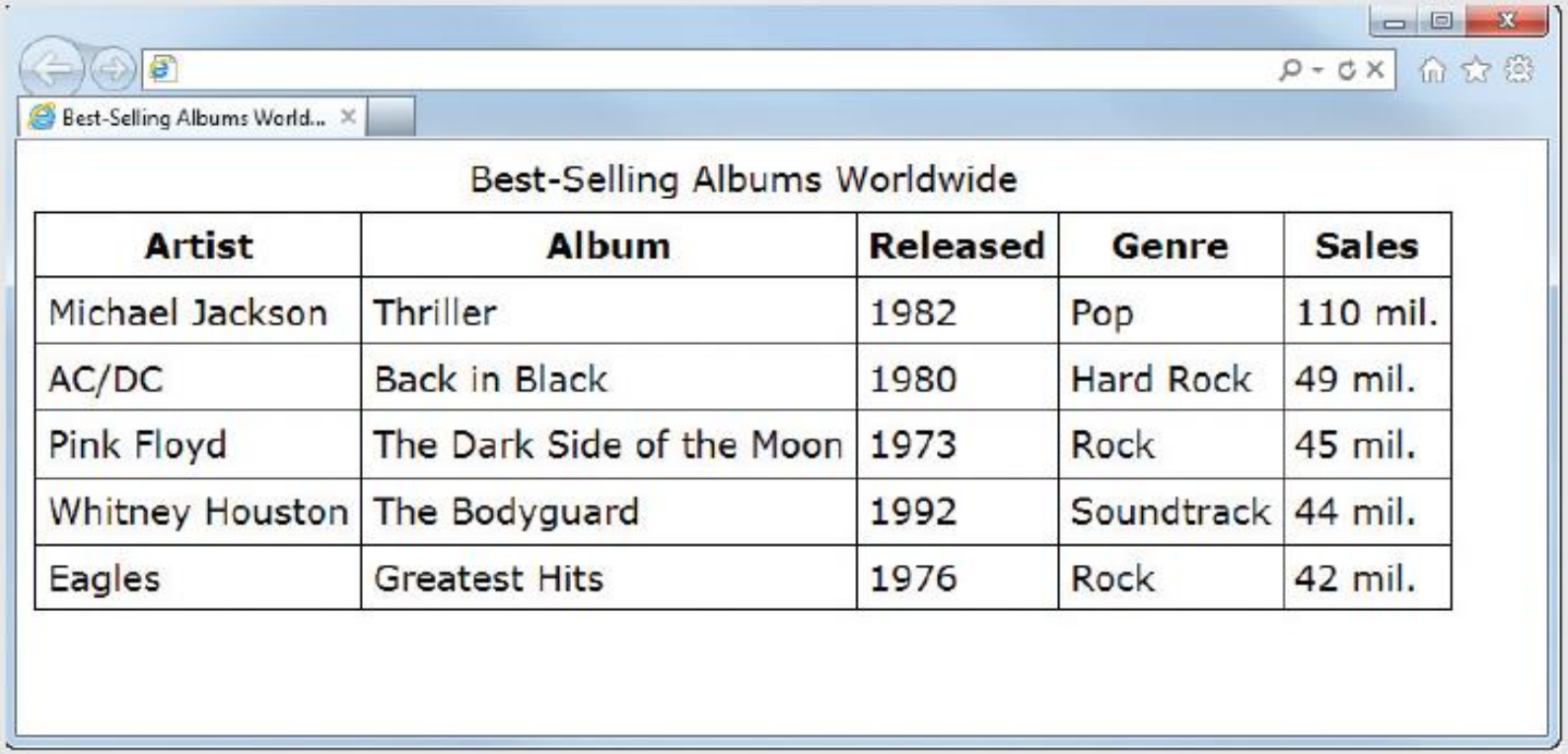
© 2015 Cengage Learning®

Applying Padding, Margins, and Floats to Tables

Using Padding

- You can enhance the legibility of your table data with padding
- This style rule adds five pixels of padding to both types of table data elements

```
th, td {padding: 5px;}
```



Artist	Album	Released	Genre	Sales
Michael Jackson	Thriller	1982	Pop	110 mil.
AC/DC	Back in Black	1980	Hard Rock	49 mil.
Pink Floyd	The Dark Side of the Moon	1973	Rock	45 mil.
Whitney Houston	The Bodyguard	1992	Soundtrack	44 mil.
Eagles	Greatest Hits	1976	Rock	42 mil.

Figure 10-12: Table with 5 pixels of padding in each cell

© 2015 Cengage Learning®

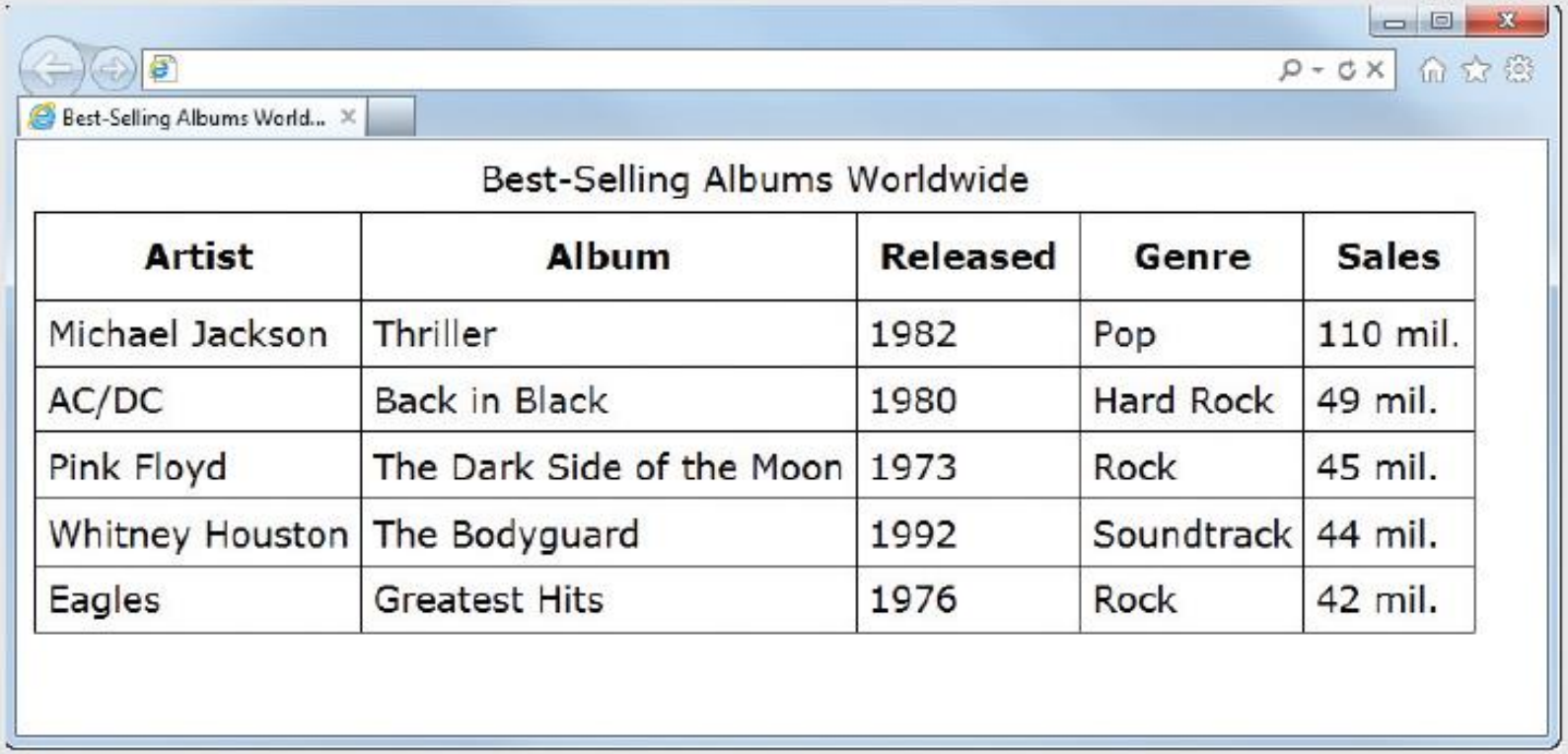


Figure 10-13: Table with 5 pixels of padding in each data cell and 10 pixels in header cell

© 2015 Cengage Learning®

Using Margins and Floats

- Tables can be floated
- Use margins to add white space around floating tables

```
table.best {
font-family: verdana;
border: solid 1px black;
border-collapse: collapse;
float: left;
margin-right: 20px;
margin-bottom: 10px;
}
```

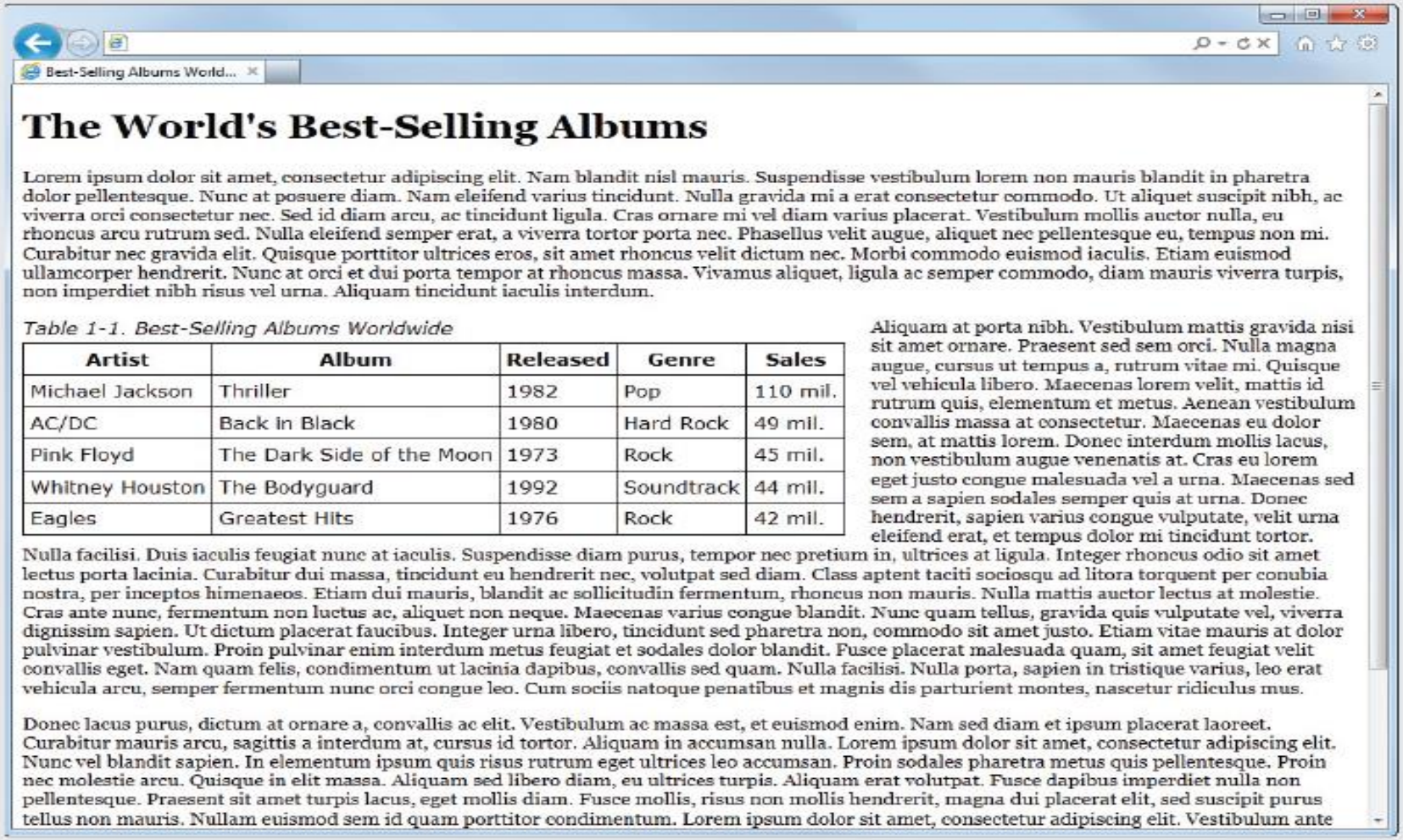


Figure 10-14: Table floated to the left with right and bottom margins

© 2015 Cengage Learning®

Styling Table Background Colors

- You can apply background colors to:
  - Entire table
  - Single rows or cells
  - Column groups of individual columns
- You can alternate colors for different rows
- Add hover interactions

Figure 10-15: Styling table background colors

© 2015 Cengage Learning®

Creating Alternate Color Rows

- Table data is easier to read when alternate rows have a distinguishing background color
- Write a style rule for the odd or even row using a class selector

```
tr.odd td {background-color: #eaead5;}
```

Figure 10-16: Styling alternate table rows

© 2015 Cengage Learning®

Creating Background Hover Effects

- You can add interactivity to your table with hover effects
- When the user hovers the pointer over a cell or row, the formatting can change

```
td:hover {
color: white;
background-color: #722750;
}
```

Figure 10-17: Table cell hover

© 2015 Cengage Learning®

Figure 10-18: Table row hover

© 2015 Cengage Learning®

Summary

- Use tables for presentation of data, not for page layout
- Use the grouping elements to apply styles to groups of rows or columns or to the header, body, and footer of a table
- Apply borders to both the <table> and cell (<th> and <td>) elements to display a table border on the entire table
- Use the border-collapse property to make table data more legible

Summary

- Always use CSS to add presentation style to tables
- Use padding to add space within your cells to make your data more legible
- You can float tables and add margins with the box model properties
- Specify background colors or hovers to aid in the legibility of your data

Thank you