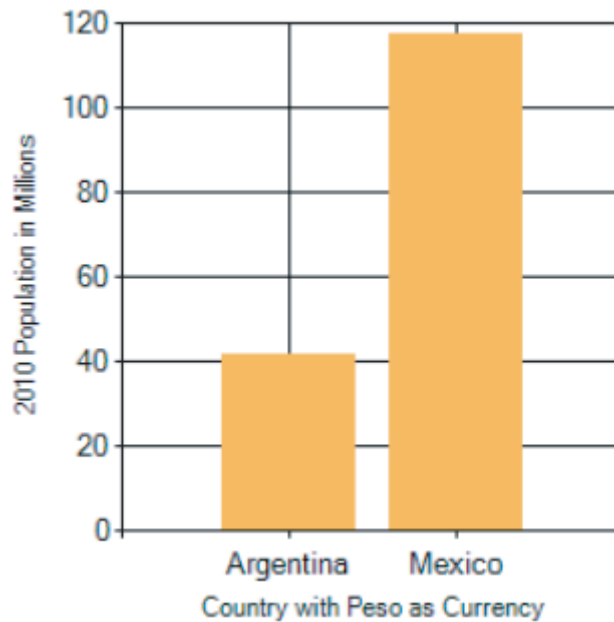


**Solution to Practice Problems 12.3**

1. There is no need to carry out the four stages from the walkthrough, since we have already created an object model and LinqDataSource control for this database. The following steps create the new program, and Fig. 12.30 shows the bar chart that is produced:
  - (a) Start a new Web program with the name PracticeProb and then close the program.
  - (b) Use the process for building on an existing Web program discussed at the end of Section 12.1 to make PracticeProb a clone of the program created in the walkthrough.



**FIGURE 12.30** Output of Practice Problem.

- (c) Open PracticeProb in VWD and change the query to the following:

```
Dim query = From country In mcDC.Countries
             Where country.monetaryUnit = "peso"
             Select country.name, country.pop2010
```

- (d) Change the string in the next to last line of the code from “City” to “Country with Peso as Currency”.

## CHAPTER 12 SUMMARY

1. *Visual Web Developer* (VWD) is used to create programs that reside on a server and run in the Web browser of a client computer.
2. There are many similarities between creating a Web program with VWD and creating a Visual Basic Windows program. However, there are some important differences. For one thing, text can be typed and formatted directly into Web pages. Also, not as many controls are available in VWD as in Visual Basic, and controls that are common to both have fewer properties and events in VWD than in Visual Basic.
3. The *table control* is helpful for aligning text and controls in VWD.
4. *Validation controls* allow the browser to check input before it is sent to the server.
5. The *hyperlink control* is used to request different pages from the server.

6. A *postback* occurs when the browser sends a request containing data back to the server for processing.
7. The *page load event* is raised each time the server receives a page request.
8. *Radio-button list* and *check box* controls have the same functionality as their counterparts in Visual Basic. A required field validation control is often used to verify that a radio button has been selected.
9. The *chart control*, along with LINQ to SQL, enhances the programmer's ability to graphically display data retrieved from a database.

## CHAPTER 12 PROGRAMMING PROJECTS

1. Write a program that determines whether or not a person is from New England. People who do not know their state's abbreviation should be able to get help in the form of a list box showing the states and their abbreviations. Figure 12.31 shows the initial Web page at design time. In addition to two text boxes and a button, the page contains a hyperlink control that navigates to the help page in Fig. 12.32 and a required field validation control that verifies the top text box. (When the help page is loaded, the file USStates.txt should be used to populate the list box. This file contains information about each of the 50 states. Each record of the file contains four fields—name, abbreviation, land area (in square miles), and population in the year 2000. The records are ordered by the states' dates of entry into the union.) After a state abbreviation is typed into the input text box and the button is clicked on, the word YES or NO should be displayed in the *Answer* text box.

FIGURE 12.31 Initial page in design mode.

FIGURE 12.32 Help page during run time.



VideoNote  
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2. Write a Web program that uses the Megacities.mdf database and displays the interface shown in Fig. 12.33. After the user makes a selection from each list of radio buttons and clicks on the *Display Bar Chart* button, the requested bar chart should be displayed. Use two RequiredFieldValidator controls to ensure that selections are made from both lists.

## Megacities Population Bar Charts

**Year**      **Order**

☒ 2010    ☐ Ascending  
☐ 2015    ☒ Descending

Display Bar Chart

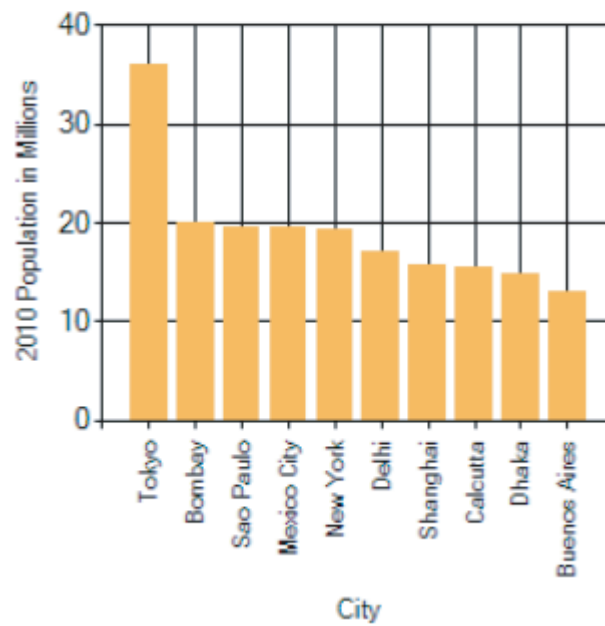


FIGURE 12.33 Possible outcome of Programming Project 2.