27. The _____ window shows your application's form. This is where you design your application's user interface by placing controls on the form that appears when your application executes.
28. When you want to place a Button, Label, TextBox, or other control on an application's form, use the mouse to select it in the _____ and drag it onto the form in the *Designer* window.
29. You can access the full documentation for Visual Studio by clicking _____ on the menu bar, and then selecting *View Help*.
30. A(n) _____ is a small box that is displayed when you hold the mouse cursor over a button on the toolbar or in the *Toolbox* for a few seconds.

Short Answer

1. What is the difference between main memory and secondary storage?
2. What is the difference between operating system software and application software?
3. What is an object?
4. What is a control?
5. Briefly describe what an event-driven program is.
6. From what you have read in this chapter, describe the difference between a Label control and a TextBox control. When is it appropriate to use one or the other?
7. When creating a Visual Basic application, you will spend much of your time doing what three things?
8. What is a form?
9. Summarize the mandatory rules that you must follow when naming a control.
10. What is a keyword?
11. What is the purpose of inserting comments in a program?
12. What is language syntax?
13. What is a syntax error?
14. What is a logic error?
15. What is an operator?
16. What is a flowchart?
17. What is pseudocode?
18. What default name will Visual Basic give to the first Label control that you place on a form? What default name will Visual Basic assign to the first TextBox control that you place on a form?
19. What property determines the text that is displayed by a Label control?
20. What is Auto Hide? How do you turn Auto Hide on or off?
21. What is the *Toolbox* window in Visual Studio?
22. What is the standard toolbar in Visual Studio?
23. What is a ToolTip?
24. If you do not see the *Solution Explorer* window in Visual Studio, how do you display it?
25. If you do not see the *Properties* window in Visual Studio, how do you display it?
26. Figure 1-30 shows the Visual Studio IDE. What are the names of the four areas indicated in the figure?

Programming Challenges

1. **Carpet Size**

   You have been asked to create an application for a carpet sales and installation business. The application should allow the user to enter the length and width of a room and calculate the room's area in square feet. The formula for this calculation is

   $$Area = Length \times Width$$

   In this exercise, you will gain practice using Steps 1 through 6 of the programming process described in Section 1.4:

   1. Clearly define what the application is to do.
   2. Visualize the application running on the computer and design its user interface.
   3. Determine the controls needed.
   4. Define the values of each control's relevant properties.
   5. Determine the event handlers and other code needed for each control.
   6. Create a flowchart or pseudocode version of the code.

   Step 1: Describe the following characteristics of this application:

   Purpose
   Input
   Process
   Output

   Step 2: Draw a sketch of the application's form and place all the controls that are needed.

   Step 3: Make a list of the controls you included in your sketch. List the control type and the name of each control.

   Step 4: List the value of the Text property for each control, as needed. (Remember, some controls do not have a Text property.)

   Step 5: List each method needed. Give the name of each method and describe what each method does.

   Step 6: For each method you listed in Step 5, draw a flowchart or write pseudocode.

2. **Available Credit**

   A retail store gives each of its customers a maximum amount of credit (commonly known as a credit limit). A customer's available credit is determined by subtracting the amount of credit used by the customer from the customer's maximum amount of credit. As you did in Programming Challenge 1, perform Steps 1 through 6 of the programming process to design an application that determines a customer's available credit.

VideoNote
Solving the Sales Tax Problem

3. **Sales Tax**

   Perform Steps 1 through 6 of the programming process to design an application that gets from the user the amount of a retail sale and the sales tax rate. The application should calculate the amount of the sales tax and the total of the sale.

4. **Account Balance**

   Perform Steps 1 through 6 of the programming process to design an application that gets from the user the starting balance of a savings account, the total dollar amount of the deposits made to the account, and the total dollar amount of withdrawals made from the account. The application should calculate the account balance.