Answers to Knowledge Check Chapter 1

1. a. accept input data
    b. process the data
    c. create output data, or information

2. Computer hardware is the physical equipment associated with a computer such as the CPU, printer, and monitor. Computer software is a set of electronic instructions that directs the computer hardware to perform tasks.

3. Matching
    a-2
    b-4
    c-8
    d-3
    e-1
    f-6
    g-5
    h-7

4. An event means the user has initiated an action that causes the program to perform the type of processing called for by the user's action.
    (Student can give any example of an event in an event driven program)
    Example 1: Enter an account number and click the Display Account Balance button to display the account balance.
    Example 2: Click a Reset Window button to clear text boxes in the user interface.

5. Some examples of the differences between an input and output operation are:
    1. User enters account number (input); program displays account balance (output).
    2. User enters three test scores (input); program displays the average test score (output).

6. The student can list any 3 databases that they could be found in:
    College Student Database
    Driver License Database
    Social Security Database

7. Syntax is a strict set of usage rules that a developer uses when coding a program. The reason syntax is important is that even a single syntax error can cause a program to execute improperly.

8. A Toolbox in Visual Studio 2017 contains .NET components that you can use to develop the graphical user interface for the program. It saves you time since you can place buttons, picture boxes, labels, radio buttons, and other objects in the window.

9. The Button object properties could be the size of the button and the text that appears within the button.

10. Visual Basic, Visual C#, C++, F#, JavaScript

11. The Windows Store (online location maintained by Microsoft)

12. Visual Basic has a wide range of productivity features that enable developers to quickly generate high-quality software applications for Windows. VB is also English-like and one of the easier enterprise-level programming languages to learn.

13. A Microsoft account can be used in Visual Studio 2017 to create a Windows Store app and synchronize your account settings.

14. A developer can write code one time and save it as a class. Then, all other programs can use the code when required. A class can be stored in a class library, which makes the class available to all developers.

15. The difference between a class and an object is that a class acts as a general template and an object is a specific item generated based on the class template. Examples of a class are: Button class, ADO.NET class, and ASP.NET class. Examples of an object are: button, text box, and picture box.

16. ADO.NET provides the functionality for a program to perform the four primary tasks required when working with a database: get the data, examine the data, edit the data, and update the data.

17. The process of translating statements written by the developer is called program compilation. Program compilation for Visual Basic 2017 creates a set of electronic code expressed in an intermediate language called Microsoft Intermediate Language (MSIL).

18. Five types of applications are Windows Classic Desktop, Universal Windows Apps, Web/Cloud, database, and HoloLens headset apps.

19. Answers may vary. Students should have 3 YouTube videos about the HoloLens.

20. Answers may vary. Students should display the cost and specifications of the HoloLens.