

Lesson 2-1: The Interaction of Hardware and Software

Figure 2-1

Microsoft Excel is an example of a software application program.

Figure 2-2

How hardware and software interact.

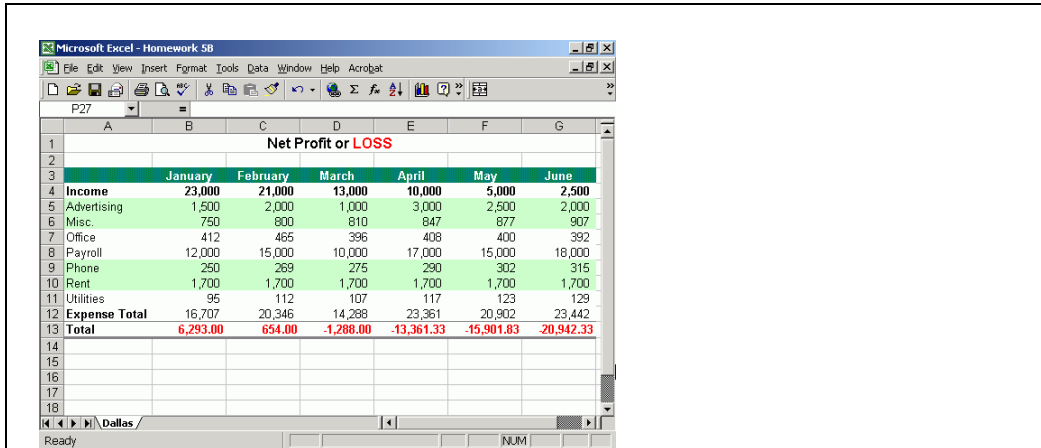


Figure 2-1

IC3

Objective: 1.2.1.1
Req. File: None

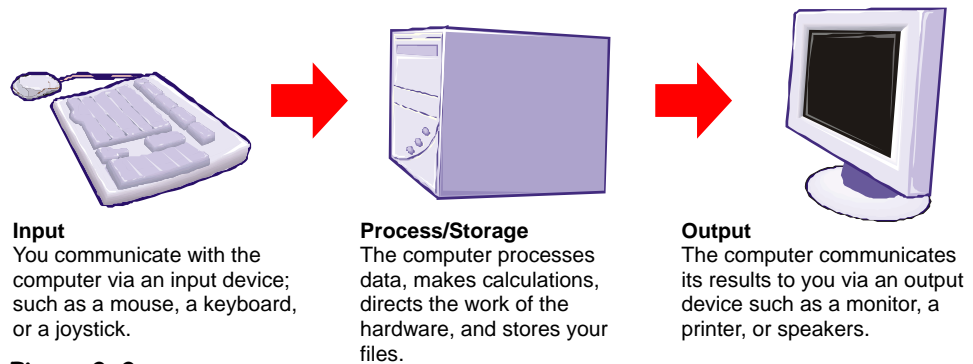


Figure 2-2

The two basic components that make up a computer are *hardware* and *software*, and you simply can't have one without the other. You already know that hardware includes the computer's monitor, case, keyboard, mouse, and printer. This chapter will focus entirely on software.

Software refers to the various computer programs that tell hardware how to operate. An application program is a software program that helps you accomplish a certain task, such as writing a letter, browsing the Internet, or playing a game. Examples include word-processing programs, spreadsheet programs, database programs, and games. You may have used applications such as Microsoft Excel or Corel WordPerfect in the past, and if so, you know just how easy they are to use. All you have to do is tell the software what you're trying to do, and then the software instructs the hardware.

Hardware and software interact in many different ways, including:

- **Input**

Input is the process of entering information into a computer. Data is inputted into a computer via an input (hardware) device, such as a keyboard, mouse, scanner, etc. Different devices enter different types of information; for example, a keyboard is used to enter text and numbers while a mouse is used for selecting items on the screen.

The user interacts with software by giving commands, such as typing commands with a keyboard and selecting menu options with the mouse.

- **Process/Storage**

A computer processes data by applying rules, or algorithms, to the data. The Central Processing Unit (CPU) does all the processing, such as applying addition rules when giving a sum function in a spreadsheet.

The storage function is handled by any number of drives (hard, floppy, Zip, tape-backup, CD/DVD-ROM) or disks (compact discs or floppy diskettes).

- **Output**

Output is the result of data processing, and refers to how the computer presents information to the user. Examples of computer output include text appearing on the screen in a word processor, calculated numbers appearing in a spreadsheet, and hard copy being produced by a printer.

An output is any device that lets the computer talk to you, such as a monitor, printer, or speakers.

Got it? Great! Continue on to the next lesson to learn how software is developed.

 **Quick Reference**

Examples of How Hardware and Software Interact Include:

1. Input
2. Processing/Storage
3. Output