普通高等教育计算机规划教材

计算机专业英语

第 2 版

范玉涛　刘　敏　张　玲　编著

提供电子教案

下载网址 http://www.cmpedu.com

机械工业出版社
CHINA MACHINE PRESS

普通高等教育计算机规划教材

计算机专业英语

第2版

范玉涛　刘　敏　张　玲　编著

机械工业出版社

本书根据计算机最新发展趋势，选取涉及软件、硬件和计算机应用方面的英文素材，旨在提高读者的计算机专业英语阅读理解能力。内容包括：计算机概述；计算机系统基础；数据、信息和文件；计算机机箱内部概观；数据及其表示；计算机软件基础；系统软件；常见的操作系统；应用软件；计算机程序设计；数据通信；计算机网络；因特网和万维网；数据安全；数据压缩和人工智能的基本知识。

本书精心选材，每章均包含相应内容的英文素材以及中文对照、新词和短语及计算机术语，还有课外阅读材料。为了指导读者学习掌握相关专业英语内容，每章都给出学习目标；课后还给出了大量的练习材料。另外，为了加强读者阅读理解能力，每章都包含专业英语语法。

本书可作为计算机相关专业的专业英语教材，也可以作为广大英语和计算机爱好者专业英语学习的参考书。

本书配套授课电子课件，需要的教师可登录 www.cmpedu.com 免费注册、审核通过后下载，或联系编辑索取（QQ：241151483，电话：010-88379753）。

图书在版编目(CIP)数据

计算机专业英语/范玉涛，刘敏，张玲编著. —2 版. —北京：机械工业出版社，2012.8
普通高等教育计算机规划教材
ISBN 978-7-111-39543-0

Ⅰ.①计… Ⅱ.①范… ②刘… ③张… Ⅲ.①电子计算机—英语—高等学校—教材 Ⅳ.①H31

中国版本图书馆 CIP 数据核字（2012）第 198291 号

机械工业出版社(北京市百万庄大街 22 号 邮政编码 100037)
责任编辑：郝建伟 王晓艳
责任印制：杨 曦
北京圣夫亚美印刷有限公司印刷
2012 年 11 月第 2 版 · 第 1 次印刷
184mm×260mm · 13 印张 · 321 千字
0001—3000 册
标准书号：ISBN 978-7-111-39543-0
定价：29.00 元

凡购本书，如有缺页、倒页、脱页，由本社发行部调换

电话服务		网络服务	
社服务中心	:(010)88361066	教材网	:http://www.cmpedu.com
销售一部	:(010)68326294	机工官网	:http://www.cmpbook.com
销售二部	:(010)88379649	机工官博	:http://weibo.com/cmp1952
读者购书热线	:(010)88379203	**封面无防伪标均为盗版**	

出 版 说 明

信息技术是当今世界发展最快、渗透性最强、应用最广的关键技术，是推动经济增长和知识传播的重要引擎。在我国，随着国家信息化发展战略的贯彻实施，信息化建设已进入了全方位、多层次推进应用的新阶段。现在，掌握计算机技术已成为21世纪人才应具备的基础素质之一。

为了进一步推动计算机技术的发展，满足计算机学科教育的需求，机械工业出版社聘请了全国多所高等院校的一线教师，进行了充分的调研和讨论，针对计算机相关课程的特点，总结教学中的实践经验，组织出版了这套“普通高等教育计算机规划教材”。

本套教材具有以下特点：

1）反映计算机技术领域的新发展和新应用。

2）为了体现建设“立体化”精品教材的宗旨，本套教材为主干课程配备了电子教案、学习与上机指导、习题解答、多媒体光盘、课程设计和毕业设计指导等内容。

3）针对多数学生的学习特点，采用通俗易懂的方法讲解知识，逻辑性强、层次分明、叙述准确而精炼、图文并茂，使学生可以快速掌握，学以致用。

4）符合高等院校各专业人才的培养目标及课程体系的设置，注重培养学生的应用能力，强调知识、能力与素质的综合训练。

5）注重教材的实用性、通用性，适合各类高等院校、高等职业学校及相关院校的教学，也可作为各类培训班和自学用书。

希望计算机教育界的专家和老师能提出宝贵的意见和建议。衷心感谢计算机教育工作者和广大读者的支持与帮助！

机械工业出版社

前　言

随着计算机技术的飞速发展，各种新的信息和技术不断涌现，大部分的新技术文献都是采用英文发表的，这对于各级各类高层次的计算机人才培养提出了现实的要求，那就是过硬的专业英语能力。因此，很多高等院校都开设了计算机专业英语课程。

本书紧密结合当前计算机最新技术，选取包含计算机软件、硬件和应用等方面的英文素材，共分16章，力求为广大读者提供计算机专业领域最新的技术和研究热点的学习内容，具体包括：

第1章计算机概述，介绍计算机的概念、计算机硬件系统的构成、计算机软件的基本概念。第2章计算机系统基础，介绍基于冯·诺依曼模型的计算机系统的组成元素、CPU（中央处理器单元）、内存与外存、输入/输出系统、计算机总线的概念和计算机网络的基本概念。第3章数据、信息和文件，介绍数据的基本概念、模拟信息和数字信息及计算机文件。第4章计算机机箱内部概观，详细介绍计算机主机内部的构成、集成电路的概念、主板的构成、RAM芯片和各种扩展卡、外存储器的种类和计算机电源。第5章数据及其表示，介绍计算机中使用的各种类型的数据、数据在计算机内的表示和各种类型的数据在计算机内的表示方法。第6章计算机软件基础，介绍计算机程序和软件的概念、计算机软件的种类和软件盗版。第7章系统软件，介绍系统软件的概念和构成、操作系统的功能和种类、实用工具、设备驱动程序和语言翻译工具。第8章常见的操作系统，介绍微软DOS和Windows操作系统的发展历史、苹果公司的Mac操作系统的发展演变、UNIX和Linux操作系统的基础知识和各种常见的移动操作系统。第9章应用软件，介绍各种常用的应用软件，包括商务应用软件、通信类软件、多媒体应用软件、教育培训软件以及其他新兴的软件。第10章计算机程序设计，介绍程序设计的概念、算法和算法的表示方法、三大流程控制结构、各类程序设计语言、结构化和面向对象程序设计的概念。第11章数据通信，介绍数据通信的基本概念、信道的类型、通信媒介的种类、有线通信与无线通信。第12章计算机网络，介绍计算机网络的演化历史、协议的概念和种类、拓扑结构的概念和种类、网络操作系统的类型。第13章因特网和万维网，介绍因特网的起源、TCP/IP协议、因特网服务提供商的概念和种类、因特网地址和域名、万维网的概念和各种应用。第14章数据安全，介绍造成数据出错的各种原因，确保计算机数据安全的各种措施。第15章数据压缩，介绍数据压缩的基本概念、有损压缩和无损压缩、各种类型的数据（文本、图像、视频和音频）的压缩方法。第16章人工智能，介绍人工智能和图灵测试的概念、人工智能研究的分支领域以及人工智能的应用。

本书每个单元都由9大部分构成：学习目标、课文、生词表、专业术语表、专业英语语法、练习、参考翻译、阅读材料和练习答案，旨在全面提高读者的计算机知识水平和专业英语阅读翻译等方面的能力。

由于计算机发展日新月异，新知识、新单词层出不穷，书中有些词汇尚无规范译法，加上作者水平有限，书中难免有错误之处，恳请广大读者指正。

编　者

此为试读，需要完整PDF请访问：www.ertongbook.com

目　录

出版说明
前言
Part 1 Fundamentals of Computers … 1
Chapter 1 Introduction to Computers …… 1
1.1 What Is a Computer? …… 1
1.2 Getting Started with Your Computer …… 2
1.2.1 System Unit …… 2
1.2.2 Storage Devices …… 2
1.2.3 Monitor …… 3
1.2.4 Mouse …… 4
1.2.5 Keyboard …… 4
1.2.6 Printer …… 4
1.3 Getting Started with Software …… 5
1.3.1 Components of Windows Desktop … 5
1.3.2 Windows Software Controls …… 6
New Words and Phrases …… 7
Computer Terms …… 7
Grammar …… 8
Exercises …… 9
Reading Material …… 9
Reference Translation …… 11
Chapter 2 Computer System Basics …… 17
2.1 The Von Neumann Model of the PC …… 17
2.2 CPU …… 17
2.3 Memory vs. Storage …… 18
2.4 Input and Output …… 18
2.5 Computer Bus …… 19
2.6 Computer Networks …… 20
New Words and Phrases …… 21
Computer Terms …… 21
Grammar …… 21
Exercises …… 22
Reading Material …… 22
Reference Translation …… 23
Chapter 3 Data, Information and Files …… 27
3.1 Data and Computers …… 27
3.2 Analog and Digital Information … 27
3.3 Computer Files …… 28
3.3.1 File Types …… 28
3.3.2 Directories …… 29
3.3.3 File Path …… 30
New Words and Phrases …… 30
Computer Terms …… 30
Grammar …… 31
Exercises …… 31
Reading Material …… 32
Reference Translation …… 33
Chapter 4 A Look Inside the Computer Case …… 37
4.1 Integrated Circuits …… 37
4.2 The Motherboard …… 38
4.2.1 CPU …… 38
4.2.2 RAM Chips …… 39
4.2.3 Expansion Slot/Card …… 39
4.2.4 BIOS Chip …… 40
4.3 Storage Drives …… 41
4.4 Power Supply Unit …… 41
New Words and Phrases …… 42
Computer Terms …… 42
Grammar …… 42
Exercises …… 44
Reading Material …… 44
Reference Translation …… 45

Part 2 Computers Software ····· 50
Chapter 5 Data and Its Representation ····· 50
5.1 Types of Data ····· 50
5.2 Data inside the Computer ····· 50
5.3 Representing Data ····· 51
5.3.1 Representing Text ····· 51
5.3.2 Representing Numbers ····· 51
5.3.3 Representing Images ····· 52
5.3.4 Representing Sound ····· 54
5.3.5 Representing Video ····· 54
New Words and Phrases ····· 55
Computer Terms ····· 55
Grammar ····· 55
Exercises ····· 57
Reading Material ····· 57
Reference Translation ····· 58
Chapter 6 Computer Software Basics ····· 63
6.1 Computer Programs ····· 63
6.2 Computer Software and Categories ····· 64
6.2.1 System Software ····· 64
6.2.2 Application Software ····· 64
6.3 Software Piracy ····· 64
New Words and Phrases ····· 66
Computer Terms ····· 67
Grammar ····· 67
Exercises ····· 69
Reading Material ····· 70
Reference Translation ····· 70
Chapter 7 System Software ····· 74
7.1 System Software and Its Components ····· 74
7.2 Operating System ····· 74
7.2.1 Basics of Operating System ····· 75
7.2.2 Types of Operating System ····· 75
7.3 Utilities ····· 76
7.4 Device Drivers ····· 76
7.5 Language Translators ····· 77
New Words and Phrases ····· 77
Computer Terms ····· 77
Grammar ····· 77
Exercises ····· 79
Reading Material ····· 80
Reference Translation ····· 80
Chapter 8 Common Operating Systems ····· 84
8.1 Microsoft DOS and Windows ····· 84
8.2 Mac OS ····· 86
8.3 UNIX and Linux ····· 86
8.4 Mobile Operating Systems ····· 87
New Words and Phrases ····· 88
Computer Terms ····· 88
Grammar ····· 89
Exercises ····· 90
Reading Material ····· 90
Reference Translation ····· 91
Chapter 9 Application Software ····· 96
9.1 Business Application Software ··· 96
9.2 Communications Application Software ····· 97
9.3 Multimedia Application Software ····· 97
9.4 Education and Training Software ····· 99
9.5 All the Other Ware Terminology ····· 100
New Words and Phrases ····· 101
Computer Terms ····· 101
Grammar ····· 101
Exercises ····· 102
Reading Material ····· 103
Reference Translation ····· 104
Chapter 10 Computer Programming ····· 109
10.1 Building a Program ····· 109
10.2 Algorithm ····· 109

10.2.1 What is an Algorithm? ····· 109
10.2.2 Algorithm Representation ····· 110
10.3 Three Constructs ····· 111
10.4 Programming Language ····· 112
10.4.1 Low-level Language ····· 112
10.4.2 High-level Language ····· 113
10.5 Structured Programming and Object-oriented Programming ····· 113
New Words and Phrases ····· 113
Computer Terms ····· 114
Grammar ····· 114
Exercises ····· 116
Reading Material ····· 116
Reference Translation ····· 117
Part 3 Computer Application ····· 122
Chapter 11 Data Communication ····· 122
11.1 Data Communication ····· 122
11.2 Communications Channels ····· 122
11.3 Communication Media ····· 123
11.3.1 Twisted Pair Wire ····· 124
11.3.2 Coaxial Cable ····· 124
11.3.3 Fiber Optic Cable ····· 125
11.3.4 Wireless Media ····· 125
New Words and Phrases ····· 126
Computer Terms ····· 126
Grammar ····· 126
Exercises ····· 128
Reading Material ····· 128
Reference Translation ····· 129
Chapter 12 Computer Networks ··· 133
12.1 Evolution of Computer Networks ····· 133
12.2 Protocol ····· 134
12.3 Topology ····· 134
12.3.1 Types of Physical Topology ····· 134
12.3.2 Types of Logical Topology ····· 136
12.4 Network Operating System ····· 137
New Words and Phrases ····· 137
Computer Terms ····· 138
Grammar ····· 138
Exercises ····· 140
Reading Material ····· 141
Reference Translation ····· 142
Chapter 13 Internet and WWW ····· 146
13.1 The Origin of the Internet ····· 146
13.2 TCP/IP ····· 147
13.3 ISP ····· 148
13.4 Internet Address and Domain Name ····· 148
13.5 World Wide Web (WWW) ··· 149
New Words and Phrases ····· 150
Computer Terms ····· 150
Grammar ····· 150
Exercises ····· 151
Reading Material ····· 152
Reference Translation ····· 152
Chapter 14 Data Security ····· 156
14.1 What Can Go Wrong? ····· 156
14.1.1 Operator Error ····· 156
14.1.2 Power Failures, Spikes and Surges ····· 157
14.1.3 Hardware Failure ····· 157
14.2 Viruses ····· 158
14.2.1 Types of Computer Viruses ····· 158
14.2.2 Worms and Trojan Horses ····· 160
14.3 Protecting Yourself ····· 160
New Words and Phrases ····· 161
Computer Terms ····· 161
Grammar ····· 162
Exercises ····· 163
Reading Material ····· 163
Reference Translation ····· 164
Chapter 15 Data Compression ····· 169
15.1 What Is Data Compression? ··· 169
15.2 Lossless Compression and Lossy Compression ····· 169
15.3 Text Compression ····· 170

15.4 Image Compression ····· 171
15.5 Video & Audio Compression ··· 172
New Words and Phrases ····· 173
Computer Terms ····· 173
Grammar ····· 173
Exercises ····· 175
Reading Material ····· 175
Reference Translation ····· 176
Chapter 16 Artificial Intelligence ····· 180
16.1 Artificial Intelligence and Turing Test ····· 180
16.2 Branches of AI ····· 181
16.3 Applications of AI ····· 183
New Words and Phrases ····· 184
Computer Terms ····· 185
Grammar ····· 185
Exercises ····· 186
Reading Material ····· 187
Reference Translation ····· 188
Appendix Key to Exercises ····· 193

Part 1 Fundamentals of Computers

Chapter 1 Introduction to Computers

Objective

After reading this chapter, the reader should be able to:

- ✧ Define the term computer
- ✧ Identify components of a personal computer system
- ✧ Identify major components of the Windows desktop

1.1 What Is a Computer?

The computer is an **acknowledged** symbol of 20th century technology—a tool that has transformed businesses and lives around the world, increased **productivity**, and opened access to vast amounts of knowledge. Computers **relieved** the **drudgery** of simple tasks, and brought new capabilities to complex ones. Engineering ingenuity fueled this revolution, and continues to make computers faster, more powerful and more affordable.

But if you look in a dictionary printed before 1940, you might be surprised to find a computer defined as a person who performs calculations! Prior to 1940, machines designed to perform calculations were referred to as calculators and ***tabulator***s not computers. The modern definition and use of the term "computer" emerged in the 1940s, when the first electronic computing devices were developed.

Most people can **formulate** a mental picture of a computer, but computers do so many things and come in such a variety of shapes and sizes that it might seem difficult to distill their common characteristics into an all-purpose definition. At its core, a computer is a device that accepts input, processes data, stores data and produces output, all according to a series of stored instructions.

Computers work through an interaction of ***hardware*** and ***software***. Hardware refers to the parts of a computer that you can see and touch, including the case and everything inside it. The most important piece of hardware is a tiny rectangular ***chip*** inside your computer called the ***central processing unit***(CPU), or ***microprocessor***. It's the "brain" of your computer—the part that translates ***instruction***s and performs calculations. Hardware items such as your ***monitor, keyboard, mouse, printer,*** and other components are often called hardware devices, or devices.

Software refers to the instructions, or ***program***s, that tell the hardware what to do. A ***word processing program*** that you can use to write letters on your computer is a type of software. The operating system (OS) is software that manages your computer and the devices connected to it. Two well-known operating systems are Windows and Mac OS.

1.2 Getting Started with Your Computer

Your computer—the one you own, the one you use in a school lab, or the one provided to you at work—is technically classified as a ***microcomputer*** and sometimes referred to as a ***personal computer***. A computer runs software (or "programs") that help you accomplish a variety of tasks. A typical computer system consists of several devices as shown in Figure 1-1.

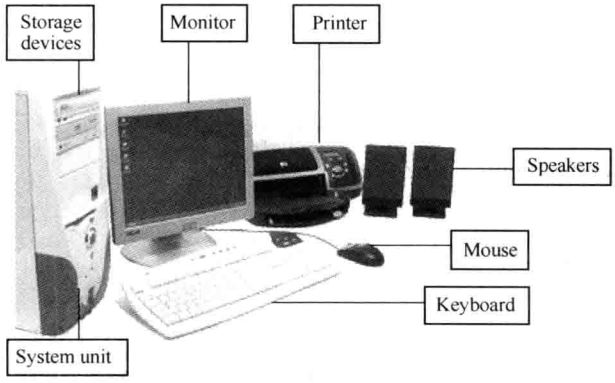


Figure 1-1 Parts of a Typical Desktop Personal Computer

From Figure 1-1, you might already know that there isn't any single part called the "computer". A computer is really a system of many parts working together. Now, let's take a look at each of these parts.

1.2.1 System Unit

The ***system unit*** is the core of a computer system. Usually it's a rectangular box placed on or underneath your desk(Figure1-2). Inside this box are many electronic components that process information. The most important of these components is the central processing unit (CPU), or microprocessor, which acts as the "brain" of your computer. Another component is ***random access memory*** (RAM), which temporarily stores information that the CPU uses while the computer is on. The information stored in RAM is erased when the computer is turned off.

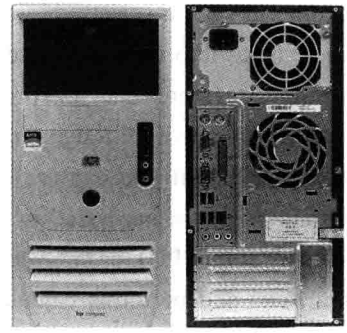


Figure 1-2 Front and Back of System Unit

Almost every other part of your computer connects to the system unit using cables. The cables plug into specific ***port***s (openings), typically on the back of the system unit. Hardware that is not part of the system unit is sometimes called a ***peripheral device*** or device.

1.2.2 Storage Devices

Your computer has one or more ***disk drive***s—devices that store information on a metal or

此为试读,需要完整PDF请访问: www.ertongbook.com

plastic disk. The disk preserves the information even when your computer is turned off. There are several different types of disk drives in your computer.

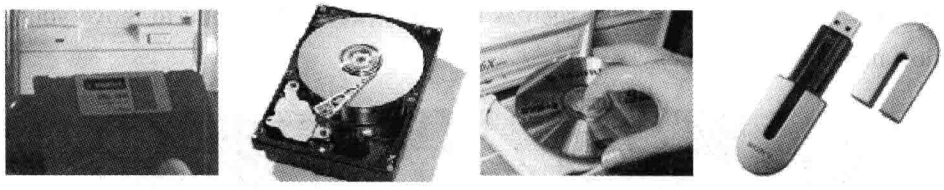
Your computer's hard disk drive stores information on a ***hard disk***, a rigid platter or stack of platters with a magnetic surface. Because hard disks can hold massive amounts of information, they usually serve as your computer's primary means of storage, holding almost all of your programs and files. The hard disk drive is normally located inside the system unit.

Nearly all computers today come equipped with a ***CD*** or ***DVD*** drive, usually located on the front of the system unit. CD drives use lasers to read (**retrieve**) data from a CD, and many CD drives can also write (record) data onto CDs. If you have a recordable disk drive, you can store copies of your files on blank CDs. You can also use a CD drive to play music CDs on your computer. DVD drives can do everything that CD drives can, plus read DVDs. If you have a DVD drive, you can watch movies on your computer. Many DVD drives can record data onto blank DVDs.

Floppy disk drives store information on ***floppy disk***s, also called floppies or diskettes. Compared to CDs and DVDs, floppy disks can store only a small amount of data. They also retrieve information more slowly and are more prone to damage. For these reasons, floppy disk drives are less popular than they used to be, although some computers still include them.

A ***USB flash drive*** is a portable storage device featuring a built-in connector that plugs directly into a computer's ***USB*** port. A USB flash drive requires no card reader, making it easily transportable from one computer to another. USB flash drives offer potential advantages over other portable storage devices, particularly the floppy disk. They are more compact, faster, hold much more data, and have a more durable design.

There are different kinds of disk drives (Figure1-3).



a) b) c) d)

Figure 1-3 Different Types of Disk Drives in Your Computers
a) Floppy Disk Drive b) Hard Disk Drive c) CD/DVD Disk Drive d) USB Flash Drive

1.2.3 Monitor

A monitor displays information in visual form, using text and graphics. The portion of the monitor that displays the information is called the screen. Like a television screen, a computer screen can show still or moving pictures.

There are two basic types of monitors: ***CRT*** (cathode ray tube) monitors and ***LCD*** (liquid crystal display) monitors(Figure1-4). Both types produce sharp images, but LCD monitors have the advantage of being much

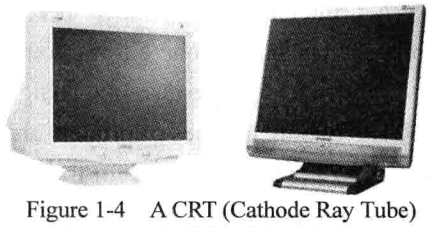


Figure 1-4 A CRT (Cathode Ray Tube) Monitor and a LCD (Liquid Crystal Display) Monitor

thinner and lighter. CRT monitors, however, are generally more expensive.

1.2.4 Mouse

A mouse is a small device used to point to and select items on your computer screen(Figure1-5). Although mice come in many shapes, the typical mouse does look a bit like an actual mouse. It's small, **oblong,** and connected to the system unit by a long wire that resembles a tail. Some newer mice are wireless.

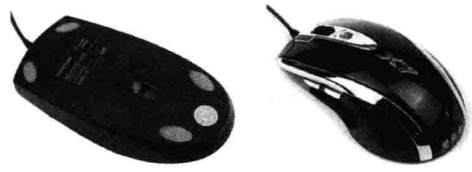


Figure 1-5 Face and Bottom of an Optical Mouse

A mouse usually has two buttons: a primary button (usually the left button) and a secondary button. Many mice also have a wheel between the two buttons, which allows you to scroll smoothly through screens of information.

When you move the mouse with your hand, a pointer on your screen moves in the same direction(The pointer's appearance might change depending on where it's positioned on your screen). When you want to select an item, you point to the item and then click (press and release) the primary button. Pointing and clicking with your mouse is the main way to interact with your computer.

1.2.5 Keyboard

A keyboard is used mainly for typing text into your computer. Like the keyboard on a typewriter, it has keys for letters and numbers, but it also has special keys(Figure1-6).

The ***function key***s, found on the top row, perform different functions depending on where they are used. The ***numeric keypad***, located on the right side of most keyboards, allows you to enter numbers quickly. The **navigation** keys, such as the arrow keys, allow you to move your position within a document or a web page.

Figure 1-6 Ergonomic Keyboard and Standard Keyboard

1.2.6 Printer

A printer transfers data from a computer onto paper. You don't need a printer to use your computer, but having one allows you to print e-mail, cards, invitations, announcements, and other materials. Many people also like being able to print their own photos at home.

The two main types of printers are ***inkjet printer***s and ***laser printer***s(Figure1-7). Inkjet printers are the most popular printers for the home. They can print in black and white or in full color and can produce high-quality photographs when used with special paper. Laser printers are faster and generally better able to handle heavy use.

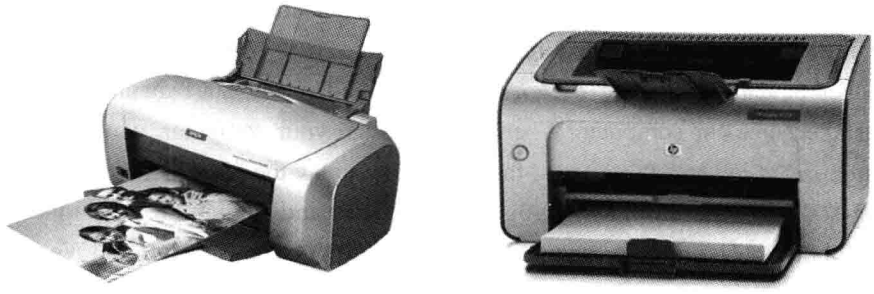


Figure 1-7 An Inkjet Printer and a Laser Printer

1.3 Getting Started with Software

Computer software is a program that enables a computer to perform a specific task, as opposed to the physical components of the system(hardware). This includes application software such as a word processor and system software such as an operating system.

1.3.1 Components of Windows Desktop

Microsoft Windows(usually referred to simply as "Windows")is the most widely used operating system for personal computers. The Windows provides the users Windows Desktop to use their computers easier.

As shown in Figure 1-8, the Windows displays on-screen controls designed to be manipulated by a mouse. You can easily start programs or applications, copy and move files from one place to another and drag and drop files and programs where you want them on the computer.

Figure 1-8 Components of Windows Desktop

The Windows Desktop is usually divided into several areas. The main part of the desktop displays small pictures called ***icons*** that represent software, files and folders containing documents, graphics and other data. The ***Start button*** is used to display the Start menu, which lists all the programs installed on your computer. When working with your computer, you will frequently use the Start button in the lower-left corner of the screen to display the Start menu that provides options for accessing software, finding data, configuring hardware and finding answers to your questions about using Windows. The ***taskbar*** contains the Start button, ***Quick Start bar*** and ***Notification area***. The Quick Start bar is always visible, making it a good place for icons that represent the programs you frequently use. The Notification area displays the current time and the status of programs, devices and Internet connections.

1.3.2 Windows Software Controls

Usually you can use the Start button to launch just about any software that has been installed on your computer. Click the Start button, then the Start menu will list recently accessed software. Click the All Programs option, a list of every software program installed on your computer will appear. You can run a program from this list simply by clicking it. Each software or program appears in a rectangular area called a "window" which includes a title bar, a menu bar, and various controls shown in Figure 1-9.

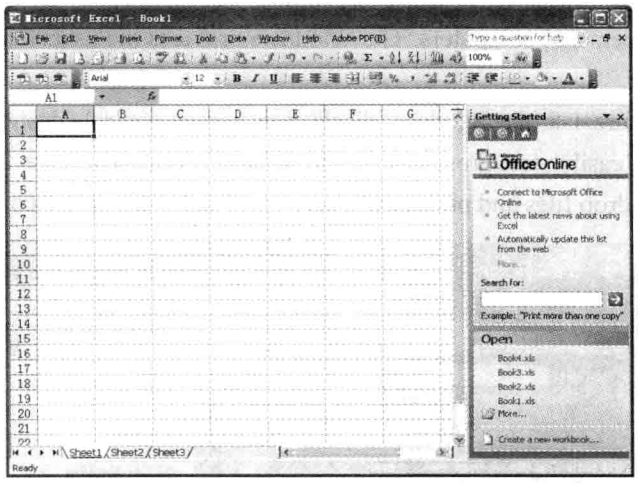


Figure 1-9 Windows Software Controls

The ***Title bar*** is a bar at the top of the window that contains the filename of the open file, the program name and the program window sizing buttons. The ***Menu bar*** is below the Title bar and it is a collection of menus for commonly used commands. Below the Menu bar is the Tool bar and it is the collections of buttons that are ***shortcuts*** to commonly used menu commands. The large workplace is where you complete your work by the software. According to the different software you are running, the appearance of the workplace will be a little different. An area at the bottom of the program window is called ***Status bar***. The Status bar contains information about the open file or the current task on which you are working.

New Words and Phrases

acknowledged	[ək'nɔlidʒid]	*adj.*	公认的
productivity	[ˌprɔdʌk'tiviti]	*n.*	生产力
relieve	[ri'li:v]	*v.*	减轻，解除，援救，救济，换班
drudgery	['drʌdʒəri]	*n.*	辛苦乏味的工作;苦工
formulate	['fɔ:mjuleit]	*v.*	用公式表示，明确地表达，作简洁陈述
retrieve	[ri'tri:v]	*v.*	取回，找回，恢复;【计】检索
oblong	['ɔblɔŋ]	*adj.*	长方形的，椭圆形的
navigation	[ˌnævi'gei∫ən]	*n.*	航海，航空，导航，领航，航行

Computer Terms

tabulator	制表机（一种从穿孔卡上读出数据并将结果或结果的总和打印出来的装置）
hardware	硬件
software	软件
chip	芯片
central processing unit	中央处理单元，简写为 CPU
microprocessor	微处理器
instruction	指令
monitor	显示器
keyboard	键盘
mouse	鼠标
printer	打印机
program	程序
word processing program	文字处理软件（程序）
microcomputer	微型（电子）计算机，简称微型机
personal computer	个人计算机，简称 PC
system unit	系统单元
random access memory	随机存取存储器，简写为 RAM
port	端口
peripheral device	外围设备
disk drive	磁盘驱动器
hard disk	硬盘
CD	光盘，也就是 Compact Disc
DVD	数字化视频光盘，也就是 Digital Video Disc
floppy disk	软盘
USB flash drive	闪存
USB	通用串行总线，也就是 Universal Serial Bus
CRT	阴极射线管，也就是 Cathode Ray Tube
LCD	液晶显示器，也就是 Liquid Crystal Display
function key	功能键
numeric keypad	数字小键盘
inkjet printer	喷墨打印机
laser printer	激光打印机
icon	图标
Start button	“开始”按钮

taskbar	任务栏
Quick Start bar	“快速启动”栏
Notification area	“通知”区
Title bar	“标题”栏
Menu bar	“菜单”栏
shortcut	捷径，快捷键
Status bar	“状态”栏

Grammar

专业英语概述

随着科学技术的飞速发展，充满信息和知识的新时代正向我们走来。信息和知识的爆炸带来了更多的新词汇和新知识，需要我们不断地学习和交流。英语作为一种很受关注和欢迎的世界用语，也面临着新的挑战。大量的科技用语、专业词汇在各行各业和报纸期刊中的不断涌现，形成了一种与日常生活的词语有极大差别的专业英语。诸如计算机英语、医学英语等，各自都有着很强的专业特色，它们都属于科技英语（EST）的范畴。

科技英语或者说专业英语，大多数人都认为就是一般英语加上一些专业词汇。实际上，科技英语在形式、文体和语法结构上都有很多与日常英语迥然不同的特点。

首先，在形式上科技英语和日常英语一样都有口语和书面形式两种。口语形式大多出现在一些科技知识的讲座、广播等场合中，它的特点是用词有含糊的地方，也会出现不完全句或同一句话的重复。而书面形式一般是一些书籍、论文和杂志等，用语正规。但不管哪种形式都少不了大量的专业词汇。

第二，在文体结构上，由于科技英语大多强调简单明了、精练准确，所以会大量地使用一些诸如动名词、分词和不定式等非限定性动词。另外也使用一些名词结构以及像“with+名词”这样的结构，这些都使我们达到简化句子结构、简明表述文章内容的目的。除了精练的特点外，在科技英语中还使用限制条件，以便进一步准确地说明意思。比如在一些科技文章中，有很多描述实验过程等的现象，在设置实验条件时，就常常会出现“假定……”的情况，这时就会用到类似于虚拟语气之类的结构和一些表示假设的词，比如 if、provided 等。

第三，在语气上，大量使用被动语态是科技英语的一大特色。由于被动语态中包含大量信息的主语在句子的开头出现，这样很容易引起读者的注意。另外，在科技英语中的许多句子中常常不指定特定的主语，总是用一些像 it、there 等的词代替具体的主语。出现这种特点主要是因为在科技文章中，我们更关心的是所发生的动作和事实，而对发生动作的主语并不关心。所以在对于科技文章的翻译和理解中，就要找到合适的方法来处理这些被动语态和无特定主语句子的翻译，使得翻译后的句子既不偏离原意又在表达上符合汉语的习惯。

第四，在用词上，科技英语一个最重要的特点就是使用大量的专业词汇。这就要求大家在平时的学习中注意积累，不能按照日常英语的意思来理解这些词语。否则可能弄出许多的笑话。比如 bus 这个词，在日常英语中是公共汽车的意思，但在计算机英语中通常做“总线”来讲，因此就有了 control bus、address bus 和 data bus，分别称为“控制总线”、“地址总线”和“数据总线”，而不是“控制公共汽车”、“地址公共汽车”和“数据公共汽车”。

此为试读，需要完整PDF请访问：www.ertongbook.com