本书荣获1998年全国优秀畅销书(科技类)奖
本书同时荣获江苏省第四次高教科研成果优秀奖
累计销售近20万册 出版10年经久不衰

本书附光盘

计算机英语教程

(第四版)

司爱侠 张强华 编著

電子工業出版社
PUBLISHING HOUSE OF ELECTRONICS INDUSTRY
http://www.phei.com.cn

计算机英语教程

（第四版）

司爱侠　张强华　编著

電子工業出版社
Publishing House of Electronics Industry
北京·BEIJING

内容简介

本书旨在切实提高读者实际使用英语的能力，并遵循立足实用，软件、硬件和网络并重，同时兼顾技术发展热点的原则。

本书体例以课为单元，课文内容选材广泛、风格多样；给出课文中出现的新词，读者由此可以积累计算机专业的基本词汇；给出课文中的常用词组；讲解课文中出现的疑难句子；每单元一个核心，系统地讲述计算机领域中常见的语法；既有语法练习，也有针对课文的练习，还有专门针对“计算机水平考试”的练习；技能训练模拟了一个工作环境，以训练读者运用语言的能力；阅读材料进一步扩大读者的视野。书后附有“英语基本句型”和“英语单词速记法”。

本书既可作为大、中专院校的计算机专业英语教程，也可供所有使用计算机的人员自学。

图书在版编目(CIP)数据

计算机英语教程/司爱侠,张强华编著．—4 版．—北京:电子工业出版社,2005.4
ISBN 7-121-00966-8
Ⅰ.计... Ⅱ.①司...,②张... Ⅲ.电子计算机－英语－教材 Ⅳ.H31
中国版本图书馆 CIP 数据核字(2005)第 012555 号

责任编辑：秦　梅　　特约编辑：李立华
印　　刷：北京燕南印刷厂
出版发行：电子工业出版社
　　北京市海淀区万寿路 173 信箱　邮编 100036
经　　销：各地新华书店
开　　本：787×1092　1/16　印张：21　字数：542.4 千字
印　　次：2006 年 7 月第 4 次印刷
印　　数：5000 册　　定价：32.00 元（含光盘 1 张）

凡购买电子工业出版社的图书,如有缺损问题,请向购买书店调换。若书店售缺,请与本社发行部联系。联系电话:(010)68279077。质量投诉请发邮件至 zlts@ phei. com. cn,盗版侵权举报请发邮件至 dbqq@ phei. com. cn。

第四版前言

计算机是当今最具生命力的技术领域之一，其极高的发展速度、强劲的渗透能力、高附加值的经济价值使计算机技术进入了日新月异的发展时期。这也就决定了计算机领域中的新技术有着更短的生命周期，要求计算机行业的从业人员必须更快地掌握最新的技术。因此，对计算机专业技术人员外语水平的要求比对其他传统领域中同类人员的要求高得多。可以毫不夸张地说，外语水平高低，是决定计算机技术人员的成就大小的因素之一。

本书旨在切实提高读者实际使用英语的能力。立足实用，软件、硬件和网络并重，同时兼顾发展热点。

本书体例以课为单元，每课由相同部分组成，即由课文（选材广泛、风格多样）、单词（给出课文中出现的新词，读者由此可以积累计算机专业的基本词汇）、词组（给出课文中的常用词组）、难句讲解（讲解课文中出现的疑难句子）、语法（每单元一个核心，系统地讲述计算机领域中常见的语法）、习题（既有语法练习，也有针对课文的练习，还有部分针对“计算机水平考试”的练习）、技能训练（模拟了一个工作环境，以训练读者运用语言的能力）、阅读材料（进一步扩大读者的视野）等组成。

书后的“英语基本句型”提供了常用的英语句型，以助读者在汉译英时能够心中有数；“英语单词速记法”会有效地增加读者的词汇量，尤其便于破译那些新构造出来的单词。

我们认为“计算机英语”类教材必须进行“动态维护”。因此，在本次修订中，我们更换了第三版中的大量内容，增加了与 Internet 相关的网站建设软件、电子商务、网络安全等新颖知识；根据素质教育的要求，拓展了知识面（如增加了“微软”垄断案的相关材料）；注意了文体的多样性（如增加了“访谈”类题材）。

本书前三版问世以来，被很多学校选为教材。我们收到了许多教师的反馈意见，其中一些好的建议在本次修订中已予以采纳，如增加了单词的音标、增加了参考译文和习题答案（方便自学）、提供简单的电子教案，便于教师组织教学。

我们希望大家不吝赐教。让我们共同努力，使本书成为一部“结构合理、取材得当、知识丰富、严谨大气”的优秀教材。如果联系，请发电子邮件至：zqh3882355@sina.com

本书既可作为大、中专院校的专业英语教程，也可供所有使用计算机的人员自学。

编著者

Contents

Lesson 1

Text

How PCs Work

When you mention the word "technology", most people think about computers. Virtually every facet of our lives has some computerized component. The appliances in our homes have microprocessors built into them, as do our televisions. Even our cars have a computer. But the computer that everyone thinks of first is typically the personal computer, or PC. [1]

A PC is a general-purpose tool built around a microprocessor. It has lots of different parts — memory, a hard disk, a modem, etc. — that work together. "General purpose" means that you can do many different things with a PC. You can use it to type documents, send E-mail, browse the Web and play games.

In this article, we will talk about PCs in the general sense and all the different parts that go into them. You will learn about the various components and how they work together in a basic operating session.

1. On the Inside

Let's take a look at the main components of a typical desktop computer.

- Central Processing Unit (CPU) — The microprocessor, "brain" of the computer system, is called the central processing unit. Everything that a computer does is overseen by the CPU.
- Memory — This is very fast storage used to hold data. It has to be fast because it connects directly to the microprocessor. There are several specific types of memory in a computer:

  Random-Access Memory (RAM) — Used to temporarily store information that the computer is currently working with.

  Read-Only Memory (ROM) — A permanent type of memory storage used by the computer for important data that does not change.

  Basic Input/Output System (BIOS) — A type of ROM that is used by the computer to establish basic communication when the computer is first turned on.

  Cache Memory — The storing of frequently used data in extremely fast RAM that connects directly to the CPU.

  Virtual Memory — Space on a hard disk used to temporarily store data and swap it in and out of RAM as needed.

- Motherboard — This is the main circuit board that all of the other internal components connect to. The CPU and memory are usually on the motherboard. Other systems may be found directly on the motherboard or connected to it through a secondary connection. For example, a sound card can be built into the motherboard or connected through PCI.
- Power supply — An electrical transformer which regulates the electricity used by the computer.
- Hard disk — This is large-capacity permanent storage used to hold information such as programs and documents.
- Operating system — This is the basic software that allows the user to interface with the computer.
- Integrated Drive Electronics (IDE) Controller — This is the primary interface for the hard drive, CD-ROM and floppy disk drive.
- Peripheral Component Interconnect (PCI) Bus — The most common way to connect additional components to the computer, PCI uses a series of slots on the motherboard that PCI cards plug into.
- Small Computer System Interface (SCSI) — Pronounced "scuzzy", the small computer system interface is a method of adding additional devices, such as hard drives or scanners, to the computer.
- AGP — Accelerated Graphics Port is a very high-speed connection used by the graphics card to interface with the computer.
- Sound card — This is used by the computer to record and play audio by converting analog sound into digital information and back again.
- Graphics card — This translates image data from the computer into a format that can be displayed by the monitor.

2. Connections

2.1 Input/Output

No matter how powerful the components inside your computer are you need a way to interact with them.[2] This interaction is called Input/Output (I/O). The most common types of I/O in PCs are:

- Monitor — The monitor is the primary device for displaying information from the computer.
- Keyboard — The keyboard is the primary device for entering information into the computer.
- Mouse — The mouse is the primary device for navigating and interacting with the computer.
- Removable storage — Removable storage devices allow you to add new information to your computer very easily, as well as save information that you want to carry to a

different location.

Floppy disk — The most common form of removable storage, floppy disks are extremely inexpensive and easy to save information to.

Compact Disc, Read-Only Memory (CD-ROM) — CD-ROM is a popular form of distribution of commercial software. Many systems now offer CD-R (recordable) and CD-RW (rewritable), which can also record.

Flash memory — Based on a type of ROM called electrically erasable programmable read-only memory (EEPROM), Flash memory provides fast, permanent storage. CompactFlash, SmartMedia and PCMCIA cards are all types of Flash memory.

Digital Video Disc, Read-Only Memory (DVD-ROM) — DVD-ROM is similar to CD-ROM but is capable of holding much more information.

2.2 Ports

- Parallel — This port is commonly used to connect a printer.
- Serial — This port is typically used to connect an external modem.
- Universal Serial Bus (USB) — Quickly becoming the most popular external connection, USB ports offer power and versatility and are incredibly easy to use.
- FireWire (IEEE 1394) — FireWire is a very popular method of connecting digital-video devices, such as camcorders or digital cameras, to your computer.

2.3 Internet/Network

- Modem — This is the standard method of connecting to the Internet.
- Local Area Network (LAN) card — This is used by many computers, particularly those in an Ethernet office network, to connect each other.
- Cable modem — Some people now use the cable-television system in their home to connect to the Internet.
- Digital Subscriber Line (DSL) modem — This is a high-speed connection that works over a standard telephone line.
- Very high bit-rate DSL (VDSL) modem — A newer variation of DSL, VDSL requires that your phone line have fiber-optic cables.

3. From Power-up to Shut-down

3.1 BIOS

Now that you are familiar with the parts of a PC, let's see what happens in a typical computer session, from the moment you turn the computer on until you shut it down: [3]

A. You press the "On" button on the computer and the monitor.

B. You see the BIOS software doing its thing, called the power-on self-test (POST). On many machines, the BIOS displays text describing such data as the amount of memory

installed in your computer and the type of hard disk you have. [4] During this boot sequence, the BIOS does a remarkable amount of work to get your computer ready to run.

- The BIOS determines whether the video card is operational. Most video cards have a miniature BIOS of their own that initializes the memory and graphics processor on the card. If they do not, there is usually video-driver information on another ROM on the motherboard that the BIOS can load.
- The BIOS checks to see if this is a cold boot or a reboot. It does this by checking the value at memory address 0000:0472. A value of 1234h indicates a reboot, in which case the BIOS skips the rest of POST. Any other value is considered a cold boot.
- If it is a cold boot, the BIOS verifies RAM by performing a read/write test of each memory address. It checks for a keyboard and a mouse. It looks for a PCI bus and, if it finds one, checks all the PCI cards. If the BIOS finds any errors during the POST, it notifies you with a series of beeps or a text message displayed on the screen. An error at this point is almost always a hardware problem.
- The BIOS displays some details about your system. This typically includes information about the following:
  Processor
  Floppy and hard drive
  Memory
  BIOS revision and date
  Display
- Any special drivers, such as the ones for SCSI adapters, are loaded from the adapter and the BIOS displays the information.

The BIOS looks at the sequence of storage devices identified as boot devices in the CMOS Setup. " Boot " is short for " bootstrap ", as in the old phrase " Lift yourself up by your bootstraps ". Boot refers to the process of launching the operating system. The BIOS tries to initiate the boot sequence from the first device using the bootstrap loader.

C. The bootstrap loader loads the operating system into memory and allows it to begin operation. It does this by setting up the divisions of memory that hold the operating system, user information and applications. The bootstrap loader then establishes the data structures that are used to communicate within and between the sub-systems and applications of the computer. Finally, it turns control of the computer over to the operating system.

3.2 Operating System

Once loaded, the operating system's tasks fall into six broad categories:

- Processor management — Breaking the tasks down into manageable chunks and prioritizing them before sending to the CPU.
- Memory management — Coordinating the flow of data in and out of RAM and determining when virtual memory is necessary.

- Device management — Providing an interface between each device connected to the computer, the CPU and applications.
- Storage management — Directing where data will be stored permanently on hard drives and other forms of storage.
- Application Interface — Providing a standard communication and data exchange between software programs and the computer.
- User Interface — Providing a way for you to communicate and interact with the computer.

You open up a word processing program and type a letter, save it and then print it out. Several components work together to make this happen:

The keyboard and mouse send your input to the operating system.

The operating system determines that the word-processing program is the active program and accepts your input as data for that program.

The word-processing program determines the format that the data is in and, via the operating system, stores it temporarily in RAM.

Each instruction from the word-processing program is sent by the operating system to the CPU. These instructions are intertwined with instructions from other programs that the operating system is overseeing before being sent to the CPU.

All this time, the operating system is steadily providing display information to the graphics card, directing what will be displayed on the monitor.

When you choose to save the letter, the word-processing program sends a request to the operating system, which then provides a standard window for selecting where you wish to save the information and what you want to call it. Once you have chosen the name and file path, the operating system directs the data from RAM to the appropriate storage device.

You click on "Print". The word-processing program sends a request to the operating system, which translates the data into a format the printer understands and directs the data from RAM to the appropriate port for the printer you requested.[5]

You open up a Web browser and check out HowStuffWorks. Once again, the operating system coordinates all of the action. This time, though, the computer receives input from another source, the Internet, as well as from you. The operating system seamlessly integrates all incoming and outgoing information.

- You close the Web browser and choose the " Shut Down " option.
- The operating system closes all programs that are currently active. If a program has unsaved information, you are given an opportunity to save it before closing the program.
- The operating system writes its current settings to a special configuration file so that it will boot up next time with the same settings.

If the computer provides software control of power, then the operating system will completely turn off the computer when it finishes its own shut-down cycle. Otherwise, you

185 will have to manually turn the power off.

New Words

technology	[tek'nɔlədʒi]	*n*. 工艺，科技，技术
computer	[kəm'pju:tə]	*n*. 计算机，电脑
virtually	['və:tjuəli]	*adv*. 事实上，实际上，实质上
facet	['fæsit]	*n*. 方面；（多面体的）面，（宝石等的）刻面，小平面
computerize	[kəm'pju:təraiz]	*vt*. 用计算机处理，使计算机化
component	[kəm'pəunənt]	*n*. 部件
		adj. 组成的，构成的
appliance	[ə'plaiəns]	*n*. 设备，器械，装置
microprocessor	[maikrəu'prəusesə]	*n*. 微处理器
oversee	['əuvə'si:]	*vt*. 监督，监视；管理
memory	['meməri]	*n*. 存储器，内存
modem	['məudəm]	*n*. 调制解调器
document	['dɔkjumənt]	*n*. 文件，文档，公文
session	['seʃən]	*n*. 对话期，运行期
type	['taip]	*n*. 类型，型，种类，样式
		v. 打字
E-mail	[i:meil]	*n*. 电子邮件
desktop	['desktɔp]	*adj*. 台式的，桌面的
		n. 桌面，桌上型电脑，桌面计算机
storage	['stɔridʒ]	*n*. 存储
data	['deitə]	*n*. 数据，资料
temporarily	['tempərərili]	*adj*. 暂时的，临时的
store	[stɔ:]	*vt*. 存储
information	[ˌinfə'meiʃən]	*n*. 信息
permanent	['pə:mənənt]	*adj*. 永久的，持久的
establish	[is'tæbliʃ]	*vt*. 建立，设立
communication	[kəˌmju:ni'keiʃən]	*n*. 通讯，通信
cache	[kæʃ]	*n*. 高速缓冲存储器
frequently	['fri:kwəntli]	*adv*. 常常，频繁地
		n. 经常地
swap	[swɔp]	*v*. 交换
		n. 交换
motherboard	['mʌðəbɔ:d]	*n*. 主板，母板
transformer	[træns'fɔ:mə]	*n*. 变压器
regulate	['regjuleit]	*vt*. 管理，调整，控制，调节

capacity	[kə'pæsiti]	*n*. 容量
program	['prəugræm]	*n*. 程序
interface	['intəfeis]	*n*. 界面，接口
software	['sɔftwɛə]	*n*. 软件
controller	[kən'trəulə]	*n*. 控制器
bus	[bʌs]	*n*. 总线
plug	[plʌg]	*vt*. 插上
		n. 插头，插销
device	[di'vais]	*n*. 设备
analog	['ænəlɔg]	*n*. 模拟
digital	['didʒitl]	*adj*. 数字的，数位的
		n. 数字，数字式
record	['rekɔ:d]	*n*. 纪录
		vt. 记录
audio	['ɔ:diəu]	*adj*. 音频的，声频的
format	['fɔ:mæt]	*n*. 格式
		vt. 格式化（磁盘）
display	[di'splei]	*vt*. 显示
		n. 显示，显示器
monitor	['mɔnitə]	*n*. 监视器
input	['input]	*n*. 输入 *v*. 输入
output	['autput]	*n*. 输出 *v*. 输出
interaction	[ˌintər'ækʃən]	*n*. 相互作用
keyboard	['ki:bɔ:d]	*n*. 键盘
mouse	[maus]	*n*. 鼠标
removable	[ri'mu:vəbl]	*adj*. 可拆卸的，可移动的
location	[ləu'keiʃən]	*n*. 位置，场所
extremely	[iks'tri:mli]	adv. 极端地，非常地
inexpensive	[ˌiniks'pensiv]	*adj*. 便宜的，不贵重的
provide	[prə'vaid]	*v*. 提供，供应，供给
parallel	['pærəlel]	*adj*. 并行的
printer	['printə]	*n*. 打印机
port	[pɔ:t]	*n*. 端口
serial	['siəriəl]	*adj*. 串行的，连续的
versatility	[ˌvə:sə'tiliti]	*n*. 多功能性
camcorder	['kʌmkɔ:də]	*n*. 便携式摄像录音一体机
Internet	['intənet]	*n*. 因特网，互联网
moment	['məumənt]	*adj*. 片刻的，瞬间的
		n. 瞬间
boot	[bu:t]	*v*. 导入，引导

determine	[di'tə:min]	*v*. 决定，确定，测定
load	[ləud]	*n*. 负荷，加载
		vt. 装载，装入
check	[tʃek]	*vt*. 检查
address	[ə'dres]	*n*. 地址
indicate	['indikeit]	*vt*. 指出，指明
beep	[bi:p]	*n*. 蜂鸣声，哔哔声
		v. 嘟嘟响
message	['mesidʒ]	*n*. 消息
detail	['di:teil]	*n*. 细节，详情
		vt. 详述，详解
hardware	['hɑ:dwɛə]	*n*. 硬件
driver	['draivə]	*n*. 驱动器，驱动程序
category	['kætigəri]	*n*. 种类，类目，部属，类别
instruction	[in'strʌkʃən]	*n*. 指令
save	[seiv]	*vt*. 保存
request	[ri'kwest]	*vt* .请求，要求
		n. 请求，要求
click	[klik]	*v*. 单击，点击
browser	[brauzə]	*n*. 浏览器
receive	[ri'si:v]	*vt*. 收到，接到，接收
option	['ɔpʃən]	*n*. 选项
active	['æktiv]	*adj*. 活动的
		n. 活动

Phrases

hard disk	硬盘
work with . . .	与……共事，与……合作，对……起作用
turn on	打开
virtual memory	虚拟内存
circuit board	电路板
connect to . . .	连接到……
power supply	电源
operating system	操作系统
floppy disk drive	软盘驱动器
sound card	声卡
as well as	也，又
base on . . .	基于……
digital camera	数码相机