

新世纪高等院校双语教学规划教材

计算机英语

陈胤 编著

浙江大学出版社

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内 容 提 要

本书是一本面向 21 世纪的计算机类教材,以计算机和 IT 领域的最新英语时文和经典原版教材为基础,旨在使读者掌握计算机专业英语术语,快速掌握计算机英语的一般特点和专业词汇,并提高阅读和检索计算机原版文献资料的能力。本书分四部分七章,分别介绍计算机基础、系统结构、操作系统、程序设计语言、C 语言集成开发环境、数据库和管理信息系统、计算机网络,并配有词汇注释和练习。本书特点是:内容新颖、风格多样、覆盖面广、系统性强、可读性好,注重实践性和实用性,难度适当,是学习计算机英语的实用教材。本书可作为计算机及相关专业大中专学生的英语教材;也可供计算机硬件、软件和信息处理等专业的工程技术人员使用;同时,对于那些想了解计算机基础知识、掌握计算机使用技能的一般计算机用户,也是一本良好的英文读物。

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前 言

在日益国际化的信息时代，越来越多的大学生、研究生和教学、科研工作者参加国际性学术活动，走上国际会议的讲坛，与国外同行进行口头和书面交流。更为重要的是，随着信息技术的高速发展，Internet 应用的日益普及，计算机已渗透到人们工作和生活的方方面面，计算机英语也随之成为一门专业英语，并在计算机应用中扮演着人机之间交流的语言角色。用英语表示的新概念、新术语层出不穷，直接阅读英文技术资料 and 文献，将有助于更准确全面地掌握计算机信息技术。学好计算机英语，能使科技工作者具备更强的查阅英文技术资料的能力，同时直接提高人机交互的能力。

计算机英语不仅是各层次计算机专业在校学生的必修课，也是部分国内、国际认证考试的主考课程。笔者认为学习计算机英语应从两方面着手：

1. 词汇

学习计算机英语词汇主要不是“记忆”，而是“转义”。大部分单词可能是熟悉的，只需要在学习过程中，将它对应到计算机专业课程中已经熟知的专有词义，因为这一新兴学科的大量专业术语来源于日常英语词汇，既取其原有含义，又被计算机领域赋予了类似功能的专有词义。例如：memory（存储器）、instruction（指令）、code（代码）、program（程序）等。

2. 语法结构

在计算机英语中，只要能正确理解句子中的单词含义，对句子的整体理解也就不会有太大问题。为了满足技术人员快节奏阅读和交流的习惯，一些科技含量很高的技术资料往往更喜欢采用简单句来表达含义。此外，对一些科技英语的常见句式如被动语态、同位语从句等，平时应多加留意，注意积累常见句式的阅读技巧，是十分必要的。

本书是一本面向 21 世纪的计算机英语教材，涉及了计算机基础、系统结构、操作系统、编程语言、C 语言集成开发环境、数据库和管理信息系统、计算机网络等内容。本书具有以下特点：第一，取材新颖，技术前卫，全书均选自计算机和 IT 领域的最新英语时文和经典原版教材。第二，文章风格多样，覆盖面广，既有硬件知识，又有软件知识；既有计算机系统知识，又有专业知识。第三，文章

难度适当, 章节安排由浅入深, 符合学生学习的特点。第四, 具有很强的实用性, 通过学习, 能较全面地掌握计算机专业的英文知识, 对计算机的技术理论、常见的专用术语的含义、信息领域的文献体裁和风格有一个大体了解。第五, 全书配以相应的注释和练习, 并对重要词汇进行中、英文双解, 使读者能够快速掌握计算机英语的一般特点和大量专业词汇, 并提高阅读和检索计算机原版文献资料的能力。

本书可供大专院校计算机技术、信息技术及相关专业的学生使用, 也可供计算机硬件、软件和信息处理等专业的工程技术人员使用。对那些想了解计算机基础知识、掌握计算机使用技能的一般计算机用户, 也不失为一本好的英文读物。

本书的编写得到了浙江大学刘加海、姚惠能、来政等老师的关心和帮助, 也得到了浙江大学出版社的大力支持, 在此表示衷心感谢。

由于编者时间仓促, 且水平有限, 若书中有不当之处, 敬请读者批评指正。

编 者

2005 年 8 月

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Part I

COMPUTER SYSTEM



Inside the PC

1.1 The Three Main Parts

A desktop PC is actually made up of three main parts. And here I'm talking about parts that can be internal or external. Strictly speaking, the average desktop PC would have to be called three black boxes. First, of course, is the *system unit*. That's what we all think of when we say "the PC" or "the computer." Second is the *display*. Third is what I'll call *input*, but that you can think of as the keyboard and mouse, or some other pointers. These three systems make up the minimum hardware needed for what is called a PC. Even a handheld or palm-sized device has these three parts, although they are found in one box in that case. (You can buy desktop PCs, too, in which all three parts are found in one or two external cases.)

Because most people think of the system unit as the PC, it's good to take a look at what's inside it first.

Caution

If you want to open your PC and actually look inside as you read through this chapter, I think that's a great idea. Before you do, you must make sure that you know completely the issue of safety both for you and your PC when it comes the time to open the system unit case.

Words and Expressions

desktop	[ˈdesktp] <i>n.</i> 桌面; 桌上型电脑
internal	[inˈtə:nl] <i>adj.</i> 内部的, 在内部的
external	[eksˈtə:nl] <i>adj.</i> 外部的, 外面的

Computer English

keyboard	['ki:bɔ:d] <i>n.</i> 键盘
pointer	['pɔɪntə] <i>n.</i> 指示器, 指物棒, 指示物 one that directs, indicates, or points.
minimum	['mɪnɪmə] <i>adj.</i> 最小的, 最低的
hardware	['hɑ:dwɛə] <i>n.</i> 硬件
palm	[pɑ:m] <i>n.</i> 手掌
device	[di'vaɪs] <i>n.</i> 设备
case	[keɪs] <i>n.</i> 事例, 事件; 箱, 盒, 容器
caution	['kɔ:ʃən] <i>n.</i> 小心, 谨慎, 警告
issue	['ɪʃu:] <i>n.</i> 论点, 问题 a point or matter of discussion, debate, or dispute.



1.2 The System Unit

In fact, there are five major systems inside the system unit. They are the logic system, the display system, the storage system, the input/output system, and the communications system.

Although each of these five systems functions as a complete subsystem of the PC, none of them is worth anything on its own. As you'll see, they work together to create, collectively, the PC.

1.2.1 The Logic System

As anyone who's spent any time working with a PC will tell you that "logic" on a PC isn't the same as human logic. The term "logic" refers to the major circuitry inside a PC because that circuitry often evaluates whether certain things are true or false. What sorts of things? Well, whether an electrical circuit is completed in a certain way, and so forth. Or, more often, whether certain collections of circuits are completed whereas certain others are not. The logic in your system's circuitry can also make certain types of analyses and then act on them. For example, "if this is true, then do that," or "if this is true and that is false, then do the other." All of this is called Boolean logic, and it can get pretty complex. Consider:

IF ((X AND Y) AND (NOT Z) AND (Y AND NOT W)) THEN DO A

And that's really a simple example. These sorts of analyses which are called logical evaluations are completed by the circuitry in the PC's logic system billions of times each second. Those evaluations make your computer compute.

The logic system is actually comprised of five main parts.

Words and Expressions

major	['meɪdʒə] <i>adj.</i> 主要的
logic	['lɒdʒɪk] <i>n.</i> 逻辑(电路)

storage	['stɔːrɪdʒ] <i>n.</i> 存储
communication	[kə,mjuːni'keɪʃn] <i>n.</i> 通信
subsystem	['sʌb.sɪstəm] <i>n.</i> 次要系统, 子系统
collectively	[kə'lektɪvli] <i>adv.</i> 全体地, 共同地
term	[tɜːm] <i>n.</i> 术语
refer to	涉及, 提到, 与……有关, 关于 to pertain; concern.
circuitry	['sɜːkɪtri] <i>n.</i> 电路学, 电路图, 电路系统, 电路 electric circuits considered as a group.
circuit	['sɜːkɪt] <i>n.</i> 电路 a closed path followed or capable of being followed by an electric current.
evaluate	[i'væljueɪt] <i>v.</i> 评价, 估计, 求……的值
evaluation	[i.vælju'eɪʃən] <i>n.</i> 估价, 评价, 求值
electrical	[i'lektrɪk(ə)l] <i>adj.</i> 电的, 有关电的
whereas	[(h)wɛər'æz] <i>conj.</i> 然而, 反之, 鉴于, 尽管, 但是
analysis	[ə'næləsɪs] <i>n.</i> 分析, 分解 <i>pl.</i> analyses [ə'næləsɪ(:)z]
Boolean	['buːliən] <i>adj.</i> 布尔逻辑的
billion	['bɪljən] <i>n.</i> 十亿
comprise	[kəm'praɪz] <i>v.</i> 包含, 由……组成

The Motherboard

The first part of the logic system is the PC's motherboard. It's the large, usually green, piece of plastic that's covered with copper lines and that has most of the PC's chips, sockets, and connections soldered to it.

BIOS

It's more common today that the majority of your PC's basic settings are



maintained in software. That software is part of a system called the BIOS (Basic Input / Output System), and those settings are stored in a special type of memory, called CMOS or FlashMemory. These special types of memory allow your PC's configuration settings to be maintained even when the system is off or even unplugged. The BIOS performs many jobs, but among them are keeping track of how many drives your PC has, what type and size they are, and how they're installed. The BIOS settings also commonly include fundamental information like how many of each type of external port (or connector) your PC has.

A small program (also part of the BIOS) called the BIOS Setup lets you view and modify these settings. They're then saved and maintained until you change them again (or change the hardware in such a way that these settings automatically update themselves.) Every system is different, but many systems allow you to access the BIOS Setup program by pressing the Delete or F2 keys right after you power up your PC.

Words and Expressions

motherboard	[ˈmʌðəbɔ:d] <i>n.</i> 主板, 母板
plastic	[ˈplæstɪk, ˈplɑ:stɪk] <i>n.</i> 塑料 <i>adj.</i> 塑料的
copper	[ˈkɒpə] <i>n.</i> 铜
chip	[tʃɪp] <i>n.</i> 芯片
socket	[ˈsɒkɪt] <i>n.</i> 插座, 插槽
solder	[ˈsɒldə] <i>v.</i> 焊接
majority	[məˈdʒɔrɪti] <i>n.</i> 多数, 大半
maintain	[meɪnˈteɪn] <i>v.</i> 维护, 维修
configuration	[kənˌfɪɡjuˈreɪʃən] <i>n.</i> 配置
drive	[draɪv] <i>n.</i> 驱动器
install	[ɪnˈstɔ:l] <i>v.</i> 安装
fundamental	[ˌfʌndəˈmentl] <i>adj.</i> 基本的, 根本的, 主要的
port	[pɔ:t] <i>n.</i> 端口; 外部设备的连接点