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国家示范性高等职业院校
优质核心课程改革教材

计算机类

计算机专业英语

主 编 李 倩
副主编 罗菁晶 雷 嵩
主 审 杨 桦



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内容提要

本书针对高职高专院校学生的特点, 从实用性和易学性入手, 巩固并扩大学生的计算机专业知识面, 提高学生实际使用计算机专业英语的能力。

本书是在搜集国内外计算机技术网站及其他网站上的相关计算机类文章等计算机专业技术资料的基础上, 精选主题编写而成的。内容涉及计算机硬件、软件、网络、数据库、多媒体等计算机各个领域的专业知识, 同时兼顾技术发展热点, 内容新颖、实用性、可读性高。

本书可以作为高职高专院校计算机及相关专业的“计算机专业英语”课程的教材, 也可以作为 IT 业技术人员以及其他有需要的读者的自学参考书。

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序

为贯彻教育部、财政部《关于实施国家示范性高等职业院校建设计划，加快高等职业教育改革与发展的意见》（教高【2006】14号）和《关于全面提高高等职业教育教学质量的若干意见》（教高【2006】16号）精神，作为国家示范性高等职业院校建设单位，我院从2007年开始组织探索如何设计开发既能体现职业教育类型特点，又能满足高等教育层次需求的专业课程体系和教学方法。三年来，我们先后邀请了多名国内外职业教育专家，组织进行了现代职业技术教育理论系统学习和职业技术教育课程开发方法系统的培训；在课程开发专家团队指导下，按照“行业分析，典型工作任务，行动领域，学习领域”的开发思路，以职业分析为依据，以培养职业行动能力为核心，对传统的学科式专业课程进行解构和重构，形成了以学习领域课程结构为特征的专业核心课程体系；与企业专业技术人员共同组成课程开发团队，按照企业全程参与的建设模式、基于工作过程系统化的建设思路，完成了十个重点建设专业（4个为中央财政支持的重点建设专业）核心课程的学材、电子资源、试题库、网络课程和生产问题资源库等内容的建设和完善，在课程建设方面取得了丰厚的成果。

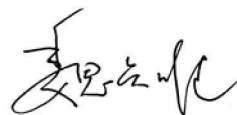
对示范院校建设工程而言，重点专业建设是龙头；在专业建设项目中，课程建设是关键。职业教育的课程改革是一项长期艰苦的工作，它不是片面的课程内容的解构和重构，必须以人才培养模式创新为核心，以实训条件的改善、实训项目的开发、教学方法的变革、双师结构教师团队的建设等一系列条件为支撑。三年来，我们以课程改革为抓手，力图实现全面的建设和提升；在推动课程改革中秉承“片面的借鉴，不如全面的学习”，全面的学习和借鉴，认真的研究和实践；始终追求如何在课程建设方面做出中国特色，做出四川特色，做出交通特色。

历经1000多个日夜的辛劳，面对包含了我们教师团队心血，即将破茧的课程建设成果的陆续出版，感到几分欣慰；面对国际日益激烈的经济的竞争，面对我国交通现代化建设的巨大需求，感到肩上的压力倍增。路漫漫其修远兮，吾将上下

而求索！希望更多的人来加入我们这个团结、奋进、开拓、进取的团队，取得更多更好的成果。

在这些教材的编写过程中，相关企业的专家给予了很大的支持与帮助，在此谨表示衷心的感谢！

四川交通职业技术学院院长



前 言

当今,对于计算机人才来说,计算机英语能力已经成为快速获取新的计算机知识、决定其工作能力的-一个重要因素。要提高计算机英语水平,就必须进行专门的学习。本书正是在这样的指导思想下编写的。

本书以章为单位,每一章由以下几个部分组成:课文——包括五个小节,每个小节为一个知识点;关键词(短语)——需要掌握的常用单词和短语,分布到每个独立的知识点中;阅读材料——分为短文一和短文二,第一篇短文之后附有译文,帮助读者自学;习题——既有针对课文的练习,也有一些扩展练习;参考译文——课文内容的翻译,可供读者在学习时参考。

本书是在搜集国内外计算机技术网站及其他网站上的相关计算机类文章等计算机专业技术资料的基础上,精选主题编写而成的。选取的内容实用、新颖。本书从内容上分为6章。第1章——计算机硬件,第2章——计算机软件,第3章——计算机网络,第4章——数据库,第5章——多媒体,第6章——计算机领域新技术。

本书由成都大学信息科学与技术学院李倩主编,并完成第1~3章内容的编写;由四川交通职业技术学院计算机工程系罗菁晶、雷茵任副主编,并分别完成第5~6章、第4章内容的编写。本书由四川交通职业技术学院计算机工程系杨桦主审。

在本书的编写和出版过程中,出版社的同志为使本书尽快出版付出了辛勤劳动,在此表示感谢。

由于作者水平有限,加之时间仓促,对于本书中出现的错误,欢迎广大读者批评指正。

编 者
2010年10月

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Chapter 1

Computer Hardware

1.1 Overview of Computer Hardware

1.1.1 Computer Hardware Components

The computer as we know it is a group of pieces of hardware put together to get a job done faster. To accomplish its various tasks, the computer is made of different parts, each serving a particular purpose in conjunction with other parts. You don't necessarily need to know how these parts operate, at least not at this time, but you should be aware of their co-dependence to take advantage of their various characteristics.

Computers are made of the following basic components:

1. Case with hardware inside:

➤ **Power Supply**—The power supply comes with the case, but this component is mentioned separately since there are various types of power supplies. The one you should get depends on the requirements of your system.



➤ **Motherboard**—This is where the core components of your computer reside which are listed below. Also the support cards for video, sound, networking and more are mounted into this board.

✓ **Microprocessor**—This is the brain of your computer. It performs commands and instructions and controls the operation of the computer.

✓ **Memory**—The RAM in your system is mounted on the motherboard. This

is memory that must be powered on to retain its contents.

✓ **Drive controllers**—The drive controllers control the interface of your system to your hard drives. The controllers let your hard drives work by controlling their operation. On most systems, they are included on the motherboard, however you may add additional controllers for faster or other types of drives.

➤ **Hard disk drive(s)**—This is where your files are permanently stored on your computer. Also, normally, your operating system is installed here.

➤ **CD-ROM drive(s)**—This is normally a read only drive where files are permanently stored. There are now read/write CD-ROM drives that use special software to allow users to read from and write to these drives.

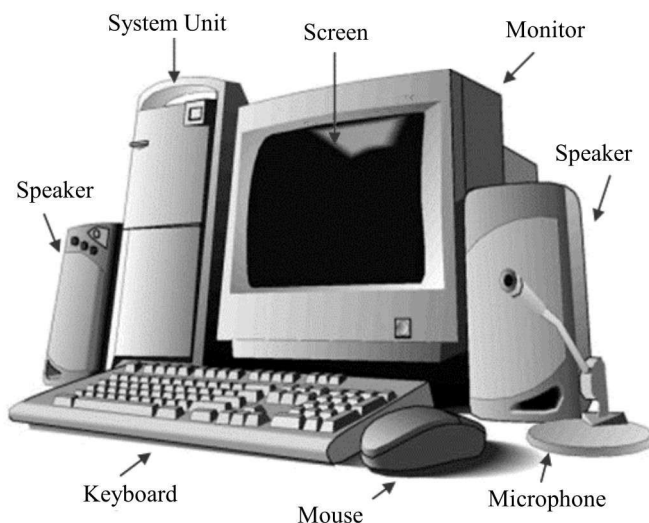
➤ **Floppy drive(s)**—A floppy is a small disk storage device that today typically has about 1.4 Megabytes of memory capacity.

Other possible file storage devices include DVD devices, Tape backup devices, and some others.

2. Monitor—This device which operates like a TV set lets the user see how the computer is responding to their commands.

3. Keyboard—This is where the user enters text commands into the computer.

4. Mouse—A point and click interface for entering commands which works well in graphical environments.



Keywords

hardware (n.) 硬件	component (n.) 部件, 元件
power supply (n.) 电源	motherboard (n.) 主板
microprocessor (n.) 微处理器	memory (n.) 内存
hard disk 硬盘	CD-ROM (n.) 只读存储器, 只读光盘
floppy drive 软盘驱动器	monitor (n.) 监视器
keyboard (n.) 键盘	mouse (n.) 鼠标

1.1.2 Types of Computers

The Desktop

A computer is referred to as “desktop” when it is relatively small enough to be positioned on top of a table where a person is working. Such a computer can also be placed on the floor or somewhere under, or aside of, the table, in which case the monitor would be placed on top of the table. This is the most common type of computers used in the office or at home.



A desktop computer is made of different parts that are connected with cables.

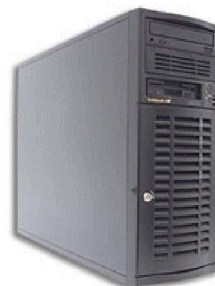
The Laptop

A computer is called laptop when it combines the CPU, the monitor, the keyboard, and the mouse in one unit to be so small that you can carry it on your laps when traveling or commuting. A laptop is also called a notebook. Other parts, such as an external mouse, an external keyboard, a monitor, or peripherals such as a printer or a projector, can be connected to the laptop. A laptop is only physically smaller than a desktop but, everything considered, it can do anything that a desktop can do.



The Server

A server is a computer that holds information that other computers, called workstations, can retrieve. Such workstations are connected to the server using various means. This means that they could be connected using cable, wireless connection, etc. Only computers that maintain a type of connection with the server can get the information that is stored in the server.



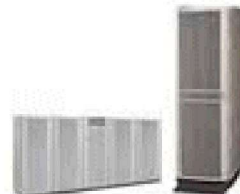
Normally, although not particularly recommended, any computer, including a desktop or even a laptop can be used as a server, as long as it can do the job required. A server is more defined by the program (called an operating system) that is installed in it, not how the machine looks.

Any type of computer, including a desktop, a laptop, a CD or DVD machine, etc can be connected to a server. The person who sets up a server also defines the types of connections it is made for.

The Mainframe

A mainframe is a computer, usually physically big, that does almost all the jobs for other types of computers that are connected to it. This is a broad definition but other aspects are involved.

Like a server, the program (operating system) that runs in the mainframe defines its role.



Keywords

desktop (*n.*) 桌上型电脑

laptop (*n.*) 便携式计算机

server (*n.*) 服务器

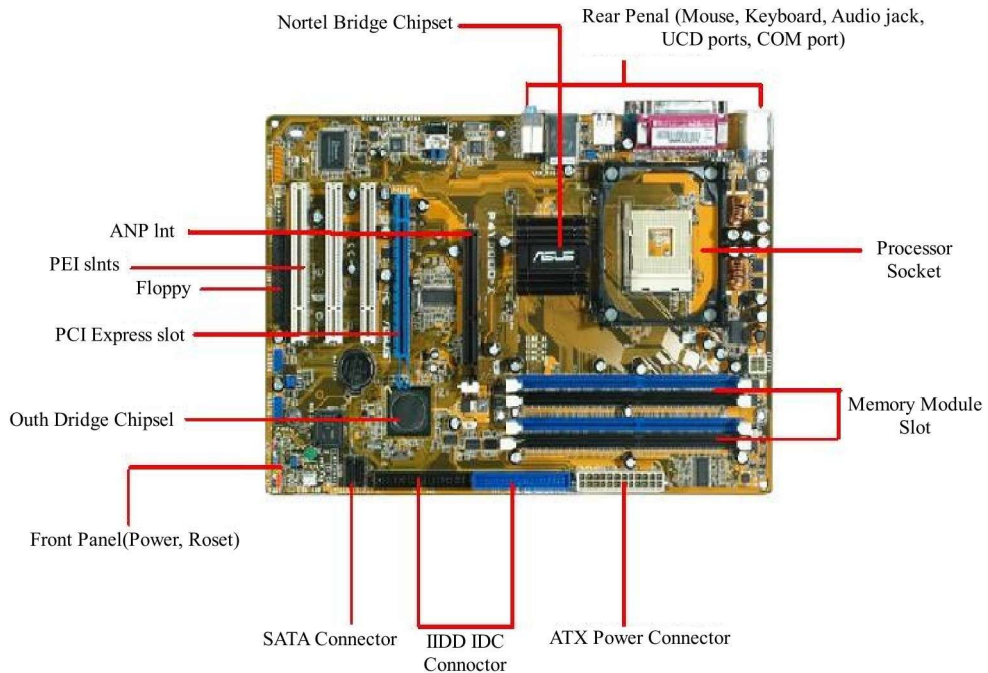
workstation (*n.*) 工作站

mainframe (*n.*) 主机

1.2 Motherboard

Motherboard is one of the main components of a computer and made of the printed circuit board (PCB). The motherboard is also known as mainboard, system board, logic board or sometimes, shortened as “mobo”. It serves as the backbone of a system because it provides all the electrical connections by which other components of the system communicate. Aside from that, it hosts the central processing unit (CPU), and other devices.

The parts of the motherboard are shown in the example below:



Processor Socket—This is where the processor is placed. On the picture above, the processor socket is Socket 478, which means that the compatible processor for this type of socket is Pentium 4.

Memory Module Slot —This is where the DDR DIMM is placed. Typical

motherboards have 4 memory modules that can have a maximum of 1 GB of memory per slot.

North Bridge Chipset —Chipset located on the north bridge or near the CPU handles communication among CPU, RAM, AGP or PCI-Express and the South Bridge Chipset.

South Bridge Chipset —Chipset located on the south bridge supports input/output devices.

ATX Power Connector—This is where the power supply connected. Typical motherboards have 20-pin connectors. But new motherboards are now 24-pin power connector ready. Users can either place a 20-pin or 24-pin ATX connector.

HDD IDE Connector—This is where the IDE hard disk and CD-ROM drives are placed.

SATA Connector —SATA means Serial Advancement Technology Attachment. Its primary function is to transfer data between motherboard and media storage device. It offers faster data transfer rate.

Floppy—This is where the floppy drive connector is placed. Floppy drives are still important to computer systems especially when a user wants to have an emergency disk of a particular program.

AGP slot—This is the slot for the video card. Older motherboards still have AGP slots but as technology advances, AGP slots are now considered obsolete on new and modern motherboards.

PCI-Express—This is also the slot for the video card. It mainly replaces the functions of the AGP slot and it offers faster connection.

PCI slots—These are the slots where we can place extra network interface cards, modem cards, and other external cards used in computers.

Rear panel—This is also called the back panel of the computer. This is where the ports of mouse, keyboard, COM, USB, and Audio are located.

Front panel —This panel consists of connections for power, reset, sound, HDD LED, and power LED. This panel also consists of USB ports, depending on the architecture of the motherboard.