



高职高专电子信息类专业“十二五”课改规划教材

计算机专业英语

■主编 权小红 李琳 易琼



西安电子科技大学出版社
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内 容 简 介

目前,计算机技术中直接采用英文的现象越来越普遍,计算机从业者的英文水平对其工作能力起着至关重要的作用。本书即根据高职高专学生的特点为计算机专业学生而编写。

本书共有十个单元,围绕“理论”及“实践”两条主线展开。每一单元的 TEXT、EXERCISES、SUPPLEMENTARY 部分构成了本书的“理论主线”,系统介绍了计算机专业各方向的基础知识及发展热点;CONVERSATION、WRITING 部分则构成了本书的“实践主线”,以计算机英语在工作和生活中的各种典型应用为背景,从口语和写作两方面训练学生的语言实践技能。

本书可作为高职高专院校的计算机专业英语教材、IT 职业英语考试的参考教材或各种相关培训班的专业英语教材,也可供计算机工程技术人员或广大英语爱好者使用。

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前 言

► 关于本书

本书根据全国高等职业教育“十二五”规划教材的指导精神编写。

计算机技术的飞速发展使得我们的地球越来越小，大量新概念、新术语、新资料来源不断地从国外引入，直接采用英文的现象越来越普遍；计算机操作过程中的界面也多是英文。因此，计算机从业者的专业英语水平对其工作能力起着至关重要的作用。

本书参考了大量国内外计算机英文资料和计算机专业英语书籍，根据高职高专学生的认知水平及教学特点而编写，旨在将英语与计算机知识相结合，提高学生独立阅读计算机专业英文资料的能力，强化学生英语实践技能。

► 本书结构

本书共有十个单元，每一单元由以下六部分组成：

- **TOPICS**：列出本单元的知识技能目标与要点。
- **TEXT**：本单元的主题文章，概要介绍与本单元主题相关的专业基础知识。每一单元围绕一个主题，涉及计算机软硬件、网络、数据库、信息安全、多媒体等计算机技术的各个方面。
- **EXERCISES**：通过各种形式的综合练习，加深对本单元主题相关专业知识的理解与掌握。
- **SUPPLEMENTARY**：拓展阅读，将专业知识与生活实际相联系，就本单元主题，给出生活中一些比较有趣而常见的实际应用。
- **CONVERSATION**：职业场景对话，每一单元设定一个不同场景，如面试、就餐、招待客户、商业谈判等。
- **WRITING**：英文应用文写作，每一单元围绕一项应用，如简历、商务合同、通知及邀请函、道歉信及投诉信的写作等。

► 本书特点

I. 兼顾知识的系统性与技能的实用性。

本书围绕两条主线展开：**TEXT**、**EXERCISES**、**SUPPLEMENTARY** 部分构成了本书的“理论主线”，系统介绍了计算机专业各方向的基础知识及发展热点；**CONVERSATION**、**WRITING** 部分则构成了本书的“实践主线”，以计算机英语在工作和生活中的各种典型应用为背景，从口语和写作两方面训练学生的语言实践技能。

II. 内容选材新颖，难度适中，风格多样。

本书素材均选取计算机专业各个方向的最新信息，内容与时俱进；充分考虑高职高专学生的认知水平，选材难度适中，篇幅合理，通俗易懂；在文体风格上有专业论文、技术手册、科普短文等各种文体形式。

III. 注重学生创新性学习能力的培养。

在 EXERCISES 部分布置有各种形式的专业知识练习，可让学生做探究性自主学习；在 CONVERSATION 和 WRITING 部分通过 Practice 环节，布置实践技能开放式训练任务，从而提高学生学习的自主性与创造性。

► 适用对象

本书可作为高职高专院校的计算机专业英语教材、IT 职业英语考试的参考教材或各种相关培训班的专业英语教材，也可供计算机工程技术人员或广大英语爱好者使用。

► 关于编者

本书的第一、五单元由王旭升编写，第二、九单元及附录由权小红编写，第三单元由赵香会编写，第四单元由刘穗编写，第六单元由贺萌编写，第七单元由易琼编写，第八单元由李琳编写，第十单元由权小红、李春华共同编写，权小红负责全书的统稿工作。

在本书的编写过程中，我们参阅了许多计算机英语及英语学习网站的参考资料，这里谨向资料作者致以衷心的感谢！由于编者水平有限，加之时间仓促，疏漏与不妥之处在所难免，敬请读者不吝赐教。

编 者

2012 年 5 月

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TOPICS



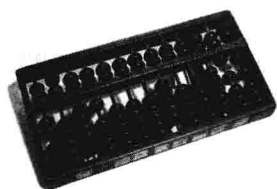
- How people dealt with numbers and data in ancient times?
- How do you think W.W.II might have been different if the ENIAC had not been invented then?
- Who came up with the idea of using “binary code” to store programs for computers?
- What's your earliest computer memory?
- What is your vision of the computer technology in the next 20, 50, 100 years?
- Tips for job interview.
- How to write a resume?



The History of Computers in a Nutshell

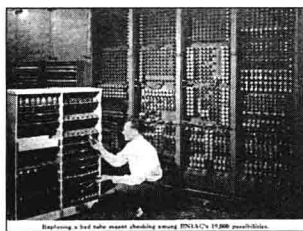
Computers and computer **applications** are on almost every aspect of our daily lives. As like many ordinary objects around us, we may need clearer understanding of what they are. You may ask “What is a computer?” or “What is a **software**”, or “What is a **programming language**?” First, let’s examine the history.

The term Computer, originally meant a person capable of performing **numerical** calculations with the help of a **mechanical** computing device. The evolution of



computers started way back in the **era** before Christ. **Binary arithmetic** is at the **core** of computer systems. The history of computers starts out about 2000 years ago with the birth

of the **abacus**, a wooden rack holding two horizontal wires with beads strung on them. The invention of **logarithm** by John Napier and the invention of slide rules by William Oughtred were significant events in the evolution of computers from these early computing devices.



If you look at the timeline of the evolution of computers, you will notice that the first computers used **vacuum tubes** for **circuitry** and **magnetic drums** for memory, and were often

enormous, taking up entire rooms. They were very expensive to operate and in addition to using a great deal of electricity, generated a lot of heat, which was

application [ˌæpliˈkeɪʃən] n. 申请; 应用程序

software [ˈsɒftweɪə] n. 软件; 软体; 软设备

programming language 编程语言

numerical [njuːˈmerɪkəl] adj. 数字的; 数值的

mechanical [miˈkænikəl] adj. 机械的; 体力的; 手工操作的

era [ˈiərə] n. 纪元, 年代; 历史时期, 时代

binary [ˈbaɪnəri:] adj. 双重的; 二态的; 二元的; 二进制的 n. 二进制数; 双量子

arithmetic [əˈrɪθmətɪk] n. 算术, 计算; 算法

core [kɔː] n. 中心, 精髓; 果核

abacus [ˈæbəkəs] n. 算盘

logarithm [ˈlɒːɡəˌrɪðəm] n. 对数

vacuum tubes 真空管

circuitry [ˈsəːkɪtri] n. 电路, 线路

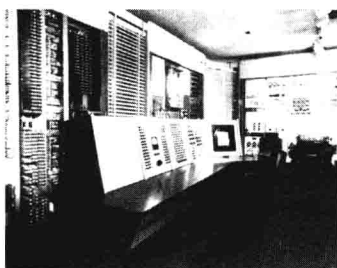
magnetic drum 磁鼓

enormous [iˈnɔːməs] adj. 巨大的, 庞大的; 的;

often the cause of **malfunctions**.

The UNIVAC and ENIAC computers are examples of first-generation computing devices. The UNIVAC was the first commercial computers delivered to a business client, the U.S. Census Bureau in 1951. These computers were expensive and **bulky**. They used machine language for computing and could solve just one problem at a time. They did not support **multitasking**. Input was based on punched cards and paper tape, and output was displayed on printouts.

Transistors replaced vacuum tubes and **ushered** in the second generation of computers. The transistor was invented in 1947 but did not see widespread use in computers until the late 50s. The transistor was far **superior** to the vacuum tube, allowing computers to become smaller, faster, cheaper, more energy-efficient and more reliable than their first-generation **predecessors**. Though the transistor still generated a great deal of heat that subjected the computer to damage, it was a vast improvement over the vacuum tube. Second-generation computers still relied on punched cards for input and printouts for output.



Second-generation computers moved from **cryptic** binary machine language to **symbolic**, or **assembly**, languages, which allowed programmers to specify instructions in words. High-level programming languages were also being developed at this time, such as early versions of COBOL and FORTRAN. These were also the first computers that stored their instructions in their memory, which moved from a magnetic drum to magnetic core technology.

malfunction [mæl'fʌŋkʃən] n. 故障, 功能障碍; 失灵 vi. 失灵; 发生故障

bulky ['bʌlki:] adj. 庞大的, 笨重的, 体积大的

multitasking [mʌlti'ta:skɪŋ] n. 多任务 (处理)

transistor [træn'sɪstə(r)] n. 晶体管; 晶体管收音机

usher ['ʌʃə(r)] n. 带位员; 招待员
vt. 引导; 引入

superior [sju:'piəriə(r)] n. 上级; 高手; 上标 adj. 上层的; 上好的; 出众的

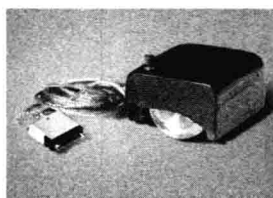
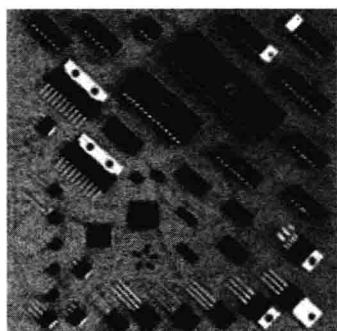
predecessors ['pri:disəsə(r)] n. 祖先; 前任; 原有事物

cryptic ['kriptɪk] adj. 隐秘的; 秘密的; 用密码的; 隐晦的

symbolic [sim'bɒlik] adj. 象征的; 符号的 n. 代号

assembly [ə'sembli] n. 集会; 装配; [计] 汇编

The use of integrated circuits ushered in the third generation of computers. Their use increased the speed and efficiency of computers. **Operating systems** were the human **interface** to computing operations and keyboards and monitors became the input-output devices. COBOL, one of the earliest computer languages, was developed in 1959–1960. BASIC came out in 1964. It was designed by John George Kemeny and Thomas Eugene Kurtz. Douglas Engelbart invented the first mouse prototype in 1963. Computers used a video display terminal (VDT) in the early days. The invention of Color Graphics Adapter in 1981 and that of Enhanced Graphics Adapter in 1984, both by IBM added “color” to computer displays. All through the 1990s, computer monitors used the CRT technology. LCD replaced it in the 2000s. Computer keyboards evolved from the early typewriters. The development of computer storage devices started with the invention of Floppy disks, by IBM again.



Thousands of **integrated circuits** placed onto a **silicon** chip made up a **microprocessor**. Introduction of microprocessors was the **hallmark** of fourth generation computers.

- Intel produced large-scale integration circuits in 1971. Microprocessors came up during the 1970s. Ted Hoff, working for Intel introduced 4-bit 4004.
- In 1972, Intel introduced the 8080

operating systems 操作系统

interface ['ɪntəfeɪs] n. 界面; 接口

integrated circuit 集成电路

silicon ['sɪlɪkən] n. 硅

microprocessor [ˌmaɪkrəʊ'prəʊsesə(r)]
n. 微处理器

hallmark ['hɔːlmɑːk] n. 纯度标记; 标志; 特征 vt. 标纯度

microprocessors.

- In 1974, Xerox came up with Alto **workstation** at PARC. It consisted of a monitor, a graphical interface, a mouse, and an Ethernet card for networking.
- Apple Computers brought out the Macintosh personal computer on January 24 1984.
- By 1988, more than 45 million computers were in use in the United States. The number went up to a billion by 2002.



The fifth generation computers are in their development phase. They would be capable of massive parallel processing, support voice recognition and understand natural language. The current advancements in computer technology are likely to transform computing machines into intelligent ones that possess self organizing skills. The evolution of computers will continue, perhaps till the day their processing powers equal human intelligence.

workstation[wə:ks'teɪʃən] n. 工作站



EXERCISES

I . Match the terms and the interpretations.

1. Abacus

- (a) A low-level programming language for computers, microprocessors, microcontrollers, and other programmable devices in which each statement corresponds to a single machine language instruction. It is specific to a certain computer architecture, in contrast to most high-level programming languages, which may

be more portable.

- | | |
|----------------------|--|
| 2. Multitasking | (b) A manual aid to calculating that consists of beads or disks that can be moved up and down on a series of sticks or strings within a usually wooden frame. |
| 3. Workstation | (c) A method where multiple tasks, also known as processes, are performed during the same period of time. |
| 4. Assembly Language | (d) It is a multipurpose, programmable device that accepts digital data as input, processes it according to instructions stored in its memory, and provides results as output. |
| 5. Microprocessor | (e) A high-end microcomputer designed for technical or scientific applications. Intended primarily to be used by one person at a time, they are commonly connected to a local area network and run multi-user operating systems. The term has also been used to refer to a mainframe computer terminal or a PC connected to a network. |

II. Are the following statements True (T) or False (F)?

1. () 0 and 1 are the binary numbers.
2. () Abacus is considered to be the first calculator.
3. () ASCII is the abbreviation for American Standard Code for Information Interchange.
4. () Because of transistors, computers have given off no heat.
5. () Vacuum tubes were replaced by integrated circuits.
6. () First generation computers used vacuum tubes for circuitry and floppy disk for memory.
7. () Second-generation computers still relied on punched cards for input and printouts for output.
8. () Assembly languages came into play in the third generation computers.
9. () Douglas Engelbart invented the first mouse prototype in 1963.
10. () Fifth generation computers would be capable of massive parallel processing, support voice recognition and understand natural language.

III. Translate the following words and phrases into Chinese.

1. Binary system _____

2. CRT _____
3. LCD _____
4. Integrated circuits _____
5. Massive parallel processing _____
6. Voice recognition _____
7. Operating system _____
8. Interface _____
9. Floppy disks _____
10. Color Graphics Adapter _____

IV. Translate the following Chinese statements into English.

1. 公元前 5 世纪，中国人发明了算盘，广泛应用于商业贸易中。算盘被认为是最早的计算设备，并一直使用至今。

2. 1943 年到 1959 年的计算机通常被称做第一代计算机。此时期的计算机使用真空管，所有的程序都是用机器码编写的，使用穿孔卡片。

3. 1964 年到 1972 年的计算机一般被称为第三代计算机。此时期的计算机大量使用集成电路，典型的机型是 IBM360 系列。

4. 与整个人类的发展历程及传统科学技术相比，计算机的历史才刚刚开始。

5. 计算机是由硬件系统和软件系统组成的，硬件包括中央处理器、存储器、输入设备和输出设备，软件系统包括系统软件和应用软件。

V. Fill in each of the blanks with one of the following words.

upon led up to for analyze capable of

too mechanical calculate solved instead of

Since civilizations began, many of the advances made by science and technology have depended _____ the ability to process large amounts of data and perform complex mathematical calculations. For thousands of years, mathematicians, scientists and businessmen have searched _____ computing machines that could perform calculations and _____ data quickly and efficiently. One such device was the abacus.

The abacus was an important counting machine in ancient Babylon, China, and throughout Europe where it was used until the late middle ages. It was followed by a series of improvements in _____ counting machines that _____ the development of accurate mechanical adding machines in the 1930's. These machines used a complicated assortment of gears and levers to perform the calculations but they were far _____ slow to be of much use to scientists. Also, a machine capable of making simple decisions such as which number is larger was needed. A machine _____ making decisions is called a computer.

In June 1943, work began on the world's first electronic computer. It was built at the University of Pennsylvania as a secret military project during World War II and was to be used to _____ the trajectory(弹道, 轨迹) of artillery shells. It covered 1500 square feet and weighed 30 tons. The project was not completed until 1946 but the effort was not wasted. In one of its first demonstrations, the computer _____ a problem in 20 seconds that took a team of mathematicians three days. This machine was a vast improvement over the mechanical calculating machines of the past because it used vacuum tubes _____ relay switches. It contained over 17,000 of these tubes, which were the same type tubes used in radios at that time.

The invention of the transistor made smaller and less expensive computers possible. Although computers shrank in size, they were still huge by today's standards. Another innovation to computers in the 1960's was storing data on tape instead of punch cards. This gave computers the ability to store and retrieve data quickly and reliably.



SUPPLEMENTARY

Famous People in the History of IT

Almost everyone uses computers these days for everything from shopping to working to playing games. But have you ever stopped to think about where all this amazing technology came from?