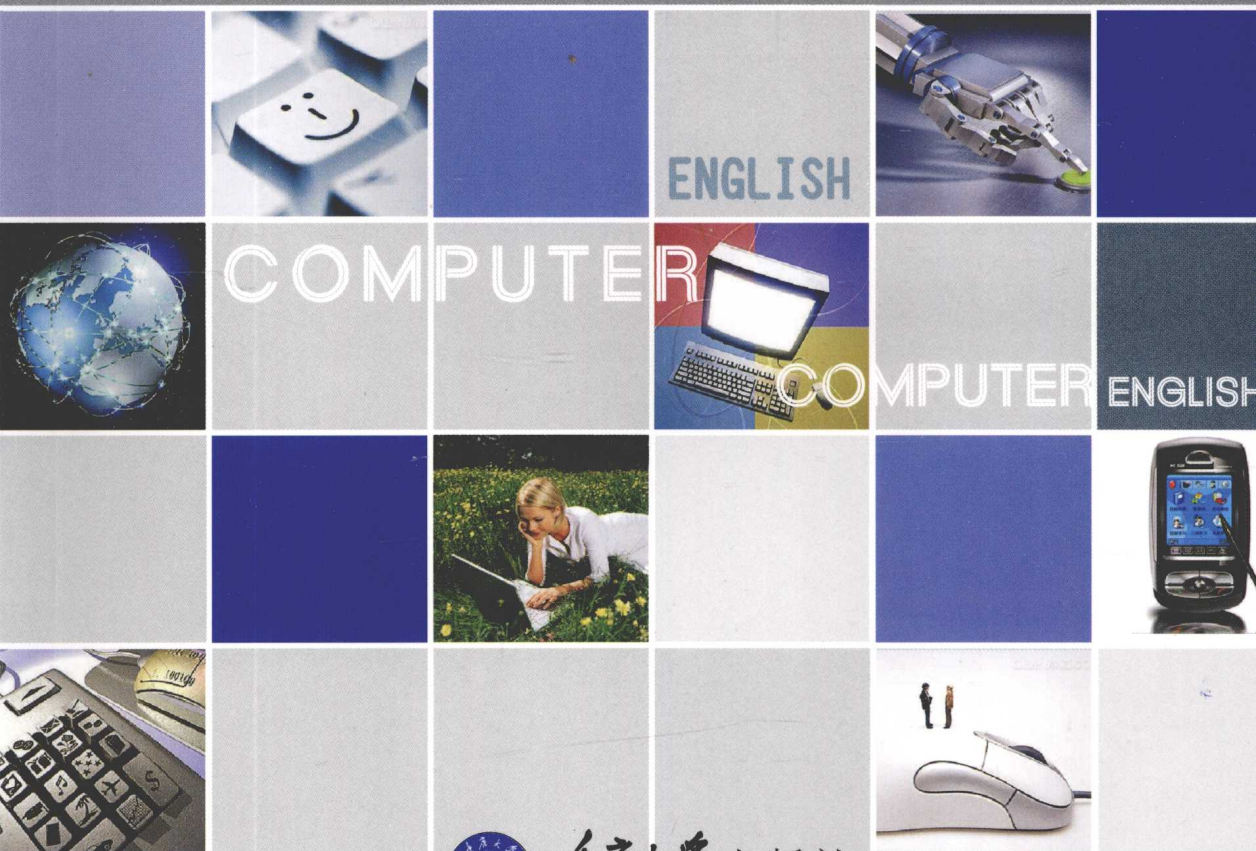


高职高专行业英语

ESP

计算机 英语

主 编 钟文龙



重庆大学出版社

<http://www.cqup.com.cn>

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内 容 提 要

《计算机英语》系高职高专行业英语系列丛书,是一本综合了计算机知识和实用英语的双领域教材。本书共分为十个单元和四个附录,分别介绍了计算机的发展历史、计算机的组成、计算机的操作系统、数据库系统、编程语言、现时流行的计算机网络技术和互联网技术、信息安全、多媒体技术和电脑游戏、电子商务技术、计算机未来的发展方向和最新的技术概念等。本书既可作为高等职业院校计算机类专业学生学习行业英语的教材,也可以作为从事其他专业的读者了解计算机原理、科学知识,认识计算机技术的应用和发展的辅助参考手册。

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前 言

随着计算机应用的日益普及和计算机技术的高速发展,人类已进入了“信息时代”。在这个时代里,英语众望所归地成为了通用语言,日新月异的信息技术带来了大量的新名词、创新的表达方式,从根本上不断改变着人们的交流方式,以及生活、学习和工作模式。其知识更新首先突出地体现在计算机领域的技术书刊、杂志、资料等出版发行物上。掌握最新的信息资料和技术是对于计算机类专业人才的基本要求。在计算机这个高新技术行业中,绝大部分最新技术信息都来自于欧美技术专家在国际知名期刊或网站上所发表的文献资料。欲成为未来计算机行业的优秀人才,必须具有熟练阅读这些最新技术文献的能力,以便及时了解计算机发展的前沿技术和信息。

计算机专业英语是高职院校计算机应用专业学生的重要工具课程,它是一门综合了计算机专业知识和英语应用能力的专业课程。本课程旨在使学生掌握实用的专业英语词汇和计算机的基本概念,为阅读计算机专业文献和书籍打下坚实的基础,同时为在以后的工作中解决与计算机专业英语相关的问题提供必要的知识保证。编写本书的目的是为目前的高等职业院校计算机类专业的学生或开始自学计算机专业技术的人员提供一本与他们基础相适应的专业英语教材。

近几年来国务院和教育部大力发展高等职业教育的不断推进,在这样的大背景下本书的编写指导思想进行了大胆的革新,重点强调“理论够用,重在培养实践动手技术能力”的原则。在文章取材上尽量缩减篇幅,词汇量控制在较低水平上,并注重提高它们的实用性。总的原则是兼顾介绍计算机专业英语常用的基本词汇、术语和最大限度地适应目前高职高专学生的基础现状。

本书有以下几个方面的特点:计算机专业知识丰富,介绍了必要的语法知识及专业文章的翻译方法与技巧,注意与其他计算机专业课程内容

的衔接与知识补充;阅读材料难度适当,强调理解及分析,每章配有关键词、注释及大量习题;附录中列出了常用的计算机专业词汇、网络聊天词汇、常见的计算机屏幕英语等。

本书共分为十个单元和四个附录。第一单元介绍计算机的发展历史,主要介绍了第一台计算机的由来,和个人计算机的发展历史,并在辅助读物中简单介绍了著名的摩尔定律。第二单元详细介绍了计算机的组成,包括 CPU、主板、硬盘、显示器、打印机等硬件设备。第三单元主要介绍计算机的操作系统,包括广泛应用的 WINDOWS 系列操作系统,以及 Linux 和 Unix 操作系统。还介绍了 WINDOWS 最新发布的 VISTA 操作系统产品。第四单元介绍了数据库系统,包括文件数据库、层次数据库、网络数据库、关系型数据库等多种数据库模型,以及一些主流的数据库管理系统。第五单元介绍编程语言,主要包括主流的 VB、C、C++、JAVA 等编程语言。第六单元介绍现在流行的计算机网络技术和互联网技术,包括 TCP/IP、HTTP、WWW 等网络协议,以及局域网、广域网、城域网等网络结构。第七单元介绍信息安全,包括加密、验证、数字签名、防火墙、入侵检测系统等安全技术和基本的信息安全概念。第八单元介绍多媒体技术和电脑游。第九单元介绍电子商务技术,包括 B2B、B2C、C2C 等应用模式,第十单元介绍了计算机未来的发展方向和最新的技术概念,包括人工智能、虚拟实现技术等。附录 A 集中罗列整理了计算机中的缩写术语,附录 B 介绍了计算机专业英语的翻译技巧,附录 C 介绍了计算机应用过程中经常出现的屏幕提示信息,并进行了解释,附录 D 是全书的基本词汇表的索引。

本书由重庆航天职业技术学院的钟文龙老师担任主编,负责全书的大纲编写、统稿、修改、校正和定稿工作,并编写了本书的第 1 单元、第 4 单元以及计算机专业英语翻译技巧和书后全部附录。桂林航天工业高等专科学校的刘建华老师编写了第 7 单元,重庆电力高等专科学校的向笛老师编写了第 9 单元,两位老师都同时担任本书的副主编工作。重庆航天职业技术学院的董明老师和钟文龙老师合编了第 3 单元。广东南海东软信息技术职业学院的周瑞枝老师、程娟老师和朱新颜老师分别编写了

本书的第2、第8、第10单元。桂林航天工业高等专科学校的李志梅老师编写了第5单元。重庆电力高等专科学校的周燕老师编写了第6单元。此外重庆航天职业技术学院的邱云霞老师和陈艳平老师参加了全书的统稿和校对工作。

计算机技术方兴未艾,行业英语教学活动正在日益广泛和不断深入。由于计算机技术发展突飞猛进,新知识新名词层出不穷不断更新,加上编者水平有限、时间仓促,书中难免存在不足之处,恳请广大读者批评指正。

编 者

2009年6月

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Unit 1 History of Computer

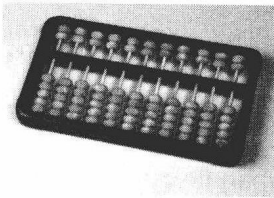
After reading this unit and completing the exercises, you will be able to

- ✧ Understand the earliest calculating devices, such as abacus, logarithms.
- ✧ Be familiar with the history of computer development.
- ✧ Identify all the general elements of a computer structure.
- ✧ Apply your knowledge when using your computers.

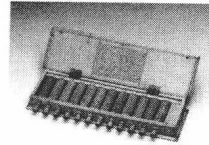
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Lead-in

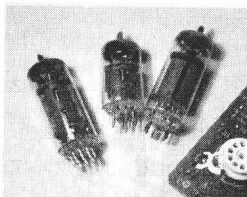
(1) *Look at the pictures and discuss about them. Then produce the possible words and expressions that are related to the theme.*



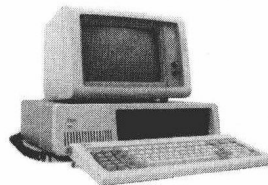
Picture 1



Picture 2



Picture 3



Picture 4

Write down the relevant words and expressions in the space provided below.

(2) Listen to the passage and then fill in the blanks with the exact words or phrases you have just heard.

Using a computer is now part of _____ life for most Chinese, whether we like it or not! In fact, in today's China, you will inadvertently use a computer when purchasing a train or _____ ticket, paying for taxes, making a _____, watching an LCD television and such.

Computers have an _____ upon our lives almost everywhere we do (or don't) go. Perhaps amazingly, computers are a relevantly recent _____.

2

Read and Understand

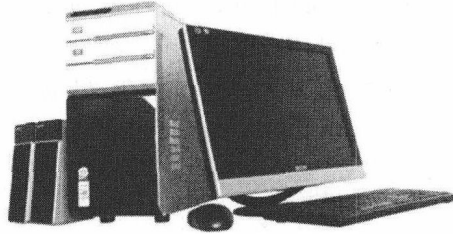
(1) Discuss the questions with your partners.

- 1) Talk about the first mechanical calculator and tell where it firstly appeared.
- 2) What is the mechanical computer?
- 3) What is the first electronic computer and when it was created?
- 4) When did the first personal computer appear?

(2) Time to read it

I. The First Computer

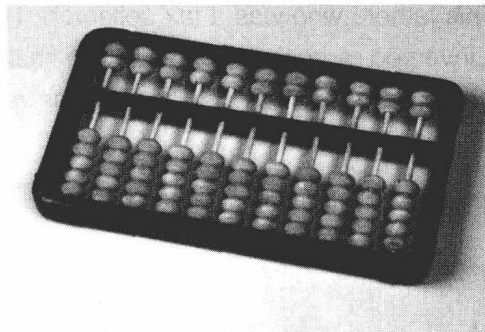
Many discoveries and inventions have directly and indirectly contributed to the development of the personal computer. Examining a few important developmental landmarks can help bring entire picture into focus.



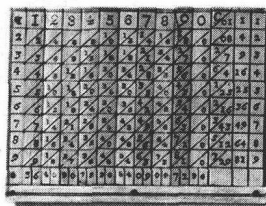
The first computers of any kind were simple calculators. Even these evolved from mechanical devices to electronic digital devices.

Mechanical Calculators

One of the earliest calculating devices on record is the abacus, which has been known and widely used for more than 2,000 years. The abacus is a simple wooden rack holding parallel rods on which beads are strung. When these beads are manipulated back and forth according to certain rules, several different types of arithmetic operations can be performed.



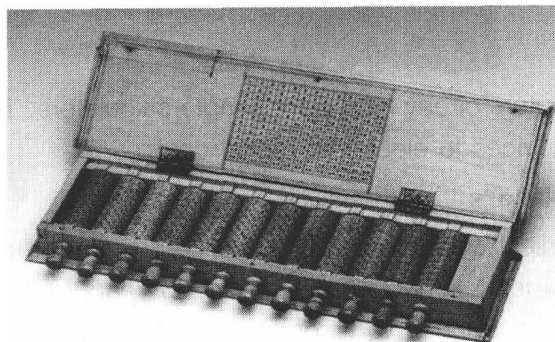
Courtesy Clive "Max" Maxfield and Alvin Brown



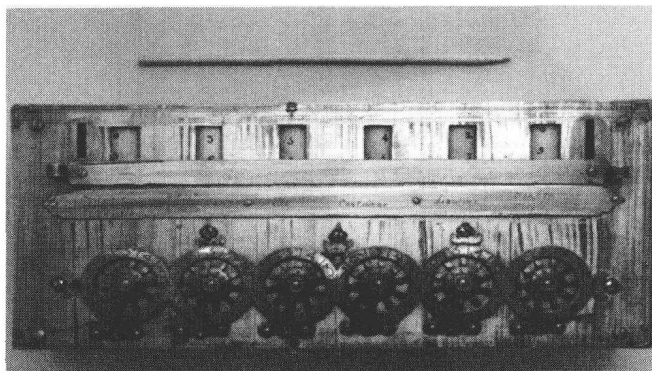
Courtesy IBM (www.ibm.com)

John Napier and Napier's Bones

Math with standard Arabic numbers found its way to Europe in the eighth and ninth centuries. In the early 1,600s a man named Charles Napier (the inventor of logarithms) developed a series of rods (later called Napier's Bones) that could be used to assist with numeric multiplication.



Blaise Pascal is normally credited with building the first digital calculating machine in 1642. It could perform the addition of numbers entered on dials and was intended to help his father, who was a tax collector. Then in 1671, Gottfried Wilhelm von Leibniz invented a calculator that was finally built in 1694. His calculation machine could not only add, but by successive adding and shifting, could also multiply.



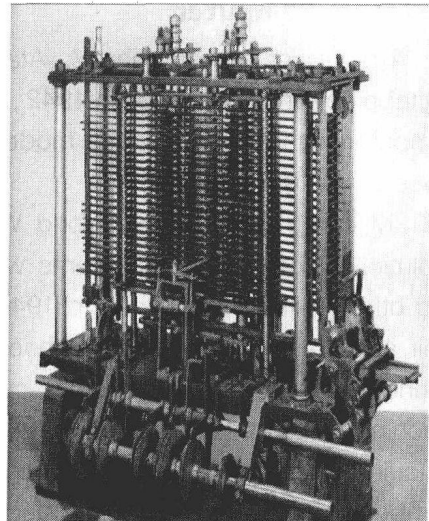
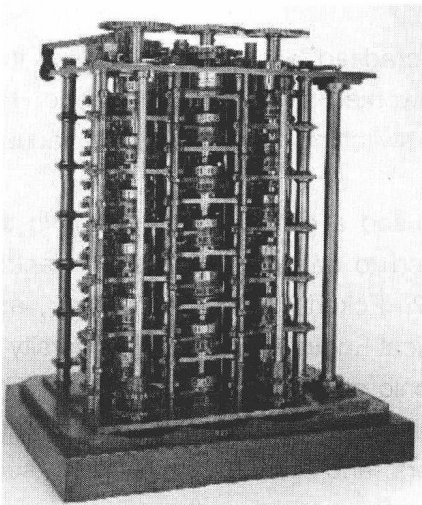
In 1820, Charles Xavier Thomas developed the first commercially successful mechanical calculator that could not only add but also subtract, multiply, and divide. After that, a succession of ever improving mechanical calculators created by various other inventors followed.

The First Mechanical Computer

Charles Babbage, a mathematics professor in Cambridge, England, is considered by many as the father of computers because of his two great inventions — each a different type of mechanical computing engine.



The Difference Engine, as he called it, was conceived in 1812 and solved polynomial equations by the method of differences. By 1822, he had built a small working model of his Difference Engine for demonstration purposes. With financial help from the British government, Babbage started the construction of full-scale model in 1823. It was intended to be steam-powered and fully automatic and would even print the resulting tables.



Babbage continued work on it for 10 years, but by 1833 he had lost interest because he now had an idea for an even better machine, something he described as a general-purpose, fully program-controlled, automatic mechanical digital computer. Babbage called his new machine an Analytical Engine.

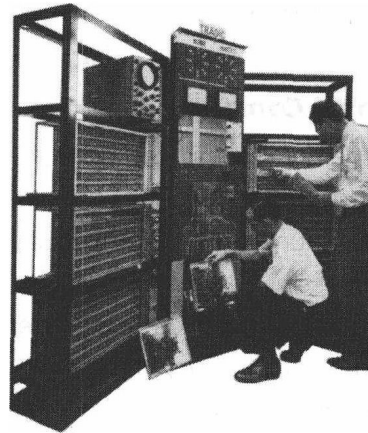
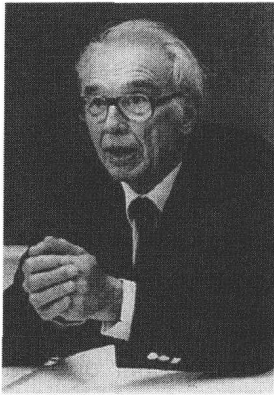
This Analytical Engine would have been the first true general-purpose computing device. It is regarded as the first real predecessor to a modern computer because it had all the elements of what is considered a computer today. This included

- ✧ An input device. Using an idea similar to the looms used in textile mills at the time, a form of punched cards supplied the input.
- ✧ A control unit. A barrel-shaped section with many slats and studs was used to control or program the processor.
- ✧ A processor (or calculator). A computing engine containing hundreds of axles and thousands of gears about 10 feet tall.
- ✧ Storage. A unit containing more axles and gears that could hold 1,000 50-digit numbers.
- ✧ An output device. Plate designed to fit in a printing press, used to print the final results.

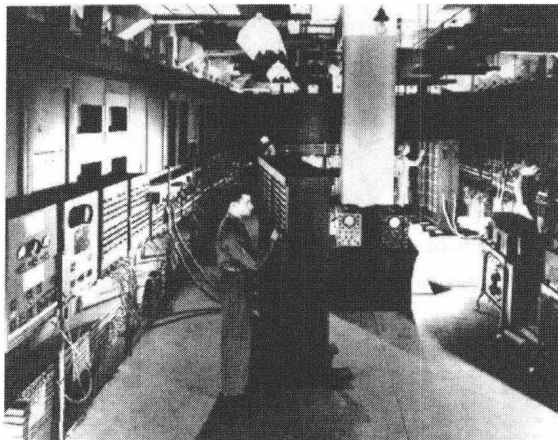
Electronic Computer

A physicist named John V. Atanasoff is credited with creating the first true digital electronic computer in 1942, while he worked at Iowa State College. His computer was the first to use modern digital switching techniques and vacuum tubes as the switches.

Military needs during World War II caused a great thrust forward in the evolution of computers. Systems were needed to calculate weapons trajectory and other military functions. In 1946, John P. Eckert, John W. Mauchly, and their associates at the Moore School of Electrical Engineering at the University of Pennsylvania built the first large-scale electronic computer for the military. This machine became known as ENIAC, the Electrical Numerical Integrator and Calculator. It operated on 10-digit numbers and could multiply two such numbers at the rate of 300 products per second by finding the value of each



product from a multiplication table stored in its memory. ENIAC was about 1,000 times faster than the previous generation of electromechanical relay computers.



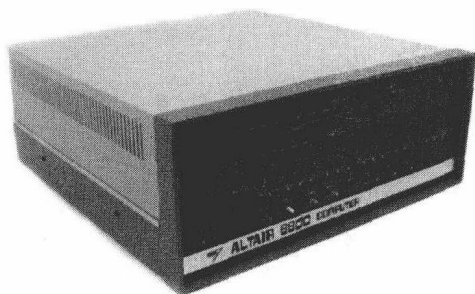
ENIAC used about 18,000 vacuum tubes; occupied 1,800 square feet (167 square meters) of floor space, and consumed about 180,000 watts of electrical power. Punched cards served as the input and output; registers served as adders and also as quick-access read-write storage.

From ENIAC to the present, computer evolution has moved very rapidly. The first-generation computers were known for using vacuum tubes in their construction. The generation to follow would use the much smaller and more

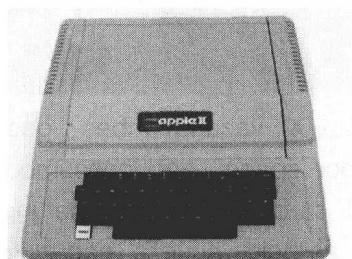
efficient transistor.

II. Personal Computer

A personal computer or PC is a small, relatively inexpensive computer designed for an individual user. In price, personal computers range anywhere from a few hundred dollars to over five thousand dollars. All are based on the microprocessor technology that enables manufacturers to put an entire CPU on one chip. Businesses use personal computers for word processing, accounting, desk-top publishing, and for running spreadsheet and database management applications. At home, the most popular use for personal computers is for playing games and computer-assisted learning.

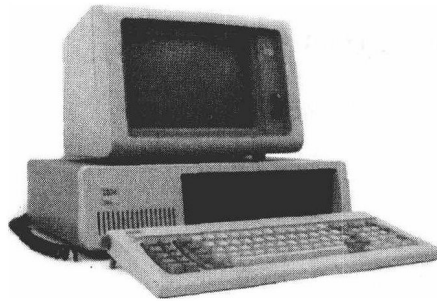


Personal computers first appeared in the late 1970s. One of the first and most popular personal computers was the Apple II, introduced in 1977 by Apple Computer.



During the late 1970s and early 1980s, new models and competing operating systems seemed to appear daily, then, in 1981, IBM entered the fray with its first personal computer, known as the IBM PC. The IBM PC quickly

became the personal computer of choice, and most other personal computer manufacturers fell by the wayside. One of the few companies to survive IBM's onslaught was Apple Computer, which remains a major player in the personal computer marketplace.



Other companies adjusted to IBM's dominance by building IBM clones, computers that were internally almost the same as the IBM PC, but that cost less. Because IBM clones used the same microprocessors as IBM PCs, they were capable of running the same software. Over the years, IBM has lost much of its influence in directing the evolution of PCs. Many of its innovations, such as the MCA (Micro Channel Architecture) expansion bus and the OS/2 operating system, have not been accepted by the industry or the marketplace.

Today, the world of personal computers is basically divided into Apple Macintoshes and PCs. The principal characteristics of personal computers are that they are single-user systems and are based on microprocessors. However, although personal computers are designed as single-user systems, it is common to link them together to form a network. In terms of power, there is great variety. At the high end, the distinction between personal computers and workstations has faded. High-end models of the Macintosh and PC offer the same computing power and graphics capability as low-end workstations by Sun Microsystems, Hewlett Packard, and DEC.

It is interesting to note that IBM had originally contacted Digital Research (the company that created CP/M, then the most popular personal computer operating system) to have it develop an operating system for the new IBM PC, but Digital was leery of working with IBM, and especially balked at the nondisclosure agreement IBM wanted Digital to sign. Microsoft jumped on the

opportunity left open by Digital Research and as a result has become one of the largest software companies in the world. IBM's use of outside vendors in developing the PC was an opened invitation for the aftermarket to jump in and support the system — and it did.

• Words & Expressions •

- landmark /'lændmɑ:k/ *n.* 具有里程碑意义
 mechanical calculator 机械计算器
 arithmetic /ə'riθmətik/ *n.* 算术
 abacus /'æbəkəs/ *n.* 算盘
 demonstration /,deməns'treɪʃən/ *n.* 示范
 multiplication /,mʌltipli'keɪʃən/ *n.* 乘法
 vacuum tubes 真空管
 electromechanical /ɪˌlektərəʊmɪ'kænɪkəl/ *a.* 机电
 transistor /træn'zɪstə/ *n.* 晶体管
 evolve from to 演进, 从以
 analytical engine 分析的引擎
 input and output 输入和输出
 trajectory /'trædʒɪktəri, trə'dʒekətəri/ *n.* 轨迹
 digital /'dɪdʒɪtl/ *a.* 数字的, 数码的
 electrical engineering 电气工程
 university of pennsylvania /ˌpensɪl'veɪnjən, -'veɪniən/ 宾夕法尼亚大学
 printing press 印刷机
 cambridge /'keɪmbrɪdʒ/ *n.* 剑桥(英国城市, 剑桥大学所在地)
 individual user 个人用户
 inexpensive /ɪnɪks'pensɪv/ *a.* 物美价廉
 range from... to... 范围从……到……
 microprocessor technology 微处理器技术
 manufacturer /ˌmænjʊ'fæktʃərə/ *n.* 制造商
 word processing 文字处理
 desktop publishing 桌面出版
 running spreadsheet 运行电子表格