



# English for Computer Science and Engineering

## Unit 6

# Magnetic Stripes and Smart Cards

<b>badge</b>	tag, sign	امضاء و علامت برجسته و مشخص
<b>appropriate</b>	suitable, fitting	مناسب
<b>confidential</b>	secret	محرمانه
<b>authorization</b>	official permission	اجازه، اختیار
<b>permit</b>	allow	اجازه دادن
<b>chronological</b>	arranged according to the dates on which events occurred	بترتیب وقوع، ترتیب زمانی وقوع
<b>nonvolatile</b>	stable	غیر فرار
<b>replacement</b>	substitute	جایگزین

# Magnetic Stripes and Smart Cards

<b>purchase</b>	buy	خریداری نمودن
<b>deduct</b>	subtract from a total	کم کردن ، کسر کردن ، وضع کردن
<b>inevitable</b>	unavoidable	اجتناب ناپذیر
<b>recognition</b>	acknowledgment, identification	تشخیص، شناسایی
<b>discrete</b>	separate, individual	گسسته ، جدا ، مجزا
<b>catch up with</b>	overtake	پیشی گرفتن
<b>off-the-shelf</b>	standard, mass-produced	تولید انبوه
<b>visually</b>	by means of vision	دیداری
<b>extremely</b>	very, highly	بشدت

# Magnetic Stripes and Smart Cards

<b>complex</b>	complicated	پیچیده
<b>eyesight</b>	sight, seeing	دید، بینایی
<b>digitize</b>	convert analog data into digital data	دیجیتالی کردن
<b>identify</b>	recognize	تشخیص دادن
<b>drop off</b>	disappear, become less	کاهش یافتن
<b>roll</b>	cylindrical object, scroll	طاقه، رول، لوله
<b>once</b>	when	هنگامی
<b>merchandise</b>	goods, stock, trade	کالا، تجارت کردن

# Magnetic Stripes and Smart Cards

<b>customer</b>	client	مشتری
<b>train</b>	learn	آموزش دادن
<b>expand</b>	grow larger	بسط یافتن، منبسط شدن
<b>permanent</b>	fixed, invariable	دائمی
<b>handheld</b>	small enough to be held in the palm of one's hand	دستی
<b>soft</b>	not firm; smooth	نرم، ملایم
<b>solid-state</b>	consisting of semiconductor materials	نیمه هادی
<b>stock</b>	supply of goods, inventory; share	موجودی، ذخیره
<b>clerk</b>	minor office worker	دفتردار، کارمند دفتری

# Magnetic Stripes and Smart Cards

<b>routinely</b>	ordinarily	معمولی
<b>inventory</b>	stock, list of assets	موجودی ، دارایی
<b>slate</b>	fine grained rock that is easily split into thin layers	ورقه، صفحه، سنگ لوح
<b>alphanumeric</b>	consisting of letters and numbers	حرفی عددی
<b>signature</b>	signing of one's name	امضاء
<b>participant</b>	partaker	شرکت کننده

# Point-And-Draw Devices

<b>navigate</b>	steer, journey	هدایت کردن
<b>command</b>	order, direction, control	فرمان
<b>effectiveness</b>	efficiency, productivity	اثر، تاثیر، کارایی
<b>instance</b>	example	مورد، نمونه
<b>particular</b>	special, unusual	ویژه، خاص
<b>accordingly</b>	therefore; correspondingly	نتیجتاً

# Language focus F

## Time sequence

In activities such as scheduling, doing routine activities, and conducting and describing experiments, it is important to recognize the sequence of events. As we know, events do not simply occur in isolation, they occur either before, during, or after other events. This time sequence may be chronological, logical, or causal. The following tables show examples of time relaters.

### 1 Before given time-references:

	Time relaters		
Adjectives	earlier former	preceding previous	
Adverbials	already prior before	earlier first formerly originally	previously so far yet
	before that before then	up to now/then until now/then	in the beginning (long) ago

Examples:

- 1 The memory storage capacity of **earlier** computers was not as large as those of today.
- 2 When the first digital computer was developed, the first analog computer had **already** been in use for some time.
- 3 **Up to now**, voice recognition technology has not been developed for mass marketing.

### 2 Simultaneous with given time-references:

	Time relaters	
Adjectives	contemporary	simultaneous
Adverbials	at present at this point now/then today for the time being at the moment at that time	meantime meanwhile in the meantime when at the same time



Examples:

- 1 **At that time** many new computer programs were being developed for use in businesses.
- 2 Computers may soon take over many daily tasks, but **in the meantime** ordinary people must continue to do them themselves.
- 3 Computer magazines keep us informed about **contemporary** issues in the computing world.

3 After given time-references:

	Time relaters		
Adjectives	following	later	next
Adverbials	afterwards	since	by the end
	after that	by the time	soon
	eventually		next

Examples:

- 1 **Since** the development of the chip, computers have become cheaper and more compact.
- 2 You should have a good idea of the various applications of computer software **by the time** you finish reading this book.
- 3 Although initial versions of word-processing programs were not very complex, **later** versions were much more sophisticated.

Sample paragraph:

Computers, as we know them *today*, have not been around for a long time. It was not *until* the mid-1940s that the first working digital computer was completed. But *since* then, computers have evolved tremendously. Vacuum tubes were used in the first-generation computers only to be replaced by transistors in the second-generation computers *at the beginning* of the early 1960s. *By the end* of the 1960s, transistors themselves were replaced by tiny integrated circuit boards and, consequently, a new generation of computers was on the market. Fourth-generation computers are *now* produced with circuits that are much smaller than *before* and can fit on a single chip. *Even now*, new technologies are being developed to make even better machines.

**Exercise 1**

Read the following paragraph and, as you read, underline the time relaters.

During the seventeenth and eighteenth centuries, many easy ways of calculating were devised. Logarithm tables, calculus, and the basis for the modern slide rule were invented during this period. It was not until the early 1800s that the first calculating machine appeared and, not too long after, Charles Babbage designed a machine which became the basis for building today's computers. A hundred years later, the first analog computer was built, but the first digital computer was not completed until 1944. Since then, computers have gone through four generations: digital computers using vacuum tubes in the 1950s, transistors in the early 1960s, integrated circuits in the mid-60s, and a single chip in the 1970s. In the 1980s, we saw computers become smaller, faster, and cheaper. Earlier this decade, computers became portable, from laptops to palmtops. At the rate computer technology is growing now, we can expect further dramatic developments before the end of the century.

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**Exercise 2**

Read the following sentences which come from previous units. Underline the time relaters and indicate whether they refer to before, during, or after the given time reference. The first one has been done for you.

- 1 after                 Since then, over seventy million PCs made by IBM and other manufacturers have been sold. (Unit 1)
- 2 \_\_\_\_\_         Over this period, PCs have become commodity items. Since IBM made the design non-proprietary, anyone can make them. (Unit 1)
- 3 \_\_\_\_\_         Ten years later, in 1991, IBM were making PCs with 16Mb of memory, expandable to 64Mb, running with a processor speed of 33MHz. (Unit 1)
- 4 \_\_\_\_\_         Large companies are considering running major applications on PCs, something which, ten years ago, no one would have believed possible of a PC. (Unit 1)
- 5 \_\_\_\_\_         When the computer finds the closest match, it encodes the character in memory and displays it on the screen as if it has been typed. (Unit 2)
- 6 \_\_\_\_\_         Enter the clipboard computer, a technology that has been in development for the last 20 years but took hold in the mass market only this year. (Unit 2)
- 7 \_\_\_\_\_         Eventually, we're all going to be interlinked, no matter which service we use, in what DIALOG's Richard Ream calls a 'network of networks'. (Unit 3)
- 8 \_\_\_\_\_         Until then, most of us have to go to more than one service to find everything we need. (Unit 3)

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**Exercise 3**

Now refer back to paragraphs 1, 2, 4, and 5 of the text entitled *Computer networks* (page 67, Unit 6). Underline all the time relaters and indicate whether they refer to before, during, or after the given time reference.