Technical English

for Computer Science

Week 6

Asst. Prof. Deniz DURAL BALTA

Online Services

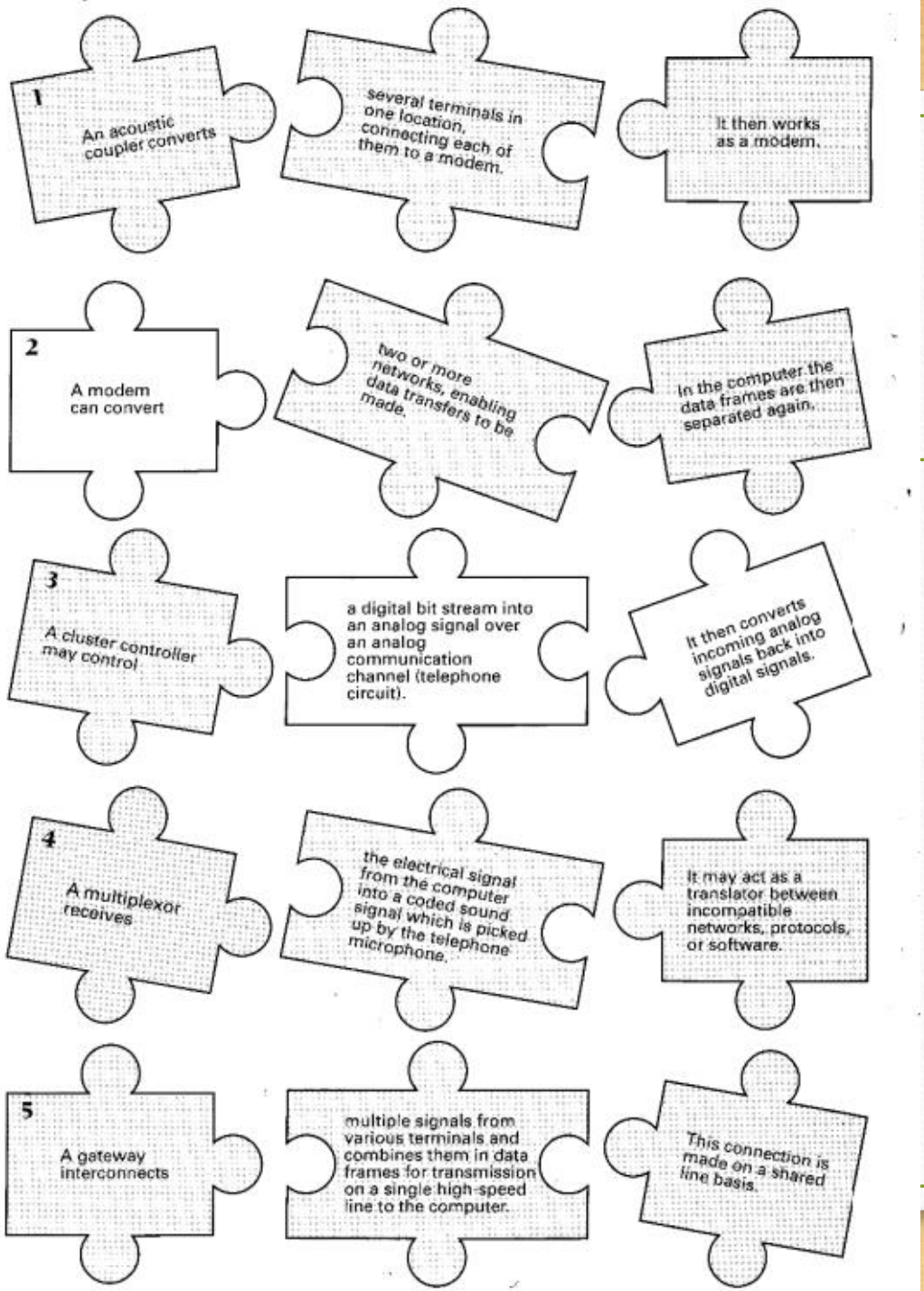
Decide whether the following statements are true (T) or false (F) in relation to the information in the text which follows. If you think a statement is false, change it to make it true.

1. ☐ Most people choose an online service because of the price or the number of available files.
2. ☐ Everybody has one service which he/she likes more than all the others.
3. ☐ You should judge each service according to whether it is better or worse overall than the service you are currently using.
4. ☐ Eventually, all services will be accessible from the service you are using.
5. ☐ McGraw-Hill is owned by BIX.
6. ☐ Tammy Ray and Jeanette Shearer think the BIX service is average.
7. ☐ French Minitel users have free access to an English-language version of CompuServe, although they cannot use the e-mail facility.
8. ☐ DELPHI's Hobby Shop now has two special-interest areas: one on classic vehicles, and one on new cars and technology.

Match each word or expression in the first column with a synonym in the second column.

1	but (line 2)	**a**	ultimately
2	while (line 6)	**b**	however
3	still (line 12)	**c**	whereas
4	for my part (line 19)	**d**	nevertheless
5	eventually (line 40)	**e**	personally
6	until then (line 44)	**f**	meanwhile

Data Transmission



Analog transmission

The older telephone systems function on the basis of analog signals representing voice modulation patterns which are represented by variations in wave forms. When using telephone lines for transmitting data by terminal to a computer, the digital signals from the terminal need to be converted to analog signals by an acoustic coupler or modem prior to transmission. A modem is a device which serves a dual purpose because it acts as a MOdulator (digital to analog) and DEModulator (analog to digital), hence the name MODEM. An analog communication system requires a modem at either end of the communication line. When the signals are received by the distant computer, the signals are reconverted to digital form prior to being input for processing.

Digital transmission

Analog transmission has been in use for many years as the basis of telephone technology and is very effective for this purpose, but it is not so suitable for high-speed transmission of information. Digital transmission consists of electrical pulses representing data in binary code as a series of on/off pulses. A number of different codes exist, some of which are based on a 6-, 7-, or 8-bit structure. ASCII is a 7-bit code and EBCDIC is an 8-bit code. The codes represent characters, transmission control signals, information separators, and device control. Digital technology has a number of advantages compared to analog, including higher transmission speed, lower incidence of errors, and the facility for mixing data consisting of voice, image, and text on the same circuit. It is for this reason that data transmissions will be increasingly digital in the future. A network structure known as Integrated Services Digital Network (ISDN) facilitates these aspects.

CROSSWORD…

Organizing Information

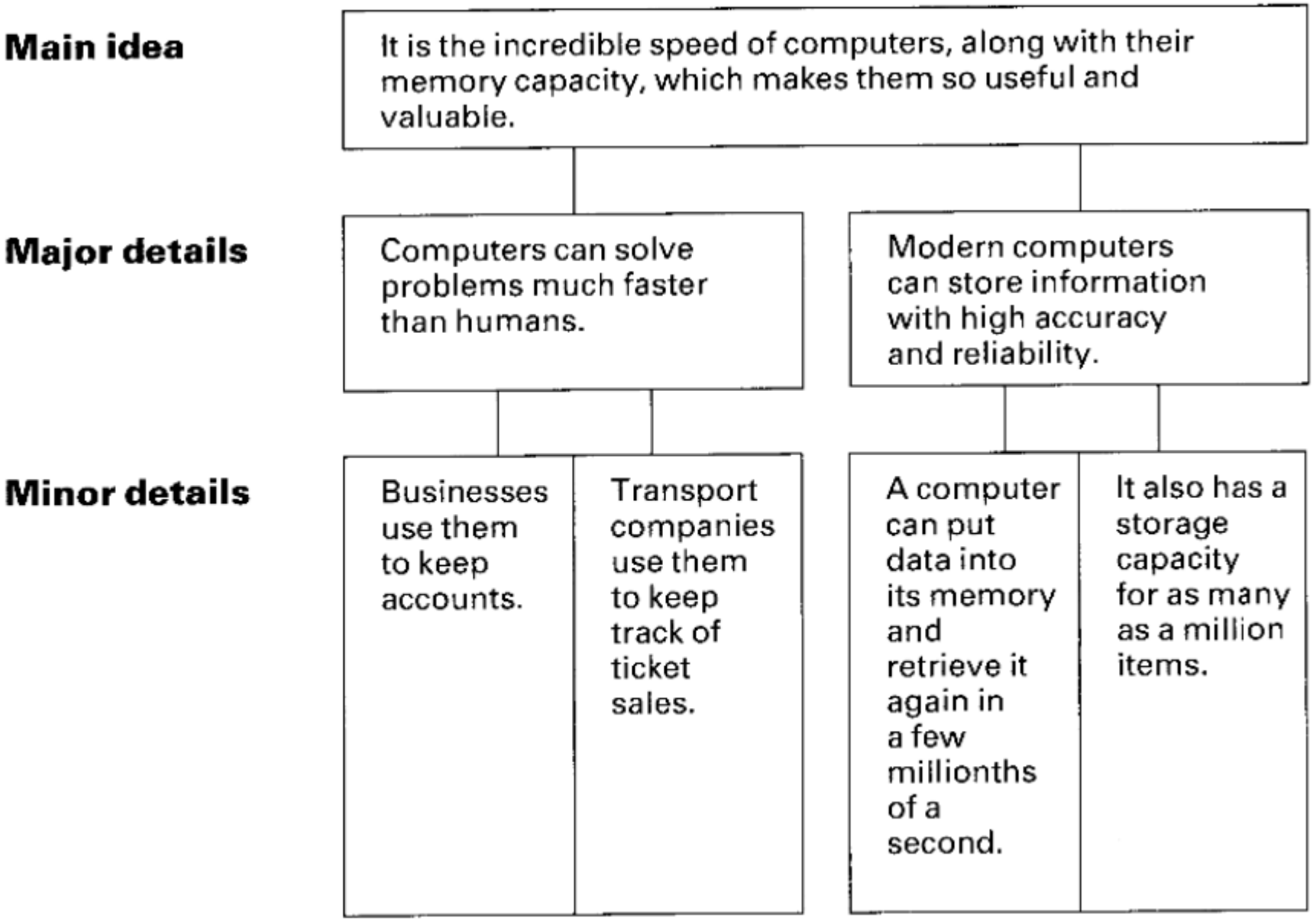
Sample paragraph 1:

All computers, whether large or small, have the same basic capabilities. They have circuits for performing arithmetic operations. They all have a way of communicating with the person(s) using them. They also have circuits for making decisions.

Organizing Information

Sample paragraph 2:

It is the incredible speed of computers, along with their memory capacity, which makes them so useful and valuable. Computers can solve problems in a fraction of the time it takes man. For this reason, businesses use them to keep their accounts, and airline, railway, and bus companies use them to control ticket sales. As for memory, modern computers can store information with high accuracy and reliability. A computer can put data into its memory and retrieve it again in a few millionths of a second. It also has a storage capacity for as many as a million items.


Main idea
It is the incredible speed of computers, along with their memory capacity, which makes them so useful and valuable.
Major details
Computers can solve problems much faster than humans.
Modern computers can store information with high accuracy and reliability.
Minor details
Businesses use them to keep accounts.
Transport companies use them to keep track of ticket sales.
A computer can put data into its memory and retrieve it again in a few millionths of a second.
It also has a storage capacity for as many as a million items.

Exercise 1

The computer has changed the production of copy in the newspaper industry. There are three steps involved in the process: input, correction, and output. First, the computer numbers each story, counts words, and gives a listing of the length of each story. Then, a page is made up, advertisements are placed in. the copy is shifted or deleted, and corrections are made. Finally, the computer hyphenates words, and the result of all this is a newspaper page.

Exercise 2

Railway companies use large computer systems to control ticket reservations and to give immediate information on the status of their trains. The computer system is connected by private telephone lines to terminals in major train stations, and ticket reservations for customers are made through these phone lines. The passenger's name, type of accommodation, and the train schedule is put into the computer's memory. On a typical day, a railway's computer system gets thousands of telephone calls about reservations, space on other railways, and requests for arrivals and departures. A big advantage of the railway computer ticket reservation system is its rapidity because a cancelled booking can be sold anywhere in the system just a few seconds later. Railway computer systems are not used for reservations alone. They are used for a variety of other jobs including train schedules, planning, freight and cargo loading, meal planning, personnel availability, accounting, and stock control.

Writing

- What do you think was the most productive and enjoyable course you attended during your computer engineering education? Why is that? If there is no such course, which course would you prefer to be added to the curriculum?