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BUSINESS ENGLISH Part I

ДЕЛОВОЙ ИНОСТРАННЫЙ ЯЗЫК (АНГЛИЙСКИЙ) Часть I

Учебный практикум для студентов специальности «Информационные системы и технологии»

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Пособие направлено на развитие навыков устной речи по темам «Information Technology in Professional Activity», «What is a Computer?», «Computer Hardware», «Application of Computers», «History of Computers», «Methods of Working with Computers», «Data Processing Concepts» and «Networks».

Пособие предназначено для студентов специальностей «Информационные системы и технологии» дневной и заочной формы обучения.

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ВВЕДЕНИЕ

Цель данного практикума — помочь обучающимся совершенствовать навыки чтения и устной речи, а также расширить словарный запас по заданным темам.

Пособие направлено на формирование коммуникативных умений и навыков. Оно состоит из восьми тематических разделов, каждый из которых соответствует определенной теме.

Каждый раздел включает в себя учебные тексты, раскрывающие основные теоретические вопросы по теме, подлежащие усвоению. Для активизации и усвоения изученного материала представлены разнообразные лексические и речевые упражнения, а также творческие задания, направленные на развитие навыков устной речи.

Все изучаемые темы соответствуют учебной программе по английскому языку для студентов специальности «Информационные системы и технологии».

Большинство заданий имеют коммуникативную направленность.

UNIT 1

INFORMATION TECHNOLOGY IN PROFESSIONAL ACTIVITY

Topical Vocabulary

requirement	требование;
logical mind	логическое мышление;
to break tasks down	разбить задания на части;
software	программное обеспечение;
string	последовательность, цепочка;
timescale	шкала времени;
installation	установка;
help-desk	служба технической помощи;
to implement	осуществлять;
to divert	перенаправлять;
to rollout	откачивать (из оперативной
	памяти), развертывать (ин-
	формацию в базах данных)

Exercise 1

Work in groups of three. Read your text A, B or C and complete the table. You may not find information for each section of the table.

	A	В	C
Job title			
Nature of work			
Formal qualifications			
Personal qualities			
Technical skills			
How to get started			
How to make progress			

Text A. HOW TO BECOME A PROGRAMMING EXPERT

The primary requirements for being a good programmer are nothing more than a good memory, an attention to detail, a logical mind and the ability to work through a problem in a methodical manner breaking tasks down into smaller, more manageable pieces.

However, it's not enough just to turn up for a job interview with a logical mind as your sole qualification. An employer will want to see some sort of formal qualification and a proven track record. But if you can show someone an impressive piece of software with your name on it, it will count for a lot more than a string of academic qualifications.

So what specific skills are employers looking for? The Windows market is booming and there's a demand for good C, C + +, Delphi, Java and Visual Basic developers. Avoid older languages such as FORTRAN and COBOL unless you want to work as a contract programmer.

Text B. HOW TO BECOME A COMPUTER CONSULTANT

The first key point to realise is that you can't know everything. However, you mustn't become an expert in too narrow field. The second key point is that you must be interested in your subject. The third key point is to differentiate between contract work and consultancy. Good contractors move from job to job every few months. A consultant is different. A consultant often works on very small timescales – a few days here, a week there, but often for a core collection of companies that keep coming back again and again.

There's a lot of work out there for people who know Visual Basic, C + +, and so on. And there are lots of people who know it too, so you have to be better than them. Qualifications are important. Microsoft has a raft of exams you can take, as does Novell, and these are very useful pieces of paper. University degrees are useless. They merely prove you can think, and will hopefully get you into a job where you can learn something use-

ful. Exams like Microsoft Certified Systems Engineer are well worth doing. The same goes for Novel Linux Certification. However, this won't guarantee an understanding of the product, its positioning in the market, how it relates to other products and so on. That's where the all important experience comes in.

Here's the road map. After leaving university you get a technical role in a company and spend your evenings and weekends learning the tools of your trade – and getting your current employer to pay for your exams. You don't stay in one company for more than two years. After a couple of hops like that, you may be in a good position to move into a junior consultancy position in one of the larger consultancy companies. By the age of 30, you've run big projects, rolled out major solutions and are well known. Maybe then it's time to make the leap and run your own life.

Text C. HOW TO BECOME AN IT MANAGER

IT managers manage projects, technology and people. Any large organization will have at least one IT manager responsible for ensuring that everyone who actually needs a PC has one and that it works properly. This means taking responsibility for the maintenance of servers and the installation of new software, and for staffing a help-desk and a support group.

Medium to large companies are also likely to have an IT systems manager. They are responsible for developing and implementing computer software that supports the operations of the business. They're responsible for multiple development projects and oversee the implementation and support of the systems. Companies will have two or three major systems that are probably bought off the shelf and then tailored by an in-house development team.

Apart from basic hardware and software expertise, an IT manager will typically have over five years' experience in the industry. Most are between 30 and 45. Since IT managers have to take responsibility for budgets and for staff, employers look for both of these factors in any potential recruit.

Nearly all IT managers have at least a first degree if not a second one as well. Interestingly, many of them don't have degrees in computing science. In any case, the best qualification for becoming a manager is experience. If your personality is such that you're unlikely to be asked to take responsibility for a small team or a project, then you can forget being an IT manager. You need to be bright, communicative and be able to earn the trust of your teams. Most of this can't be taught, so if you don't have these skills then divert your career elsewhere.

Exercise 1

Find in the text English equivalents of the following words and word combinations:

требование; достижение; слишком узкая сфера; группа поддержки; техническое обслуживание серверов; установка нового программного обеспечения; по крайней мере; заслуживать доверие.

Exercise 2

For which of the careers described are these statements true? More than one career may match each statement.

- 1. You may work for only a few days or a week for a company.
- 2. It's a good idea to buy books on languages such as C + +.
- 3. You are responsible for developing and implementing the software a company needs to run its operations.
- 4. You need to be able to break down a problem into a number of smaller tasks.
- 5. It's worth paying for a training course if you get serious about this career.
- 6. Microsoft Certified Systems Engineer is a useful qualification for your career.
 - 7. Your objective is to become self-employed.
 - 8. It's important to have the right personality to lead a team.

Exercise 3

Study these job requirements. Then try to match the requirements I-6 to the following list of jobs A-F.

A	В	C	D	Е	F

- A. Visual Basic Developer.
- B. IT Engineer (Network & Database).
- C. Web Developer.
- D. Network Support.
- E. E-commerce Consultant.
- F. Team Leader.

1	 at least 5 years (2 at senior level) in: Unix, SYBASE or ORACLE or Windows OS, Terminal Server, TCP / IP, Internet strong project management (2 years) willingness to travel abroad 	4	 minimum 4 years lifecycle development experience demonstrable skills using VB, SQL, RDBMS able to develop core s / w excellent communication skills
2	 able to manage, lead and develop a team knowledge of C, C + +, Delphi experience of object-oriented design within a commercial environment ability to deliver software projects against agreed schedules and within agreed estimates 	5	 minimum of 18 months commercial experience of Web development knowledge of HTML, Java, ASP full portfolio of URLs as examples
3	 proven track record in the delivery of e-solutions in banking environment knowledge of Unix, Windows1 and Oracle willingness to travel internationally 	6	 experience of Windows OS, Exchange, Monitoring Software, SQL Server, Verta, TCP / IP solid grasp of networking 2 to 5 years experience in a network environment

BEST IT CERTIFICATIONS

Certifications give experienced workers a chance to master their skills and knowledge. Certifications prove how dedicated a professional is to be in the field they work in. For fresh graduates, it gives a hiring advantage over the competitors. It is a given IT industry fact, that an inexperienced but certified professional, is a better choice than a non-certified one. A certificate can be used as a proof of competency.

Microsoft Certified Technology Specialist (MCTS) tests the skills and expertise in a specific technology. This is the first level of certification exams for Microsoft.

Microsoft Certified IT Professional (MCTIP) is useful for experienced professionals. It tests the ability to use Microsoft technologies in performing an IT job, like database administrator or server administrator. To have this exam, one or more compulsory MCTS certifications are to be obtained first.

CompTIA A + is a vendor neutral certification that covers multiple operating systems and technologies. It ensures basic knowledge of software and hardware components. It is intended for professionals.

Apple Certified Technical Coordinator (ACTC) targets entrylevel system administrators, who provide support and maintain Mac OS X client server environment.

Red Hat Certified System Administrator (RHCSA) is the best Linux certification. It carries out practical exams. It deals with basic system administration.

Certified Information Systems Security Professional (CISSP) is a certification from the nonprofit International Information Systems Security Certification Consortium (ISC2). It deals with information and network security. It is highly regarded as an information systems standard. It requires a minimum of 5 years, full-time, security work experience.

Certified Ethical Hacker (CEH) is an ethical hacker or penetration tester employed by a company to penetrate or hack into the network or computer systems, so that weaknesses in the security system can be exposed. Global Information Assurance Certification (GIAC) is information security certification. GIAC measures an individual's specific knowledge areas in the field of information security, for nearly 20 job specific responsibilities, like firewall analyst, intrusion analyst or security expert to name a few.

Certified Information Security Manager (CISM) is an advanced certification for experienced professionals in the field of information security.

Project Management Professional (PMP) certifies the management know-how and skills of an IT professional in handling projects and tasks at a managerial level within a budget and time limit.

DISCUSSION

Answer the following questions:

- 1. Why is an IT Certification so important for both experienced and non experienced workers?
 - 2. What are the best IT certifications for 2014?

COVER LETTER AND CURRICULUM VITAE (CV)

A resume or CV is a summary of your educational qualifications and work experience. A cover letter or a letter of application is the letter that accompanies your resume when you send it to a company. Both of the documents are vitally important in the job application process.

In the second paragraph of IT cover letters, mention the details of previous work experience and projects. Because you are applying for job in IT sector, you need to place emphasis of technical skills. Those applying for team leader or team consultant position need to mention their technical and interpersonal skills. Provide the details about the domain you worked on, the front end, back end you are well versed with, the web technologies you used. Provide the project you worked for and the clients you worked for. Mention details such as «Work in finance domain, de-

veloped android web software for XYZ Company» or «Worked on Perl CGI technology» or «have experience of using Tomcat server and web sphere», etc.

Fresher applying for IT jobs should mention their project and internship details. Even if you do not have much work experience, mention the software languages that you know and your proficiency level in using them. Explain your projects and the details of your contributions such as «Created the software design of the project, drafted the CLD, DFD of the system, helped in designing the interactive GUI of the website». Avoid mentioning the names of software languages that you are not well versed with. Students can mention the details of various technical inter-college programs or competitions. Provide information regarding your participation and contribution in creating technical tools or software. If your project or presentation received any prize during any well-known intercollege competitions, then mention it in your cover letter. College students who have attended any seminar of IT experts on emerging new technologies or any other technical topic can mention about it in brief in the cover letter.

End the letter by thanking the recruiter for considering you for the job opening and mention your interest in attending the interview. Make sure you sign the letter before sending it. Provide the details of the documents enclosed in the letter. Your IT cover letters should represent your resume and should not be a copy of your resume. Your cover letter should be readable and error free. It is essential that you use a readable font style and size. The cover letter should contain 3–4 paragraphs.

Exercise 1

Study the samples of cover letter for IT jobs. Complete the first paragraph of the cover letter. Then write two more paragraphs, explaining the reasons for applying and describing your skills and qualities. Provide complete postal address so that the recruiter can easily contact you. Mention the employer's name, designation, company's name, and address below your details.

Dear Mr. ,	
I am writing to apply for a position of	, which you ad-
vertised in today's . I am very excited by the	opportunity you
offer and believe that I have the personality and quality	fications you are
looking for.	•

CURRICULUM VITAE

Your CV is a summary of your professional/academic life until now, and it usually concentrates on your personal details, education and work experience.

Your CV's goal is to get you a job interview. To do this, your CV must be:

- · clear;
- well-organised;
- easy to read;
- concise;
- relevant to the job offered.

Your CV is the summary of your professional life. There are usually 5 general headings of information to include:

- personal details name, address, email and telephone number;
- objective a headline that summarizes the job opportunity you are seeking;
- work experience your previous employment in reverse chronological order with most detail for your present or most recent job;
- education details of secondary and university education including the establishments and qualifications (but excluding any that are irrelevant to your career);
- personal interests demonstrating that you are a balanced, responsible member of society with an interesting life outside work.

UNIT 2

WHAT IS A COMPUTER?

Topical Vocabulary

intricate сложный, запутанный; electronic circuit электронная цепь, схема; to operate switches приводить в действие;

переключатели;

to store numbers запоминать числа;

to manipulate управлять, обращаться,

преобразовывать;

to input / to feed in вводить; to turn on = to switch on включать; to turn off = to switch off выключать;

to process data обрабатывать данные;

to supply подавать, вводить, снабжать,

обеспечивать;

additionсложение;substractionвычитание;divisionделение;multiplicationумножение;

exponentiation возведение в степень;

user пользователь;

input device устройство ввода;

disk drive дисковое запоминающее

устройство, дисковод;

tape drive запоминающее устройство

на магнитной ленте;

to make decisions принимать решение; instantaneously мгновенно, немедленно;

USB flash drive флэшнакопитель

WHAT IS A COMPUTER?

A computer is a machine with an intricate network of electronic circuits that operate switches or magnetize tiny metal cores. The switches, like the cores, are capable of being in one or two possible states, that is, on or off; magnetized or demagnetized. The machine is capable of storing and manipulating numbers, letters, and characters (symbols).

The basic idea of a computer is that we can make the machine do what we want by inputting signals that turn certain switches on and turn others off, or magnetize or do not magnetize the cores.

The basic job of computers is processing of information. For this reason computers can be defined as devices which accept information in the form of instructions, called a program, and characters, called data, perform mathematical and / or logical operations on the information, and then supply results of these operations. The program, or part of it, which tells the computers what to do and the data, which provide the information needed to solve the problem, are kept inside the computer in a place called memory.

It is considered that computers have many remarkable powers. How ever most computers, whether large or small, have three basic capabilities.

First, computers have circuits for performing arithmetic operations, such as: addition, subtraction, division, multiplication and exponentiation.

Second, computers have a means of communicating with the user. After all, if we couldn't feed information in and get results back, these machines wouldn't be of much use. Some of the most common methods of inputting information are to use disks and USB flash drive. The computer's input device reads the information into the computer. For outputting information two common devices used are: a printer, printing the new information on paper.

Third, computers have circuits which can make decisions. The kinds of decisions which computer circuits can make are not

of the type: "Who would win the war between two countries?" or "Who is the richest person in the world?" Unfortunately, the computer can only decide three things, namely: Is one number less than another? Are two numbers equal? And, is one number greater than another?

A computer can solve a series of problems and make thousands of logical decisions without becoming tired. It can find the solution to a problem in a fraction of the time it takes a human being to do the job.

A computer can replace people in dull, routine tasks, but it works according to the instructions given to it. There are times when a computer seems to operate like a mechanical 'brain', but its achievements are limited by the minds of human beings. A computer cannot do anything unless a person tells it what to do and gives it the necessary information; but because electric pulses can move at the speed of light, a computer can carry out great numbers of arithmetic-logical operations almost instantaneously. A person can do the same, but in many cases that person would be dead long before the job was finished.

Exercise 1

Find in the text English equivalents of the following words and word combinations:

сложная сеть электронных цепей; хранить (запоминать) числа; символы, называемые данными; выполнять математические операции; выдавать результаты; иметь замечательные возможности; без устали; нудная рутинная работа.

Exercise 2

Answer the questions:

- 1. What is a computer?
- 2. What are the main functions of a computer?
- 3. In what way can we make the computer do what we want?
- 4. What is the basic task of a computer?
- 5. In what form does a computer accept information?

- 6. What is a program?
- 7. What are data?
- 8. What is memory?
- 9. What basic capabilities do computers have?
- 10. What are the computer's achievements limited by?

Exercise 3

Read and translate the dialogue:

Amy: Hi, Sean. How are you?

Sean: Hi, Amy. I'm fine, thank you. It's good to hear from you.

Amy: Sorry to bother you, but I have one problem and I think you might help me with it.

Sean: No problem. What's happened?

Amy: It's my computer. I've been having some problems with it lately. I know that you're good with computers, so I decided to address you. As for me, I don't understand a thing in electronic appliances.

Sean: I see. I'll try to help you. So, what's the problem?

Amy: There are actually several problems here. First of all, my computer started to shut down unexpectedly. It wasn't like this before. Secondly, I fail to open some of my past pictures or documents. Thirdly, I can't start the music. I'm at a loss. I think, perhaps, my computer has become outdated or something.

Sean: Those problems are quite serious. I must come over and have a look at it. I assume that the problem of shutting down is because of overheating. Perhaps you should replace the battery. When certain files fail to open, it might be a virus. So we will need a reliable anti-virus software set up. And the problem with audio files might be because the player became outdated. It needs to be refreshed.

Amy: See, I knew you are a computer genius. Could you come over?

Sean: Yes, of course. When is it more convenient for you?

Amy: The sooner, the better. I don't work this week so you can come anytime.

Sean: Ok, then. I will come tomorrow evening if that's all right.

Amy: That's perfect. I'll be waiting for you.

Sean: I will have to take some software and equipment with me. Is there anything else to be fixed?

Amy: My printer is also a mess. I've tried to change the ink, it didn't help. I'm having some trouble printing black and white pages.

Sean: I see. I'll have a look. However, I'm not good at printer or scanner fixing.

Amy: It's ok, Sean. Those devices are not so important for me as the computer and laptop. By the way, my laptop also plays tricks on me.

Sean: What's wrong with it?

Amy: I think, there is also some kind of a virus, because my files don't open.

Sean: Yes, that might be a virus. It is a common problem of computers these days.

Amy: I will purchase anti-virus software for both computers then. I should have done this earlier.

Sean: Yes, it is important to protect your PC. Otherwise, your personal information might become available to third parties.

Amy: Thank you, Sean, for trying to help me. I'll see you to-morrow then.

Sean: See you. Bye.

DISCUSSION

Do you agree or not? Comment on the following statements.

- 1. A computer is a machine with an intricate network of electronic circuits that operate switches or magnetize tiny metal cores.
- 2. The basic idea of a computer is that we can make the machine do what it wants.

ROLE-PLAY

Yesterday my brother got a flame when he was surfing the Internet. We are going to buy a new mouse for our PC. This one doesn't work. I can't boot my computer, there's something wrong. Michael is a real geek, he knows everything in the world of computers.

UNIT 3

COMPUTER HARDWARE

Topical Vocabulary

environment среда, окружение, режим ра-

боты;

human-related (взаимо)связанный с челове-

ком;

human-independent независимый от человека;

remote terminal удаленный терминал;

reel of magnetic tape бобина с магнитной лентой; input-output interface интерфейс (сопряжение, ме-

сто стыковки) ввода-вывода;

scan просматривать, сканировать,

развертывать;

bar-code scanner / устройство считывания

bar-code reader штрих-кода;

regardless of несмотря на, независимо от;

to match characteristics сопоставлять параметры;

similarly подобным образом, также,

аналогично;

to fall between падать, попадать в интервал

между;

card reader устройство считывания платы

(карты);

line printer построчный принтер, принтер

печатания строки;

page printer принтер с постраничной печа-

тью;

character printer принтер с посимвольной пе-

чатью;

optical character reader оптическое считывающее уст-

ройство текста;

optical mark reader оптическое считывающее

устройство знаков;

visual display визуальный индикатор;

digitizer аналого-цифровой преобразо-

ватель, сканер;

keyboard input device клавишное устройство ввода;

plotter графопостроитель;

voice recognition устройство распознавания

and response unit голоса и реагирования

Exercise 1

Name these different types of devices. Then match the possible users.



- a) student using a computer for entertainment while travelling;
- b) large company processing payroll data;
- c) travelling salesperson giving marketing presentations;

- d) large scientific organization processing work on nuclear research;
- e) businessperson keeping in touch with clients while travelling;
- f) graphic designer;
- g) secretary doing general office work.

Exercise 2

What do these abbreviations mean?

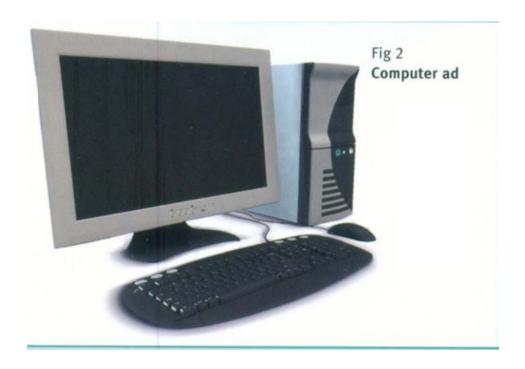
- 1. CD-ROM.
- 2. TFT.
- 3. MB.
- 4. GHz.
- 5. FSB.
- 6. SDRAM.
- 7. XGA.

Use the Glossary if necessary.

Exercise 3

Now study the text below to find this information:

- 1. What is the memory size of this PC?
- 2. What storage devices are supplied?
- 3. What size is the display screen?
- 4. How fast is the processor?
- 5. What is the capacity of the hard drive?
- 6. Which operating system does it use?
- 7. What multimedia features does the computer have?



Hov to Read a Computer AD

- 1. Intel Pentium 4 processor (3GHz, 800MHz FSB).
- 2. Mini-tower chassis.
- 3. 1GB dual channel DDR2 SDRAM.
- 4. 200GB Serial ATA hard drive (7200 r.p.m.).
- 5. 128MB PCI-Express video card.
- 6. Integrated audio.
- 7. 48X CD-RW drive.
- 8. 19" TFT flat panel XGA(1024x 768) monitor.
- 9. Microsoft Windows XP Professional.
- 1. The main processing chip called a Pentium 4 that was designed and manufactured by the Intel Corporation. It operates at a clock speed of three gigahertz and has a front side bus that operates at a speed of eight hundred megahertz.
- 2. A small, tall and narrow style of case containing the computer system.
- 3. Synchronous dynamic random access memory with a capacity of one gigabyte. It is a high bandwidth, double data rate memory.

- 4. A hard drive with a capacity of two hundred gigabytes that uses a type of connection interface known as Serial ATA i. e. it has a serial data connection rather than the original parallel connection. It rotates at a speed of seven thousand, two hundred revolutions per minute.
- 5. Electronics for driving the graphics output that has a memory capacity of one hundred and twenty-eight megabytes and uses a type of connection interface known as PCI-Express.
- 6. Electronics for controlling the sound output that is built into the main electronics of the computer.
- 7. A compact disk read / write disk drive that operates at forty-eight times the speed of the original CD drives.
- 8. A nineteen inch, flat display screen made from thin film transistors with a resolution of 1024 by 768.
 - 9. The operating system that is used to control the system.

Exercise 1

Find in the text English equivalents of the following words and word combinations:

функциональная организация; действия компьютера; связывать друг с другом; вводить информацию извне; делать информацию доступной; выполнять вычисления; выводить информацию; блок управления; выдавать команды; заставлять выполнять команды; выходное устройство; внешний мир; связываться друг с другом; комбинация электрических импульсов; холостой импульс; импульсы, распознаваемые компьютером; введение информации; координатные устройства ввода; манипуляторы; мышь; трекбол; сенсорная панель; графические планшеты; цифровые камеры; сканеры; ТВ тюнеры; стандартная клавиатура; числовая и текстовая информация; световые индикаторы; клавиши; режим работы; презентация текста на мониторе; графический интерфейс; программные средства; оптико-механическое устройство ввода; управлять движением курсора; упрощать ориентацию пользователя на экране; указывать и выбирать изображения; удерживать кнопки в нажатом состоянии;

двойное нажатие; стирать объекты; ровная поверхность; вращать ролики; следить за вертикальным движением; легко скользить; портативный компьютер; рукописный текст; посредством; разрешающая способность.

Exercise 2

Match each item in Column A with its functions in Column B. Then describe its functions.

A – Item	B – Function
A – Ittili	D - I uncuvn

RAM Controls the cursor

Processor Inputs data through

keys like a typewriter

Mouse Displays the output from a com-

puter on a screen

Clock Reads DVD – ROMs

Flash memory key Reads and writes electronic

chips on a card

Keyboard Holds instructions which

are needed to start up a computer

DVD-ROM drive Holds data read or written

to it by the processor

Cache Provides extremely fast access

for sections of a program

and its data

ROM Controls the timing of signals

in the computer, controls all the

operations in a computer

DISCUSSION

- 1. Write an e-mail to a colleague describing your computer characteristics.
- 2. Compare two computers and choose best suitable variant for:
 - personal home use;
 - graphic design;
 - software development;
 - computer games creation.

UNIT 4

APPLICATION OF COMPUTERS

Topical Vocabulary

to maintain records вести учет;

deposits and withdrawal вклады и изъятие (выемка);

guidance наведение (на цель), управле-

ние, руководство;

on-board environment бортовое окружение; pattern recognition распознавание образов; computer-aided автоматизированный;

computer-generated компьютерная информа

information

компьютерная информация

At present a great deal of the work force of most countries is engaged in creating, processing, storing, communicating and just working with information. Computers have become commonplace in homes, offices, stores, schools, research institutes, plants.

The use of computers in business, industry and communication services is widespread today. Computer-controlled robots are able to improve the quality of manufactured products and to increase the productivity of industry. Computers can control the work of power stations, plants and docks. They help in making different decisions and in management of economy.

The work of banks depends upon computer terminals for millions of daily operations. Without these terminals, records of deposits and withdrawals would be difficult to maintain, and it would be impossible to make inquiries about the current status of customer accounts.

Computers form a part of many military systems including communication and fire control. They are applied for automatic piloting and automatic navigation. Space exploration depends on computers for guidance, on-board environment and research. Computers find application in astronomy and upper atmosphere research. Weather forecasting, library information services can benefit from computers too.

It is interesting to note that computers are widely used in medicine. They became valuable medical diagnostic tools. Computers are used for optical scanning and image processing, ranging from pattern recognition to image processing. Technicians can operate computer tomography scanners which combine x-rays with computer technology to give sectional views of the body of patients. The views then can be combined into a single image shown on the screen.

It should be noticed that learning on a computer can be fun. Students spend more time with computer-aided instruction performing the assigned task, as compared with conventional classroom.

At last air traffic control is impossible without computer application. It fully depends upon computer-generated information.

Many other uses of computers that we cannot imagine at present will become commonplace in the transition from an industrial to post industrial, or information society.

Exercise 1

Find in the text English equivalents of the following words and word combinations:

использование компьютера; роботы, контролируемые компьютерами; принятие решений; ежедневный; счет покупателя; диагностический инструмент.

Exercise 2

Choose the wright variant:

- 1. Information is given into the computer in the form of ____.
- a) ideas; b) characters; c) rules.
- 2. The basic function of a computer is ____ information.

a) to switch; b)	to keep; c) to process.
3. The data need	ed for solving problems are kept in the
a) memory; b)	input device; c) output device.
of	rmation into the computer is realized by means letters; c) diskettes.
5. A computer ca	an carry out arithmetic-logical operations
a) quickly; b) in	nstantaneously; c) during some minutes.
tutes.	th; b) commonplace; c) common room.
	s computers widely. b) production; c) exploration.
_	used for image) operating; c) producing.
	p in of economy. b) management; c) government.
	ntrol depends on computer information. instructed; c) combined.
Exercise 3 Match the terms	with the definitions:
1. Computer	a) a machine by which information is received from the computer.
2. Data	b) a device capable of storing and manipulating

numbers, letters and characters.

- 3. Input device c) an electronic machine that processes data under the control of a stored program.
- 4. Memory d) a disk drive reading the information into the computer.
- 5. Output device e) information given in the form of characters.

DISCUSSION

Choose the wright variant to express the main idea of the text:

- **A.** Computers are devices that accept information in the form of instructions.
- **B.** The switches are usualy in one of two states: magnetized or demagnetized.
- **C.** Computers are remarkable devices serving for processing and storage the information and for solving problems.

UNIT 5

HISTORY OF COMPUTERS

Topical Vocabulary

calculating device вычислительное устройство;

multiple кратный; abacus счеты;

slide rule логарифмическая линейка; logarithm table логарифмическая таблица;

calculus исчисление, математический

анализ;

general-purpose общего назначения, универ-

сальный;

to cut out the human being полностью исключить челове-

altogether ка;

to manipulate обрабатывать, преобразовы-

вать, управлять;

data processing обработка данных (информа-

ции);

tabulate the census занести данные по переписи

(населения) в таблицу;

means of coding средства кодирования (шиф-

ровки);

to punch the holes пробивать отверстия;

punched card перфокарта;

to perform выполнять, производить

(действие), осуществлять;

unit of data единица информации;

keyboard terminals терминал (вывод) с клавиш-

ным управлением;

proliferation размножение, быстрое увели-

чение

FROM THE HISTORI OF COMPUTERS

Let us take a look at the history of computers that we know today. The very first calculating device used was the ten fingers of a man's hands. In fact, this is why today we still count in tens and multiples of tens.

Then the abacus was invented. People went on using some form of abacus well into the 16th century, and it is still being used in some parts of the world because it can be understood without knowing how to read.

During the 17th and I8th centuries many people tried to find easy ways of calculating. J. Napier, a Scotsman, invented a mechanical way of multiplying and dividing, which is now the modern slide rale works. Henry Briggs used Napier's ideas to produce logarithm tables which all mathematicians use today.

Calculus, another branch of mathematics, was independently invented by both Sir Isaak Newton, an Englishman, and Leibnitz, a German mathematician. The first real calculating machine appeared in 1820 as the result of several people's experiments.

In 1830 Charles Babbage, a gifted English mathematician, proposed to build a general-purpose problem-solving machine that he called "the analytical engine". This machine, which Babbage showed at the Paris Exhibition in 1855, was an attempt to cut out the human being altogether, except for providing the machine with the necessary facts about the problem to be solved. He never finished this work, but many of his ideas were the basis for building today's computers.

By the early part of the twentieth century electromechanical machines had been developed and were used for business data processing. Dr. Herman Hollerith, a young statistician from the US Census Bureau successfully tabulated the 1890 census. Hollerith invented a means of coding the data by punching holes into cards. He built one machine to punch the holes and others — to tabulate the collected data.

Through a series of merges the company eventually became the IBM Corporation.

Until the middle of the twentieth century machines designed to manipulate punched card data were widely used for business data processing. These early electromechanical data processors were called unit record machines because each punched card contained a unit of data.

In the mid 1940s electronic computers were developed to perform calculations for military and scientific purposes. By the end of the 1960s commercial models of these computers were widely used for both scientific computation and business data processing. Initially these computers accepted their input data from punched cards. By the late 1970s punched cards had been almost universally replaced by keyboard terminals. Since that time advances in science have led to the proliferation of computers throughout our society, and the past is but the prologue that gives us a glimpse of the nature.

Exercise 1

Find in the text English equivalents of the following words and word combinations:

механический способ; умножение; деление; выполнять расчеты; серия слияний; обработка данных; единица данных; заменять; широко используемый.

Exercise 2

Answer the questions:

- 1. What was the very first calculating device?
- 2. What is the abacus?
- 3. What is the modern slide rule?
- 4. Who gave the ideas for producing logarithm tables?
- 5. How did Newton and Leibnitz contribute to the problem of calculation?
 - 6. When did the first calculating machine appear?
 - 7. What was the main idea of Ch.Babbage's machine?
 - 8. How did electromechanical machines appear?
- 9. How were those electromechanical machines called and why?

UNIT 6

METHODS OF WORKING WITH COMPUTERS

Topical Vocabulary

mode вид, метод, способ, режим ра-

боты;

pattern шаблон, образец, образ, изоб-

ражение;

to predict прогнозировать;

benefit выгода, польза, помогать, при-

носить пользу;

interpret orders интерпретировать, истолко-

вывать команды

to get rid of избавляться

bulleted list список или текст с буллитами

margin поле (страницы) footer нижний колонтитул

spreadsheet programm программа табличных вычис-

лений

Exercise 1

Read the following information about the following methods of working with computers:

A computer is a handy tool for many assignments. These include using a computer for writing, doing research, communicating with other students, calculating numeric data, creating charts or graphs, taking digital pictures, shooting videos, and getting extra help.

WRITING

One of the most common ways people use a computer is as a replacement for the old-fashioned typewriter or pen and paper. Rather than type a paper or write out a paper long-hand, for example, you can use your computer and a word processing program, such as Word, to type it.

Using a word processing program for any kind of written work provides many benefits, including the following.

- You can easily correct mistakes, either as you type (using the Backspace or Delete key) or when you review your work.
- You can reorganize the contents of the writing. Sometimes, when you review your work, you find that one sentence or paragraph belongs to another. Or your conclusion may actually work better as an introduction. With a word processing program, you can easily move information to a different location. You can also delete sentences, paragraphs, and words (to get rid of repetition or to correct mistakes) and copy passages (if you want to use them again in the same or another document).
- You can make formatting changes to improve the appearance of the document. For example, in a research paper, you can make the section headings bold and bigger so that they stand out. You can emphasize new terms by italicizing them. You can create bulleted or numbered lists, add a border to a paragraph, change the page margins, create headers and footers, and more.
- Check your spelling and grammar. You can use the spelling checker to make sure your paper doesn't include any typographical errors. Most word processing programs also enable you to check your grammar. Note, however, that neither of these tools is foolproof. The spelling checker only flags words it can't find in its dictionary; it doesn't know whether you used each word correctly. (For example, the spelling checker won't flag "their" even if it should be "there.") The grammar checker also doesn't catch all errors and may flag sentences that are already correct. So, you still must proof, read and correct your work.
- **Insert graphic elements.** You can also insert pictures, illustrations, graphs, charts, clipart (pre-drawn art), and other visual image files into your document.
- Create outlines. Most programs have an outline feature that helps you type up an outline, which is a great planning tool when writing papers or creating research assignments.

DOING RESEARCH

With an Internet connection, look up facts, statistics, and other information. You can search for data on a topic for a research assignment. You can also browse through current news stories to find one suitable for a class discussion.

COMMUNICATING WITH YOUR INSTRUCTOR AND WITH OTHER STUDENTS

With an Internet connection, you can easily communicate with anyone who has an e-mail address. You can send e-mail messages to your instructor or to other students. You can also attach files to an e-mail message. For example, you can proactively e-mail an assignment to your instructor if you must miss a class. Your instructor may, in response, e-mail you what you've missed during your absence and tell you what homework you need to complete.

Most schools have Web sites, and some instructors are able to post important information on the site. For example, you may find a list of test dates, or you may find links for solving extra problems or handouts. Having a Web site not only lets you and the instructors stay in contact but also provides a way for students and parents to stay up-to-date on school activities.

Another way to communicate is by using Instant Messaging (IM). You set up a list of your buddies and their screen names. If one of these students is online when you are, you'll be notified. You can then send text messages to each other by typing and sending the message. This can be helpful if you want to ask a classmate for clarification about an assignment. You can also use Instant Messaging to talk to and make new friends online (within your school and beyond school). Keep in mind that you can easily get distracted by messaging. If you are studying, keep the messaging to a minimum or log off so that you can focus on your work.

CALCULATING NUMERIC DATA AND CREATING CHARTS

In some classes, you may be required to calculate and study numeric data beyond solving typical math problems. For example, in a practical math class like business math, you may have to track the income and expenses of a small company. To help store and create formulas for calculating data, you may use a spreadsheet program (for instance, Excel).

One of the benefits of using a spreadsheet program is that it accurately calculates results (unless you've made an incorrect entry or created the formula incorrectly). You can change any of the entries referenced in the formula, and the formula will be recalculated immediately, saving you plenty of time. You can also use a spreadsheet program to create a database list; the program also includes commands for working with lists of like data. For example, you could sort all customers in your sample company by state. You can add subtotals for each sales region to see the total of sales by region, as well as the grand total.

In fact, if you plan to venture into business management, sales and marketing, or some financial field, you'll most likely use a spreadsheet program, even if you aren't introduced to it in your classes.

Another tool found in spreadsheet programs is the ability to create a chart. A chart can show at a glance a trend or a key aspect of the data. For example, a pie chart of product sales can help you easily spot your best-selling product. Line charts can help you spot trends over time, such as whether sales are decreasing (and, if so, by how much) or increasing.

You can even use a chart to illustrate data from a science experiment, such as a range of temperatures over several weeks or the growth rate of plants. Or suppose that, as part of a math class, you have to create a fictional business and forecast sales; you can do so with a chart. While charts might not be appropriate for your current studies, you'll probably find that creating them is a useful tool in other classes as you further your education.

TAKING PICTURES OR CREATING VIDEOS

- With the advent of digital cameras and digital video recorders, many students are familiar with how to take pictures and create movies using a digital camera. If not, you can still use the traditional methods for taking pictures and creating videos.
- Digital video cameras have also become popular, which means you may be challenged to create a movie as part of a project. For example, you might create a film of a skit based on a novel you've read. You can create a film to demonstrate some activity, such as playing an instrument or performing an experiment.

GETTING EXTRA HELP

Computers are also an excellent method to get extra help on a topic or subject that you find difficult. For example, if you're struggling with math, you can purchase a practice math program with a CD that includes sample problems (and answers). In fact, your textbook or course materials may include a CD component for extra studies. You can also purchase a program to help you study a foreign language, such as Spanish or French, and use this program to practice at home.

You may also be able to find free help online. For example, you can find sites that help with vocabulary or explain science in terms that may be easier for you to understand.

Exercise 1

Find in the text English equivalents of the following words and word combinations:

обработка текстов; пользоваться популярностью; любители; способности компьютера; бесконечный перечень; анализ инвестиций; набор номера телефона; автоответчик; ведение календаря; хранение адресов и почты; и так далее; прикладные программы; исправлять ошибки в написании; стирать предложения; переставлять абзацы; бухгалтер; биржевые брокеры; консультант по налогам; юристы; работники образования; управленцы; бухгалтерский учет; подоходный налог;

компьютерное моделирование; электронные таблицы; составление расписания; оказывать огромное влияние; прокладывать путь; дать толчок; удовлетворять потребности; учебная деятельность; компьютерная грамотность; моделирование реальных жизненных ситуаций.

Exercise 2

Read what Ben says about computer usage in his office. Answer the questions.

I must update my calendar all the time. I don't have to back up all the files. That's automatic. I have to log in using my user name and password. I can't access some websites. I can use Excel but my colleague can't.

- 1. What must Ben do?
- 2. What can Ben do?
- 3. What can't Ben do?
- 4. Can he open any website?
- 5. Why is it important to follow computer dos and don'ts?

UNIT 7

DATA PROCESSING CONCEPTS

Topical Vocabulary

data processing обработка информации (дан-

ных);

to convert преобразовывать, переводить

(в др. единицы);

to accomplish завершать, заканчивать, осу-

ществлять, выполнять;

to house помещать, размещать;

to improve улучшать, совершенствовать;

to control управлять, регулировать;

управление, регулирование;

to store хранить, запоминать, заносить

(размещать) в памяти;

storage запоминающее устройство,

память, хранение;

resource ресурс, средство, возмож-

ность;

facility устройство, средство;

facilities приспособления, возможно-

сти;

equipment оборудование, аппаратура;

приборы, устройства;

available доступный, имеющийся

(в наличии), возможный;

display дисплей, устройство (визуаль-

ного) отображения, показ,

manner способ, образ (действий);

sequence последовательность, порядок

(следования);

successively последовательно;

data storage hierarchy иерархия накопленных дан-

ных;

to enter входить, вводить (данные), за-

носить, записывать;

comprehensive groupings полные, обширные, универ-

сальные образования;

meaningful имеющий смысл, значащий

(о данных);

item элемент, составная часть;

record запись, регистрация, записы-

вать, регистрировать;

file файл, заносить (хранить)

в файл;

set набор, множество, совокуп-

ность, серия, группа, система;

database база данных;

related смежный, взаимосвязанный,

относящийся (к ч. - л.)

Exercise 1

Read the text and say how you understand the terms "data processing" and "data storage hierarchy".

DATA PROCESSING AND DATA PROCESSING SYSTEMS

The necessary data are processed by a computer to become useful information. In fact this is the definition of data processing. *Data* are a collection of facts – unorganized but able to beorganized into useful information. *Processing* is a series of actions or operations that convert inputs into outputs. When we speak of data processing, the input is data, and the output is useful information. So, we can define *data processing* as a series of actions or operations that converts data into useful information.

We use the term *data* processing system to include the resources that are used to accomplish the processing of data. There are four types of resources: people, materials, facilities, and equipment. People provide input to computers, operate them,

and use their output. Materials, such as boxes of paper and printer ribbons, are consumed in great quantity. Facilities are required to house the computer equipment, people and materials. The need for converting facts into useful information is not a phenomenon of modern life.

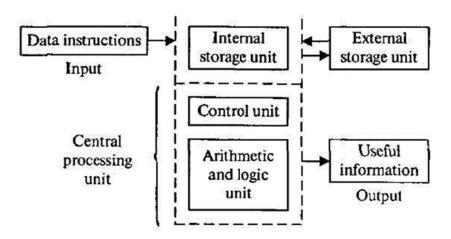


Fig. 3. Computer data processing system

Throughout history, and even prehistory, people have found it necessary to sort data into forms that were easier to understand. For example, the ancient Egyptians recorded the ebb and flow of the Nile River and used this information to predict yearly crop yields. Today computers convert data about land and water into recommendations to farmers on crop planting. Mechanical aids to computation were developed and improved upon in Europe, Asia, and America throughout the seventeenth, eighteenth, and nineteenth centuries. Modern computers are marvels of an electronics technology that continues to produce smaller, cheaper, and more powerful components.

BASIC DATA PROCESSING OPERATIONS

Five basic operations are characteristic of all data processing systems: inputting, storing, processing, outputting, and controlling. They are defined as follows.

Inputting is the process of entering data, which collect facts into a data processing system. Storing is saving data or information so that they are available for initial or for additional pro-

cessing. *Processing* represents performing arithmetic or logical operations on data in order to convert them into useful information. *Outputting* is the process of producing useful information, such as a printed report or visual display. *Controlling* is directing the manner and sequence in which all of the above operations are performed.

DATA STORAGE HIERARCHY

It is known that data, once entered, are organized and stored in successively more comprehensive groupings. Generally, these groupings are called a data storage hierarchy. The general groupings of any data storage hierarchy are as follows.

- 1) *Characters*, which are all written language symbols: letters, numbers, and special symbols.
- 2) Data elements, which are meaningful collections of related characters. Data elements are also called data items or fields.
 - 3) Records, which are collections of related data elements.
- 4) *Files*, which are collections of related records. A set of related files is called a data base or a data bank.

Exercise 1

Find in the text English equivalents of the following words and word combinations:

системы обработки информации; определение (термин) обработки данных; совокупность фактов; последовательность действий; преобразование входных данных в полезную информацию; включать ресурсы; завершить обработку данных; обеспечивать ввод информации в компьютер; ленты принтера; расходовать в большом количестве; размещать компьютерное оборудование; нуждаться в приспособлениях (требовать); явление современной жизни; на протяжении доисторического периода; превращать информацию в выражения; регистрировать отливы и приливы; прогнозировать урожай зерновых культур; механические средства вычисления; ввод данных; хранение данных; первоначальная обработка данных; дополнительная обработка; выдача полезной информа-

ции; напечатанное сообщение; зрительное отображение; последовательность запоминания информации; записанные символы языка; элементы информации; база данных; набор взаимосвязанных файлов.

Exercise 2

Answer the questions:

- 1. What is processing?
- 2. What is data processing?
- 3. What does the term of data processing system mean?
- 4. What basic operations does a data processing system include?
 - 5. What is inputting / storing / outputting information?
 - 6. What do you understand by resources?
- 7. How did ancient Egyptians convert facts into useful information?
 - 8. When were mechanical aids for computation developed?
 - 9. What does data storage hierarchy mean?
- 10. What are the general groupings of any data storage hierarchy?

Exercise 3

Match terms with their definitions:

- 1. Computer a) the set of instructions that direct the operations of computers.
- 2. Computer literacy b) a part of a computer, entering data into the device.
- 3. A program c) facts unorganized but able to be organized.
- 4. Data d) the output of a data processing system.

5. Data processing e) possessing sufficient knowledge of

how computers work and what they can do to use them as problem-solving tools.

6. Data processing f) a series of operations that results in the

conversion of data system into useful

information.

7. Input g) an electronic device performing calcu-

lations on numerical data.

8. Output h) an electronic device accepting the da-

ta processing results from the computer

and displaying them.

9. Useful information i) a set of related files.

10. Data bank j) the resources required to accomplish

the processing of data. These resources are personnel, material, facilities and

equipment.

UNIT 8

NETWORKS

Topical Vocabulary

network сеть; bridge мост;

router маршрутизатор;

modem модем; gateway шлюз;

hub концентратор; switch переключатель; file server файловый сервер;

backbone магистраль сети, маги-

стральная линия связи;

bandwidth пропускная способность,

полоса пропускания;

latency время ожидания, задерж-

ка;

digital signals / analogue цифровые сигналы / ана-

логовые

signals сигналы; protocol протокол; interface интерфейс;

LAN (Local Area Network) ЛВС (Локальная Вычис-

лительная Сеть)

Exercise 1

Match the words to their definitions:

1. a modem a) is an entrance to another network;

2. a repeater b) channels incoming data but main-

tains the bandwidth speed;

3. a bridge c) allows wireless devices to connect

to the network;

4. a router or an analog d) modulates and demodulates the data

into a digital signal;

5. a gateway e) channels incoming data but shares

the bandwidth among the devices pre-

sent on a network;

6. a switch f) sends the digital signal further on in

the network;

7. a hub g) connects networks and sends pack-

ages of data between them;

8. a wireless access

point

h) connects networks that use the sa-

me protocol.

RANGE

Wireless networks have limited range. Network range depends on the type of 802.11 protocol, strength of the device transmitter and the architecture of the surrounding area. Some structures, such as walls and metal frames, reduce the range of a WLAN by 25 %. However, users can extend the range of a WLAN. Repeaters forward the wireless signal to access points or routers and increase the range of a network.

SPEED

Bandwidth and latency are the measures of computer network speed, or data transfer rate. Bandwidth is the maximum throughput of data in bits per second. Some modems support 100 Gbit / s but speed depends on the hardware and software used. Latency is the delay that network creates during the transfer data. Users have no, or very little, control over bandwidth and latency.

Exercise 1

Find in the text English equivalents of the following words and word combinations:

входящие данные; беспроводные средства; преобразовывать данные; высокоскоростные маршрутизаторы; удаленный доступ; местная сеть; пакет данных; передавать и получать данные; через телефонную сеть; беспроводная сеть.

Exercise 2

Answer the questions:

- 1. What is WLAN?
- 2. What does network range depend on?
- 3. Can users control bandwidth and latency?
- 4. What can reduce network range?

Exercise 3

Read this article about data storage. Complete the sentences with the following words.

cloud contents emerging encrypt flash loss magnetic offsite protect security theft volumes

DATA STORAGE

Online storage is an (1)	method of data storage
and back-up. A remote server with a netw	work connection and spe-
cial software backs up files, folders, or	the entire (2)
of a hard drive. There are many compar	nies that provide a web-
based back-up.	
One (3) technology in the	nis area is (4)
computing. This allows colleagues in an	organization to share re-
sources, software and information over the	ne Internet.
Continuous backup and storage on a	remote hard drive elimi-
nates the risk of data (5) as	s a result of fire, flood
or (6) Remote data storage	and back-up providers
(7) the data and set up passw	ord protection to ensure

maximum(8)		
Small businesses and individuals choose to save data		
in a more traditional way. External drives, disks and (9)		
tapes are very popular data storage solutions. USB		
or (10) memories, DVDs and hard disks are cheap		
and widely accessible solutions. These methods are very practical		
with small (11) of data storage and backup. However,		
they are not very reliable and do not (12) the user		
in case of a disaster.		

DISCUSSION

Describe networks you use in your studies.

Divide into two groups. Group A lists all the advantages of networks, group B lists all the disadvantages. Then two groups together consider how to minimize the disadvantages.

LITERATURE

- 1. Гольцова, Е.В. Английский язык для пользователей ПК и программистов: самоучитель / Е.В. Гольцова. СПб.: Учитель и ученик, КОРОНА принт, 2002. 480 с.
- 2. Зубанова, О.В. Everyday English in Dialogues: учебн. пособие / О.В. Зубанова. М: "Менеджер", 2000. 224 с.
- 3. Карпеева, О.Я. Английский язык: сборник текстов для чтения и перевода / О.Я. Карпеева. Чебоксары: изд-во Чувашского университета, 2010. 53 с.
- 4. Olejniczak, Maja. English for Information Technology / Maja Olejniczak. PEARSON, Longman: 1st Vocational English Course book, 2011. p. 79.
- 5. Радовель, В.А. Английский язык. Основы компьютерной грамотности (Сам себе репетитор): учебное пособие / В.А. Радовель. 3-е изд. Ростов н/Д: Феникс, 2006. 224 с.

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