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Сибирский колледж транспорта и строительства

СГЦ.02 ИНОСТРАННЫЙ ЯЗЫК В ПРОФЕССИОНАЛЬНОЙ ДЕЯТЕЛЬНОСТИ
Учебно-методические указания к практическим занятиям
к практическим занятиям для обучающихся 2 курса специальности
09.02.06 Сетевое и системное администрирование

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Учебно-методическое пособие для практических занятий предназначено для обучающихся 2-3 курсов специальности 09.02.06 Сетевое и системное администрирование

ПОЯСНИТЕЛЬНАЯ ЗАПИСКА

Практические занятия направлены на экспериментальное подтверждение теоретических положений, отнесены наряду с другими к основным видам учебных занятий.

В результате изучения дисциплины «Иностранный язык в профессиональной деятельности» обучающийся должен:

знать: лексический (1200-1400 лексических единиц) и грамматический минимум, необходимый для чтения и перевода (со словарём) иностранных текстов профессиональной направленности.

уметь:

понимать общий смысл четко произнесенных высказываний на известные темы (профессиональные и бытовые), понимать тексты на базовые профессиональные темы.

-участвовать в диалогах на знакомые общие и профессиональные темы;

- строить простые высказывания о себе и о своей профессиональной деятельности, кратко обосновывать и объяснять свои действия (текущие и планируемые);

-писать простые связные сообщения на знакомые или интересующие профессиональные темы, правила построения простых и сложных предложений на профессиональные темы.

Обучающийся должен обладать общими и профессиональными компетенциями:

ОК 01. Выбирать способы решения задач профессиональной деятельности применительно к различным контекстам;

ОК 02. Использовать современные средства поиска, анализа и интерпретации информации, и информационные технологии для выполнения задач профессиональной деятельности;

ОК 03. Планировать и реализовывать собственное профессиональное и личностное развитие, предпринимательскую деятельность в профессиональной сфере, использовать знания по правовой и финансовой грамотности в различных жизненных ситуациях;

ОК 04. Эффективно взаимодействовать и работать в коллективе и команде;

ОК 05. Осуществлять устную и письменную коммуникацию на государственном языке Российской Федерации с учетом особенностей социального и культурного контекста;

ОК 06. Проявлять гражданско-патриотическую позицию, демонстрировать осознанное поведение на основе традиционных российских духовно-нравственных ценностей, в том числе с учетом гармонизации межнациональных и межрелигиозных отношений, применять стандарты антикоррупционного поведения;

ОК 09. Пользоваться профессиональной документацией на государственном и иностранном языках.

На 3 курсе изучаются следующие темы и усваиваются следующие компетенции:

Наименование тем	Кол-во часов	Усвоенные компетенции
Аппаратное обеспечение	10 часов	ОК 06, ОК 04, ОК 01,
Программное обеспечение	22 часа	ОК 01, ОК 02, ОК 04, ОК 05
Навигация по Интернету	28 часов	ОК 01, ОК 02, ОК 04, ОК 06

Тема 1. Аппаратное обеспечение. Hardware.

Цель: изучить лексику по теме Аппаратное обеспечение, повторить грамматический материал.

Содержание работы: тексты для чтения по данной теме, упражнения на усвоение и закрепление лексико-грамматического материала.

Задание: прочитать, перевести тексты, выписать и выучить новые лексические единицы, выполнить ряд предложенных упражнений на закрепление лексики и грамматического материала.

Практическая работа 1.

A PERSONAL COMPUTER IS A GENERAL-PURPOSE DEVICE

Упражнение 1.

Обсудите следующие вопросы в группах или парах.

- What can computers do?
- What can computers do that people can't?
- What can people do that computers can't?

Упражнение 2.

Просмотрите текст, найдите ответ на следующий вопрос: «Почему **Персональный компьютер** называется устройством общего назначения?» и расскажите об **ЭТОМ** на русском языке.

The computer that everyone thinks of first is typically the personal computer, or PC. Here is one way to think about your PC: "A PC is a general-purpose information processing device. It can take information from a person (through input devices like the keyboard and mouse), from a device (like a floppy disk or CD) or from the network (through a modem or a network card) and process it. Once processed, the information is shown to the user (on the monitor), stored on a device (like a hard disk) or sent somewhere else on the network (back through the modem or network card)."

A PC is a general-purpose tool built around a microprocessor. It has lots of different parts — memory, a hard disk, a modem, etc. — that work together. We have lots of special-purpose processors in our lives. An MP3 Player is a specialized computer for processing MP3 files. It can't do anything else. A GPS is a specialized computer for handling GPS signals. It can't do anything else. A Gameboy is a specialized computer for handling games, but it can't do anything else.

A PC can do it all because it is general purpose. "General purpose" means that you can do many different things with a PC. You can use it to type documents, send e-mail, browse the Web and play games.

Упражнение 3.

Данные слова и выражения встречаются в тексте. Соедините английские слова и выражения с их русскими эквивалентами,

- | | |
|--------------------------------|--|
| 1. a general-purpose device | а. гибкий диск |
| 2. a processing device | б. хранить информацию |
| 3. a special-purpose processor | с. использовать |
| 4. input devices | д. управлять, регулировать, манипулировать |
| 5. a floppy disk | е. показывать информацию |
| 6. a hard disk | ф. устройство общего назначения |
| 7. a keyboard | г. обрабатывающее устройство |
| 8. to take information | h. означать |
| 9. to process information | и. обрабатывать информацию |
| 10. to show information | j. брать, принимать информацию |
| 11. to store information | к. клавиатура |
| 12. to send information | l. процессор специального назначения |
| 13. to handle | м. устройства ввода |

- | | |
|-------------|------------------------|
| 14. to mean | п. пользователь |
| 15. to use | о. жесткий диск |
| 16. a user | р. посылать информацию |

Упражнение 4.

В следующих предложениях отсутствуют некоторые слова. Заполните пропуски словами, приведенными в упр. 3.

1. U ... is a person who uses a computer.
2. People can ... information on different devices like a hard or floppy disk.
3. A computer is a..... device.
4. MP3 Player is adevice.
5. Our company produces different, like keyboards and mice.
6. The main computer function is to ... information.
7. A monitor is used to ... information to the user.
8. A computer ... a device that processes information.

Упражнение 5.

а) Переведите следующие слова и выражения на русский язык, пользуясь текстом и упр. 3.

Персональный компьютер, устройство, устройство общего назначения, устройство специального назначения, принимать информацию, через устройства ввода, обрабатывать информацию, показывать информацию, посылать информацию, хранить информацию, жёсткий диск, гибкий диск, клавиатура, пользователь, процессор, сеть, специализированный компьютер, печатать документы, играть в игры.

б) В парах потренируйтесь в переводе вышеуказанных слов и выражений. Студент 1 называет слова по-русски, а студент 2 переводит их на английский язык. Потом можно поменяться.

Упражнение 6.

Сравните следующие предложения с предложениями, приведенными в тексте, и исправьте выделенные грамматические ошибки. Попробуйте дать объяснение данным ошибкам. Переведите предложения на русский язык.

1. A PC general-purpose device. 2. The information is show to the user, store on device or send somewhere else on the network. 3. A PC general purpose tool building around microprocessor 4. An MP3 Player is specialized computer for process MP3 files. 5. It can't do nothing else. 6. "General purpose" mean that you can ilo many different things with a PC. 7. You can use it type documents, send e-mail, browse the Web and play in games.

Упражнение 7.

Переведите предложения на английский язык, обращая внимание на грамматические явления из упр. 6.

1. Персональный компьютер это устройство общего назначения, а Winamp - это программа специального назначения. 2. Информация хранится на гибких и жестких дисках. 3. Информация может пересылаться по сети. 4. Персональный компьютер - это устройство общего назначения, построенное на основе микропроцессора. 5. Клавиатура - это устройство, используемое для ввода информации.

6. MP4 Player является специализируемой программой для обработки MP4 файлов. 7. Это означает, что он больше ничего не может делать. 8. Вы можете использовать это устройство для того, чтобы вводить информацию.

Упражнение 8.

Прочитайте текст ещё раз и определите, являются ли следующие предложения верными по смыслу. Если нет - исправьте.

1. When someone thinks of a computer it is usually a personal computer.
2. A PC is a general-purpose device and it can process only information. 3. A computer can't take information from a device. 4. A PC is a general purpose tool built round a microprocessor. 5. There are a lot of special-purpose devices in our life. 6. A PC can do a lot of things because it is special purpose.

Упражнение 9.

а) Пользуясь текстом, составьте вопросы так, чтобы получились следующие ответы.

1. A general-purpose device.
2. From a person, from a device, from the network.
3. It is shown to the user, stored on a device or sent on the network.
4. Special purpose devices.
5. An MP3 player.
6. Because you can do a lot of things with it.
7. You can use it to type documents, send e-mail, browse the Web and play games.

б) Используйте полученные вопросы и ответы для составления диалога. Разыграйте следующую ситуацию. Представьте, что вы - студент одного из английских университетов. Вы обедаете в университетском кафе, к вам Подходит ваш друг с просьбой помочь в подготовке к семинару. Он задает вопросы по теме «Персональный компьютер - устройство общего назначения», вы отвечаете.

Упражнение 10.

а) Закончите начатые предложения, пользуясь текстом.

1. A personal computer is a ...
2. It can take information from from ..., from..., and ...
3. Once processed, the information is ...
4. A personal computer is a general purpose tool...
5. We have a lot of... in our lives, for example ...
6. They are called special-purpose devices because ...
7. A PC can do it all because ...
8. "General purpose" means that ...
9. You can ...

б) Перескажите текст " A Personal Computer is a General-Purpose Device", представив, что вы - участник студенческой конференции по проблемам компьютерных технологий. Вам дали слово. Что бы вы ответили?

в) Ситуацию в упр. 106 можно повторить. Теперь можно добавить переводчика, который будет переводить вашу речь с английского языка на русский или с русского на английский.

Упражнение 11. Переведите следующий текст на английский язык.

Сегодня компьютер используется во многих областях человеческой деятельности.

Компьютер рассчитывает конструкцию космического корабля, управляет его полетом. Компьютер предсказывает погоду. Он обрабатывает массу информации, получаемую как на Земле, так и из космоса - с искусственных спутников Земли.

Компьютер помогает проектировать новые автомобили, самолеты, заводы. Компьютер рассчитывает заработную плату на предприятиях.

Компьютер применяется и в школе. Он может заменить химическую лабораторию. С его помощью легко продемонстрировать, как работает паровой двигатель или как взлетает ракета. Он облегчает изучение иностранного языка.

Практическая работа 2.

TYPES OF COMPUTERS

Упражнение 1. Поделитесь своими знаниями о видах компьютера, ответив на вопросы.

- What types of computers do you know?
- What is the difference between them?
- What do you know about analog and digital computers?

Упражнение 2.

Просмотрите текст и определите, являются ли следующие предложения верными по смыслу.

1. A personal computer is designed for use by a single person.
2. A personal computer is designed for portability.
3. Palmtop computers have the same input devices as personal ones.
4. Mainframes are the most expensive and the most powerful.

There are a lot of terms used to describe computers. Most of these words imply the size, expected use or capability of the computer. Here are the main computer types:

Personal computer - The personal computer (PC) defines a computer designed for general use by a single person. PCs were first known as *microcomputers* because they were a complete computer but built on a smaller scale than the huge systems in use by most businesses. *Desktop* - A PC that is not designed for portability. You can set the computer up only in a permanent location. Most desktops offer more power, storage and versatility for less cost than their portable analogs. *Laptop* - Also called *notebooks*, laptops are portable computers that integrate the display, keyboard, a pointing device or trackball, processor, memory and hard drive all in a battery-operated package slightly larger than an average hardcover book.

Palmtop - Palmtops are tightly integrated computers that often use flash memory instead of a hard drive for storage. These computers usually do not have keyboards but rely on touchscreen technology. Palmtops are typically smaller than a paperback novel and very lightweight. A slightly larger and heavier version of the palmtop is the *handheld computer*.

Power supply - An electrical transformer regulates the electricity used by the computer.

Hard disk - This is large-capacity permanent storage used to hold information such as programs and documents.

Operating system - This is the basic software that allows the user to interface with the computer.

Sound card - This is used by the computer to record and play audio by converting analog sound into digital information and back again. *Graphics card* - This translates image data from the computer into a format that

can be displayed

Упражнение 3.

а) Данные слова и выражения встречаются в тексте. Соедините их русскими эквивалентами

- | | |
|-------------|------------------|
| 1. hardware | а. дорогостоящий |
| 2. software | б. зависеть от |

3. a central processing unit	с. важный
4. a motherboard	d. объем, емкость
5. a rectangular circuit board	e. соединение
6. random-access memory	f. содержать
7. read-only memory	g. материнская плата
8. basic input/output system	h. прямоугольная плата
9. power supply	i. программное обеспечение
10. graphics card	j. основание
11. data	к. данные
12. capacity	l. аппаратное обеспечение
13. foundation	т. временно
14. connection	п. блок питания
15. application	о. базовая система ввода и вывода
16. to contain	р. применение
17. to depend on	q. центральное обрабатывающее устройство
18. important	г. видеокарта
19. expensive	s. постоянная память
20. temporarily	t. оперативная память слова

б) Чтобы быстрее запомнить эти слова (упр. 3а), расположите их в порядке появления в тексте.

в) В парах потренируйтесь в переводе этих слов и выражений. Студент 1 называет слова по-русски, а студент 2 переводит их на английский язык. Потом можно поменяться.

Упражнение 4.

Переведите слова, указанные в скобках, на английский язык.

1. Pentium IV is one of the most (мощный) processors. 2. Computer programming (основывается на) computer algorithm. 3. This device offers more (мощности) and (способности) than its analogs. 4. A notebook is designed for (портативности). 5. A PC (определяется как, подразумевается) a computer used in a permanent location. 6. An (обычный) computer comprises different hardware parts. 7. A lot of computer companies (предлагают услуги) to users. 8. After upgrading the power of my computer (увеличилась). 9. Huge computer systems like mainframes (вышли из употребления) and nowadays much smaller computer types are in use.

Упражнение 5.

Переведите предложения на русский язык, обращая внимание на выделенные грамматические явления. Попробуйте дать объяснение данным грамматическим явлениям.

1. There are a lot of computer types used in all spheres of our life. 2. AC1) See is a specialized program designed to work with pictures. 3. A computer is designed to process information. 4. Notebooks are computers that have all hardware in one package. 5. Notebooks are slightly larger than an average book. 6.

Supercomputers are the most powerful computers. 7. In early days of programming, an average program could fill only one floppy disk. 8. As the size of computers has diminished while the power has increased, the term mainframe has fallen out of use. 9. Although supercomputers are very expensive they offer more power and capability.

Упражнение 6.

Переведите на английский язык предложения, содержащие грамматические явления из упр. 5.

1. Существует множество компьютеров, используемых для обработки информации. 2. Жесткий диск - это устройство, созданное для хранения информации. 3. Информация показывается пользователю на мониторе. 4. Мощность этого компьютера увеличена для обработки большего количества информации. 5. Сервер - это компьютер, который предоставляет услуги другим компьютерам. 6. Palmtops это вид компьютера, который не имеет клавиатуры. 7. Ноутбуки меньше, чем настольные компьютеры. 8. Суперкомпьютеры намного дороже, чем ноутбуки.

Упражнение 7.

Подготовьте перевод текста на русский язык (упр. 2). Подойдите к заданию творчески; помните, что перевод текста должен звучать по-русски. В некоторых местах проявите свое воображение! Затем выберите лучший перевод.

Упражнение 8.

Прочитайте следующие предложения и догадайтесь, о каком виде компьютера говорится в каждом из них.

1. Many years ago these computers were huge.
2. This type of computers is the smallest and the lightest.
3. These computers are usually used by a single person.
4. This computer is based on touchscreen technology.
5. These computers provide service to other computers over the network.
6. This type of computer is very- expensive and powerful.
7. These computers are portable ones.
8. This computer is not designed for portability.

Упражнение 9.

а) Повторите степени сравнения прилагательных и образуйте сравнительную и превосходную степени следующих прилагательных.

Small, large, powerful, cheap, expensive, heavy, light, big, little.

б) Переведите предложения на английский язык, используя степени сравнения прилагательных.

1. Palmtops - самые маленькие компьютеры. 2. Суперкомпьютеры - самые дорогие компьютеры.
3. Настольные компьютеры дешевле портативных компьютеров. 4. Серверы - более мощные, чем настольные компьютеры. 5. Настольные компьютеры менее мощные, чем суперкомпьютеры.

в) Сравните различные виды компьютеров, исходя из их размеров, стоимости, возможности и их использования. Найдите общие и отличительные черты. Используйте степени сравнения прилагательных и слова из текста.

Упражнение 10.

a) Проверьте, насколько хорошо вы запомнили информацию о видах компьютера. Не пользуясь текстом, ответьте на вопросы.

1. What are the main computer types used in different spheres of human activity? 2. What is the difference between them? 3. How does the personal computer define? 4. Why were PCs first known as microprocessors? 5. What is a PC designed for? 6. What do PCs offer?

Практическая работа 3.

COMPUTER HARDWARE

Упражнение 1.

В парах или в группах обсудите следующие вопросы.

- What are the main parts of computer hardware?
- What are the functions of the main computer parts?
- What part is the "brain" of the computer system?
- What part is used to hold data?

Упражнение 2.

Просмотрите текст и проверьте, насколько вы были правы в ответах на вопросы из упр. 1.

The physical components that make up a computer are called hardware. Every PC has basically the same hardware. The differences in size and power of that hardware makes one PC more expensive or powerful than another. Let's take a look at the main components of a typical desktop computer.

Motherboard - The motherboard is a thin, rectangular circuit board that forms the foundation of your computer. It contains many computer "chips and connections. The CPU and memory are usually on the motherboard. Other systems may be found directly on the motherboard or connected to it through a secondary connection. For example, a sound card can be built into the motherboard or connected through PCI. The motherboard allows users to personalize a computer system depending on their applications and needs.

Central processing unit (CPU) - The microprocessor, "brain" of the computer system, is called the central processing unit. Everything that a computer does is overseen by the CPU.

Memory - This is very fast storage used to hold data. It must be fast because it connects directly to the microprocessor. There are several specific types of memory in a computer: Random-access memory (RAM) - Used to temporarily store information that the computer is currently working with. Read-only memory (ROM) - A permanent type of memory storage used by the computer for important data that does not change.

Basic input/output system (BIOS) - A type of ROM that is used by the computer to establish basic communication when the computer is first turned on.

Server - A computer that has been optimized to provide services to other computers over a network. Servers usually have powerful processors, lots of memory and large hard drives.

Mainframe - In the early days of computing, mainframes were huge computers that could fill an entire room or even a whole floor! As the size of computers has diminished while the power has increased, the term mainframe has fallen out of use in favor of *enterprise server*. You'll still hear the term used, particularly in large companies to describe the huge machines processing millions of transactions every day.

Supercomputer - This type of computer usually costs hundreds of thousands or even millions of dollars. Although some supercomputers are single computer systems, most comprise multiple high performance computers working in parallel as a single system."

Упражнение 3.

a) Данные слова и выражения встречаются в тексте. Соедините их с русскими эквивалентами.

1. versatility

уменьшать

2.portability	возможность
3.capability	средний, обычный
4.power	мощный
5.to imply	подразумевать
6.to comprise	портативность
7.to provide services	переносной
8.to fall out of use	мощность
9.to rely on	увеличивать
	универсальность
10.to diminish	определять
11.to increase	конструировать
12.to define	предоставлять услуги
13.to design	постоянный
14.powerful	состоять из
15.huge	основываться
16.permanent	выйти из употребления
17.portable	огромный
	уменьшать
18.average	возможность

б) Чтобы быстрее запомнить эти слова (упр. За), расположите их в порядке появления в тексте.

в) В парах потренируйтесь в переводе этих слов и выражений. Студент 1 называет слова по-русски, а студент 2 переводит их на английский язык.

Упражнение 4.

В следующих предложениях отсутствуют некоторые слова. Заполните пропуски словами, приведенными в упр. За.

1. An average computer consists of different ... 2. The ... is the heart of any computer. 3. Computer is nothing without ... 4. The CPU is based on the ... 5. There are two main types of computer memory: ... and ... 6. The information processed by a computer is called 7. It is very ... to establish new types of hardware. 8. The computer performance .the quality of its hardware and software. 9. The motherboard is athat forms the ... of any computer. 10. The motherboard ... many chips and connections.

Упражнение 5.

Сравните следующие предложения с предложениями, приведенными в тексте, и исправьте выделенные грамматические ошибки. Попробуйте дать объяснение данным ошибкам. Переведите предложения на русский язык.

1. The physical components that make computer call hardware. 2. The differences in size and power make one PC more expensive or powerful another. 3. Motherboard thin, rectangular circuit board that form the foundation of your computer. 4. It contain many computer chips and connections. 5. A sound card can build into the motherboard. 6. The motherboard allows users personalize a computer system depend from their applications and needs. 7. Everything that a computer does oversee the CPU. 8. This very fast storage use hold data. 9. It must be fast because it connect direct to the microprocessor.

Упражнение 6.

Переведите предложения на английский язык, обращая внимание на грамматические явления из упр. 5.

1. Видео и звуковая карты подсоединяются к материнской плате. 2. Блок питания используется для регуляции электричества. 3. Устройство, которое используется для хранения информации, называется жестким диском. 4. Жесткий диск - это часть компьютера, которая используется для хранения информации. 5. Процессор может быть разной мощности в зависимости от его стоимости. 6. Звуковая карта преобразует аналоговый звук в цифровую информацию и обратно. 7. Память может быть оперативной и постоянной.

Упражнение 7.

Представьте, что вы - переводчик, и вам поручили перевести текст "Computer Hardware". Как бы вы перевели этот текст? Подготовьте хороший письменный перевод на русский язык.

Упражнение 8.

Пользуясь текстом, соедините колонки так, чтобы получились верные предложения.

The motherboard	temporarily store information,
The central processing unit	establish basic communication, permanently store data that does not change.
Random-access memory	permanently hold programs and documents.
Read-only memory	regulate the electricity, record and play audio.
Basic input/output system	_____
Power supply	_____
The hard disk operating system	_____
The sound card	_____
The graphics card	_____

Упражнение 9.

а) В парах выполните следующее задание, используя упражнение 8. Студент 1 описывает часть компьютера, не называя ее. Студент 2 угадывает. Потом можно поменяться.

Например:

St. 1: - *This device is used to record and play audio.*

St.2: - The sound card is used to record and play audio.

and memory- are usually on the motherboard, is the basic software, is very fast storage used to hold data, is called the microprocessor "brain", is fast as it connects directly to the microprocessor, allows users to personalize a computer system, contains many computer chips and connections, forms the foundation of your computer, translates image data to be displayed by the monitor.

St.1: - *This device is called the microprocessor "brain".*

St.2: - The central processing unit is called the microprocessor "brain".

б) Поменяем задание. Студент 1 загадывает часть компьютера. Студент 2 отгадывает при помощи общих вопросов. Студент 1 может только отвечать «да» или «нет». Например:

St.1: - *I'm ready.*

St.2: - *Does this device form the foundation of a computer?* St.1: - *No, it doesn't.*

St.2: - *Is it the basic software?* St.1: - *Yes, it is.* St.2: - *Is it BIOS?*

St.1: - *Yes, it is.*

Упражнение 10.

Разыграйте следующую ситуацию. К вам обращается ваш друг, начинающий пользователь, с просьбой помочь разобраться в аппаратном обеспечении компьютера. Как бы вы это сделали? Вы можете выполнить это задание в форме диалога или монолога.

Упражнение 11.

Переведите следующий текст на английский язык.

В состав любого компьютера входят процессор, память, устройства ввода и вывода информации.

Процессор занимается обработкой информации - это своего рода «мозг» компьютера. В оперативной памяти (ОЗУ) компьютера в двоичном виде запоминается обрабатываемая информация, программа ее обработки и результаты работы. Кроме оперативной памяти, у компьютера может быть постоянная память (ПЗУ). Основной характеристикой является ее объем.

Устройства ввода и вывода обеспечивают ввод информации в память компьютера и выдачу ее наружу.

Практическая работа 4.

INPUT DEVICES.

Упражнение 1.

Поделитесь своими знаниями об устройствах ввода, ответив на вопросы.

- What input devices do you know?
- What input devices do you usually use when you work with a computer?

Упражнение 2.

Прочитайте текст и определите, являются ли следующие предложения верными.

1. The keyboard is the most common input device.
2. Most mice are used on digital technology.
3. Digital pens are mouse substitutes.
4. Today, joysticks are advanced optical-mechanical devices.

No matter how powerful the components inside your computer are, you need a way to interact with them. This interaction is called input/output (I/O). The most common types of input devices in PCs are: of programming languages currently in use. C has been around for several decades and has won widespread acceptance because it gives programmers maximum control and efficiency. C is an easy language to learn. It is a bit more cryptic in its style than some other languages, but you get beyond that fairly quickly.

If you are a programmer, or if you are interested in becoming a programmer, there are a couple of benefits you gain from learning C:

- You will be able to read and write code for a large number of platforms -- everything from microcontrollers to the most advanced scientific systems can be written in C, and many modern operating systems are written in C.
- The jump to the object oriented C++ language becomes much easier. C++ is an extension of C, and it is nearly impossible to learn C++ without learning C first.

C is what is called a compiled language. This means that once you write your C program, you must run it through a C compiler to turn your program into an executable that the computer can run (execute). To write and run a C program, you must have access to a C compiler. If you are a student, then the school will likely

provide you with a compiler - find out what the school is using and learn about it. If you are working at home on a Windows machine, you are going to need to download a free C compiler or purchase a commercial compiler. A widely used commercial compiler is Microsoft's Visual C++ environment (it compiles both C and C++ programs).

Упражнение 3.

а) Данные слова и выражения встречаются в тексте. Соедините их русскими эквивалентами.

- | | |
|----------------------------------|--|
| 1. a computer language | a. выяснять, узнавать |
| 2. a decade | b. компилятор |
| 3. a programmer | c. следовать, выполнять |
| 4. a compiled language | d. десятилетие |
| 5. a compiler | e. добиться широкого признания |
| 6. environment | f. программист |
| 7. extension | g. тайный, загадочный |
| 8. to be interested in | h. дополнение |
| 9. to gain benefits from | i. получать выгоду от |
| 10. to find out | g. язык компьютерного программирования |
| 11. to download | к. компилярный язык |
| 12. to purchase | l. бесплатный |
| 13. to win widespread acceptance | т. интересоваться |
| 14. to follow | п. загружать |
| 15. free | о. невозможный |
| 16. impossible | р. покупать |
| 17. cryptic | |

б) Чтобы быстрее запомнить эти слова (упр. За), расположите их в порядке появления в тексте.

в) В парах потренируйтесь в переводе этих слов и выражений. Студент 1 называет слова по-русски, а студент 2 переводит их на английский язык.

Упражнение 4.

В следующих предложениях отсутствуют некоторые слова. Заполните пропуски словами, приведенными в упр. За.

1. Different are used to create programs.
2. C++ is an of programming
3. In the USA it is ... to get a program
4. Although programming is ... a lot of programs are written on its base.
5. "Diablo ГГ has won round the world.
6. If you ... your teacher's advice you'll learn to write programs very soon.
7. Those people who were interested in programming two ago now are called

Упражнение 5.

Проверьте, насколько хорошо вы переводите английские тексты на русский язык. Подготовьте хороший письменный перевод.

Упражнение 6.

Определите, являются ли следующие предложения верными по смыслу. Если нет - исправьте.

1. C is a computer programming language.
2. That means that you can use C to create lists of instructions for a computer to follow.
3. C is a new computer programming language.
4. C is a difficult language to learn.
5. It is a bit clumsier in its style than some other languages.
6. Many modern operating systems are written in C.
7. C is an extension of C++, and it is nearly impossible to learn C without learning C++ first.
8. Once you write your C program, you must run it through a C compiler to turn your program into an executable that the computer can run.
9. A widely used commercial compiler is Microsoft Office.

Упражнение 7.

Представьте, что вы - создатель языка C и C++. Расскажите о своем «детище» начинающим программистам. Можете выполнить это задание в форме диалога или монолога.

Упражнение 8.

Переведите следующий текст на английский язык.

Для того чтобы компьютер мог выполнить программу, программа должна быть записана по строгим правилам, в виде, доступном для обработки на компьютере. Такой набор правил называется языком программирования. Воспринимая программу, записанную на языке программирования, компьютер некоторым образом её преобразует, помещает в собственную память, а затем выполняет команды, соответствующие данной программе.

Программа на языке программирования записывается в виде текста, содержащего буквы, цифры, знаки операций и т.д. Любой такой текст можно закодировать.

При выполнении компьютер анализирует программу и в соответствии с программой выполняет те или иные преобразования над данными.

Упражнение 9.

а) Проверьте, насколько хорошо вы запомнили информацию об устройствах ввода. Не пользуюсь текстом, закончите начатые предложения.

1. The most common types of...
2. The keyboard is the primary device for ...
3. Most have a QWERTY ...
4. The mouse is the primary device for ...
5. A mouse is optimized for ...
6. Most are used on optical or...
7. Digital pens are ...
8. Pens rely on handwriting recognition or ...
9. Pens come in corded and ...
10. Joysticks plug into the 15-inch game port ...
11. In the past, joysticks were ...
12. Today, joysticks are ...
13. Voice input systems can have ...
14. Voice input systems can be used to control ...
15. Many voice-input systems vary according to ...

б) Перескажите текст "Input Devices", представив, что вы - участник студенческой конференции по проблемам компьютерных технологий. Вам дали слово. Что бы вы ответили?

Упражнение 10.

Переведите следующий текст на английский язык.

Клавиатура нужна для управления компьютером и ввода информации. Клавиатура ПК похожа на клавиатуру пишущей машинки. Кроме буквенных и цифровых, есть функциональные клавиши.

ПК также оборудован мышью - устройством ручного управления, которое соединяется с ПК «хвостом» - кабелем. Внутри мыши находится шарик. Он вращается, когда мышь двигается по

поверхности. Связанные с шариком датчики посылают в ПК сигналы, и курсор на экране повторяет движение мыши. Это устройство используется для быстрого выбора пунктов меню, появляющихся на экране: курсор подводят к нужному пункту и нажимают клавишу мыши. Мышь можно передвигать по экрану слова и картинки, а также чертить линии.

Практическая работа 5.

HOW MICROPROCESSORS WORK

Упражнение 1.

В парах или в группах обсудите следующие вопросы.

- What is the most important hardware part in any computer?
- What do you know about the history of microprocessors?
- What processor is the most powerful?

Упражнение 2.

а) Прочитайте текст и выберите 3 предложения, максимально описывающие работу процессора.

The microprocessor, or CPU, is the heart of any normal computer, whether it is a desktop machine, a server or a laptop. It is a single computer chip about the size of a matchbox. Its many legs or pins are inserted into the motherboard. The CPU, which does the bulk of your PC's thinking, is the motor behind your software.

The CPU is a kind of a traffic cop. The information is constantly flowing back and forth between the various parts of the PC and the CPU. The CPU stands in the middle, deciding what goes where. One of the CPU's jobs is to control the information flow. When you type at the keyboard, the CPU receives every keystroke and redirects it to the right place. When you print a letter, the CPU takes the characters from the screen or the disk and sends them through the cable that connects your PC to your printer. The CPU gets its orders from the software programs that are loaded into the computer memory. A microprocessor executes a collection of machine instructions that tell the processor what to do. Based on the instructions, a microprocessor does three basic things:

- Using its ALU (Arithmetic/Logic Unit), a microprocessor can perform mathematical operations like addition, subtraction, multiplication and division.
- A microprocessor can move data from one memory location to another.
- A microprocessor can make decisions and jump to a new set of instructions based on those decisions.

б) Используйте полученные вопросы и ответы для составления диалога. Разыграйте следующую ситуацию. Представьте, что вы учитесь в одном из американских колледжей. Вы готовитесь к экзамену по компьютерному аппаратному обеспечению. Вы обсуждаете с другим студентом один из вопросов к экзамену.

Упражнение 10.

а) Закончите начатые предложения, пользуясь текстом.

1. The microprocessor, or CPU ...
2. It is a single computer chip ...
3. Its many legs or pins are ...
4. The CPU is a kind of like a ...
5. The information is constantly ...
6. One of the CPU's jobs is to ...
7. When you type at the keyboard, ...
8. When you print a letter, ...
9. The CPU gets its orders from ...

10. Based on the instructions, a microprocessor...
11. A microprocessor can ...

б) Перескажите текст " A Personal Computer is a General-Purpose Device", представив, что вы - участник студенческой конференции по проблемам компьютерных технологий. Вам дали слово. Что бы вы ответили?

в) Ситуацию в упр. 10б можно повторить. Теперь можно добавить переводчика, который будет переводить вашу речь с английского языка на русский или с русского на английский.

Упражнение 11.

Переведите следующий текст на английский язык.

Компания AMD собирается к концу этого года прекратить производства процессоров Duron, которые предназначаются для недорогих компьютеров. Во всяком случае, в планах компании на 2003 год Duron'bi не значатся. Такое решение принято в связи с надвигающимся выпуском процессоров семейства Hammer. Первый чип этого семейства под названием Claw Hammer должен как раз появиться в конце года. AMD приготовила ему роль основного своего процессора для настольных ПК и ноутбуков. А нынешний лидер Athlon займет место Duron'a, то есть станет процессором для дешевых компьютеров.

Тема 2. Программное обеспечение. Software.

Цель: изучить лексику по теме Программное обеспечение, повторить грамматический материал.

Содержание работы: тексты для чтения по данной теме, упражнения на усвоение и закрепление лексико-грамматического материала.

Задание: прочитать, перевести тексты, выписать и выучить новые лексические единицы, выполнить ряд предложенных упражнений на закрепление лексики и грамматического материала

Практическая работа 1.

DEFINING RANDOM ACCESS MEMORY (RAM)

Упражнение 1.

Поделитесь своими знаниями о видах компьютерной памяти, ответив на вопросы.

- What types of computer memory do you know?
- What are they used for?
- What is the difference between them?

Упражнение 2.

Прочитайте текст, найдите наиболее существенную информацию об оперативной памяти и расскажите об этом на русском языке.

Random-access memory (RAM) is the best known form of computer memory. RAM is a type of short-term memory; when power is turned off, the information is lost.

A memory chip is an integrated circuit (IC) made of millions of transistors and capacitors. They come in different shapes and sizes. *Dynamic random-access memory (DRAM)* chips are the most common type of computer memory, and they need to be energized hundreds of times per second to hold the information.

DRAM has memory cells with a paired transistor and capacitor requiring constant refreshing. This refresh operation is where dynamic RAM gets its name. Dynamic RAM has to be dynamically refreshed all of the time or it forgets what it is holding. The downside of all of this refreshing is that it takes time and slows down the memory.

Static RAM uses a completely different technology. Static random access memory uses multiple transistors, typically four to six, for each memory cell but doesn't have a capacitor in each cell. Static RAM

never needs to be refreshed. This makes static RAM significantly faster than dynamic RAM. However, because it has more parts, a static memory cell takes a lot more space on a chip than a dynamic memory cell. Therefore you get less memory per chip, and that makes static RAM a lot more expensive.

Упражнение 3.

а) Данные слова и выражения встречаются в тексте. Соедините английские слова и выражения с их русскими эквивалентами. В этом вам поможет словарь.

- | | |
|-----------------------------|----------------------------|
| 1. short-term memory | а. значительно |
| 2. an integrated circuit | б. включать/выключать |
| 3. a transistor | с. удерживать информацию |
| 4. a capacitor | д. транзистор |
| 5. a cell | е. конденсатор |
| 6. random-access memory | ф. недостаток |
| 7. refreshing | г. ячейка |
| 8. downside | h. требовать |
| 9. space | і. интегральная микросхема |
| 10. to turn on/off | g. краткосрочная память |
| 11. to hold the information | к. обновление |
| 12. to slow down | І. постоянный |
| 13. to require | т. замедлять |
| 14. significantly | п. оперативная память |
| 15. constant | о. место, пространство |

б) Чтобы быстрее запомнить эти слова (упр. 3а), расположите их в порядке появления в тексте.

в) В парах потренируйтесь в переводе этих слов и выражений. Студент 1 называет слова по-русски, а студент 2 переводит их на английский язык.

Упражнение 4.

В следующих предложениях отсутствуют некоторые слова. Заполните пропуски словами, приведенными в упр. 3а.

1. When you begin to work you your computer, when you finish to work you it. 2. The motherboard is that forms the foundation of a computer. 3. Today computers are ... more powerful than they were 10 years ago. 4. The computer ... it that it can break down. 5. A memory chip is made of millions of..... and6. Memory is a part of a computer used to 7. A cheap processor can..... the work of a computer.

Упражнение 5.

Переведите предложения на русский язык, обращая внимание на выделенные грамматические явления. Попробуйте дать объяснение данным грамматическим явлениям.

1. Random-access memory (RAM) is the best known form of computer memory. 2. RAM is a type of short-term memory; when power is turned off, the information is lost. 3. A memory chip is an integrated circuit (IC) made of millions of transistors and capacitors. 4. DRAM has memory cells with a paired transistor and capacitor requiring constant refreshing. 5. The downside of all of this refreshing is that it takes time and slows down the memory. 6. Static RAM never needs to be refreshed. 7. This makes static RAM significantly faster than dynamic RAM.

Упражнение 6.

Переведите на английский язык предложения, содержащие грамматические явления из упр.5.

1. Оперативная память - один из наиболее распространенных видов памяти. 2. Базовая система ввода и вывода загружается, когда вы включаете компьютер. 3. Статическая оперативная память быстрее, чем динамическая. 4. Чип ОЗУ - интегральная микросхема, состоящая из миллионов транзисторов и конденсаторов. 5. В наши дни память вмещает в себя значительно больше информации, чем 10 лет назад.

Упражнение 7.

Подготовьте перевод текста на русский язык. Подойдите к заданию творчески; помните, что перевод текста должен звучать по-русски. Затем выберите лучший перевод.

Упражнение 8.

а) Найдите ответы в тексте на следующие вопросы.

1. Why is RAM a type of short-term memory?
2. What is a memory chip made of?
3. What are the main RAM types?
4. Why is DRAM called dynamic?
5. Why is static RAM called static?

б) Используя вышеперечисленные вопросы (упр. 8а), составьте диалог и разыграйте следующую ситуацию. Вы – руководитель кружка «Юный хакер» в Американском Ломе Пионеров. Вам необходимо ответить на вопросы одного из членов вашего кружка

Упражнение 9.

Выполните следующее творчески-аналитическое задание. Сравните два основных вида оперативной памяти: DRAM и static RAM. Найдите общие и отличительные черты.

Можете использовать данные слова и выражения: dynamic random-access memory, static random access memory, the most common type of, to be energized, a paired transistor and capacitor, to be dynamically refreshed, slow down, multiple transistors, faster than, take a lot more space, make a lot more expensive.

Упражнение 10.

Для выполнения данного задания вам потребуется воображение и творческий подход к делу. Расскажите об оперативной памяти от имени самой оперативной памяти. Можете начать следующим образом: *"I'm random access memory and I'd like to tell you about myself. I'm the best known form of computer memory..."*

Упражнение 11.

Переведите следующий текст на английский язык.

Для хранения информации используются разные устройства. Отличаются они ёмкостью памяти и временем доступа к ней.

Оперативная память компьютера - самая быстрая. Чтобы извлечь из неё число или слово, достаточно миллионных долей секунды. Обычно ёмкость оперативной памяти сравнительно невелика - от нескольких мегабайт до одного гигабайта. Оперативная память находится внутри самого компьютера.

Практическая работа 2. MEMORY DEVICES

Упражнение 1.

Поделитесь своими знаниями о видах компьютерной памяти, ответив на вопросы.

- What types of computer memory do you know?
- What are they used for?
- What is the difference between them?

Упражнение 2.

Прочитайте текст и выберите 3 предложения, максимально описывающие оперативную память.

Similar to RAM, ROM chips contain a grid of columns and rows. But where the columns and rows intersect, ROM chips are fundamentally different from RAM chips. While RAM uses transistors to turn on or off access to a capacitor at each intersection, ROM uses a diode to connect the lines if the value is 1. If the value is 0, then the lines are not connected at all.

You cannot reprogram or rewrite a standard ROM chip. If it is incorrect, or the data needs to be updated, you have to throw it away and start over. Creating the original template for a ROM chip is often a laborious process full of trial and error.

But the benefits of ROM chips outweigh the drawbacks. Once the template is completed, the actual chips can cost as little as a few cents each. They use very little power, are extremely reliable and, in the case of most small electronic devices, contain all the necessary programming to control the device. A great example is the small chip in the singing fish toy. This chip, about the size of your fingernail, contains the 30-second song clips in ROM and the control codes to synchronize the motors to the music.

Упражнение 3.

а) Данные слова и выражения встречаются в тексте. Соедините английские слова и выражения с их русскими эквивалентами. В этом вам поможет словарь.

read only memory	преимущество
access	пересекать
a template	колонка
trial and error	модернизировать
benefit	создавать
drawback	шаблон, модель, лекало
a column	ряд
a row	постоянная память
a diode	допуск
to complete	заполнять
to create	выбрасывать
to update	превосходить
to intersect	метод проб и ошибок
to throw away	трудоёмкий
to outweigh	надежный
laborious	диод
reliable	недостаток

б) Чтобы быстрее запомнить эти слова (упр. 3а), расположите их в порядке, появления в тексте,

в) В парах потренируйтесь в переводе этих слов и выражений. Студент 1 называет слова по-русски, а студент 2 переводит их на английский язык.

Упражнение 4.

Переведите слова, указанные в скобках, на английский язык.

1. Nowadays you can (модернизировать) computer in any computer shop.
2. The user can study the computer by (методом проб и ошибок) but it's not the best variant. 3. (Диод) is used in every electronic device. 4. The computer (преимущество) is that it can process a lot of information. 5. The computer (недостаток) is in its little reliability. 6. Program creating is a very (трудоёмкий) process. 7. If you have written the wrong program (выбросите) it away and create a new one.

Упражнение 5.

Переведите предложения на русский язык, обращая внимание на выделенные грамматические явления. Попробуйте дать объяснение данным грамматическим явлениям.

1. While RAM uses transistors to turn on or off access to a capacitor at each intersection, ROM uses a diode to connect the lines if the value is 1.
2. If it is incorrect, or the data needs to be updated, you have to throw it away and start over. 3. Creating the original template for a ROM chip is often a laborious process. 4. Once the template is completed, the actual chips can cost as little as a few cents each.

Упражнение 6.

Переведите на английский язык предложения, содержащие грамматические явления из упр. 5.

1. Создание компьютерной игры - это трудоемкий процесс. 2. Программисты должны владеть достаточными знаниями для написания программы. 3. Если вам необходимо модернизировать постоянную память, вы можете сделать это в любом компьютерном Магазине. 4. Память полностью была заполнена, и пользователь Вася не смог установить "War Craft II", поэтому ему пришлось устанавливать тетрис.

Упражнение 7.

Вы руководитель кружка «Юный хакер» в Американском Клубе. Вы приехали в Россию. Вас попросили перевести текст "Defining Read Only Memory' (ROM)" для русских юных хакеров. Как бы вы его перевели? Подготовьте хороший письменный перевод.

Упражнение 8.

Расставьте следующие предложения по порядку их следования в тексте.

1. It is difficult to create the original template for a ROM chip.
2. They use very little power, are extremely reliable.
3. RAM uses transistors to turn on or off access to a capacitor at each intersection
4. A great example is the small chip in the singing fish toy.
5. The ROM chips are cheap.
6. You cannot reprogram or rewrite a standard ROM chip.
7. ROM uses a diode to connect the lines.

Упражнение 9.

Сравните оперативную (RAM) и постоянную (ROM) виды памяти. Найдите общие и отличительные черты.

Упражнение 10.

Для выполнения данного задания вам снова потребуется воображение и творческий подход к делу. Разыграйте диалог от лица оперативной и постоянной памяти. Расскажите, как они работают.

Упражнение 11.

Переведите следующий текст на английский язык.

Новая технология компьютерной памяти с высокой пропускной способностью поможет пользователям забыть все неприятности, связанные с перезагрузкой (rebooting) компьютера. Также новый стандарт энергонезависимой памяти позволит повысить скорость сохранения и чтения больших объемов данных на постоянных носителях информации.

Разработанная учеными память энергонезависима, то есть можно смело выключать компьютер и ничего не пропадет. Когда питание будет вновь включено, система и все приложения будут в том же состоянии, что и на момент выключения.

Принцип действия элементов памяти основан на изменении их сопротивления под действием управляющего напряжения. Новая технология резистивной памяти может дать начало новому поколению массовой памяти для компьютеров.

Упражнение 12. заполните поля соответствующей формой глагола, указанной в круглых скобках. Выберите причастие 1 (форма на-ing) или причастие 2 (форма на-ed) в зависимости от контекста, приведенного в каждом предложении.

1. The software upgrade _____ (release) last night is expected to enhance the system's performance significantly.
2. With the files _____ (encrypt) using advanced algorithms, unauthorized access to sensitive data is highly unlikely.
3. The computer program _____ (design) for simplicity can be easily navigated even by novice users.
4. After the files are _____ (compress), they occupy less storage space, which improves overall system efficiency.
5. The antivirus software _____ (update) regularly ensures protection against the latest security threats.
6. The data _____ (backup) every night is stored on an external server for disaster recovery purposes.
7. The error message _____ (display) on the screen indicates a potential hardware malfunction.
8. The email attachment _____ (scan) for viruses before it was opened to ensure safe browsing.
9. The software _____ (install) on all computers in the office simplifies workflow management.
10. The website _____ (develop) with user experience in mind loads quickly on various devices.

Answers:

1. released
2. encrypted
3. designed
4. compressed
5. updated
6. backed up
7. displayed
8. scanned
9. installed
10. developed

Практическая работа 3. COMPUTER SOFTWARE

Упражнение 1.

В парах или в группах обсудите следующие вопросы.

- What is the difference between hardware and software?
- What do you know about software?
- Is it difficult to write a program?
- Have you ever written a computer program?

Упражнение 2.

Прочитайте текст и выберите 3 предложения, максимально описывающие программное обеспечение компьютера.

Every desktop and laptop computer in common use today contains a microprocessor as its central processing unit. The microprocessor is the hardware component. To get its work done, the microprocessor executes a set of instructions known as software. You are probably very familiar with two different types of software:

The operating system - The operating system provides a set of services for the applications running on your computer, and it also provides the fundamental user interface for your computer. Windows 98 and Linux are examples of operating systems.

The applications - Applications are pieces of software that are programmed to perform specific tasks. On your computer right now you probably have a browser application, a word processing application, an e-mail application and so on. You can also buy new applications and install them.

It turns out that *the Basic Input/Output System (BIOS)* is the third type of software your computer needs to operate successfully.

Упражнение 3.

Данные слова и выражения встречаются в тексте. Соедините английские слова и выражения с их русскими эквивалентами.

- | | |
|---------------------------------|------------------------------------|
| 1. operating system | a. работать, управлять компьютером |
| 2. to provide a set of services | b. устанавливать приложения |
| 3. to install applications | c. удачно |
| 4. to operate a computer | d. операционная система |
| 5. successfully | e. предоставлять серию услуг |

Упражнение 4.

а) Найдите ответы в тексте на следующие вопросы.

1. What does every desktop and laptop computer contain? 2. Component of what is the microprocessor? 3. What does the microprocessor execute? 4. What are two types of software? 5. What does the operating system provide? 6. What are application programmed to do? 7. What is the third type of software?

б) Разыграйте следующую ситуацию. К вам обращается ваш друг, начинающий пользователь, с просьбой помочь разобраться в компьютерном программном обеспечении. Как бы вы это сделали? Вы можете выполнить это задание в форме диалога, используя вопросы из упр. 4а.

Упражнение 5.

а) Закончите начатые предложения, пользуясь текстом.

1. Every desktop and laptop computer in common use today contains ..
2. The microprocessor is the ...
3. To get its work done, the microprocessor ...
4. The operating system provides ... and it also ...
5. Applications are pieces of software that ...
6. On your computer right now you probably have ...
7. The Basic Input/Output System is the third ...

б) Расскажите о компьютерном программном обеспечении, представив, что вы - участник студенческой конференции по проблемам компьютерных технологий. Вам дали слово. Что бы вы ответили?

в) Ситуацию в упр. 5а можно повторить. Теперь можно добавить переводчика, который будет переводить вашу речь с английского языка на русский или с русского на английский.

Упражнение 6.

Переведите следующий текст на английский язык.

Описание того, какие действия, в каком порядке и над какими порциями информации должен произвести компьютер, называется программой для компьютера. Образно говоря, компьютер без программы представляет собой грудку железа, не способную ни к какой переработки информации. Поэтому составление программ - программирование составляет основу любого использования компьютера.

Сфера применения конкретного компьютера определяется не столько его конструкцией, сколько набором созданных для него программ. Для того чтобы переключить компьютер с одной работы на другую, достаточно сменить программу в его памяти.

Практическая работа 4. SOFTWARE. TYPES OF SOFTWARE

A computer to complete a job requires more than just the actual equipment or hardware we see and touch. It requires Software – programs for directing the operation of a computer or electronic data.

Software is the final computer system component. These computer programs instruct the hardware how to conduct processing. The computer is a general-purpose machine which requires specific software to perform a given task. Computers can input, calculate, compare, and output data as information. Software determines the order in which these operations are performed.

Programs usually fall in one of two categories: system software and applications software.

System software controls standard internal computer activities. An operating system, for example, is a collection of system programs that aid in the operation of a computer regardless of the application software being used. When a computer is first turned on, one of the systems programs is booted or loaded into the computers memory. This software contains information about memory capacity, the model of the processor, the disk drives to be used, and more. Once the system software is loaded, the applications software can start to work.

System programs are designed for the specific pieces of hardware. These programs are called drivers and coordinate peripheral hardware and computer activities. User needs to install a specific driver in order to activate his or her peripheral device. For example, if you intend to buy a printer or a scanner you need to worry in advance about the driver program which commonly go along with your device. By installing the driver you «teach» your mainboard to «understand» the newly attached part.

Applications software satisfies your specific need. The programmers nowadays tend to include all kinds of gimmicks in one program to make software interface look more attractive to the user. These class of programs is the most numerous and perspective from the marketing point of view.

Vocabulary:

to direct – управлять

to conduct – проводить

general purpose – многоцелевой

to require – требовать

system software – системное программное обеспечение

application software – прикладное программное обеспечение

internal – внутренний

to load – загружать

specific – конкретный, определенный

regardless of – несмотря на

to install – устанавливать

to boot – запускать

to develop – развивать, проявлять, разрабатывать

to provide with – обеспечивать чем-либо

to attach – присоединять

1. Translate from Russian into English:

- | | |
|-----------------------------------|---|
| 1) управление работой компьютера, | 7) считать, |
| 2) электронные данные, | 8) сравнивать, |
| 3) проводить обработку, | 9) выводить данные, |
| 4) многоцелевая машина, | 10) определять порядок, |
| 5) программное обеспечение, | 11) системное программное
обеспечение. |
| 6) вводить, | |

2. Find English equivalents in the text:

1. Программное обеспечение – программы для управления работой компьютера или электронными данными.
2. Программное обеспечение определяет порядок выполнения операций.
3. Прикладные программы удовлетворяют вашу потребность.
4. Системное программное обеспечение контролирует стандартные внутренние деятельности компьютера.
5. Программисты сегодня имеют тенденцию включать все виды приманок в одну программу.

3. Complete the sentences:

1. Software – programs for directing
2. Computers can
3. Software determines
4. Programs usually fall in one of two categories
5. System software controls
6. An operating system, for example, is a collection
7. System programs are designed
8. By installing the driver you

9. Applications software satisfies
10. This class of programs is

4. Make up the sentences:

- | | |
|--|--|
| 1. The computer is ... | a) requires more than just the actual equipment or hardware we see and touch. |
| 2. Software determines ... | b) your specific need. |
| 3. System programs are designed ... | c) a general-purpose machine which requires specific software to perform a given task. |
| 4. Applications software satisfies ... | d) for the specific pieces of hardware. |
| 5. A computer to complete a job ... | e) the order in which these operations are performed. |

5. Answer the questions:



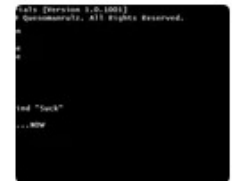
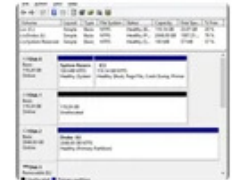
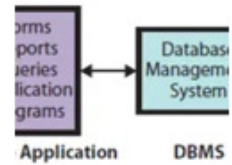
1. In what two basic groups software could be divided?
2. What is system software for?
3. What is software?
4. What is an operating system?
5. What is application software?
6. What is application software for?

6. Say if the following sentences are True or False:

1. Computer programs only instruct the hardware how to handle data storage.
2. System software controls standard internal computer activities.
3. The computer is a general-purpose machine which requires specific software to perform a given task.
4. Computers can only input, calculate data as information.
5. Programs usually fall in one of two categories: system software and applications software.

Практическая работа 5. OPERATING SYSTEM

1. Read the text and enumerate types of operating systems:

Operating System	A computer program that makes it so people, hardware, and software can interface with each other in a meaningful way.	
Graphical User Interface	An operating system interface that allows a user to interact with the computer by displaying pictures, icons, and other images on a screen to represent files, folders, and system controls and by accepting input from a mouse or a touch screen.	
Command Line Interface	An operating system interface that allows a user to interact with the computer by displaying text on a screen and accepting input from the keyboard. The input is entered as commands. The command line is used primarily by IT and other tech professionals.	
Disk Management	A role of the operating system that helps keep storage devices well organized and maintained.	
Application Management	A role of the operating system that manages applications or programs that are installed on a system. Applications are run, configured, and deleted through application management.	 <pre>graph LR; Application[Application] <--> DBMS[Database Management System];</pre>

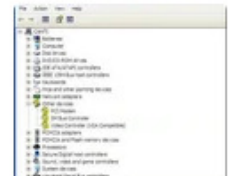
Service Management

A role of the operating system that runs processes or programs automatically in the background. These programs are services that perform functions like indexing files for better searches, verifying that software is up to date, and backing up files.



Device Management

A role of the operating system that determines the hardware that is connected to the system, interprets instructions from the hardware, and sends instructions to it. Device management includes managing device drivers.



Access Control/Protection

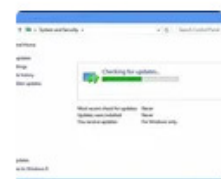
A role of the operating system that requires users to log in with their credentials before accessing sensitive information on the computer. It also manages antivirus and antimalware software to prevent malicious files from accessing the computer.

Windows Settings App

In Windows 10, an application that organizes the settings and customizes how the computer looks and functions.

Windows Update

A feature of the Windows operating system that keeps the system up to date.



Windows Registry

A database that stores settings for the operating system and other programs. These settings are stored as keys and values.



2. Answer the questions:

1. What are the functions of the Service management?
2. What is the role of Access control?
3. What does device management include?
4. What does GUI allow?
5. How can be application run, configured or deleted?

3. Match the term with its characteristic feature:

Windows registry ...	organizes the settings
Windows settings app ...	manages applications installed on the system
Device management ...	helps in keeping storage devices well maintained
Disk management ...	stores settings
Access control ...	keeps the system up to date
Graphical user interface ...	displays pictures, icons and images on a screen
Operating system ...	displays text on a screen accepting input from the keyboard
Application management ...	manages antivirus preventing malicious files from accessing the computer
Command line interface ...	determines the hardware
Windows update ...	makes people, hardware and software interface with each other

4. Translate the following words and word combinations into Russia:

- 1) icon;
- 2) interfaces;
- 3) hardware;
- 4) storage device;
- 5) management;
- 6) input;
- 7) touch
- 8) screen;
- 9) verify;
- 10) software;
- 11) credential;
- 12) antimalware software;
- 13) malicious file;
- 14) settings.

Практическая работа 6. TEXT EDITORS

History

Before text editors existed, computer text was punched into cards with keypunch machines. Physical boxes of these thin cardboard cards were then inserted into a card-reader. Magnetic tape and disk "card-image" files created from such card decks often had no line-separation characters at all, and assumed fixed-length 80-character records. An alternative to cards was punched paper tape. It could be created by some teleprinters, which used special characters to indicate ends of records.

The first text editors were "line editors" oriented to typewriter-style terminals without displays. Commands effected edits to a file at an imaginary insertion point called the "cursor". Edits were verified by typing a command to print a small section of the file, and periodically by printing the entire file. In some line editors, the cursor could be moved by commands that specified the line number in the file, text strings for which to search, and regular expressions. Line editors were major improvements over keypunching. Some line editors could be used by keypunch.

When computer terminals with video screens became available, screen-based text editors became common. One of the earliest full-screen editors was "O26", which was written for the operator console of the CDC 6000 series computers in 1967. Another early full-screen editor was "vi". Written in the 1970s, it is still a standard editor on Unix and Linux operating systems.

Also written in the 1970s was the UCSD Pascal Screen Oriented Editor, which was optimized both for indented source code as well as general text.

Emacs, one of the first free and open source software projects, is another early full-screen or real-time editor, one that was ported to many systems. A full-screen editor's ease-of-use and speed (compared to the line-based editors) motivated many early purchases of video terminals.

The core data structure in a text editor is the one that manages the sequence of characters or list of records that represents the current state of the file being edited. While the former could be stored in a single long consecutive array of characters, the desire for text editors that could more quickly insert and delete text.

Vocabulary:

punch – вбивать

keypunch machine – клавишный перфоратор

physical box –

cardboard card – перфокарта

insert – вставлять

card-reader – устройство считывания с перфокарт

magnetic tape – магнитная лента

card-image file – отображение данных перфокарты

card deck – колода перфокарт

line-separation character – разделительный символ

assume – принимать

punched paper-tape – бумажная перфолента

teleprinter – телетайп

indicate – отображать

line editor – редактор строк

typewriter-style terminal – клавиатура по типу пишущей машинки

edits – система передачи изображений

insertion point – место ввода

text string – текстовая строка

regular expression – регулярное выражение

screen-based text editors – экранный текстовый редактор

operator console – пульт оператора

indented source code – закрытый исходный текст

source software project – программа с открытыми исходными кодами

ease-of-use – простой в управлении

purchase – покупка

core data structure – структура основных данных

sequence of characters – порядок символов

current state – текущее состояние

consecutive array – последовательный порядок

1. Match the following words to make word combinations:

1) source

2) punched

3) cardboard

4) consecutive

5) computer

6) real-time

7) line

8) keypunch

9) sequence of

10) software

11) screen-based

12) operating

13) insertion

14) card

15) line

16) text

17) video

18) operator

- a) systems
- b) paper tape
- c) editors
- d) array
- e) cards
- f) characters
- g) strings
- h) code
- i) decks
- j) terminals
- k) projects
- l) terminals
- m) console
- n) text editors
- o) point
- p) number
- q) editor
- r) machines

2. Answer the questions:

1. Where was computer text punched before the invention of text editors?
2. What does the core data structure manage in a text editor?
3. What is a standard editor on Unix?
4. How did keypunch machines work?
5. What was an alternative to cardboard cards?
6. What were line editors oriented to?
7. How were edits verified?
8. What is one of the first free source software projects?
9. When did screen-based text editors become common?

Types of texts

There are important differences between plain text (created and edited by text editors) and rich text (created by word processors or desktop publishing software).

Plain text consists of character representation. Each character is represented by a fixed-length sequence of one, two, or four bytes, or as a variable-length sequence of one to four bytes, in accordance to specific character encoding conventions.

These conventions define many printable characters, but also non-printing characters that control the flow of the text, such space, line break, and page break. Plain text contains no other information about the text itself, not even the character encoding convention employed. Plain text is stored in text files, although text files do not exclusively store plain text.

Rich text, on the other hand, may contain metadata, character formatting data, paragraph formatting data, and page specification data. Rich text can be very complex. Rich text can be saved in binary format, text files adhering to a markup language, or in a hybrid form of both.

Text editors are intended to open and save text files containing either plain text or anything that can be interpreted as plain text, including the markup for rich text.

Text editors have 5 main features:

Find and replace. Text editors provide extensive facilities for searching and replacing text, either on groups of files or interactively. Advanced editors can use regular expressions to search and edit text or code.

Cut, copy, and paste. Most text editors provide methods to duplicate and move text within the file, or between files.

Ability to handle UTF-8 encoded text.

Text formatting. Text editors often provide basic visual formatting features like line wrap, auto-indentation, bullet list formatting using ASCII characters, comment formatting, syntax highlighting and so on. These are typically only for display and do not insert formatting codes into the file itself.

Undo and redo. Text editors provide a way to undo and redo the last edit, or more.

Vocabulary:

plain text – обычный текст

rich text – форматированный текст

word processor – текстовый процессор

desktop publishing software – программное обеспечение для настольных издательских систем

character – символ

fixed-length sequence – фиксированная последовательность

variable-length sequence – переменная последовательность

character encoding – кодирование символов

convention – соглашение

the flow of the text – поток данных

line break – разрыв строки

page break – разрыв страницы

employed – применяемый

store – хранить

exclusively – исключительно

metadata – метаданные

character formatting data – данные форматирования символа

paragraph – абзац

page specification data – данные о странице

complex – сложный

binary – двоичный

adhering – придерживающийся

markup language – язык разметки

provide – предоставлять

facility – возможность

interactively – интерактивный режим

advanced – расширенный

expression – выражение

paste – вставка

within – внутри

handle – обработка

feature – функция

line wrap – перенос строк

auto-indentation – автоматическое отступление

bullet list – список маркеров

syntax highlighting – выделение синтаксических конструкций

display – отображать

undo – отмена

redo – восстановление

1. Answer the questions:

1. What is the difference between plain text and rich text?
2. What do non-printing characters control?
3. What are the typical creatures of text editors?
4. What are the basic visual formatting features?
5. What does rich text contain?
6. What does plain text contain?
7. What way can rich text be saved?

Тема 3. Навигация по интернету. Internet navigation.

Цель: изучить лексику по теме Навигация по интернету, повторить грамматический материал.

Содержание работы: тексты для чтения по данной теме, упражнения на усвоение и закрепление лексико-грамматического материала.

Задание: прочитать, перевести тексты, выписать и выучить новые лексические единицы, выполнить ряд предложенных упражнений на закрепление лексики и грамматического материала

Практическая работа 1.

Internet in daily life

More and more people nowadays are interested in all events and getting some information very quickly. With the help of Internet you can make it easily.

Back in the 1960th, at the time of cold war, Pentagon asked a question: "How can orders be issued to the armed forces in the U.S. were ravaged by a nuclear assault?" The communication ways at that time were telephone, which connected offices, radio and TV stations. They were very vulnerable to attack. Pentagon needed military systems that would continue to work even the phones and radio had broken down. In 1964 Paul Baran connected 4 computers in different parts of the USA and posted a message. You couldn't destroy Internet if some computers will be broken down, the rest will work well.

Nobody owns the Internet, and there is no organization which controls its use. Now millions of people around the world are logging into libraries, call up satellite weather photos, download computer programs and music, take part in discussion groups. Even the Presidents have their own Internet accounts.

In fact, anyone with modem connected to the phone line can enjoy Internet. The total number of people in Russia, who get into Internet, due the Putin's statistics, is 10 million. In the modern Europe this number is more than 200 million Internet users.

Internet users are unimpressed by television promise of 500 channel future. The Internet already delivers 100.000 channels for all interests. In future all techniques will be connected to the Internet. Now we can connect with Internet through mobile phones, palm computers etc.

Now we can be connected with all worlds everywhere: in the bus, underground and even on the North Pole.

Tasks:

Choose the right answer:

Why do people use Internet?

- they want to get information quickly
- they are interested in all events
- they don't like watching TV

- there is no information about it

By the help of what organization internet appeared?

- Pentagon
- Arm Forces of the USA
- Military System
- Paul Baran

What did Paul Baran do?

- invented 4 computers
- linked 4 computers
- send a message
- went to different parts of the USA

The communication devices in 1960 were very...

- secure devices
- vulnerable to attack
- connected offices
- at the time of cold war

What organization controls Internet use?

- Pentagon
- Arm Forces of the USA
- Military System
- There is no organization controls it

Find the equivalents to the following words and word-combinations from the text and use them in the sentences of your own:

интересуются всеми событиями – получать некоторую информацию – во времена холодной войны –

отдавать приказы вооруженным силам – разрушены в результате ядерного нападения – очень уязвимы для атаки –

будет сломан –

спутниковые фотографии погоды – скачать компьютерные программы –

не впечатлило телевизионное обещание – подключаться к Интернету –

через мобильные телефоны – карманные компьютеры и т. д. – связаны со всеми мирами повсюду –

Ask 5-10 your own questions to the text.

Translate the text and say whether these statements are true or false:

Nowadays people aren't interested in events and any information around the world.

In 1964 Paul Baran connected 4 computers in different parts of the USA and posted a message.

The communication ways used nowadays are telephone, which connected offices, radio and TV stations.

It's impossible to destroy Internet if some computers will be broken down, the rest will work.

In future all techniques will be connected to the Internet.

d) Now we can be connected with all worlds everywhere: in the bus, underground and even on the North Pole.

Retell the text.

Make a situation, using these words and expressions: Types of computers

Three types of computers, mini-, micro-, mainframe computers, desktop, portable, multimedia computer, data, to process, powerful, expensive, small, large, to run, cheap, education, business.

Role play: "You are at computer club" GRAMMAR: Passive voice. Word Formation.

Write the verbs in brackets in the passive voice.

The Academy Awards Presentation 1) (first/organise) in 1929 and since then, it 2) ... (hold) every year. The presentation 3)(attend) by those at the top of the film industry and 4)..... (watch) on TV by millions of viewers who want to see who 5) (present) with the golden statue which 6) (desire) by everyone in the motion picture world. The voting for the Academy Awards 7)(conduct) secretly and the results 8) (not/reveal) to anyone until the envelope

9) (open) on stage in front of the audience. Awards 10) (give) for the best individual or collective work and 11) (separate) into different categories. Up to five nominations 12) (make) in each category. The awards, which 13) (know) as Oscars, 14) (consider) to be the highest honour anyone in the film industry can 15) (give).

Use verbs in brackets in the passive or active voice.

Coffee 1) ... (say) to originate from Kaffa in Ethiopia and most species of coffee plant 2) ... (find) in the tropics of the Eastern Hemisphere. The species which 3) (think) to be the earliest coffee plant 4)(ever/cultivate) by man is Coffee arabica. Today it 5) (grow) mostly in Latin America. The coffee shrub

6) (reach) a height of 8-10 metres and 7) (have) white scented flowers. It 8) (produce) a red fruit which 9) (call) a cherry. The cherry 10) (contain) two seeds which 11) (join) together. These seeds, which 12) (also/know) as beans, 13) (first/roast) and then they 14)(grind) to make coffee. The grounds 15) (then/process) in a variety of different ways.

Translate sentences using passive voice.

1. Мне рассказали об этом вчера. 2. Его встретят завтра на автобусной остановке. 3. Говорят, что в этом году весна будет теплее обычного. 4. Курицу пожарят на обед. 5. Дом построен два года тому назад. 6. Это письмо только что получено мною. 7. Об этом ребенку никто не заботится. 8. За врачом уже отправили. 9. Эти тексты переводятся учениками во время уроков. 10. Книги куплены в магазине на прошлой неделе.

Pick up the prefixes un-, dis-, in-, non-, ir- to words, paying attention to the context.

Пример: His ...action will lead to no good. - His inaction will lead to no good.

This place was ...appealing and melancholic.

Don't ...member our country!

But it is ...sense! You can't swim across the Drake Passage by yourself.

You are so ...responsible! You didn't come to rehearsal yesterday.

She always cheats on her husband. She is a ...loyal wife.

5. From the words in the frame, form new words using suffixes. Fill in the gaps in the sentences with appropriate words.

equip, doubt, art, free, equal, Russia

Пример: equip - equipment

We need hunting ... to kill a bear. - We need hunting equipment to kill a bear.

1 is the most valuable thing for a person.

She was whether the new shoes will be any better.

They always their results.

These paintings are so terrible!
My friend from Spain likes cuisine.

Change selected nouns to verbs with conversion. Redesign your sentences accordingly.
Пример: I have a walk with his friends every day. - He walks with his friends every day.
My mother is standing in a queue now.
She pushed me with an elbow.
Paola is giving a call to her friend now.
I had plans for tomorrow.
We made a mistake about that book.

7. Choose the correct answer options (vocabulary). Fill in the blanks with the meaningful words.

Пример: 1. c) - airman

My husband is - My husband is an airman.

1. air	a) care
2. copy	b) sighted
3. rain	c) man
4. birth	d) coat
5. health	e) book
6. short	f) place

I was born in India. And what is your ...?
Write in your ... an essay about summer vacation.
My brother is
It's raining outside. You should put on your
5 in our country is at top level.

Everest is.....(high) mountain in the world.
A whale is (big) animal on our planet.
He is the (good) student in our class.
This is.....(interesting) story by Dickens.
I am (happy) man in the world.

Correct the errors in the sentences.
He is the most oldest student in his group.
You are taller then me.
My car is beter than his.
It is one of most beautiful lakes in the world.
These flowers are more cheap than those ones.

Put the adjective in brackets in the desired form.
The Volga is (long) river in Europe.
Life in the country is (relaxing) than in the city.
He is one of...(rich) people in the world.
My house is (modern) than yours.
The weather today is... (good) than it was yesterday.

Практическая работа 2.

SURFING THE WEB

I. Read the following text.

Just a century ago we didn't even know about computers and the Internet. But today we take them for granted and can't imagine our life without these inventions. I think that the Internet (or World Wide Web) is the greatest invention ever and it has made a significant impact on our lives.

Nowadays the Internet is affordable almost for anyone and it connects people all around the world. You can stay in touch with your friends, relatives and colleagues. Our modern life will stop without the net because it helps to make online business transactions, manage our bank accounts, pay our gas or electricity bills and send important e-mails, for example.

The Internet is the largest source of information. There are millions of Internet sites storing plenty of useful data about everything: science, history, psychology, sports, fashion, music, cooking and many other subjects. We can also download our favourite movies or songs, listen to radio channels or play games. Learning or practising foreign languages is possible with the Internet too.

The Internet saves our time and money. We can do on-line shopping choosing the desirable thing at the best price. And then we just click "Order the delivery". By the way, we can also sell various things in the net. We often don't need to go to the library: surfing the net can easily help us to find and open the

book we need. Buying stamps and envelopes isn't required if you're going to send an e-mail. It takes just a few seconds to send an instant message by e-mail. The Internet helps shy people or those with low-esteem to find each other on dating sites. Online chatting through social networking websites is more comfortable for Internet users with the lack of social skills. In other words, we have a wide range of online activities which help us to get in touch with people, learn something new every day and be aware of all happening in the world. We have got used to this level of information accessibility due to which we feel more confident and freer to express our viewpoint. I am sure that the Internet has changed our life for the better. There is only one disadvantage about it: some people become rather addicted to it and spend all days long surfing the net, on-line dating or playing games. Over-using the net can be dangerous because new technology victims start neglecting their families, friends, work and real hobbies.

II. Are the following sentences true or false?

1. Thanks to the Internet you can be in touch with your friends.
2. Internet is a global world network, which has united people from different countries and of different backgrounds.
3. The Internet doesn't help shy people.
4. The Internet saves our time and money.
5. The Internet is not an important part of everyone's life.
6. The Internet is only for entertainment and games.
7. Over-using the net can be dangerous because new technology victims start neglecting their families, friends, work and real hobbies.
8. The Internet became an integral part of a life of each person. Now people cannot live a day without checking of mail and visiting their favourite sites.
9. The Internet has no disadvantages.
10. The Internet is the largest source of information.

III. Answer the following questions.

1. What are the advantages of the Internet?
2. What is the other name of the Internet?
3. How can the Internet help shy People?
4. Why is the Internet necessary in business?
5. What is the danger of excessive use of the Internet?
6. What can we find in the Internet?
7. What would our life be like without the Internet?
8. Is the Internet harmful or useful?
9. Why will our lives stop without the Internet?

10. Does the Internet help study.

Практическая работа 3. Information for study Internet

People always wanted to communicate and share information. That was the main reason for the development of computer network. *Computer network* is a group of computers that can interact by means of a shared communication link. There are two types of network:

- *Local area network (LAN)* is a network where computers are connected together directly, usually by cable. It is used in offices etc.
 - *Wide area network (WAN)* is a network of local area networks connected together. The connection might be a cable or a mixture of cable, fiber optic, and satellite connectivity.
- Modem* (abbreviation for modulate / demodulate) is a device that allows computers to communicate over ordinary phone lines. It converts digital computer data back and forth for use with analog phone line. There are two types of modems: internal and external. Internal means that modem goes inside your computer. External modem is outside your computer and must be plugged into it.

A *server* is a computer designed to provide various services for an entire network. It is typically either a workstation or a mainframe because it will usually be expected to handle far greater loads than ordinary desktop systems.

The roots of the Internet go to 1969, when the Defense Advanced Research Projects arm of the Department of Defense created ARPANET for research in networking. The project title was «Resource Sharing Computer Networks». The work centered around the problem in the Department of Defense - how to keep military sites in communication across the country in the event of a nuclear war.

In the beginning research was the main goal of the system. In 1994 an explosion of direct connections to the Internet occurs. Research is not any more the only purpose of Internet. The Internet experiences a steady growing process. Not only universities, research companies and other organizations became part of the Internet, but many of small businesses and homes were connected.

The estimate for year 2000 was 40 million people connected to the Internet and the large majority were home connections in more than 50 countries.

The Internet provides many services. Among them:

- *E-mail* You can send or receive electronic messages from anyone on the Internet. Anything that can be stored in text file can be mailed.
- *File Transfer** The File Transfer Protocol (FTP) provides for the copying of files from one computer to another.
- *Communication.* You can communicate with the help of the Internet with one person or a group of persons simultaneously.
- *Information.*

On the Internet all addresses / domain names refer to «electronic Addresses», e.g.:
person-id@computer name.domain name

There is never blank space between the components of the Internet address. User ids need not be unique (id - identification), e.g. two people with the same name can have it as login name as long as they operate on separate domains. But the domain name of the computer must be unique, however:

austin@galaxi.isr.umd.edu, austin@euler.berkeley.edu

Austin is the person-id, «galaxy» and «euler» are computer names, «isr.umd.edu» ctnd «berkeley.edu» are domain names. Domain names are composed of sub-domain names: esr, umd, edu.

The table summarizes commonly used sub-domain names:

	Domain names meaning	
Domain	Meaning	
com	Commercial Organization	
edu	Educational Organization	
gov	Government	
int	International Organization	
mil	Military Organization	
net	Networking Organization	
org	Non-profit Organization	
at	Austria	
au	Australia	
br	Brazil	
ca	Canada	
de	Germany (Deutschland)	
dk	Denmark	
fr	France	
ip	Japan	
nz	New Zealand	
uk	United Kingdom (England, Scotland, Wales, Ireland)	
ru	Russian Federation	

In the computer address *isr.umd.edu* the sub-domain «edu» tells that the computer is located at an educational institution. The sub-domain name «umd» stands for the University of Maryland,

and «isr» means the collection of computers at the Institute for System Research, at the University of Maryland.

If you want to send a message, put down the word «mail» before the address.

Today computers are seen as indispensable tools not only for computation and typing but for communications. The merging of computation and communications is making essential changes to day-to-day business activities of engineers. Suppose an engineer belongs to a geographically dispersed team. He can:

- Use the Internet / E-mail for day-to-day communications.
- Conduct engineering analyses at remote sites.

Практическая работа 4.

Advantages of Internet for Students

1. Information

The significant advantage of the internet is the information that it offers. Huge amount of information about various subjects are presented near your fingertips. It is not just about one single subject. This cannot be achieved without the use of search engines.

Through this ease of information, students are benefited for their data research. Students today heavily rely on internet since they longer need to waste time by going to a library or finding books from a respective author.

2. Accessibility

Internet is accessible 24x7 which means that it never closes. As long as the students are having a computer and an internet connection, they will be able to access the internet by any means.

The accessibility of the internet has made convenient for the students to understand their subject better. Therefore, unlike a library students don't need to wait for a opening and closing time. The information are accessible whenever they need it.

3. Communication

Students irrespective of their nations, races, religions and cultures will be able to communicate and express their opinions with other peer students. This type of communication is more convenient compared to other traditional ways such as telephone calls and letters. For the communication part, students can choose various forms like email, chatrooms, messenger services and videoconferencing.

And also students can use forums to discuss about their subject matters with teachers and students in various parts of the world. For the students who are hesitant to express their doubts, could use forums and remain anonymous.

4. Entertainment

Apart from studies, students can also use internet for the purpose of entertainment. From videos, music to games everything is made available on the internet. In the recent years, online gaming has become popular, particularly among teenagers. For students who study for prolonged hours, this internet entertainment is a great way to relieve stress.

5. Job Opportunities

Gone are the days when people prefer to apply jobs using letters. Since the digital era, people started seeking job opportunities through the internet. In most parts of the world, job opportunities are made available for the students via the internet.

Through this the students could find other career opportunities as well. And also during the study process, students will be able to stay updated regarding the job market based on their field of education.

6. Online Education

With the internet, students can also use the opportunity for online education. Certain universities offer virtual courses for students all around the world. This is especially beneficial for students who are located in a different country and willing to participate in the respective course.

And for working students this is even more convenient since they could follow the course without any hindrance to their regular lifestyle.

Disadvantages of Internet for Students

1. Anti Social

Children these days have lost their communication skills mainly due to the usage of internet. Rather than interacting with people real life, children are more interested in computer communication.

Interacting with people online differs massively from real life interaction. The amount of feelings and thoughts that is expressed in social interactions can never be achieved by a computer.

2. Addiction

The internet can also be extremely addictive to students. The students could spend too much time wasting on internet neglecting their studies. There are so much of entertainment options on internet that can make a student distracted from their studies. For an example, students could play online game prior to an examination where they should spend studying. This could seriously affect a student's academic performance.

3. Vulgarity

While using internet, students could be exposed to various forms of vulgarities such as Violence and Pornography. Adult contents are easily made accessible to underage children. Even though adult websites try to limit access to show their contents to 18+ audience, there is no trusted way to verify the user's age.

And some online games involve lots of violence that can be disturbing to children. Therefore, students particularly teenagers could be exposed to such contents affecting their mental health.

4. Misuse

Even for a student's education, internet can be misused to promote laziness. Unlike a library where information could just be read, internet allows contents to be copied. In case of a university assignment or a school homework, some students simply copy paste information from the internet. From such an action students will never learn the key concepts behind the internet information.

5. Reliability

Not every content posted on the internet is from reliable sources. The information posted on the internet could be fake or exaggerating. Some contents are just created purely for the sake of misleading visitors. Hence, it is the responsibility of the teachers to guide students to find reliable and trusted information on the internet.

6. Health Concerns

Students need to use a computer or a smartphone for accessing the internet. Using the smart devices for a prolonged period of time could contribute to various physical problems such as neck pain, back pain and eye pain.

Particularly, the light that is being emitted by the smart devices are known to cause numerous eye problems. Students who use smart devices for a long term are reporting health issues in eyes such as blurred vision and problems while focusing.

Практическая работа 5

Computers and modern technologies

Computers have become an important part of our everyday life. We use computers every day, though not everyone realizes it. Even smartphones that are hidden in our bags and pockets are actually small computers. Most people think that a computer is a big thing with a display, a keyboard and a mouse. Old computers of the 1990-th really looked like this. Computers contain a bunch of useful programs such as Word, Excel, an Internet browser with e-mail boxes and social networks. You can install video games and play all day long.

Modern computers are not very big; laptops are actually small and light. But they are as fast as desktop computers or even faster. I like laptops because they are portable and you don't need to replace and upgrade hardware.

But if you look closer, you will see that there are computers in modern cars, in every supermarket or a café at the cash desk. They are used in airplanes and all kinds of vessels. Computers control infrastructure of big cities. Computers are widely used in factories and in all modern equipment. Computers help to make our life easier and safer. Of course, it doesn't mean that computers control our life, though some people truly believe that it will happen with mankind sooner or later. If all the world's computers suddenly stopped, there would be a great collapse and a terrible catastrophe.

Vocabulary

though – хотя
realize – осознать
even – даже
be hidden – быть спрятанным
pocket – карман
display – экран
keyboard – клавиатура
a bunch of – куча
social network – социальная сеть
install – установить
all day long – весь день напролет
laptop – ноутбук
light – легкий
desktop computer – стационарный компьютер
portable – переносной
replace – заменять
upgrade – обновлять
hardware – «железо»
cash desk – касса
vessel – судно, большой корабль
equipment – оборудование
truly – на самом деле
mankind – человечество
collapse – крах
catastrophe – катастрофа

1. ****Vocabulary Matching:****

Match the following words with their meanings:

- a. Infrastructure
- b. Upgrade
- c. Catastrophe
- d. Portable
- e. Vessels

Meanings:

1. A sudden and widespread disaster.
2. The basic physical and organizational structures and facilities needed for the operation of a society or enterprise.
3. Capable of being easily carried or moved.
4. To improve the quality or performance of something.
5. A ship or large boat.

2. ****True or False:****

Indicate whether the following statements are true or false based on the text.

- a. Computers are only the big devices with a display, keyboard, and mouse. (False)
- b. Laptops are not as fast as desktop computers. (False)

- c. There are no computers in modern cars. (False)
- d. Computers are not used in factories. (False)
- e. If all the world's computers suddenly stopped, it would not cause any significant impact. (False)

3. **Discussion Questions:**

Discuss the following questions in pairs or groups:

- a. How have computers become an integral part of our daily lives?
- b. What are the advantages of using laptops over desktop computers?
- c. In what ways are computers used in different sectors such as transportation, retail, and manufacturing?
- d. Do you agree that computers make our lives easier and safer? Why or why not?
- e. What do you think would happen if all the world's computers suddenly stopped working?

4. **Fill in the Blanks:**

Fill in the blanks with the appropriate words from the text:

- a. Even smartphones, which we carry in our bags and pockets, are actually small _____.
- b. Modern computers are not very big; laptops are _____ and light.
- c. Computers are widely used in factories and in all modern _____.
- d. If all the world's computers suddenly stopped, there would be a great collapse and a terrible _____.

5. **Critical Thinking Exercise:**

Imagine a scenario where all computers suddenly stopped working. Discuss with your classmates or write a short paragraph about how this event would impact various aspects of society, such as communication, transportation, economy, etc.

Практическая работа 6.

Computer users.

A computer is a device that processes data according to a set of instructions known as a program. The equipment is known as the hardware and the programs and data are the software. A special set of programs, called an operating system, provides an interface for the user and allows applications programs to communicate with the hardware. Common applications programs include word processors for creating and editing texts, spreadsheets for calculating mathematical formulae and databases for storing data in a way that allows the data to be sorted and searched. Anti-virus programs are used to detect and remove viruses. Some operating systems have graphical (user) interfaces that allow the computer user to select items from menus and to start programs using an input device called a mouse. This is done by pressing a button on the mouse i.e. clicking the mouse. The main device for inputting the data is a typewriter-style keyboard and the output is commonly displayed on a monitor screen that looks like a small television screen.

There is a range of sizes and types of computers. Those designed for use by one person at a time are known as personal computers (PCs). Personal computers include desktop computers and handheld computers that can be carried around by the user. Electronics can be added to desktop computers by plugging in expansion cards (electronic circuit boards that can be plugged into special sockets called expansion slots).

Unlike most machines, computers do not have a fixed purpose. They are multi-purpose tools. They can be used in a very wide variety of situations and are found in a wide range of systems including security systems, cars and phones. Advanced systems, known as expert systems, enable computers to 'think' like experts. Medical expert systems, for example, can help doctors diagnose an illness and decide on the best treatment. As computer systems are developed, they are becoming more common and are gradually being used for more and more purposes. How they are developed, and for what purposes they are actually used in the future, can be influenced by computer users. A variety of devices known as peripherals can be added externally to a computer. One of the most common peripherals is a printer used for printing the computer output on paper. A digital camera allows photographs to be input to a computer for editing.

One of the newest and most popular services available on the Internet is the World Wide Web (WWW) which is often simply referred to as the Web. The Web contains interlinked documents called webpages. A set of related webpages stored together on a server computer is called a website. Websites, such as Google, give the user access to special programs called search engines that are designed to allow the user to find relevant webpages on the Web. An Internet system designed to provide free, interactive access to vast resources for people all over the world is sometimes referred to as an information superhighway.

Here are some exercises based on the provided text:

1. ****Vocabulary Matching: ****

Match the following words with their meanings:

- a. Hardware
- b. Software
- c. Operating system
- d. Peripherals
- e. Expert systems

Meanings:

1. Devices or equipment that constitutes a computer system.
2. Programs and data used by a computer.
3. Specialized programs that enable a computer to perform specific tasks.
4. A system software that manages computer hardware and software resources.
5. Additional devices connected to a computer, such as printers or cameras.

2. ****True or False: ****

Determine whether the following statements are true or false based on the text.

- a. A computer's hardware includes its programs and data.
- b. An operating system provides an interface for the user.
- c. Handheld computers are not considered personal computers.
- d. Expert systems enable computers to perform only basic tasks.
- e. The World Wide Web is a set of interconnected documents called webpages.

3. **Discussion Questions:**

Discuss the following questions in pairs or groups:

- a. What is the difference between hardware and software?
- b. Why is an operating system important for a computer?
- c. How do expert systems differ from regular computer programs?
- d. What are some examples of peripherals mentioned in the text?
- e. How has the World Wide Web impacted modern society?

4. **Fill in the Blanks:**

Fill in the blanks with the appropriate words from the text:

- a. A _____ provides an interface for the user and allows applications programs to communicate with the hardware.
- b. Unlike most machines, computers are _____ tools.
- c. One of the most common peripherals is a _____ used for printing the computer output on paper.
- d. The World Wide Web contains interlinked documents called _____.

5. **Critical Thinking Exercise:**

Imagine a scenario where computers suddenly ceased to exist. Discuss with your classmates or write a short paragraph about how this event would impact various aspects of society, such as communication, education, economy, etc.

Практическая работа 7.

Viewing & saving files.

Most of the time, images exist as files. Those files may be on a disk, on a digital camera connected to your computer, or on a storage device that looks and acts just like a disk in Windows. This chapter makes you Lord of the Files. It tells you how to open image files, organize those files, and save images as various kinds of files. It also helps you view them in whatever size is convenient for you.

(If you want to open an image that does *not* appear to be stored as a file, see Chapter 5. For example, you may want a picture that appears on your computer screen in a document or a snapshot that needs to be downloaded from your digital camera.)

Images are easy to deal with in small quantities. In large quantities, however, they're challenging to manage. (They're sort of like kids, in that regard.) This chapter tells you

about the clever Paint Shop Pro features for keeping an eye on all your graphical progeny, including browsing, previewing, and organizing files in different orders and in different folders.

Image files come in an amazing variety of file types because many software geeks over the years have each decided that they know a much better way of storing an image as a file (a file type). Image files of different types have different multiletter extensions at the end, like .jpg, .png, or .tif. People refer to them by those extensions, saying “jay-peg” or “jay pee gee” for .jpg or “ping file” for .png. These file types sometimes behave differently in Paint Shop Pro, so see the section “Using native and foreign file types,” later in this chapter, if someone gives you a file that behaves oddly. Fortunately, although you need to be aware that images come in a variety of file types, most of the time you don’t have to give a hoot. Paint Shop Pro can crack open most popular types of image file.

Three Ways to Open Image Files

Paint Shop Pro gives you three ways to open a file:

- I **Browsing (“I’ll know it when I see it”)**: Choose File⇨Browse or press Ctrl+B. The browser window opens, as shown in the following section, in Figure 1-1. You open folders in the left panel and double-click tiny pictures in the right panel to open them.
- I **Opening (“I know its name and where it lives”)**: Choose File⇨Open; or, click the Open button on the toolbar or press Ctrl+O. The Open dialog box appears, as shown a couple of sections from here, in Figure 1-2.
- I **Double-clicking (“There it is — open it”)**: If you see a file listed and it displays a Paint Shop Pro icon (a tiny artist’s palette), double-click that puppy and Paint Shop Pro should start up and display the image.

That’s all you need to know — well, at least most of the time, that’s all. The following sections give you some additional tricks and tips for opening files in those three ways.

If you can see the image on your screen, but aren’t sure where the image file is, see the section in Chapter 5 about capturing images from your PC screen. Images that appear in a document (a Web page, a Microsoft Word document, or an Adobe Acrobat document, for example) may not be stored as files on your computer. (Or, if they are, they may be very hard to find.) You may need to capture the image off your screen.

For some files, Paint Shop Pro has to translate the image file into a form it can use. Translation may especially be necessary for *vector* image files, such as DXF and WPG. To translate, Paint Shop Pro needs additional information from you: specifically, how many pixels wide and high you want the image to be.

See the section “Using Vector File Types (Drawing Files),” later in this chapter, for

more information.

Opening, Managing, and Sorting Files with the Browser

We like the Paint Shop Pro browser best for opening files because it also lets you manage them visually. Do one of the following to open the browser:

I Press Ctrl+B.

I Click the Browse icon, as shown in the margin. (It's on the Standard tool- bar, which runs along the top of the Paint Shop Pro window.)

I Choose File⇒Browse.

I If the Open dialog box is open already, click the Browse button.

Figure 1-1 shows you the Browse window. To close the window when you're done, choose File⇒Close or press Ctrl+F4.

The left side of the Browse window looks and works like Windows Explorer. The right side displays, and helps you manage, image files.

Практическая работа 8.

INFORMATION SECURITY

A

For centuries people have been collecting and storing different types of information for various reasons. Today, thanks to the new information technologies the process of collecting and providing information throughout the world is as easy as never before. Though technologies made this process digital, convenient, and dynamic, still information security should be the main concern for those who own and control any type of information, especially when it concerns public, business and government sectors.

Why Information needs security?

We all make use at least of one modern technology in our everyday, business, and public life – computers, laptops, mobile devices, interactive terminals etc. Many people register their personal information to Internet, some for employment, and others for business and social communication purposes. And while we, the users are running through this, we want to be assured that our information would be used and secured in a proper way since we never lose the sense of private life and security.

Information Security is the protection of the confidentiality, integrity and availability of information and information systems from unauthorized access, use, disclosure, disruption, modification, perusal, inspection, recording or destruction. It is based on the principles of the consumers' interests and human rights. In many countries it is a legal requirement. Protecting information is critical for business and governmental institutions which deal with huge volumes of confidential information about their employees, customers, products, research, and financial status. Most of this information is now collected, processed and stored on electronic

computers and transmitted across networks. So now, we can imagine what could happen if this kind of information would be available to everyone – it will cause an incredible damage like lost business, law suits or even bankruptcy of the business.

Of course, securing information is about securing the system or network that the information is stored in. But apart from all this there should be a concise understanding of information security core aspects in order to plan, implement and maintain an effective security policy. That policy should be compliant with local laws and industry standards.

B

Information Classification.

Information value needs to be assessed to have appropriate security requirements for different types of information. Not all information is equal and so not all information requires the same level of protection. This requires information to be classified due to its value. So a thorough risk management should be realized. Obviously, the more sensitive or valuable the information the stronger the security control needs to be.

Access Control.

The protected information should be available only to those people who are authorized to access that information and to control its development. That is why all the computers, software and networks which process the information, should be set up with access control and provide authorization mechanisms.

Cryptography.

Cryptography is a main asset in information security. It is the process of converting the secured data into unusable form while the information is in transmission or just is in storage. This is done for preventing unauthorized users from reading and interpreting the sensitive data they could accidentally get or access. Unusable information could be transformed back to the usable one by an authorized user, who has the cryptographic key. This converse process is decryption.

Defense-In-Depth.

Information security assumes not only the protection of stored data but also its protection on the stages of creation, development and disposal. In other words, it is “responsible” for the whole life-time of the information. During its life-time information may “travel” through different processes and systems and even change its format and value. Defense-in-depth allows controlling information life-time and adequately reacts on information transformations and external threats. It is a comprehensive and detailed approach to information security. It is a multi-layered defense system where each component of the information has its own protection mechanisms.

Backups and Disaster Recovery.

These days nobody and nothing is insured from unexpected and unprecedented cases. So does the information. To provide the business continuity and information completeness companies and other institutions of high significance employ disaster recovery planning (DRP) and back-ups policy.

Information back up is the periodical reservation of data copy on extra systems to have at least one reserved copy in case of data loss or destruction.

DRP is focused on taking the necessary steps to resume normal business operations as quickly as possible. It is executed immediately after the disaster occurs and details what steps are to be taken in order to recover critical information.

Hardware and Software.

An effective information security system incorporates a set of policies, security products, hardware and software technologies and procedures. The correct and targeted deployment of all those components should make up an effective information security.

A

1. Answer the following questions:

1. Why has the process of collecting and providing information throughout the world become easy?
2. Why do people register their personal information?
3. What is the purpose of information security?
4. What principles is information security based?
5. Why is protecting information sometimes critical for business?
6. What could happen if personal information would be available to everyone?
7. What should security policy be compliant with?

2. Translate the following sentences into Russian:

1. Though technologies made this process digital, convenient, and dynamic, still information security should be the main concern for those who own and control any type of information, especially when it concerns public, business and government sectors.
2. Protecting information is critical for business and governmental institutions which deal with huge volumes of confidential information about their employees, customers, products, research, and financial status.
3. Of course, securing information is about securing the system or network that the information is stored in.

4. And while we, the users are running through this, we want to be assured that our information would be used and secured in a proper way since we never lose the sense of private life and security.

B

1. Answer the questions:

1. What does information security system incorporate?
2. What is information back-up?
3. What is DRP focused on?
4. Why should computers be set up with access control?
5. What does information security assume?
6. What is cryptography?
7. What is decryption?
8. What does defense-in-depth allow?
9. Why should the information be classified?

2. Say if the following statements are True or False. If the statement is false transform it according to the text:

1. The simplest the information the stronger the security control needs to be.
2. Only security products and hardware technologies make up an effective information security.
3. The protected information should be available only to people with an authorized access.
4. Disaster recovery planning is focused on taking the necessary steps to resume normal business operations as quickly as possible.
5. These days everyone is insured from unexpected cases.
6. Information may travel through different processes and systems but can't change its format and value.
7. Information is not equal but it requires the same level of protection.
8. Unusable information can be transformed back to the usable one.
9. Cryptography is an important part of information security.

Практическая работа 9.

Computer viruses

The history of computer viruses has begun recently, but it has already become legendary. Almost everyone knows a few fables about these creatures but hardly anyone understands what computer virus is.

Viruses are programs that have been written to make a computer behave in an unexpected and undesired way. Although they are often relatively harmless, they sometimes cause a lot of damage. They are usually designed to remain hidden and dormant until a particular time, or until the user performs a particular action, such as pressing a particular combination of keys. They are able to reproduce themselves, and often attach themselves to other programs. It is common for a user to have a virus program on his disk without being aware of it. Plain text e-mail messages cannot contain a virus, but viruses can be carried in e-mail attachments, e.g. files attached to e-mail messages. Some viruses are much more common than others and are often unknowingly downloaded from a network system such as the Internet.

If you catch viruses, there are anti-virus programs to hunt down and eradicate the virus. The problem is that around 150 new viruses appear every month and you must constantly update your anti-virus package to deal with these new forms.

Tasks:

1. Find the equivalents to the following words and word-combinations from the text and use them in the sentences of your own:

история компьютерных вирусов –
несколько басен об этих существах –
вряд ли кто-то понимает –
неожиданный и нежелательный путь –
хотя они относительно безвредны –
иногда наносит большой ущерб –
оставаться скрытым и
бездействующим-до определенного
времени –
нажатие определенной комбинации клавиш –
не зная об этом –
переноситься во вложениях электронной почты –
сообщения не могут содержать вирус –
бессознательно загружается из сетевой системы –
выследить и искоренить вирус –
иметь дело с этими новыми формами –постоянно
обновлять свой антивирусный пакет

проблема в том, что вокруг –

2. Ask 5-10 your own questions to the text.

3. Choose the right answer:

1. Give the title to the following text:
 - a) the history of computer viruses
 - b) computer viruses
 - c) few fables about computer viruses
 - d) fairy virus tales
2. What are the viruses?
 - a) programs that have been written to make a computer behave in an unexpected and undesired way
 - b) programs belong to particular virus programs
 - c) programs which are always harmless
 - d) programs which very useful for computer
3. What cannot virus do?
 - a) to reproduce themselves
 - b) to attach themselves to other programs
 - c) to write programs
 - d) to remain hidden
4. What element cannot contain a virus?
 - a) plain text e-mail
 - b) computer game
 - c) memory card
 - d) different documents
5. What is the main problem which deals with new virus forms?
 - a) it appears every day
 - b) it deletes files and documents
 - c) you must always update your anti-virus package
 - d) you must delete viruses

4. Translate the text and say whether these statements are true or false:

- a) Nobody knows a few fables about these creatures and no one understands what computer virus is.
- b) His parents were famous and very rich people.
- c) At the age of eighteen he founded his own firm "Peter Norton Computing".
- d) The Norton Utilities Batch allowed the users to recreate lost data.
- e) Norton hasn't been saving people from problems with computers.
- d) Richard Wilton wrote programs for IBM PC, he is the author of Programmer's Guide to PC.

5. Retell the text.

6. Make a situation, using these words and expressions:

At the Institute

To have classes, to give a lecture, interesting, to make notes, not to like to use my friend's notes, to discuss, several, to be sorry, if, to have to, to miss

7. Role play: “You are at the library”

GRAMMAR: English adjective

1. Choose an adjective or an adverb to make sentences grammatically correct.

Examples: It is clear. I see it clearly.

1. It is (correct, correctly).
2. Spell the word (correct, correctly).
3. You know it (good, well).
4. Of course it is (good, well).
5. It is (cold, coldly) in the room.
6. Don't look so (cold, coldly) at me.
7. It is (easy, easily).
8. I can do it (easy, easily).
9. It is (warm, warmly) today.
10. He always greets us (warm, warmly).

2. Give the Comparative and Superlative Degrees.

Sad, grey, bad, old, happy, free, far, dry, big, near, shy, unusual, able, mountainous, little, polite, famous, well-known, heavy.

3. Put adjectives into correct forms.

1. John is (young) of the 3 brothers.
2. The Sun is (bright) the Moon.
3. Is the diameter of Jupiter (big) than that of the Earth?
4. That room is (light) than yours.
5. This room is (large) than the one upstairs.
6. It doesn't take (much) than four days to cross the Atlantic, does it?

4. Choose the correct form of an adjective.

1. Jane is the (taller — tallest) of the 2 girls.
2. Father was the (eldest — elder) of seven sons.
3. Albert is (elder — older) than John.
4. I think your plan is the (best — better) of the two.
5. This is the (most large-largest) power — station, I've ever seen.
6. Henry is the (oldest — eldest) of the 3 brothers.

5. Put the adjectives in parentheses in superlatives.

Практическая работа 10. COMPUTER PROGRAMMING

Programming is the process of preparing a set of coded instructions which enables the computer to solve specific problems or to perform specific functions. The essence of computer programming is the encoding of the program for the computer by means of algorithms. The thing is that any problem is expressed in mathematical terms, it contains formulae, equations and calculations. But the computer cannot manipulate formulae, equations and calculations. Any problem must be specially processed for the computer to understand it, that is – coded or programmed.

The phase in which the system's computer programs are written is called the development phase. The programs are lists of instructions that will be followed by the control unit of the central processing unit (CPU). The instructions of the program must be complete and in the appropriate sequence, or else the wrong answers will result. To guard against these errors in logic and to document the program's logical approach, logic plans should be developed.

There are two common techniques for planning the logic of a program. The first technique is flowcharting. A flowchart is a plan in the form of a graphic or pictorial representation that uses predefined symbols to illustrate the program logic. It is, therefore, a "picture" of the logical steps to be performed by the computer. Each of the predefined symbol shapes stands for a general operation. The symbol shape communicates the nature of the general operation, and the specifics are written within the symbol. A plastic or metal guide called a template is used to make drawing the symbols easier.

The second technique for planning program logic is called pseudocode. Pseudocode is an imitation of actual program instructions. It allows a program-like structure without the burden of programming rules to follow. Pseudocode is less time-consuming for the professional programmer than is flowcharting. It also emphasizes a top-down approach to program structure. Pseudocode has three basic structures: sequence, decision, and looping logic. With these three structures, any required logic can be expressed.

1. Copy the following words and word combinations into your notebooks:

- 1) equation – уравнение/приравнивание;
- 2) list of instructions – перечень команд;
- 3) guard – защищать/охранять;
- 4) appropriate sequence – необходимая последовательность;
- 5) program logic – логическая последовательность выполнения программы;
- 6) flowchart – блок-схема;
- 7) flowcharting – построение блок-схемы;
- 8) pictorial representation – наглядное представление;
- 9) predefined symbols – заранее заданные символы;
- 10) emplate – шаблон/образец;
- 11) pseudocode – псевдокод/псевдопрограмма;
- 12) burden – издержки/затраты;
- 13) consume – потреблять/расходовать;
- 14) emphasize – выделять/подчеркивать;
- 15) top-down approach – принцип нисходящей разработки;
- 16) looping logic – логическая схема выполнения (операций) в цикле.

2. Answer the following questions:

1. What is programming?

2. What is the essence of programming?
3. What should be done with the problem before processing by the computer?
4. What is a program?
5. What are instructions?
6. What are the main techniques for planning the program logic?
7. What is a flowchart?
8. What is a template and what is it used for?
9. What do you understand by "pseudocode"?
10. What are the basic structures of pseudocode?

3. Find English equivalents for the following words in the text:

- 1) совокупность закодированных команд;
- 2) суть компьютерного программирования;
- 3) кодирование посредством алгоритма;
- 4) необходимая последовательность;
- 5) составлять план логической последовательности;
- 6) логическая последовательность выполнения программы;
- 7) построение блок-схемы;
- 8) псевдопрограмма.

4. Match the phrases from the first column to the words from the second one:

application program;
 binary program;
 archived program;
 operating (system) program;
 running program;
 watch-dog program;
 simulation program;
 remote program;
 support program;
 utility program.

выполняемая программа;
 сторожевая программа;
 вспомогательная программа;
 программа в двоичном коде;
 программа моделирования;
 дистанционная программа;
 прикладная программа;
 сервисная программа;
 программа операционной системы;
 заархивированная программа.

Практическая работа 11.

How Computers Affect Our Lives

The computer has changed the modern lives of many people. It is very common for a household to have at least one computer. In addition, computers are essential tools that help ease our daily life. Also computer comes in various sizes and has many different types of applications.

First of all computers can change our daily tasks. Programs can do various functions and ease the process of doing it. For instance, there is a well known program called "Microsoft Word" that actually corrects many grammatical errors such as punctuations, capitalization, and the most common sentence fragments. Thus, ones essay or report can be done at home which is more convenient.

Computers can decrease the amount of time necessary to get the job done. For example, it may take a person five hours to finish their shopping needs excluding the time to get to the destination and the time to get back home, but if the person shops online the item may be a

click away and be at the door within a few days. In order for a person to shop online they would need to have a creditcard and be able to confirm his address. Next he or she would then go to a reliable website and purchase the items desired for the cheapest amount possible with a fewclicks, without going to the mall for hours and not getting what you desire. Also

one may pay the bills online which saves time for the mail carrier to actually ship the documentations the destination. This is very beneficial if your bills are on the verge of being late.

Tasks:

1. Choose the right answer:

1. Nowadays computers are aimed to
 - a) ease our life
 - b) strengthen it
 - c) entertain children
 - d) give different games
2. Program called "Microsoft Word" helps us to ...
 - a) delete our grammatical errors
 - b) correct our mistakes
 - c) type different texts
 - d) make reports
3. If you want shopping online, what must you have?
 - a) a computer
 - b) Internet
 - c) enough time and money
 - d) credit card
4. What is another useful computer function? It can ...
 - a) buy thing online
 - b) decrease the amount of our time
 - c) fulfill our daily duties
 - d) write reports
5. What may save the time for mail carriers?
 - a) paying bills online
 - b) shipping the documentations
 - c) being on the verge
 - d) to be very beneficial

2. Find the equivalents to the following words and word-combinations from the text and use them in the sentences of your own:

обычное дело для семьи – необходимые
инструменты – облегчить нашу
повседневную жизнь – например –
исправляет много ошибок – что
удобнее –
уменьшить количество времени –
добраться до места назначения – и
время возвращаться домой –
быть в состоянии подтвердить адрес –

может быть на расстоянии одного клика –
перейти на надежный сайт –
купить нужные предметы –
оплачивать счета онлайн –
отправить документацию в пункт назначения –

3. Ask 5-10 your own questions to the text.

4. Translate the text and say whether these statements are true or false:

- a) Computers improved our life, helped ease our daily life.
- b) For instance, a well known program called "Microsoft Word" that corrects many grammatical errors such as punctuations, capitalization.
- c) Computers can increase the amount of time necessary to get the job done.
- d) One may pay the bills online which saves time for the mail carrier to actually ship the documentations the destination.
- e) Thus, ones essay or report can be done at home which is less convenient.

5. Retell the text.

6. Make a situation, using these words and expressions: Foreign delegation in Moscow

Imagine, you are a reporter

- Find out the organizer of this conference
- Clear up the membership of a delegation
- Ask about their plans
- Tell him about your interview and ask about the most suitable hour for it

7. Role play: "Great inventors"

GRAMMAR: English questions

1. Put the sentence in an interrogative form (general question).

Пример: Michael and Samantha live together. – Do Michael and Samantha live together?

1. They are at home now.
2. James played chess with his friend yesterday.
3. He has been waiting for me all day.
4. Mary is speaking on the phone now.
5. Usually I wake up at 6 o'clock.

2. Put the words in the correct order.

Пример: does / he / train / how / often? – How often does he train?

1. summer / Paris / to / went / last / who?
2. flowers / Mike's / grow / in / what / garden?

3. now / where / they / walking / are?
4. charge / denied / why / has / a / Lola?
5. When / visit / grandmother / will / we / our?

3. Put an alternative question to the highlighted words.

Пример: It is chilly outside (warm) – Is it chilly or warm outside?

1. He was in Liverpool last year. (New York)
2. There is a good cafe in that hotel. (building)
3. Linda wears a strange hat. (sunglasses)
4. I'm going to work in a restaurant. (eat)
5. Her mother can speak three languages. (two)

4. Choose the correct answer.

1. The view was overwhelming, ...?
a) was it b) wasn't it c) does it
2. You mustn't eat junk food, ...?
a) do you b) must you c) mustn't
3. The monkeys swim and dive in the water, ...?
a) do they b) does they c) don't they
4. We will participate in this conference, ...?
a) won't we? b) do we? c) will we?
5. My trainer is not very muscular, ...?
a) does he b) is he c) isn't he

6. Put the question to the subject.

Пример: Jane works for a law firm. – Who works for a law firm?

1. Tony has married.
2. This city was occupied by fascists.
3. Today we will attend a new museum.
4. His car needs urgent repairing.

GRAMMAR REFERNCIES

Глагол to be в Simple Active

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Present	Past	Future
(I) am (he, she, it) is (we, you, they) are	(I, he, she, it) was (ед. ч.) were (мн. ч.)	(I, we) shall be (1-е л.) will be

Глагол to have в Simple Active

Present	Past	Future
have (got) (he, she, it)has (got)	had	(I, we) shall have will have

Оборот there + to be в Simple Active

Present	Past	Future
there is (ед.ч.) there are (мн.ч.)	there was (ед.ч.) there were (мн.ч.)	there will be

Степени сравнения прилагательных

	Положительная	Сравнительная	Превосходная
I	long easy	longer easier	(the) longest (the) easiest
II	interesting	more interesting	(the) most interesting
III	good bad much, many	better worse more	(the) best (the) worst (the) most

Времена группы Simple Passive

<i>to be + Participle II</i>	
Infinitive	to be written, to be translated
Present	The letter is written/translated.
Past	The letter was written/translated.

Сводная таблица модальных глаголов и их эквивалентов

	Present	Past	Future
Долженство вание	I must meet him. I have to meet him. I am to meet him. I should meet him.	I had to meet him. I was to meet him.	I shall have to meet him. I'll be to meet him.
Способность или возможность совершения действия	He can help you. He is able to help you.	He could help you. He was able to help you.	He will be able to help you.
Разрешение или возможность	I may use this device. I am allowed to use the device.	I might use this device I was allowed to use the device.	I shall be allowed to use the device.

Таблица времен группы Simple Active

Форма	Present Simple	Past Simple	Future Simple
Утвердительная	My friends study French. He speaks English	My friends studied French at school. He spoke English at the conference	My friends will study French at the Institute. The teacher will speak about our English exam.
Вопросительная	Do your friends study French? Does he speak English?	Did your friends study French at school? Did he speak English at the conference?	Will your friends study French at the Institute? Will the teacher speak about our English exam?
Отрицательная	My friends don't study French. He doesn't	My friends did not study French. He didn't speak English at the	My friends won't study French at the Institute. The teacher won't speak about our English

Структура специальных вопросов

Вопросительные слова	Вспомогательный глагол	Подлежащее и определение к нему	Смысловый глагол в форме инфинитива	Другие члены предложения
What Where When	do did	you he	do go	in the evening? yesterday?

Таблица времен группы Progressive Active

Форма	Present Progressive	Past Progressive	Future Progressive
Утвердительная	The are having an English class.	They were having an English class when I came to see them. He was writing an exercise from 6 till 8 o'clock.	They will be having an English class tomorrow at 9 o'clock. He will be
Вопросительная	Are they having an English class? Is he still writing an exercise?	Were they having an English class when I came to see them? Was he writing an exercise from 6 till 8 o'clock.	Will they be having an English class tomorrow at 9 o'clock? Will he be writing an exercise from 6 till 8 o'clock
Отрицательная	They aren't having an English class, they are having a Russian class. He isn't writing an exercise, he is reading a book.	They weren't having an English class when I came to see them, they were having a Russian class . He wasn't writing an exercise from 6 till 8 o'clock, he was reading a book.	They will not be having an English class tomorrow at 9 o'clock, they will be having a Russian class. He won't be writing an exercise from 6 till 8 o'clock tomorrow, he'll

Таблица времен группы Perfect Active

Форма	Present Perfect	Past Perfect	Future Perfect
Утвердительная	I have sent the letter.	I had already sent the letter by 6 o'clock yesterday.	I shall have sent the letter by tomorrow evening.
Вопросительная	Have you sent the letter?	Had you sent the letter by 6 o'clock yesterday?	Will you have sent the letter by tomorrow evening?
Отрицательная	I have not sent the letter yet.	I had not sent the letter by 6 o'clock yesterday.	I shall not have sent the letter by tomorrow evening.

Таблица времен Simple, Progressive, Perfect in Passive Voice

	Simple to be + Participle II	Progressive to be + being + Participle II	Perfect to have + been + Participle II
Present	The letter is translated. Is the letter translated? The letter isn't translated.	The letter is being translated. Is the letter being translated? The letter isn't being translated.	The letter has been translated. Has the letter been translated? The letter hasn't been translated.
Past	The letter was translated. Was the letter translated? The letter wasn't translated.	The letter was being translated. Was the letter being translated? The letter wasn't being translated.	The letter had been translated. Had the letter been translated? The letter hadn't been translated.
Future	The letter will be translated. Will the letter be translated? The letter won't be translated.	Не употребляются.	The letter will have been translated. Will the letter have been translated? The letter won't have been translated.

Таблица форм причастий

	Participle		Participle II
	Active	Passive	changed
			1 Определение: <i>изменяемый,</i> <i>измененный</i> 2) обстоятельство:
Simple	changing 1) определение: <i>изменяющий(ся)</i>	being changed 1) определение: <i>изменяющийся,</i> <i>изменяемый</i> 2)	
Perfect	having changed обстоятельство: <i>изменив(шись)</i>	having been changed обстоятельство: <i>когда</i> <i>(его) изменили, после</i>	

Таблица производных слов от some, any, no, every

Местоимения	+ thing	+body, one	+where	Употребляют
some <i>некоторый</i> <i>какой-то</i>	something <i>что-то,</i> <i>что-нибудь</i>	somebody someone <i>кто-то</i>	somewhere <i>где-то,</i> <i>куда-то,</i> <i>где-нибудь,</i>	в утверд. . предп.
any 1) <i>всякий любой</i> 2) <i>какой-нибудь</i>	anything 1) <i>всё</i>	anybody anyone	anywhere 1) <i>везде,</i>	1) в утверд. 2) в вопросит, предп.
no, not any <i>никакой + не</i>	nothing (not anything) <i>ничто</i>	nobody (not anybody), no one	nowhere not	в отрицат. предп.
every <i>всякий,</i>	everything <i>всё</i>	everybody everyone	everywhere <i>везде,</i>	в утверд., вопросит, и отрицат.

Словообразовательные аффиксы

<p>Существительные</p> <ul style="list-style-type: none"> - ion / - sion /-tion - er / -or -ing -ment -ty / -ity -ance / -ence -ness -ure / -ture 	<ul style="list-style-type: none"> - discussion, transmission, combination - writer, inspector - opening - development - activity - importance, difference - darkness - mixture
<p>Прилагательные</p> <ul style="list-style-type: none"> -ic -ive -able / -ible -ant / -ent -ous -al -ful -less -un / -in / -ir / -il / -im 	<ul style="list-style-type: none"> - democratic - progressive - valuable, accessible -resistant, different - dangerous - central - hopeful - hopeless - uncomfortable, indirect, irregular, illogical, impossible
<p>Глагол</p> <ul style="list-style-type: none"> -ize re- 	<ul style="list-style-type: none"> - to characterize - to rewrite

Infinitive	Past	Participle II	Translation
arise	arose	arisen	возникать
awake	awoke	awaked	будить, проснуться
be	was, were	been	быть
bear	bore	born	носить, родить
beat	beat	beaten	бить
become	became	become	стать
begin	began	begun	начать
bend	bent	bent	согнуться
bind	bound	bound	связать
bite	bit	bitten	кусать
blow	blew	blown	дуть
break	broke	broken	ломать
bring	brought	brought	приносить
build	built	built	строить
burst	burst	burst	разразиться, взорваться
buy	bought	bought	покупать
catch	caught	caught	ловить, поймать
choose	chose	chosen	выбирать
cut	cut	cut	резать
deal	dealt	dealt	иметь дело
dream	dreamt	dreamt	мечтать
do	did	done	делать
draw	drew	drawn	тащить, рисовать
drink	drank	drunk	пить
drive	drove	driven	ехать
eat	ate	eaten	есть, кушать

fall	fell	fallen	падать
feed	fed	fed	кормить
fight	fought	fought	сражаться
find	found	found	находить
fly	flew	flown	летать
forbid	forbade	- forbidden	запретить
forget	forgot	forgotten	забыть
forgive	forgave	forgiven	прощать
freeze	froze	frozen	замёрзнуть, замораживать
get	got	got	получить
give	gave	given	дать
go	went	gone	идти
grow	grew	grown	расти
hang	hung	hung	висеть, повесить
have	had	had	иметь
hear	heard	heard	слушать
hit	hit	hit	ударить, попасть
hold ¹	held	held	держать
hurt	hurt	hurt	причинять боль
know	knew	known	знать
keep	kept	kept	держать
lay	laid	laid	класть, положить
lead	laid	laid	вести
leap	leapt/leaped	leapt/leaped	прыгать
leave	left	left	оставлять
lend	lent	lent	одолжить
let	let	let	пустить, дать

lie	lay	lain	лежать
lose	lost	lost	терять
make	made	made	делать
meet	met	met	встречать
pay	paid	paid	платить
put	put	put	класть
read	read	read	читать
ride	rode	ridden	ездить верхом
ring	rang	rung	звонить
rise	rose	risen	поднимать
run	ran	run	бежать
say	said	said	говорить, сказать
see	saw	seen	видеть
sell	sold	sold	продавать
send	sent	sent	послать
set	set	set	устанавливать
shake	shook	shaken	трясти
shine	shone	shone	светить, сиять
shoot	shot	shot	стрелять, давать побеги
show	showed	shown/showed	показывать
sing	sang	sung	петь
sink	sank	sunk	опускаться
sit	sat	sat	сидеть
sleep	slept	slept	спать
slide	slid	slid	скользить
speak	spoke	spoken	говорить
spend	spent	spent	тратить

steal	stole	stolen	украсть
stick	stuck	stuck	втолкнуть, приклеить
strike	struck	struck/stricken	ударять, бастовать
swear	swore	sworn	клясться
swim	swam	swum	плавать
take	took	taken	брать
teach	taught	taught	учить
tell	told	told	говорить
think	thought	thought	думать
throw	threw	thrown	бросить
wake	woke	woken	просыпаться, будить
wear	wore	worn	носить
weep	wept	wept	плакать
win	won	won	выигрывать
wind	wound	wound	заводить
write	wrote	written	писать

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