

Ministry of Education of the Republic of Belarus  
Educational Institution

Belarusian State University of Informatics and Radioelectronics

The Department of Cross-Cultural Professional Communication

Part-Time Course  
Foreign Language (English)

Assignment 2

Student's Name \_\_\_\_\_

Academic Year, Group Number \_\_\_\_\_

Speciality \_\_\_\_\_

English Lecturer \_\_\_\_\_

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## Assignment 2

### *I. State which of the following sentences are Simple (S), Complex (Cx) or Compound (Cd). Points: 10*

1. The term “computer” can be replaced by the more appropriate term “electronic data processing machine”. \_\_\_\_\_
2. Worms are self-copying programs; therefore, they have the capacity to move from one computer to another without human help. \_\_\_\_\_
3. This type of computers has a disc file of extremely high capacity and access speed. \_\_\_\_\_
4. Data processing is based on an input-processing-output cycle which is often referred to as the IPOS cycle. \_\_\_\_\_
5. An information system collects, stores, and processes data; actually, it provides useful, accurate, and timely information. \_\_\_\_\_
6. If an electronic digital device provides access to information, applications, communications and storage over the Internet, this technology is called Cloud computing. \_\_\_\_\_
7. Before the problem of designing a non-mechanical printer was resolved, it had been studied in the central research laboratory. \_\_\_\_\_
8. Deterrents, preventive countermeasures, corrective procedures and detection activities protect information systems from threats. \_\_\_\_\_
9. Although no computer system can be 100 % secure, system administrators can undertake some steps to secure computer systems. \_\_\_\_\_
10. He had many options to fix the bugs; nevertheless, he chose to reinstall this computer program. \_\_\_\_\_

### *II. Complete the sentences choosing the correct option of Gerund or Infinitive from the table below. Points: 10*

1. I am not used to **(to navigate)** the WWW using this search engine.
2. **(To transmit)** confidential information across the Internet can be risky.
3. In object-oriented programming data structures are **(to integrate)** into units called classes.
4. DSL technology allows digital signals **(to carry)** and the full bandwidth of cabling to be utilized.
5. The engineer suggested **(to install)** antivirus software to protect our information system.
6. This undergraduate hopes **(to employ)** by this highly competitive company.
7. **(To demonstrate)** how the new programming language works we should evaluate its performance.

8. Artificial Intelligence is a branch of computer science concerned with **(to make)** computers' behavior like humans.
9. Justification of a project often involves **(to identify)** problems within an organisation information system.
10. For the data **(to convert)** from an existing computer system into a new system a conversion software should be used.

1	a) navigate	b) navigating	c) to be navigated
2	a) transmitting	b) transmit	c) being transmitted
3	a) integrate	b) being integrated	c) to be integrated
4	a) to be carried	b) carrying	c) to carry
5	a) installing	b) install	c) being installed
6	a) employing	b) to employ	c) to be employed
7	a) being demonstrated	b) to demonstrate	c) demonstrating
8	a) to make	b) to be made	c) making
9	a) identify	b) identifying	c) to be identified
10	a) to be converted	b) to convert	c) converting

### ***III. Open the brackets using the correct Participle form. Points: 8***

1. **(Find)** its way into your system, the worm made multiple copies of itself and damaged the files.
2. What is the technology **(need)** to set up a home network?
3. **(Work)** with the CAD system, the designer creates the lines and surfaces that form the object and stores this model in the computer database.
4. The user went to the criminals' server **(click)** a fake link in the e-mail.
5. **(Create)** a program software developers try to define its purpose.
6. **(To be improved)** the program was published as an upgraded version.
7. What is the equipment **(to be set up)** in the lab right now designed for?
8. Some pages **(adopt)** chatbot software make their sites more interactive and friendly.

### ***IV. Match the terms with their definitions. Points: 6***

1. Internet of Things	a) It is a device that controls the flow of data within a network and acts as a gateway.
2. HTML	b) With this kind of topology, data travels through several devices and over multiple channels simultaneously.
3. Router	c) It determines the text, images and sounds that become the part of a Web page, and specifies exactly how those elements are displayed.
4. Mesh	d) It is built into applications that transmit data from one digital device to another on the Internet. It is responsible for establishing a connection, transferring packets, and closing the connection when the transmission is complete.

5. Bandwidth	e) It is a system of interrelated computing devices, machines, objects, animals or people provided with unique identifiers and ability to transfer data over a network without human intervention.
6. TCP	f) It is the transmission capacity of a communications channel.

**V. Fill in the gaps using the words given in the box. Points: 7**

networks; expert; information; management; support; data; processing

1) \_\_\_\_\_ systems play a key role in helping organisations achieve goals. Transaction 2) \_\_\_\_\_ systems provide an organisation with a way to collect, display, modify, or cancel transactions. 3) \_\_\_\_\_ information systems are typically built on the data collected by a TPS to produce reports that managers use to make the business decisions needed to solve routine, structured problems. A decision 4) \_\_\_\_\_ system helps workers and managers make non-routine decisions by constructing decision models that include data collected from internal and external sources. A(n) 5) \_\_\_\_\_ system is designed to analyse data and produce a recommendation or decision based on a set of facts and rules called a(n) 6) \_\_\_\_\_ base. If the rules for an expert system are not known, neural 7) \_\_\_\_\_ might be used to enable a computer to «learn» how to make a decision.

**VI. Replace the words in bold with their synonyms from the box. Points: 6**

*secured / malicious / vulnerable / unauthorised / critical / built-in*

1. A hacker is a skilled programmer who manipulates computers with **harmful** intent.
2. When someone gains **un sanctioned** access to your personal data illegally it is called identity theft.
3. Trojans can be **embedded** in e-mail attachments, software downloads and even files.
4. Networks with wired and wireless connections are **susceptible** to a variety of threats, including viruses, theft and equipment failure.
5. If your network is not **protected**, hackers can easily connect to it, monitor transmitted data, access connected devices and spread viruses.
6. Disaster recovery plans are also **essential** to data security.

**VII. Replace the words in bold with their antonyms from the box. Points: 6**

*cause / eradicate / recover / detect / improve / reduce*

1. A recovery plan is a step-by-step plan that describes the methods used to secure data against disasters and sets guidelines for how an organization will **destroy** lost data if and when a disaster occurs.

2. Your chances of recovering a stolen computer **worsen** if you have taken some steps in advance, such as recording the computer's serial, number, affixing a tracking label, or installing tracking software.
3. Antivirus software is a type of utility software that helps to **create** viruses, Trojan horses, worms and bots.
4. The goal of White Hat Hackers is helping businesses to **hide** gaps in networks' security.
5. Although bugs typically just **prevent** annoying computer glitches, their impact can be much more serious.
6. To help **increase** risks, the hardware and software for most corporate information systems are housed in data centers.

***VIII. Choose the correct options to complete the sentences. Points: 7***

1. \_\_\_\_\_ is an OOP property that enables different objects to deal with the same instruction in different ways.
  - a) encapsulation
  - b) polymorphism
  - c) inheritance
2. A typical visual development \_\_\_\_\_ is based on a form design grid that a programmer manipulates to design the user interface for a program.
  - a) medium
  - b) environment
  - c) tool
3. The set of superclasses and subclasses that are related to each other is referred to as \_\_\_\_\_.
  - a) a class hierarchy
  - b) a set of independent classes
  - c) a set of classes with a common parent
4. A \_\_\_\_\_ error occurs when an instruction does not follow the grammar rules of the programming language.
  - a) logic
  - b) runtime
  - c) syntax
5. \_\_\_\_\_ programming focuses on a step-by-step algorithm that instructs the computer how to arrive at a solution.
  - a) declarative
  - b) procedural
  - c) event-driven
6. The OO paradigm defines a (an) \_\_\_\_\_ as a unit of data that represents an abstract or a real-world entity.
  - a) object
  - b) class
  - c) attribute

7. In the context of OO paradigm, a class attribute \_\_\_\_\_.
- defines the behavior of an object
  - is used to determine if an object exists
  - defines the characteristics of a set of objects

***IX. Put the fragments of the following sentences into the correct order. Points: 10***

- one of the most popularly / Interviews are / used devices for employee selection.
- of an employer which is conducted / consisting of a conversation between a job applicant and a representative / A job interview is an interview/ to assess whether the applicant should be hired.
- Potential job interview opportunities / and career fairs/ also include networking events.
- popular with employers / like LinkedIn have become / Professional networking sites.
- Before you start your job search / you have a clean digital footprint / make sure.
- should include important information for employers / that goes with your CV / When you apply for a job, your cover letter and application form.
- more than searching for / open positions and sending your resume to employers / Job hunting involves.
- continue to perform your current job / and looking for a better or different career, / If you are currently employed.
- or people might recommend / You might discover unlisted job openings / you for future opportunities.
- If you are just entering the workforce / to get a job /or starting a new career, / you might need more training or experience.

***X. Translate the abstract “Information Systems” into Belarusian/Russian in a written form. Use a dictionary, if needed. Points: 30***

### **Information Systems**

Information systems are combinations of hardware, software, and telecommunications networks built to collect, store, and process data. Business firms and other organizations rely on information systems to carry out and manage their operations, interact with their customers and suppliers, and compete in the marketplace. An information system progresses through several phases as it is developed, used, and finally retired. These phases are encompassed into a System Development Life Cycle, usually referred to as the SDLC.

1. Planning. Assemble the project team, justify the project, choose the development methodology, develop a project schedule, produce a project development plan.

2. Analysis. Activities for analysis phase are: study the current system, determine the system requirements (for a new or revised information system), and write requirements report. The project team determines requirements by interviewing

users and studying successful information systems that solve similar problems. Another way to determine requirements is to construct a prototype.

3. Design. The project team must figure out how the new system will fulfill the requirements specified in the System Requirements Report. The project team chooses a solution, selects hardware and software, and designs detailed application specifications.

4. Implementation. During the Implementation phase of the SDLC, the project team supervises the tasks necessary to construct the new information system. The tasks that take place during the implementation phase can include: to purchase and install hardware and/or software, create applications, test applications, finalise documentation, train users, convert data to a new system.

5. Maintenance. The Maintenance phase is the last and the longest SDLC phase and it lasts until the system is retired. It involves day-to-day operations of the system, making modifications to improve performance, and correcting problems. Three key concepts ensure good quality of maintenance service: reliability, availability, and serviceability.