INFORMATION TECHNOLOGIES

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Module №1 „BASICS OF INFORMATION TECHNOLOGIES CONSTRUCTION"
Lecture 1.1 Introduction into the subject IT. The definition of IT. Development stages of IT. Classification of IT.

Definition of information technology (IT)

Technology in the translation from Greek (*techne*) means art, skill, ability, and this is nothing like processes.

Process should be understood as a set of activities aimed to achieve the goal.

Technology of material production to understand the range of tools and methods of processing, production, changes in the state, properties, forms of material or material.

IT is a set of tools and methods for collecting, processing and transmission of data (primary data) for information about the quality of the new state of the object, process or phenomenon (information product).

The purpose of IT is the production of information for its analysis by man and making his decisions based on the implementation of any action.
Practical application of methods and data processing can be different, so it is expedient to provide:

Global information technology	• includes methods and tools for model formalizing and enable the use of information resources of society.
Basic information technology	• is designed for a specific area of application (for example production, research, training, etc.).
Specific information technology	• implement data processing in the solution of functional problems of users (for example, the problem of accounting, planning, analysis).

Tools of information technology - one or several related software products for a particular type of computer, the technology of which allows the user to achieve its goal.

Technical means of information production are *hardware*, *software* and *software process*.

Separately from these funds software products and call them tools, but for clarity it can be more specific by naming *software tools in information technology*.

INFORMATION TECHNOLOGY AND INFORMATION SYSTEM

Information technology is closely linked with information systems that are its basic environment.

Information technology - a set of clearly defined purposeful actions of staff for processing the information on your computer.

Information System - man-computer system for decision support and information products, using computer information technologies.

technology with the "friendly" interface of the user, using personal computers and telecommunications.

The adjective "*computer*" emphasizes that the main technical means of its realization is the computer.

Three pillars of the new (computer) information technology:
- Interactive mode with a computer;
- Integration with other software products;
- Flexibility of changes to both data and statements of problems.

TYPES OF INFORMATION TECHNOLOGY

Currently, the classification of IT to have the following characteristics:

- implementation of the method in automated information systems (AIS)
- the extent to control problems
- classes implemented technological operations
- type of user interface
- variants of a computer network,
- serviced domain, etc.

Classification of information technologies

By way of implementation of IT can be divided into **traditional** and **modern IT**.

For the coverage of information technology management tasks distinguished:
electronic data processing, automation of management functions, decision support, electronic office, expert support

By serviced domain IT are classified variously. .

Classification of information technologies

According to the class of realizable technological operations IT are divided:
to work with text and spreadsheet, graphics, database management systems, hypertext and multimedia systems.

By type of user interface IT are divided:
**batch,
interactive,
network IT.**

Recommended literature

Basic recommended literature

- 1. Танненбаум Г. Архитектура компьютера. – СПб.: изд. «Питер», 2002. – 704с.
- 2. Информационные технологии: 2-е изд./О.Л. Голицына [и др.]. – М: ФОРУМ: ИНФРА-М, 2008.
- 3. Информационные системы/О.Л. Голицына. – М: ФОРУМ: ИНФРА-М, 2007.
- 4. Информационные системы: учебник для вузов. 2-е издание/Ю.И. Избачков; В.Н. Петров. – СПб: Питер, 2005.

Recommended literature
Additional recommended literature

- 5. Пятибратов А.П. и др. Вычислительные системы, сети и телекоммуникации: Учебник/Под редакцией А.П. Пятибратова. – М.: Финансы и статистика, 2001. – 512с.
- 6. Информационные технологии: учебник/Б.Я. Советов. – М: Высшая школа, 2005.
- 7. Информационные системы: учебник для вузов/В.Н. Петров. – СПб.: Питер, 2003.

Thank you for your attention!!!