

Тема занятия: «Понятие обработки данных»

Цель занятия: выучить новый лексический материал по теме «Понятие обработки данных»; совершенствовать навыки чтения и перевода текста профессионального направления; систематизировать знания, выполнив задания по теме занятия.

Уважаемые студенты! Ознакомьтесь с материалами практического занятия на тему «Понятие обработки данных». Конспект практического занятия выполняйте **в рабочей тетради письменно, обязательно указывая дату занятия, тему занятия, номер упражнения.** Ответы предоставить преподавателю на проверку **до 14. 04. 2023 г.** в электронном виде (**фотоотчёт**) на e-mail mikagol2605@mail.ru. Телефон преподавателя для консультации и возникающих вопросов: 072-14-15-816.

С уважением, Голодюк Марина Викторовна.

1. Запишите новую лексику в словарь, выучите новую лексику.
2. Прочитайте и устно переведите текст «Data processing and data processing systems».
3. Дайте письменно ответы на вопросы, используя информацию текста.

Data processing and data processing systems

Vocabulary:

data processing — обработка информации (данных)

to convert — преобразовывать; переводить (в др. единицы)

to accomplish — завершать, заканчивать; осуществлять, выполнять.

to house — помещать, размещать

to store — хранить, запоминать, заносить (размещать) в памяти

storage — запоминающее устройство, память; хранение

resource — ресурс; средство; возможность

facility — устройство; средство

facilities — приспособления; возможности

equipment — оборудование; аппаратура; приборы; устройства

available — доступный; имеющийся (в наличии); возможный

display — дисплей; устройство (визуального) отображения; показ

manner — способ, образ (действий)

sequence — последовательность, порядок (следования)

successively — последовательно
data storage hierarchy — иерархия (последовательность) запоминания информации (данных)
to enter — входить; вводить (данные); заносить, записывать
comprehensive groupings — полные, обширные, универсальные образования
meaningful — имеющий смысл; значащий (о данных)
item — элемент; составная часть
record — запись, регистрация; записывать, регистрировать
file — файл; заносить (хранить) в файл
set — набор; множество; совокупность; серия; группа; система
data base — база данных
related — смежный; взаимосвязанный; относящийся (к ч.-л.)

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

We use the term **data processing system** to include the resources that are used to accomplish the processing of data. There are four types of resources: people, materials, facilities, and equipment. People provide input to computers, operate them, and use their output. Materials, such as boxes of paper and printer ribbons, are consumed in great quantity. Facilities are required to house the computer equipment, people and materials.

The need for converting facts into useful information is not a phenomenon of modern life. Throughout history, and even prehistory, people have found it necessary to sort data into forms that were easier to understand. For example, the ancient Egyptians recorded the ebb and flow of the Nile River and used this information to predict yearly crop yields. Today computers convert data about land and water into recommendations to farmers on crop planting. Mechanical aids to computation were developed and improved upon in Europe, Asia, and America throughout the seventeenth, eighteenth, and nineteenth centuries. Modern computers are marvels of an electronics technology that continues to produce smaller, cheaper, and more powerful components.

Basic data processing operations

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

Inputting is the process of entering data, which are collected facts, into a data processing system. *Storing* is saving data or information so that they are available for initial or for additional processing. *Processing* represents performing arithmetic or logical operations on data in order to convert them into useful information. *Outputting* is the process of producing useful information, such as a printed report or visual display. *Controlling* is directing the manner and sequence in which all of the above operations are performed.

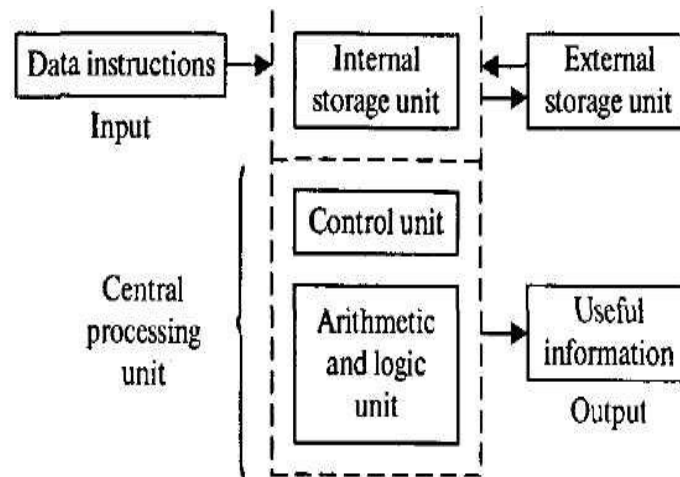


Fig. 3. Computer data processing system

Data storage hierarchy

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

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

Дайте письменно ответы на вопросы, используя информацию текста.

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