



Computer software

Operating systems

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The objective of the lesson:

To explain what the software is
and why it exists;
to learn to distinguish the
system, application software.

The notion of software

The *program* - is a specific set of ordered operations for a computer to perform.

The collection of all programs designed to run on a computer, called the *software* computer.

A computer is considered as a system consisting of interrelated parts: hardware (technical devices) and software.



Computer programs

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graph TD; A[Computer programs] --> B[System Software]; A --> C[Application Software]; A --> D[Systems of programming];
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System Software

Application Software

Systems of programming

Systems of programming

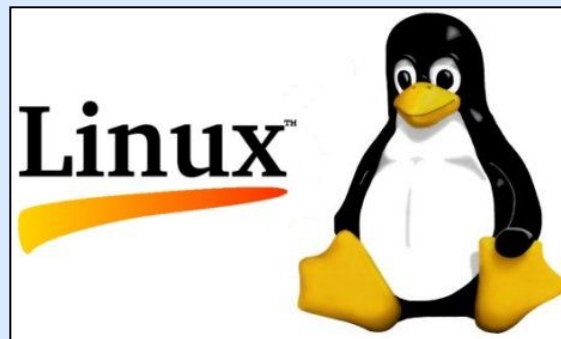
System software includes the operating system and service programs.

Operating System - a set of programs that provide operation of all computer devices and gives the user access to computer resources.

The most common operating system for personal computers:



Windows



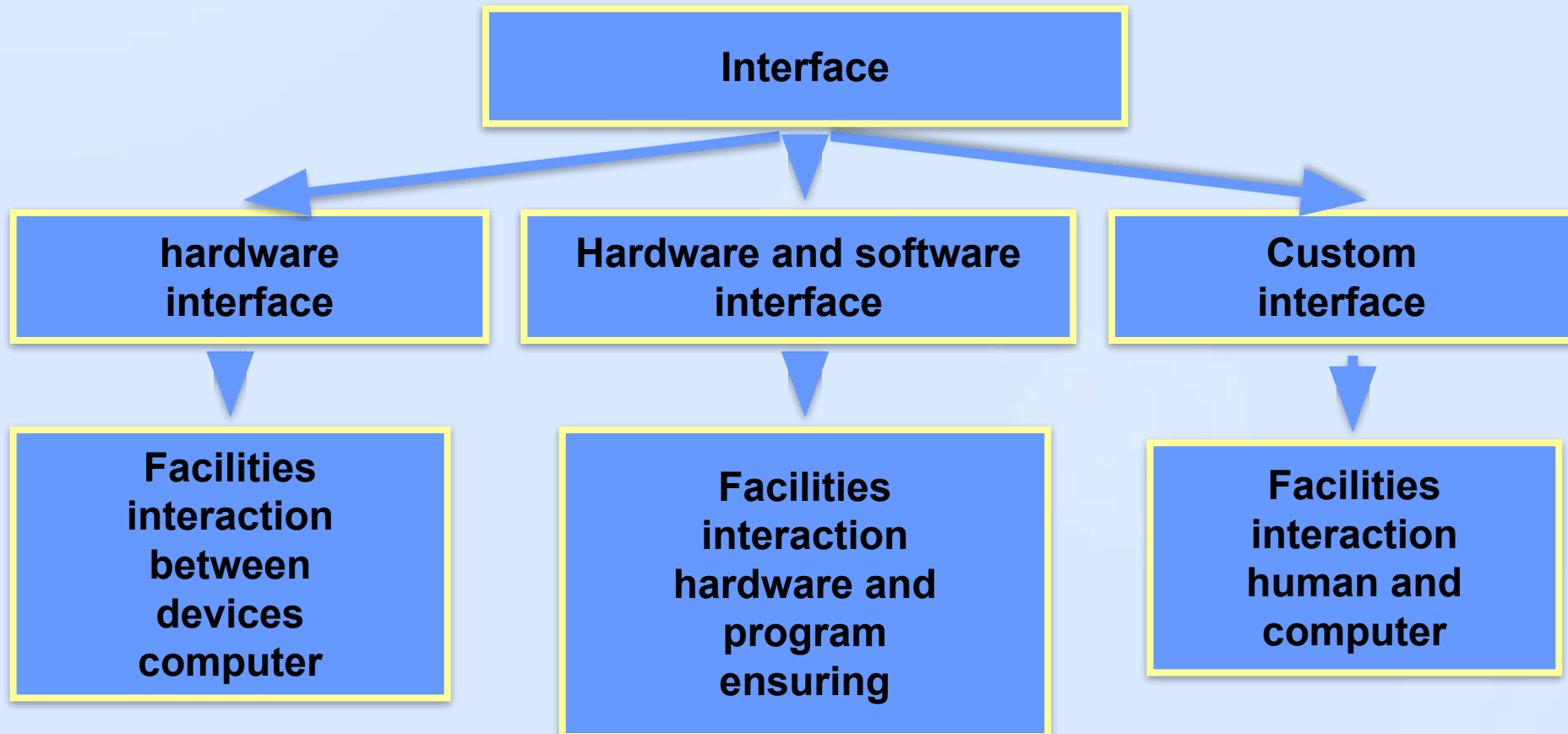
Apple



System Software

The computer is part of the "man - computer" system.

Means to ensure the relationship between the objects of this system is called interface.



Systems of programming

Programming - is the process of creating programs, the development of all types of software

To record the programs used
specific languages -
programming languages (formal languages)

Complex software designed
to develop computer programs
a programming language,
called **programming system**



General purpose applications

Text editors



Graphic editors



Electronic tables



Multimedia players



Presentation Software



Control systems database



Applications for special purposes

Publishing system



Mathematical packages



Accounting programs



Geoinformation system



**Computer-aided system
CAD design**



Programs of computer modeling



**Textbooks, exercise machines,
dictionaries**



Operating system (OS)

is system software that manages computer hardware and software resources and provides common services for computer programs.

Basic functions of the operating system

Device configuration

Controls peripheral devices connected to the computer

File management


Transfers files between main memory and secondary storage, manages file folders, allocates the secondary storage space, and provides file protection and recovery

Memory management

Allocates the use of random access memory (RAM) to requesting processes

Interface platform

Allows the computer to run other applications



**Operating
System**

Other function of Operating System

- best use of the computer resources
- provide a background for user's programs to execute
- display and deal with errors when it happens
- control the selection and operation of the peripherals
- act as a communication link between users
- system protection