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Eugene Poiman¹, Yuliya Bykova²

¹student of group CST-212 NU “Zaporizhzhia Polytechnic”

²senior teacher NU “Zaporizhzhia Polytechnic”

WINDOWS AS THE OPERATING SYSTEM OF OUR LIVES

It is rather difficult to give a precise definition of an operating system. It can be said that it is a software that runs in a kernel mode, but this statement will not always correspond to the true state of affairs. Part of the prob-

lem here is that operating systems implement two very different functions: provide application programmers with a completely understandable abstract set of resources instead of an unordered set of hardware and manage these resources.

Operating system as an extended machine

A program that hides all the realities of the hardware from a programmer and provides the ability to simply, conveniently view the specified files, read or write - this is an operating system. In each case, the abstract, imaginary machine that the user can now deal with, thanks to the operating system, is much simpler and easier to handle with than the actual hardware that underlies this abstract machine.

Operating system as a resource management system

Another view gives an idea of the OS as some kind of mechanism that controls all parts of a complex system. The second approach is the function of the OS to allocate processors, memory, devices and data among processes that compete these resources. The OS must manage all the resources of the computer in such a way to ensure maximum efficiency of its functioning.

Operationg system classification

Operating systems can differ in the implementation of internal algorithms for managing the main computer resources (processors, memory, devices), the features of the design methods used, the types of hardware platforms, areas of use, and many other properties.

Windows

Microsoft's Windows operating system, in all its forms, is by far the most widely used PC operating system today, with over 150 million IBM PC-compatible computers in the world, and 100 million of them have Windows installed. Knowledge of the Windows system is a necessary brick in the wall of PC knowledge.

Advantages and disadvantages of Windows

Advantages:

Convenience and device support. The main difference between programs for DOS and for Windows is that a DOS program can work with computer hardware directly bypassing DOS, while a Windows program must access external devices only through Windows.

Unified user interface. Windows provides programmers with all the tools they need to create a user interface, so programmers use them instead of inventing similar tools of their own.

Opportunities for developers. All of the Windows features listed are also useful for software developers. For example, Windows' standard user interface tools make it unnecessary to invent your own tools.

Disadvantages:

The main disadvantage of Windows for users is that the described advantages of Windows are achieved at the expense of a significant increase in the load on the computer hardware. The GUI, support for scalable fonts, support for multitasking, etc. require a lot of CPU power, a lot of RAM and disk space. There are some downsides to Windows programming as well.

The fact is that Windows forces programmers to use the Windows Programming Interface (API) - more than 600 functions. In addition, the programmer must be fluent in very complex conceptual concepts of object-oriented programming, operate with objects, messages, shared resources and so on.

Windows is the most common operating system, and for most users, it is the most suitable due to its simplicity, good interface, acceptable performance, and a huge number of applications for it.