

SYSTEM AND DATA SECURITY





✓ OPERATING SYSTEM - BASIC CONCEPTS

✓ OPERATING SYSTEM TASKS

✓ PARTITIONS (LOCAL DRIVES)

✓ FILE SYSTEMS

✓ OPERATING SYSTEM SECURITY

DEFINITION

It is a program that acts as an intermediary between the computer user and the computer hardware.

The purpose of an operating system is to create an environment in which the user can execute programs in an efficient and convenient manner [2].



Abraham Silberschatz

HIS TASKS INCLUDE:

- ✓ defining the user interface
- ✓ providing a file system
- ✓ providing an environment that allows executing user programs
- ✓ controlling input-output devices
- ✓ handling errors
- ✓ managing computer system resources (hardware, software) [2].



PARTITION

Part (section) of disk space. This is a certain area of the hard disk visible to the user in the operating system as a separate logical whole, which allows for storing files and directories [4].

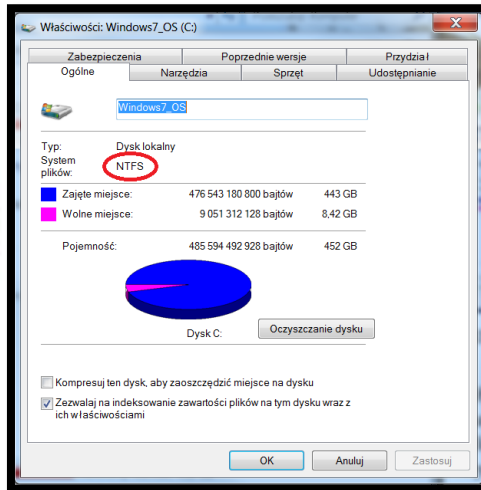
After creating a partition, it must be formatted and assigned a drive letter, and then data can be stored on it [3].

A, B – floppy drive

C – system partition

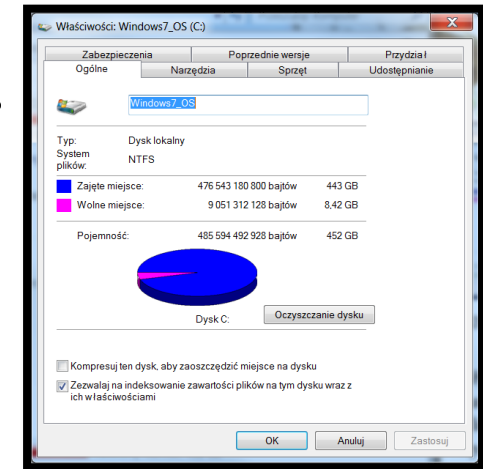
D, E, ... – data partition, DVD/CD drive, removable disks, etc.

FILE SYSTEM




This is a conventional record of disk data that is specific to a given operating system. It allows for quick recording of information, editing, searching, and deleting [1].

Modern operating systems allow the use of the following types of file systems: FAT, ISO 9660, NTFS, ext2, ZFS, SMB, NFS, JFS, XFS, UFS [3].



To check your file system, open COMPUTER, then right-click on the selected partition and select PROPERTIES.

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- [1] Jędrzycki J., *Bezpieczeństwo systemu operacyjnego i ochrona danych*, [w:] M. Furmanek (red.), *Technologie informacyjne w warsztacie pracy nauczyciela*, Oficyna Wydaw. Uniwersytetu Zielonogórskiego, Zielona Góra 2008.
- [2] Silberschatz A., Peter B. Galvin, Greg Gagn, *Podstawy Systemów Operacyjnych*, Wyd. Naukowo-Techniczne, Warszawa 2006.
- [3] <https://odzyskiwanie-danych-z-macierzy.warszawa.pl/systemy-plikow/>
- [4] <http://www.pcformat.pl/slownik>
- [5] <http://www.beniamin.pl>