Operation Systems



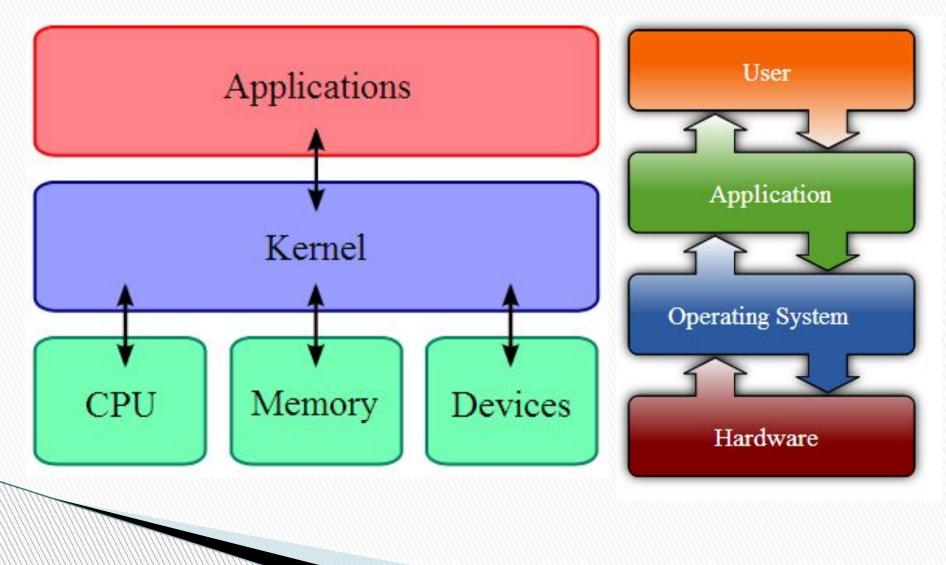
Types of operating systems

- Real-time
- Multi-user
- Multi-tasking
- Distributed
- Embedded





Basic principles of OS

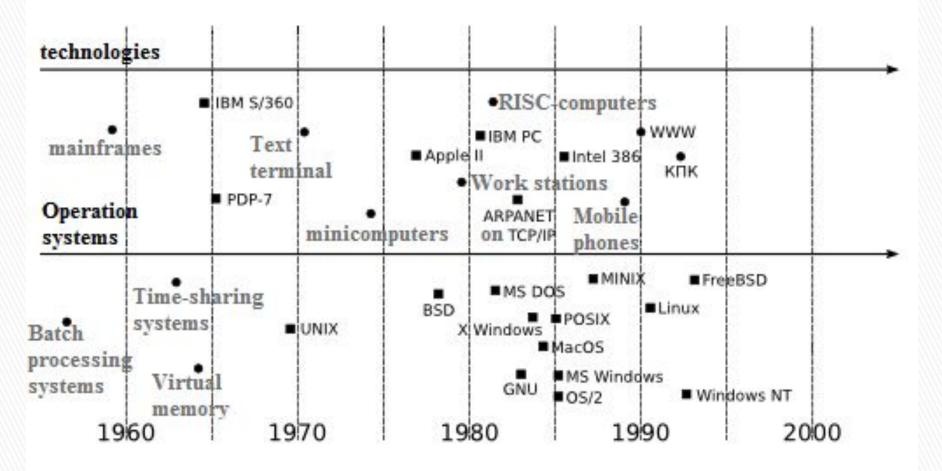


Functionality. Algorithm of working

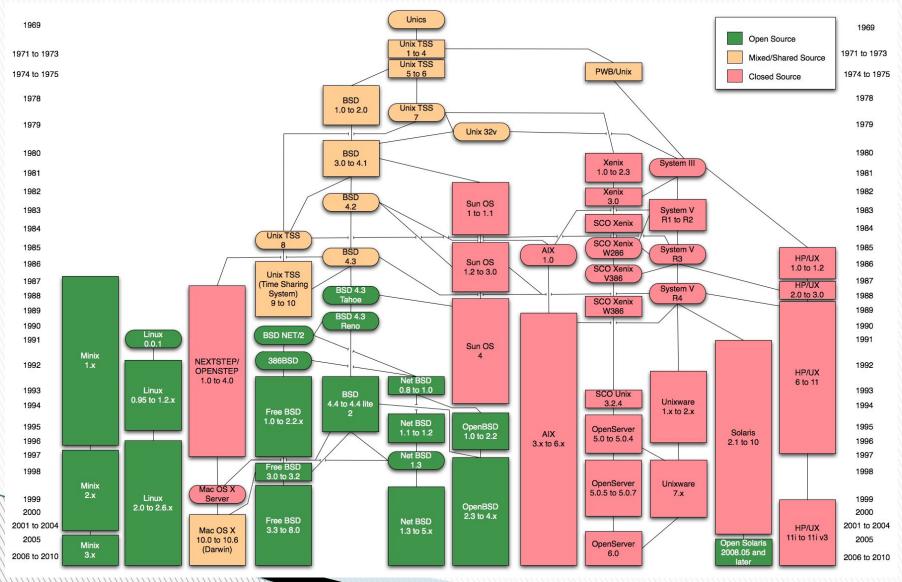
• OS tasks are divided into 6 categories:

- 1) Trolling processor the division of tasks into manageable pieces and distributing them by priority before sending for processing in the CPU.
- 2) Memory management coordinating the flow of data to (from) RAM and requesting space in the virtual memory.
- 3) Device management connection between each peripherals devices.
- 4) Data Management send data to hard disks, flash drives etc. to store for a long time.
- 5) The application interface providing standard communication and data exchange between programs and computers.
- 6) User Interface providing ways for user to communicate and interact with the computer.

The history of operation systems



UNIX and next generations OS



Vulnerability of OS

Windows

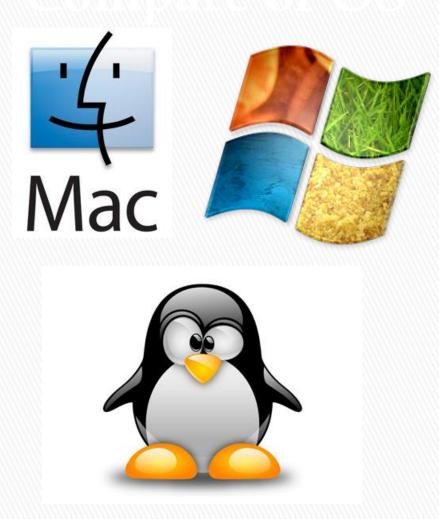
- 1) Remote hacking through NetBIOS
- 2) Passwords in Windows NT, and the likes, use SAM (Security Accounts Manager), which puts all the information in the database of the same name. If you open SAM in the special soft, you could get all passwords.

Unix (Linux, Mac OS)

- 1) Penetration of the service, a pending request (TCP / UDP)
- 2) Using as a base of UNIX, ensure safety of two or more networks.
- 3) The use of methods of remote hacking, implying a hidden user involvement (created with criminal intent a special Web-site and e-mail with an attached "Trojan horse", etc.).

First GUIs

Modern GUIs





- Based on DOS
- Used on all types of computers
- Less safety
- Better for business
- Less responsive to increase of calculations

- Based on UNIX
- Used only on Apple computers
- More safety
- Better for multimedia and graphics

to com

 More responsive to increase of calculations

Windows

Macintosh



- Based on MS DOS
- Command Line don't have permission to operate the OS
- Drivers could be installed from Internet, Disk or manually
- A lot of proprietary and free software

Inux for human beings
Based on UNIX
Command Line let user operate the OS

ubuntu

Linux

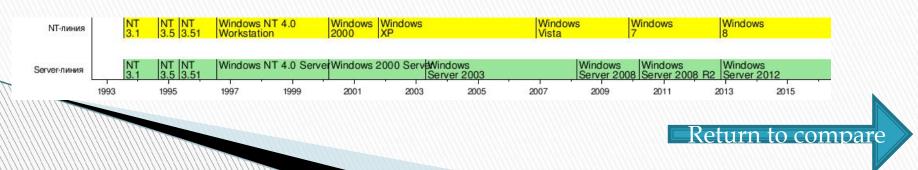
- Drivers often installed automatically
- Lots of free software, but not commercials



Features of different OS

- Windows is also used as server
 line
- Linux is an OS that depends on what module is plugged-in
- Mac OS has a Time Machine backup, which let you to recover previous versions of individual files or even the entire system.



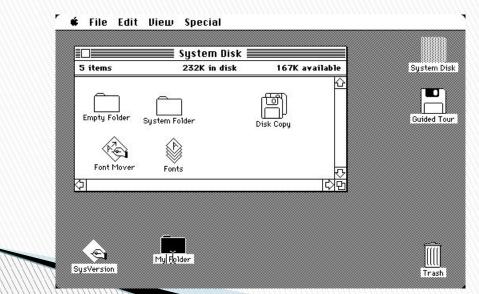


First GUIs

Drives	1	Logical dri	ive C: =				
HDD 80h └→ Logical C:	CIN						
└→ Logical D:	Name	Size	Attrib		Тіме		
⊨→ Extended	MICROS~1	< <folder>></folder>		04.02.2002	16:16		
L→ Logical E:	MULTIM~1	< <folder>></folder>		14.10.2001	22:29		
└→ Logical F:	PLATF0~1	< <folder>></folder>		15.03.2002	16:15		
└→ Unallocated	PROGRA~1	< <folder>></folder>		14.10.2001	08:11		
HDD 81h	RECYCLED	< <folder>></folder>	SH.	26.11.2001	17:55		
→ Unallocated	RECYCLER	< <folder>></folder>		07.02.2002	22:55		
HDD 82h	Темр	< <folder>></folder>		15.03.2002	16:13		
└→ Extended	WINNT	< <folder>></folder>		14.10.2001	08:06		
→ Unallocated	WinHex	< <folder>></folder>		11.04.2002	13:57		
└→ Logical G:	AUTOEXEC BAT	0	A	14.10.2001	08:14		
	CONFIG SYS	0	A	14.10.2001	08:14		
	IO SYS	0	A.SHR	14.10.2001	08:14		
	MFT DAT	6555648	AC	10.03.2002	17:29		
	MSDOS SYS	0	A.SHR	14.10.2001	08:14		
	NTDETECT COM	26800	A.SHR	14.10.2001	22:20		
	boot ini	288	AS.R	14.10.2001	08:57		
	ntldr	156496	A.SHR	14.10.2001	22:20		
	pagefile sys	134217728	A	04.02.2002	16:21		
F1-Help		ames ENTER-					
Active@ NTFS Reader for DOS v 1.0 2002 (C) Active Data Recovery Softwar							
<free> http://www.ntfs.cc</free>							

← Ms Dos 1.0

← Mac OS 1.0



CTOCK	MS-DOS Executive		REHVME.VUC
.	File View Special	File Edit	Search
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	CLOCK Memory Free:	303K	Spooler=no will c
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		should create	andard applications a PIF file for the k
		→ Page 1	← →



← Windows 1.0

One of the ancient Linux

Return to compare





Drives

Disk Free

free: 1250 MB

Write





Calendar



Help

22:21:46





08.10. 🔽



Files

Internet



Email



Xfe

XFE

Burn

PET Install

Console

4

MuppyBackup

9

Autostart

Windows



Calc



Connect





Arbre du Ténéré The most isolated tree on Earth

Puppy Linux 3.01



VLADSTUDIO



TKBAS IC

100

WE 08-001

MacOS X Lion

The descendants of the old OS

- IOS is an OS that is used in
- I-Phones, I-Pads etc. This OS based on MacOS.
- Android is the most popular OS for smartphones and tablet PCs.
 This OS based on Linux.
- Kolibri OS is the first OS that is written on Assembler.



THANKS FOR PAYING ATTENTION