

# Operation Systems

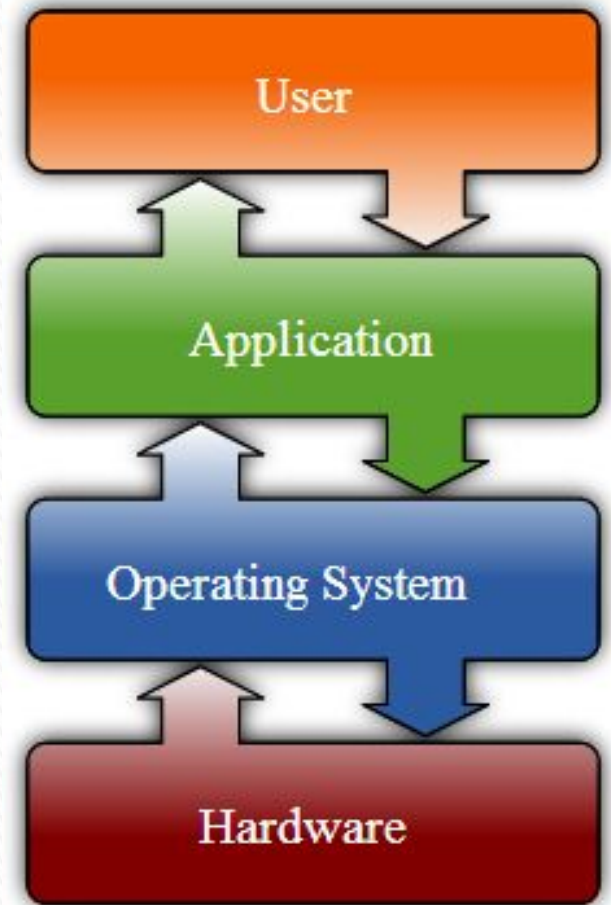
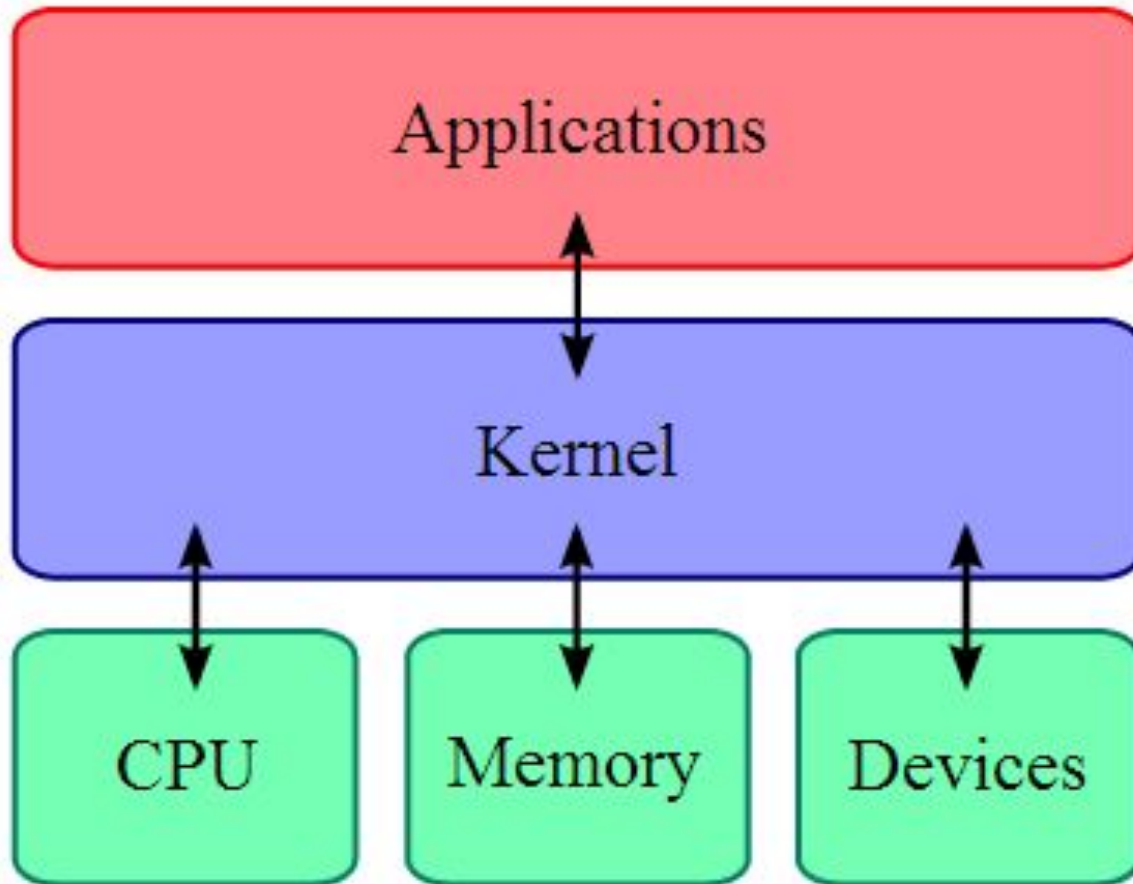


# Types of operating systems

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



# Basic principles of OS



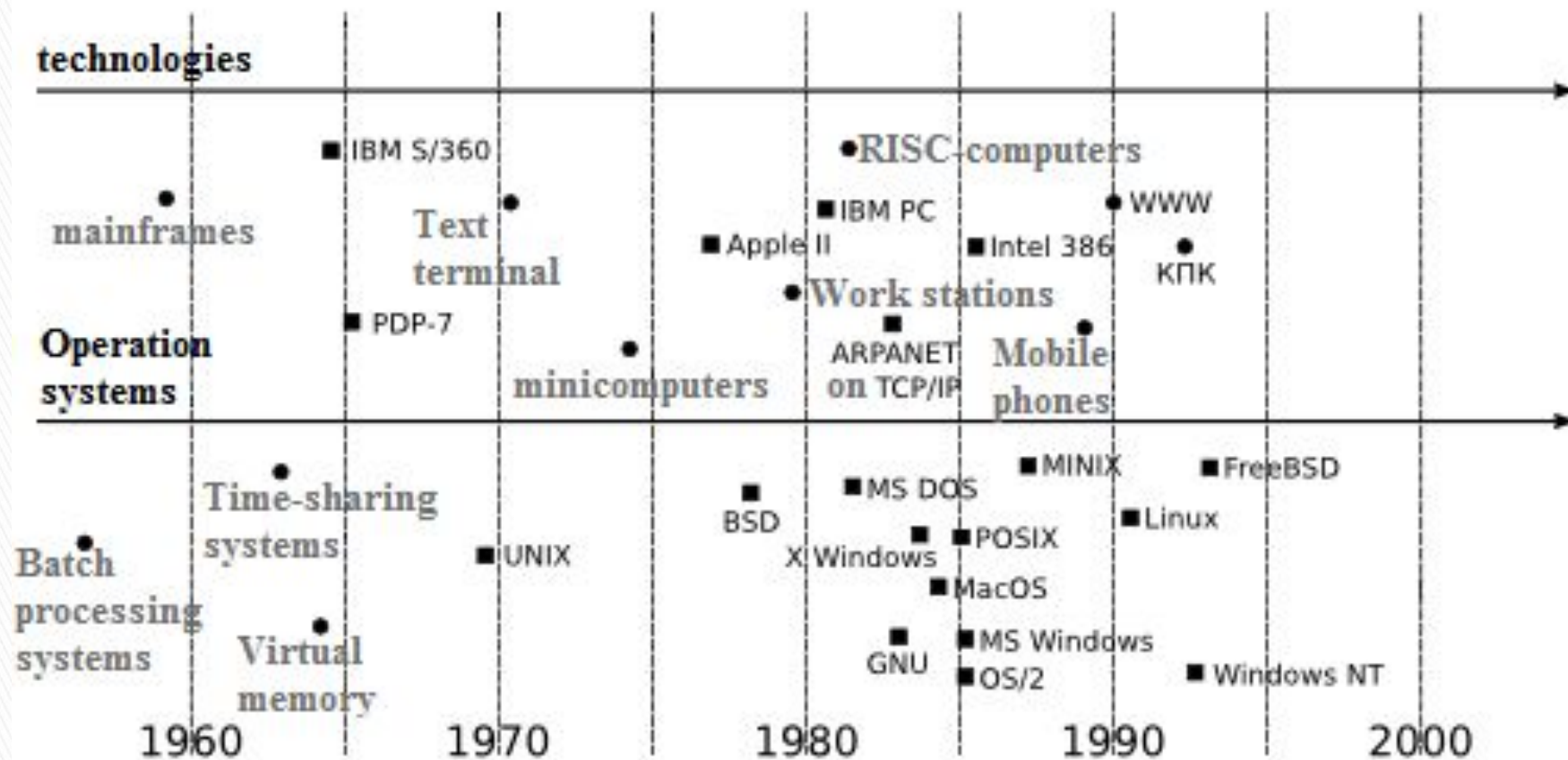


# Functionality. Algorithm of working

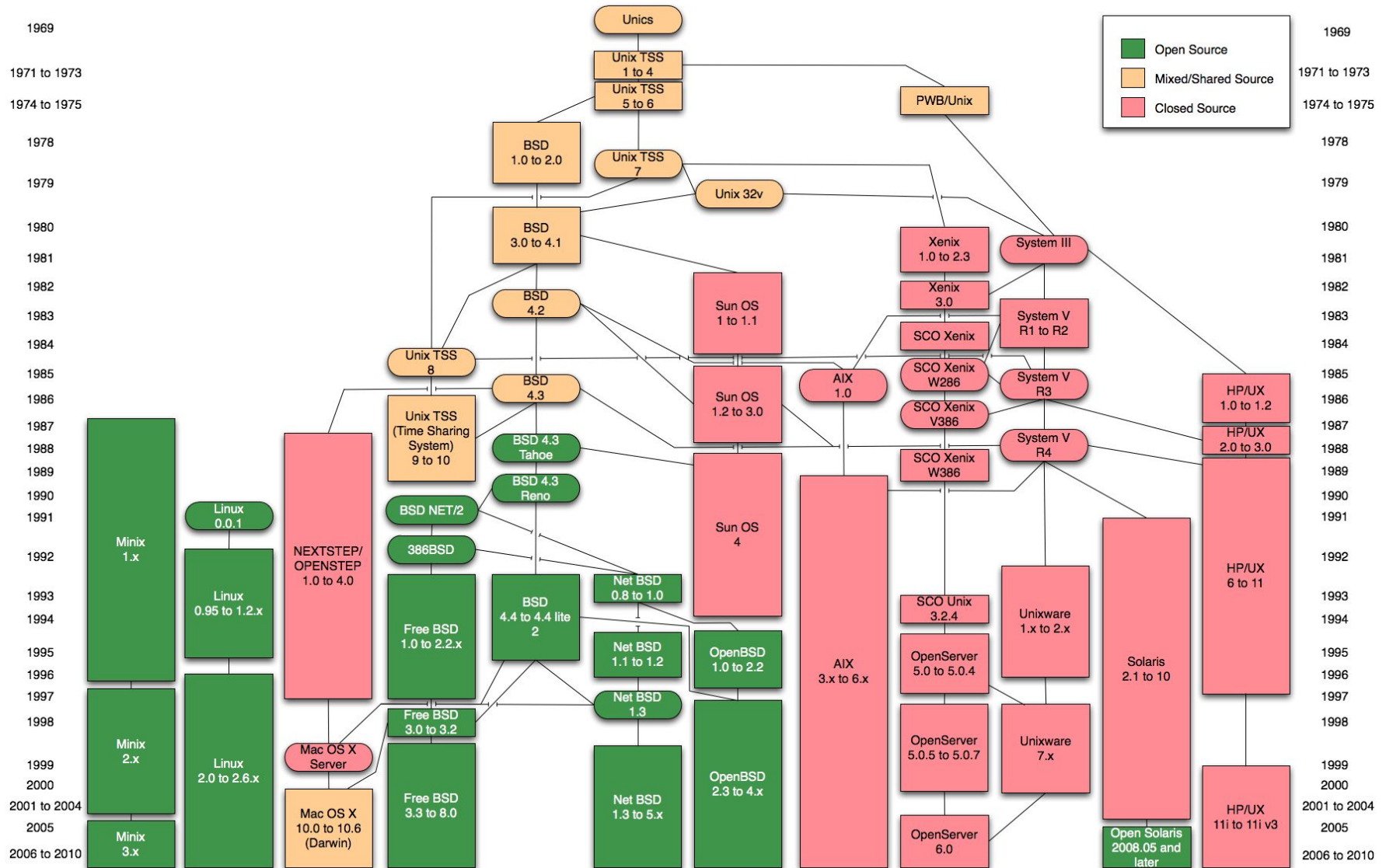
□ OS tasks are divided into 6 categories:

- 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.).

# Examples of OS

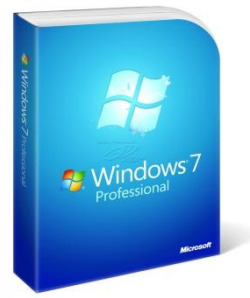
First GUIs

Modern GUIs

# Compare of OS







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

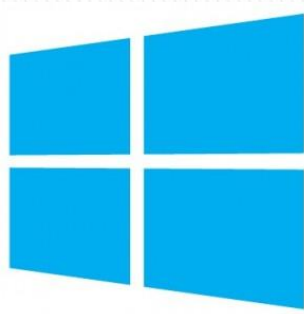
Windows



- ❑ Based on UNIX
- ❑ Used only on Apple computers
- ❑ More safety
- ❑ Better for multimedia and graphics
- ❑ More responsive to increase of calculations

Macintosh

[Return to compare](#)



- ❑ 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

- ❑ Based on UNIX
- ❑ Command Line let user operate the OS
- ❑ Drivers often installed automatically
- ❑ Lots of free software, but not commercials

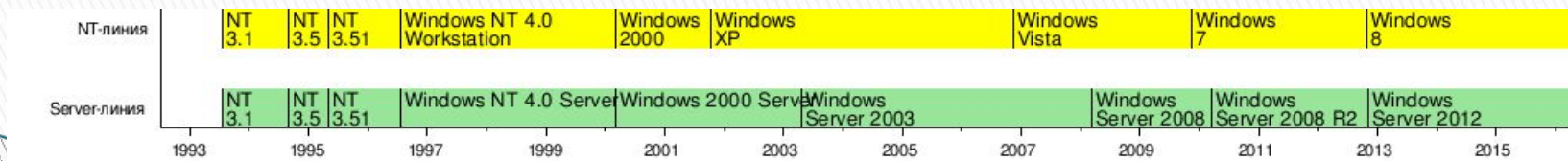
Windows

Linux

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# Features of different OS

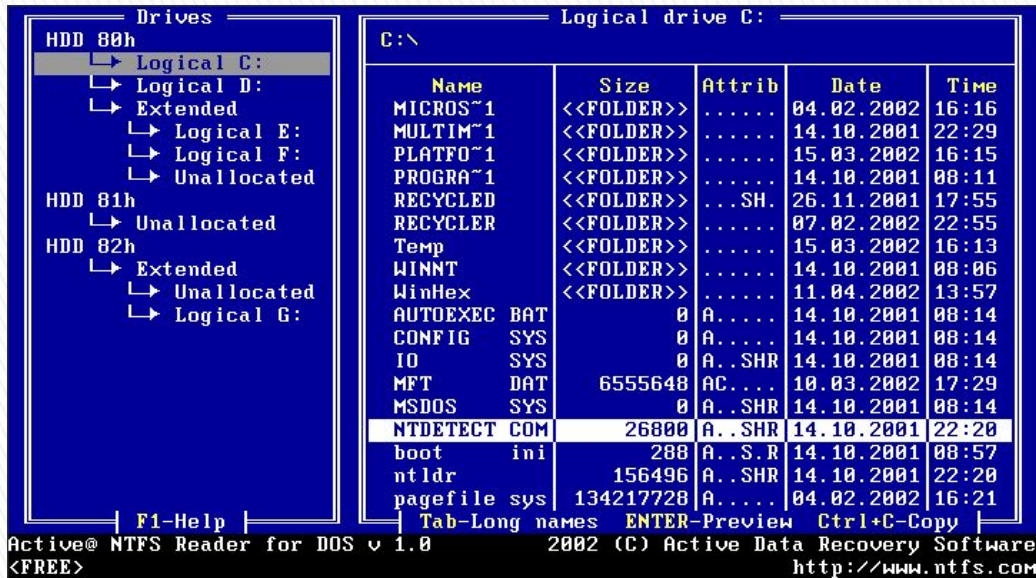
- Windows is also used as server – line
- Linux is an OS that depends on what module is plugged-in
- Mac OS has a Time Machine backup, which let you to recover previous versions of individual files or even the entire system.



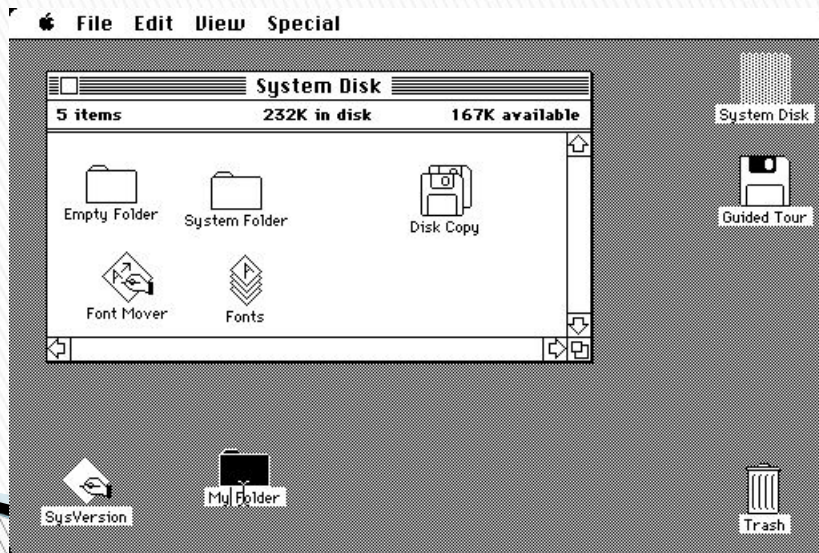
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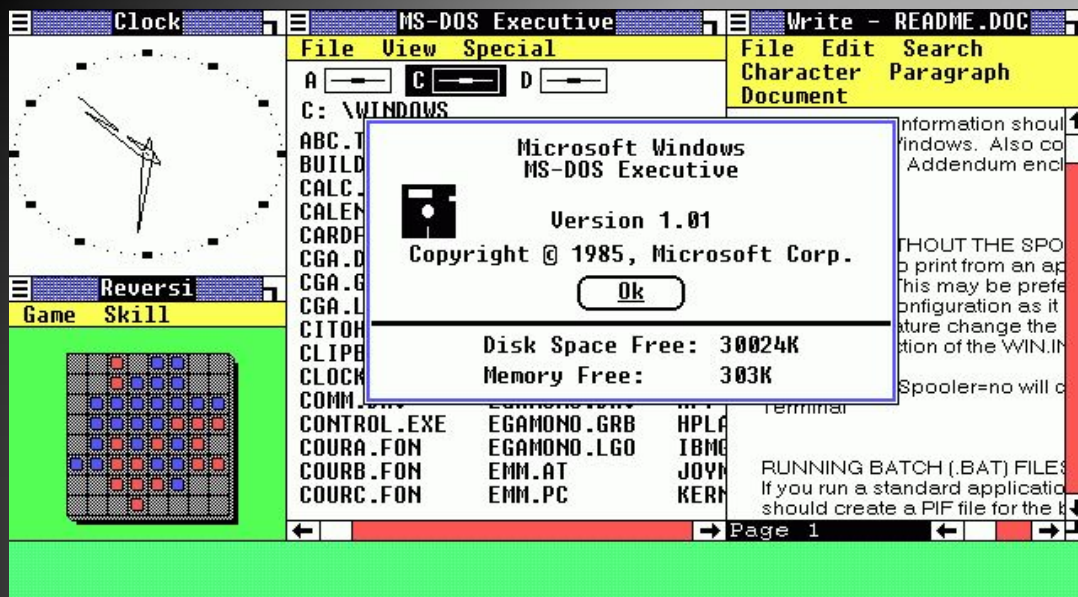
# First GUIs



← Ms Dos 1.0



← Mac OS 1.0



← Windows 1.0



← One of the ancient Linux

Return to compare

# Start

# Windows 8

Daniel  
Robinson 

 Mail	 6 Wednesday	 Internet Explorer	 Store	 News
 People	 Photos	 Maps	 SkyDrive	
 Messaging	 Video	 Music	 Rio de Janeiro, Brazil	
 Desktop	 Weather	 Xbox LIVE Games	 Camera	
				 FTSE AIM ALL 684.18 ▲ +0.54 % (+3.70) 06 June 15:40 BST





# Puppy Linux 3.01



VLADSTUDIO

System status panel with various indicators:

- XFS: 000000
- GTKBRAS: 100%
- WMSM: 000000
- CPU: +00:00
- 100% battery
- FAN: - - °C
- Hard drive icon
- Calendar: WE 08-OCT
- CPU, MEM, SWP, IOR, IOL bars

# 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