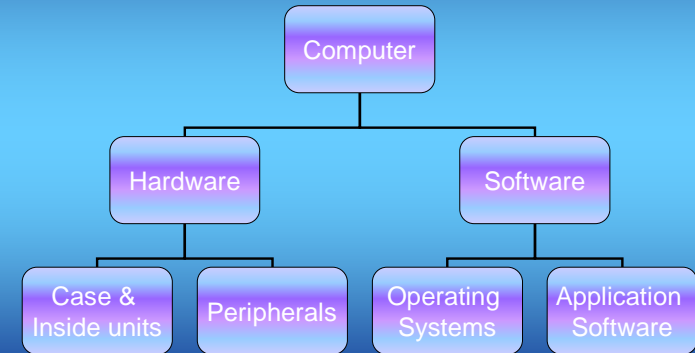


Software

Instructor Özgür ZEYDAN
Bülent Ecevit University
Department of Environmental
Engineering



Software

- **Software:** Instructions for the computer. A series of instructions that performs a particular task is called a "program."
- **Ref:** computer desktop enc.

Programming Language

- An artificial language used to write instructions that can be translated into machine language and then executed by a computer.

Programming Languages

- **Machine language**
- **Low level languages**
 - ❖ Assembly
- **Medium level languages**
 - ❖ C++
 - ❖ Java
- **High level languages**
 - ❖ Basic
 - ❖ Pascal

Some Common Programming Languages

- Pascal
- Basic
- C
- C++
- Java
- JavaScript
- Cobol
- Perl
- Python
- Ada
- Fortran
- Visual Basic
- Visual Basic .NET
- Microsoft Visual C#

Source Code

- Code written by a programmer in a high-level language and readable by people but not computers. Source code must be converted to object code or machine language before a computer can read or execute the program.
- **Ref:** <http://www.thefreedictionary.com/>

Compiler

- A computer program associated with certain programming languages that converts the instructions written in those languages into machine code that can later be executed directly by a computer.
- **Ref:** <http://www.thefreedictionary.com/>

Source Code Examples Hello World Program

➤ Pascal Programming Language:

```
program HelloWorld(output);  
begin  
  WriteLn('Merhaba Dünya');  
end.
```

➤ C Programming Language :

```
#include <stdio.h>  
void main()  
{  
  printf("Merhaba Dünya");  
}
```

Source Code Examples Hello World Program

➤ Java Programming Language:

```
public class HelloWorld  
{  
  public static void main( String[] args )  
  {  
    System.out.println( "Merhaba Dünya" );  
  }  
}
```

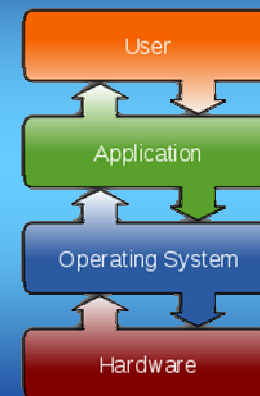
➤ Basic Programming Language:

```
Sub Hello_World()  
print "Merhaba Dünya"  
End Sub
```

Operating System

- An operating system (OS) is a collection of software that manages computer hardware resources and provides common services for computer programs.
- The operating system is a vital component of the system software in a computer system.
- Application programs require an operating system to function.

Operating System



- Operating systems perform basic tasks, such as recognizing input from the keyboard, sending output to the display screen, keeping track of files and directories on the disk, and controlling peripheral devices such as disk drives and printers.

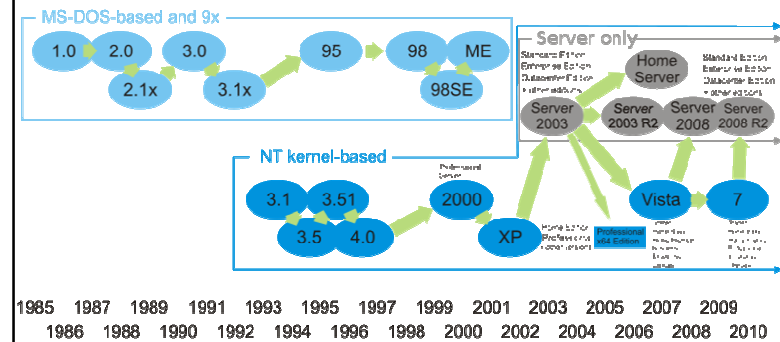
Windows Operating Systems

- Windows 1.0 (November 1985)
- Windows 2.0 (April 1987)
- Windows 3.0 (May 1990)
- Windows 3.1 (April 1992)
- Windows NT 3.1 (August 1993)
- Windows 3.11 (February 1994)
- Windows NT 3.5 (September 1994)
- Windows 95 (August 1995)
- Windows NT 3.51 (June 1995)
- Windows NT 4.0 (August 1996)
- Windows 98 (June 1998)
- Windows 98 SE (May 1999)
- Windows ME (September 2000)
- Windows 2000 (February 2000)
- Windows 2000 Datacenter (August 2000)
- Windows XP (October 2001)
- Windows Server 2003 (March 2003)
- Windows Vista (June 2007)
- Windows 7 (October 2009)
- Windows 8 (26 October 2012)

Windows Operating Systems

Microsoft Windows

family tree



Minimum Requirements of Windows

	95	98	ME	XP	Vista*	7
Proc	486	486DX-66Mhz	150Mhz Pentium	300Mhz	1Ghz	1Ghz
Mem	4MB	16MB	32MB	128MB	1GB	1GB (2 for 64bit)
Video	na	VGA monitor	VGA monitor	SVGA	DX9/128MB	DX9/WDDM 1.0
HD	50MB	195MB	320MB	1.5GB	40GB HDD/15GB free	16GB (20 for 64bit)
Misc	na	FDD	CD-ROM	CD-ROM	Patience	Lollipop

* I took the Vista Premium specs, not Vista Capable

http://thesystemmaster.com/minimum_specs.php

Other Operating Systems

- DOS
- Unix
- Solaris
- Mac OS
- BeOS
- AmigaOS
- Free BSD
- Linux
 - ❖ Mint
 - ❖ Ubuntu
 - ❖ Fedora
 - ❖ Debian
 - ❖ OpenSuse
 - ❖ Mandriva
 - ❖ Redhat
 - ❖ Pardus
 - ❖ Clonzilla
 - ❖ ...

Commodore 64 Basic V2

```
**** COMMODORE 64 BASIC V2 ****
64K RAM SYSTEM 38911 BASIC BYTES FREE
READY.
```

Disc Operating System (DOS)

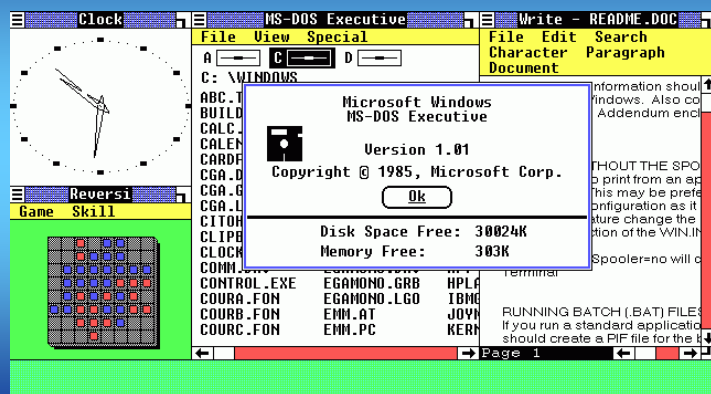
```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Sürüm 5.1.2600]
(C) Telif Hakkı 1985-2001 Microsoft Corp.

C:\Documents and Settings\OZGUR>dir
C sürücüsündeki birimin etiketi yok.
Birim Seri Numarası: 887C-7333

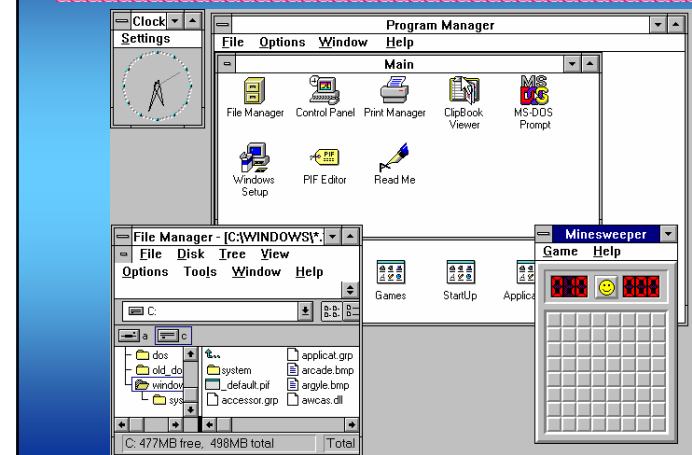
C:\Documents and Settings\OZGUR dizini

02.10.2012 12:00 <DIR> .
02.10.2012 12:00 <DIR> ..
05.04.2012 15:30          13 .bash_history
05.04.2012 15:27          88 .grassrc6
05.04.2012 15:31 <DIR> .qgis
23.01.2012 16:08          732 .recently-used.xbel
06.08.2012 09:57 <DIR> Belgelerin
02.10.2012 15:09 <DIR> Desktop
16.03.2012 12:37          8912896 NTUSER.bak
02.10.2012 13:43       10223616 NTUSER.DAT
15.03.2012 14:53 <DIR> Start Menu
08.02.2012 15:43 <DIR> Sık Kullanılanlar
11.05.2012 14:27 <DIR> Tracing
                5 Dosya          19137345 bayt
                8 Dizin          34226737152 bayt boş
```

Windows 1.0

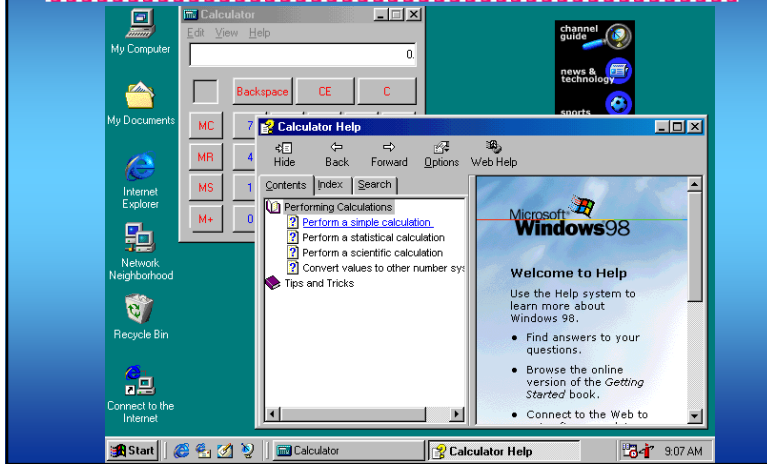


Windows 3.1



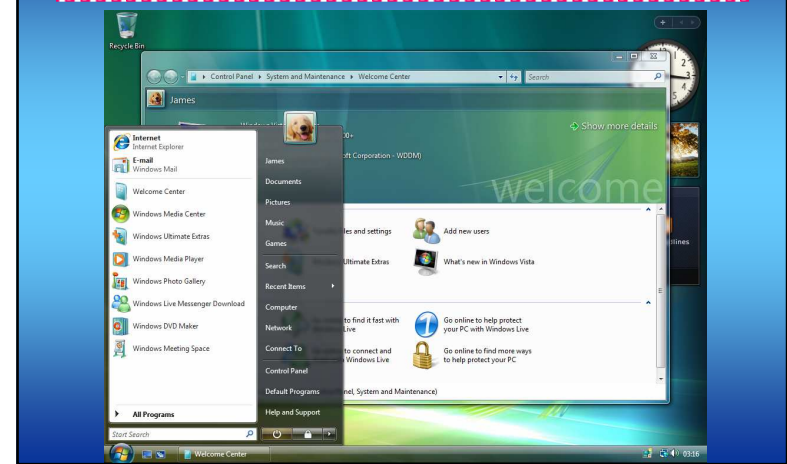
Instructor Özgür ZEYDAN

Windows 98



Instructor Özgür ZEYDAN

Windows Vista



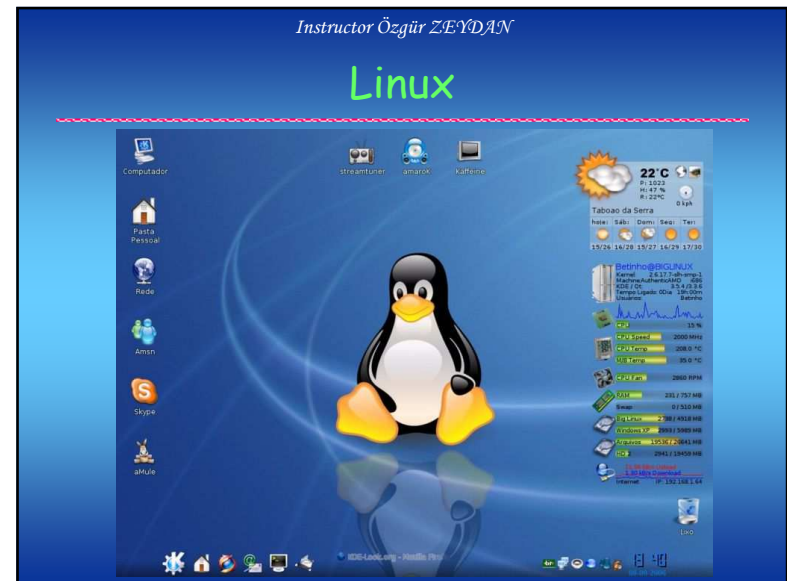
Instructor Özgür ZEYDAN

Mac OS X

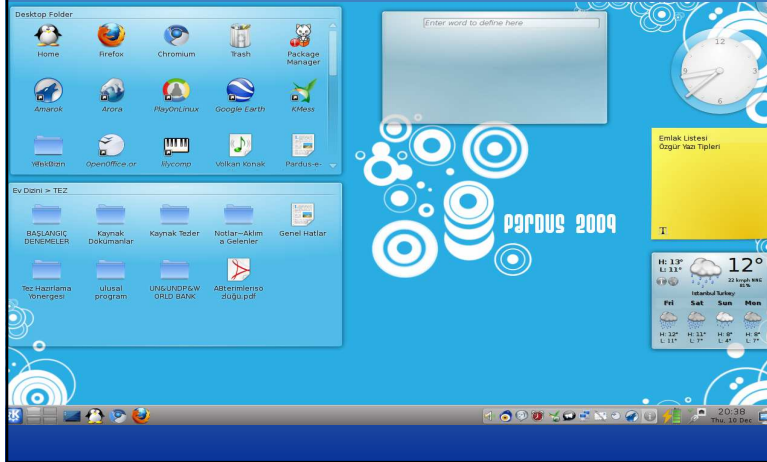


Instructor Özgür ZEYDAN

Linux



Pardus Linux



Application Software

- Office Applications
- Web browsers
- Games
- Chat software
- Multi-media software (video, picture, music...)
- Specific softwares
 - ❖ AutoCAD, Matlab, SPSS etc...

Software Types

- Freeware
- Shareware
- Demo
- Ad-supported
- Spyware