

# ARKITEKTURE KOMPJUTERI

## LEKSIONI VI

KOMPJUTERI SI PJESE PERBERESE E RRJETAVE KOMPJUTERIKE

Lektor

Alban Deda

# KOMPJUTERI

- Pjeset perberese hardware te nje kompjuteri
- Sistemet e Operimit
- Windows Tools dhe Services

# PJESET PERBERESE HARDWARE TE KOMPJUTERIT

- Tower
- Rack mounted

## **Pjeset perberese**

- Motherboard
- Procesoret
- Memoria
- Disk Drives
- Adapter cards
- Fans

## **Pjeset Periferike**

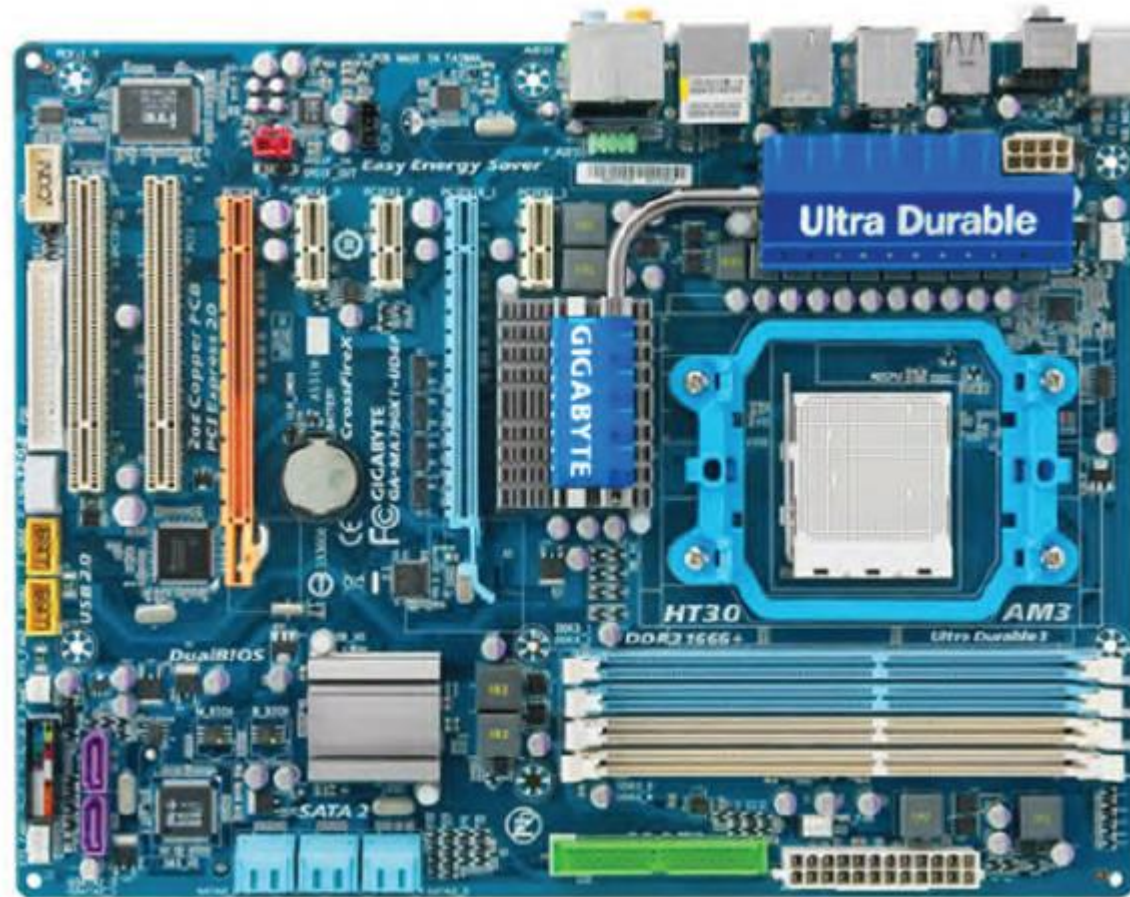
Keyboards  
Monitor  
Mouse



# Motherboard

Komponentet jane :

- Soldered
- Slots/sockets



# MEMORY RAM

- RAM eshte nje komponent kompjuteri, i cili ofron nje “temporary workspace” per procesorin
- Perbehet nga miliona tranzistore
- Cfare jane Tranzistoret ?



# TRANZISTORET

Jane switches, ose celesa, te cilet mund te hapen ose mbyllen

Gjendja e tyre eshte : OPEN ose CLOSED

- CLOSED – tranzistori transmeton elektricitet, i cili perfaqesohet nga kodi binar 1
- OPEN – tranzistori NUK transmeton elektricitet. Perfaqesohet nga kodi binar 0

# Volatile dhe Non-volatile Memory

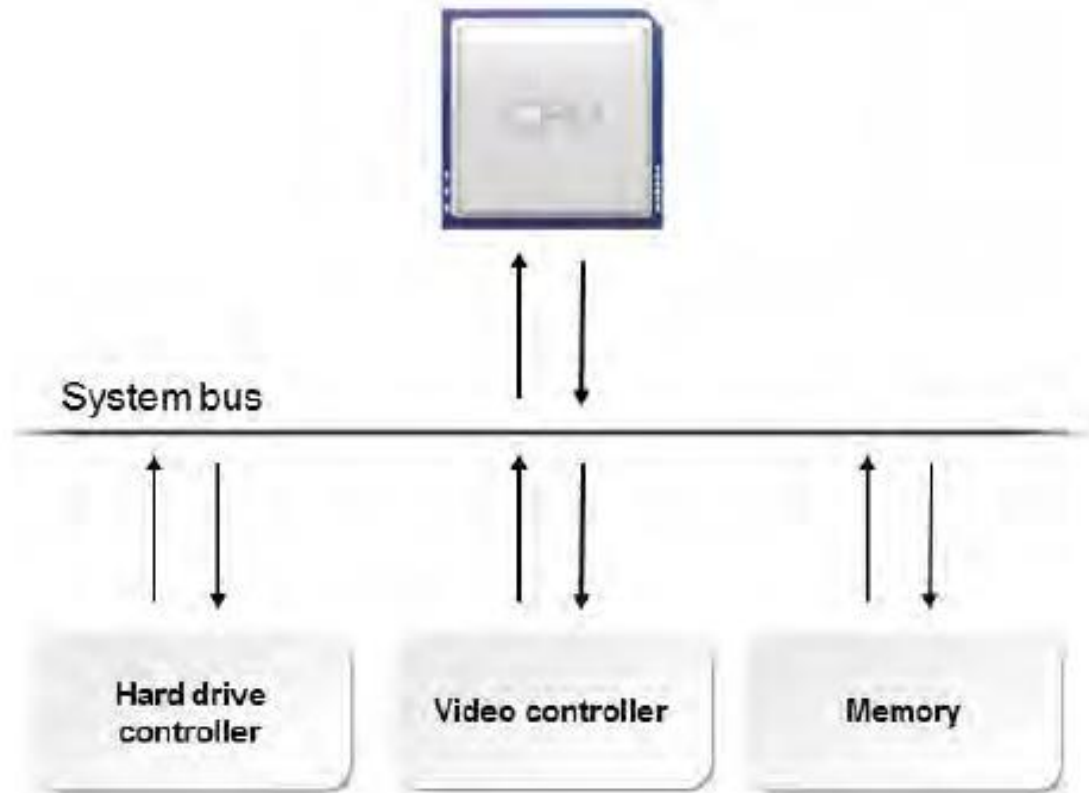
# Volatile dhe Non-volatile Memory

- Volatile Memory – kerkohet energji konstante, qe te ruhet informacioni
- Non-volatile – NUK ka nevojë për energji konstante për ruajtjen e informacionit.

Pra edhe kur kompjuteri është i fikur, ai serish e ruan informacionin.



# System BUS



# Storage & Power Supply



# BIOS

Basic Input/Output System

Cfare funksioni ka, dhe ku ruhet ?

# BIOS

- Bios eshte nje Set Instruksionesh, qe ruhet ne ROM
- Funkzioni i tij eshte qe te startoje SERVICES me kryesore te PC

- Bios ruhet ne ROM Chips,  
ne System Board



# USB – Universal Serial Bus



<i>Characteristic</i>	<i>USB 1.1</i>	<i>USB 2.0</i>	<i>USB 3.0</i>	<i>USB 3.1</i>
Analog or digital?	Digital	Digital	Digital	Digital
Distance limitations	Maximum cable length 3 meters with devices operating at low speed (1.5 Mbps); maximum cable length of 5 meters with devices operating at full speed (12 Mbps)	Maximum cable length 5 meters	Maximum cable length recommended 3 meters	Maximum cable length recommended 3 meters
Data transfer speed	Up to 12 Mbps	Up to 480 Mbps when connected to USB 2.0 hubs or ports  Up to 12 Mbps when connected to USB 1.1 hubs or ports	5.0 Gbps	Up to 10 Gbps

# Konektore dhe Konvertues

- *Video Graphics Array (VGA)* is a display standard that is implemented with a 15-pin DE-15 connector. You can find this connector type on many video cards, computer monitors, and high definition television sets. On laptop computers and other small devices, a mini-VGA port is sometimes used in place of the full-sized VGA connector.
- *High Definition Multimedia Interface (HDMI)* is a proprietary audio/video interface for transferring uncompressed video data and compressed or uncompressed digital audio data from a display controller to a compatible peripheral device (such as a display monitor, a video projector, digital TV, or digital audio device) over a single HDMI cable.
- *Digital Visual Interface (DVI)* is a video standard for transferring both analog and digital video signals. You can find this connector type on high-definition TVs, DVD players, home theater systems, and computer monitors.

Analog audio splits sound into "Left" and "Right" components, or stereo sound. Analog audio cables are split with red and white RCA style connectors at the end.



The PS/2 connector is a legacy connection technology used to connect keyboards and mice to system units.



An HDMI to VGA converter enables you to convert an HDMI (digital) video signal so that it can be displayed on a VGA (analog) monitor.



SISTEMET E OPERIMIT

# OS

- Windows  
Jo kompatibel ne cdo lloj hardware platforms. Fokusi tek ana vizuale, krahasuar me OS tjere.
- UNIX – open source, zhvilluar ne Bell Laboratories ne 1960  
Kompatibel ne cdo lloj hardware platforms
- OS X – derivative i Unix. Zhvilluar nga Apple Inc. OS I inkorporuar ne te gjithe Macintosh Hardware – GUI based. Fokusi tek performanca, jo tek paraqitja.
- Linux – derivative i Unix. Zhvilluar nga Linus Tovalds. Inkorporuar ne Servers dhe Clouds – CL te zhvilluar me shume – Red Hat, Debian, Kali Linux etj.



# LINUX OS



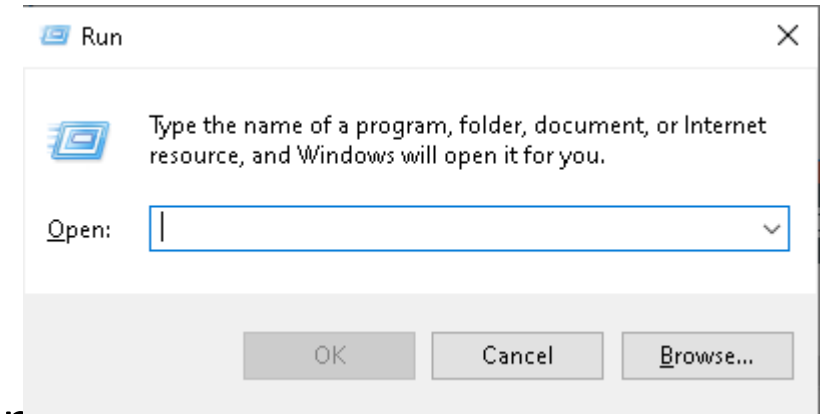
# Mobile OS

- iOS – instalohet vetem ne platformat Apple.  
Gjuha e programimit eshte Swift
- Android – instalohet ne disa platforma, apo prodhues te ndryshem.  
Gjuha e programimit eshte Java. Po ashtu Android perdor APK  
(Android Application Package), I cili permбан gjithë kodet e programeve.
- Windows – instalohet vetem ne platformat Windows.  
Gjuha e programimit eshte windows.net

# Windows Tools & Services

Start RUN – tool per aksesimin ne menyre te shpejte te elementeve te PC

- Ping – teston komunikimin me nje host
- Telnet – hyjme ne konfigurim te nje host
- Msconfig – hyjme ne startup te PC
- Regedit – hyjme ne regjistrat e windows.  
Nuk sugjerohet editimi i tyre, pervec rasteve te vecanta
- CMD – hyjme ne komand line te PC



# CMD – Comand Line

```
C:\Users\GERMAN>help
For more information on a specific command, type HELP command-name
ASSOC          Displays or modifies file extension associations.
ATTRIB         Displays or changes file attributes.
BREAK          Sets or clears extended CTRL+C checking.
BCDEDIT        Sets properties in boot database to control boot loading.
CACLS          Displays or modifies access control lists (ACLs) of files.
CALL           Calls one batch program from another.
CD             Displays the name of or changes the current directory.
CHCP           Displays or sets the active code page number.
```

**Help** – shfaq komandat

**Ipconfig** – shfaq IP qe kemi marre

**arp -a** – shfaq IP/mac te hosteve fqinje

**ping x.x.x.x**

```
C:\Users\GERMAN>
C:\Users\GERMAN>ipconfig

Windows IP Configuration

Wireless LAN adapter Wi-Fi:

    Connection-specific DNS Suffix  . : lan
    Link-local IPv6 Address . . . . . : fe80::b870:4cf8:56b3:b860%19
    IPv4 Address. . . . . : 192.168.1.155
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.99

Ethernet adapter Bluetooth Network Connection 2:
```

# Windows Tools & Services

per gjetjen e informacionit te faqeve te internetit

- Qe te mbajme nje faqe, bashke me emails, na duhen keto te dhena :
  1. NS – Name Servers Nje server ne bote, ku do e HOSTOJME kete faqe.
  2. DOMAIN – emri i faqes. Kete e blejme kudo. Ne rastin tone eshte AKEP. Akep na kerkon detyrimisht NS

# Windows Tools & Services

- Nslookup – shofim ku jane te ngritura REKORDET e nje faqeje

REKORDET – server ku mbahet nje sherbim (mail, web, etj)

- NS – Name Servers – CMD / set q=ns
- SOA – server of authority – CMD / set q=soa
- MX – mail exchanger – CMD / set q=mx
- PTR – ose reverse dns – CMD/ set q=x.x.x.x

# Troubleshooting, kur nuk hapet nje faqe

- Ka raste kur nje subject, do te kaloje sherbimet web/mail nga nje kompani ne tjetren.
- Qe te realizohet kjo, duhet te kihen parasysh disa veprime:
  - A. Ulja e rekordeve nga HOST i pare.
  - B. dhenia e rekordeve te reja, tek AKEP, qe te ndryshoje NS
  - C. Ngritja e rekordeve tek HOST i dyte

# Si e gjejme nese faqja ose MX jane ngritur ne dy host-ime

[www.mxtoolbox.com](http://www.mxtoolbox.com)

- Vendosim domain (beder.edu.al)
  - DNS Lookup
  - MX Lookup
- ...dhe te gjitha rekordet me radhe.

Nese nuk korespondojne rekorde te njejta nga brenda rrjetit dhe nga jashte rrjetit, atehere kemi problem.

Problemi eshte qe rekordet jane te ngritura ne dy vende, ndaj dhe paketat e kane te veshtire te kuptojne se ku te shkojne