



# **THE COMPUTER LECTURE 2**

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Input device

Output device

Motherboard

Storage device

Hard drive

Control panel

RAM

Hardware

Software

CPU

An **input device** is any hardware device that sends data to a computer, allowing you to interact with and control it.



# TYPES OF INPUT DEVICES

Audio conversion device  
Barcode reader  
Biometrics (e.g., fingerprint scanner).  
Business card reader  
Digital camera and digital camcorder.  
EEG (electroencephalography)  
Finger (with touch screen or Windows Touch).  
Gamepad, joystick, paddle, steering wheel, and Microsoft Kinect.  
Gesture recognition  
Graphics tablet  
Keyboard  
Light gun  
Light pen  
Magnetic ink (like the ink found on checks).  
Magnetic stripe reader  
Medical imaging devices (e.g., X-ray, CAT scan, and ultrasound images).

Microphone (using voice speech recognition or biometric verification).  
MIDI keyboard  
MICR  
Mouse, touchpad, or other pointing devices.  
OMR (optical mark reader)  
Paddle  
Pen or stylus  
Punch card reader  
Remote  
Scanner  
Sensors (e.g., heat and orientation sensors).  
Sonar imaging devices  
Stylus (with touch screen).  
Touch screen  
Voice (using voice speech recognition or biometric verification).  
Video capture device  
VR helmet and gloves  
Webcam  
Yoke

# BIOMETRICS

**biometrics** is the identification of a person by the measurement of their biological features. For example, a user identifying themselves to a computer or building by their fingerprint or voice is considered a biometrics identification. When compared to a password, this type of system is much more difficult to fake since it is unique to the person. Other common methods of a biometrics scan are a person's face, hand, iris, and retina.

**Face scanner** - Biometric face scanners identify a person by taking measurements of a person's face. For example, the distance between the person's chin, eyes ([interpupillary distance](#)), nose, and mouth. These types of scanners can be very secure assuming they are smart enough to distinguish between a picture of a person and a real person. See our [facial recognition](#) page for further information on this term.

**Hand scanner** - Like your fingerprint, the palm of your hand is also unique to you. A biometric hand scanner will identify the person by the palm of their hand.

**Finger scanner** - Like the picture shown on this page, a biometric finger scanner identifies the person by their fingerprint. These can be a secure method of identifying a person. However, cheap and less sophisticated fingerprint scanners can be duped several ways. For example, in the show Myth Busters, they were able to fake a fingerprint using a Gummy Bear candy treat.

**Retina scanner or iris scanner** - A biometric retina or iris scanner identifies a person by scanning the iris or retina of their eyes. These scanners are more secure biometric authentication schemes when compared to the other devices because there is no known way to duplicate the retina or iris.

**Vein recognition** - A biometric scan of a person's veins in the user's finger or palm. See our [vein recognition](#) page for further information.

**Voice scanner** - Finally, a voice analysis scanner will mathematically break down a person's voice to identify them. These scanners can help improve security but with some less sophisticated scanners can be bypassed using a tape recording.

# OUTPUT DEVICE

An **output device** is any peripheral that receives data from a computer, usually for display, projection, or physical reproduction. For example, the image shows an inkjet printer, an output device that can make a hard copy of anything shown on the monitor. Monitors and printers are two of the most commonly used output devices used with a computer.

# MOTHERBOARD

Alternatively referred to as the **mb, mainboard, mboard, mobo, mobd, backplane board, base board, main circuit board, planar board, system board**, or a **logic board** on Apple computers. The **motherboard** is a printed circuit board and foundation of a computer that is the biggest board in a computer chassis. It allocates power and allows communication to and between the CPU, RAM, and all other computer hardware components.



# STORAGE DEVICE

Alternatively referred to as **digital storage, storage, storage media, or storage medium**, a **storage device** is any hardware capable of holding information either temporarily or permanently. The picture shows an example of a Drobo, an external secondary storage device.

There are two types of storage devices used with computers: a primary storage device, such as RAM, and a secondary storage device, such as a hard drive. Secondary storage can be removable, internal, or external.

# HARD DRIVE

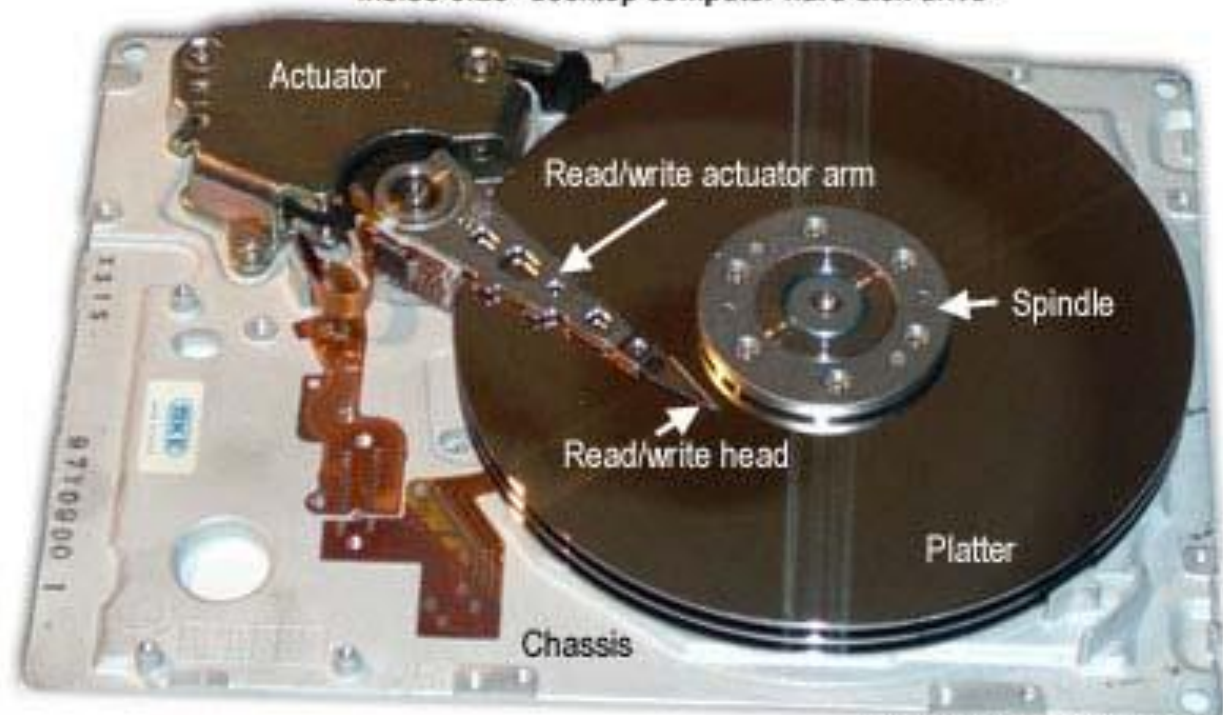
A **hard disk drive** (sometimes abbreviated as **hard drive**, **HD**, or **HDD**) is a non-volatile data storage device. It is usually installed internally in a computer, attached directly to the disk controller of the computer's motherboard. It contains one or more platters, housed inside of an air-sealed casing. Data is written to the platters using a magnetic head, which moves rapidly over them as they spin.

Internal hard disks reside in a drive bay, connected to the motherboard using an ATA, SCSI, or SATA cable. They are powered by a connection to the computer's PSU (power supply unit).

Inside laptop hard disk drive



Inside 5.25" desktop computer hard disk drive



# CONTROL PANEL

The **Control Panel** is a section of Microsoft Windows that enables a user to change various computer hardware and software features. Settings for the mouse, display, sound, network, and keyboard represent a few examples of what may be modified in the Control Panel. Below are some examples of how the Control Panel appeared in Windows.

# RAM



Alternatively referred to as **main memory**, **primary memory**, or **system memory**, **RAM (random-access memory)** is a hardware device that allows information to be stored and retrieved on a computer. RAM is usually associated with DRAM, which is a type of memory module. Because information is accessed randomly instead of sequentially like it is on a CD or hard drive, access times are much faster. However, unlike ROM, RAM is a volatile memory and requires power to keep the data accessible. If the computer is turned off, all data contained in RAM is lost.

# HARDWARE

Abbreviated as **HW**, **hardware** is best described as any physical component of a computer system that contains a circuit board, ICs, or other electronics. A perfect example of hardware is the screen on which you are viewing this page. Whether it be a monitor, tablet, or smartphone, it is hardware.

# EXTERNAL HARDWARE EXAMPLES

*Below is a list of external hardware or hardware found outside of your computer that may be found with a computer.*

Flat-panel, monitor, and LCD

Gamepad

Joystick

Keyboard

Microphone

Mouse

Printer

Projector

Scanner

Speakers

USB thumb drive

# INTERNAL HARDWARE EXAMPLES

Below is a list of internal hardware or hardware that is found inside your computer and may be found in a computer.

CPU (central processing unit).

Drive (e.g., Blu-ray, CD-ROM, DVD, floppy drive, hard drive, and SSD).

Fan (heat sink)

Modem

Motherboard

Network card

Power supply

RAM

Sound card

Video card



# WHAT IS THE MOST COMMON HARDWARE INCLUDED WITH A COMPUTER?

Processor (CPU)

One or more fans and heat sink

Motherboard that most likely has an integrated video card, sound card, and network card.

For most desktop computers (especially gaming computers), a separate video card is used.

RAM

Hard drive

Power supply

Cables that connect internal components and external peripherals.

Keyboard

Mouse or touchpad with a laptop.

Flat-panel, monitor, or TV for desktop computers and LCD as part of a laptop.

# SOFTWARE

Sometimes abbreviated as **SW** and **S/W**, **software** is a collection of instructions that enable the user to interact with a computer, its hardware, or perform tasks. Without software, most computers would be useless. For example, without your Internet browser software, you could not surf the Internet or read this page. Without an operating system, the browser could not run on your computer. The picture shows a Microsoft Excel box, an example of a spreadsheet software program.

# CPU

Alternately referred to as a **processor**, **central processor**, or **microprocessor**, the **CPU** (pronounced sea-pea-you) is the **central processing unit** of the computer. A computer's CPU handles all instructions it receives from hardware and software running on the computer.

Hi! I'm Ananda and I am 20 years old. I read The Secret when I was 16.

Well, I really wanted a new computer for a long time... a new computer, one that you can play any game on, any software, anything you want without even checking the configuration. Since I was a kid I was in love with games and stuff like this. I used to have an old computer, really old, like Win98, with almost no games and a very low internet connection. I was angry about that almost every day when I turned the PC on, because it was too old and slow, and because my mom didn't have any money for a new computer.

But then I started to think different – think like The Secret book has taught me. I started to think that my wish didn't depend on the money of anyone, even mine. I REALLY started to believe that the Universe will bring one to me. Then, a few months later, my mom said to me, “I think I can buy one new PC for you.” We started to search in the stores for a computer that I really liked, because you know, I didn't want any computer – I wanted THE computer. I found many computers, but I didn't find anything that I really wanted, something that makes my soul scream in happiness. But I never stopped believing, because it wasn't up to the stores to offer something that I wanted – I knew the Universe was to do that.

On the same weekend of that week, I had an idea. I told my mom to ask my uncle if he can search for or even build a good computer for me, and we'll pay for the pieces that he uses. He is an expert on building and fixing computers. She called, and to my surprise, my uncle had a new finished PC that he bought for his daughter, but she wasn't using it because she was about to buy a laptop for work. He sold the PC to my mom, and the configuration was double what I had asked! I mean, I asked for a "Super PC" and I got a "Super Mega Ultra PC"! I became so happy, my dream just came true on that day. And the best part is that my mom paid just the half price, because after paying for half my grandmother gave to my uncle a rare clock that he wanted so much, so he considered that the computer had already been paid for with that clock.

So, now here I am, writing this story on the keyboard of my new shiny super cool computer! Believe with your soul, and anything that you want will happen, trust me.



**The Negative Effect of Social Media : my story**

**Me and the Internet: A Story**

**Internet Addiction: my story**

- Artificial intelligence terms
- Battery terms
- Business terms
- Camera terms
- CD terms
- Cell phone terms
- Certification terms
- Chat terms
- Color terms
- Computer Companies
- CPU terms
- Database terms
- Domain suffixes
- E-mail terms
- Electronics terms
- Floppy drive terms
- Gaming terms
- Hard drive terms
- Hardware terms
- Internet terms

- Keyboard terms
- Measurements
- Memory terms
- Modem terms
- Motherboard terms
- Mouse terms
- Network terms
- Operating system terms
- Phone terms
- Power terms
- Printer terms
- Programming terms
- Security terms
- SEO terms
- Scanner terms
- Smartphone terms
- Software terms
- Sound terms
- Spreadsheet terms
- Tape terms

- Typography terms
- Video terms
- Virus terms
- Web design terms
- Word processor terms



Server

E-mail

Username

Domain

@

Phishing

Junk mail folder

E-mail header

Outlook

Mail merge

At

At sign

Attachment

Automatic response

BCC

Blacklist

Body

Bounce

Bulk e-mail

Send

Sent items

Server

Signature

SMTP

Snail mail

Spam

Spammer

Spear phishing

Spoof

Spool

Sub

Subject

Subscribe