

Online information and content

Information technology is technology that helps people communicate and share information. If we are not careful or we do not understand how to use the technology it might affect us or our friends.

Benefits of Information Technology:

- Find information quickly
- Talk to friends and family
- Learn new skills
- Watch educational videos

Problems created by Information Technology:

- Problems with health and time
- Fake news
- Privacy problems
- Addiction and online scams

To prevent these problems, we can:

- Strong passwords
- Private accounts
- Don't share personal information
- Avoid strangers
- Think before clicking
- Use trusted websites

Practices when finding inappropriate content

While using the Internet you can find many types of information, both correct and information that is changed or created to cause damage to others or the public.

If you find inappropriate content you should:

1. **STOP**– Don't open suspicious links. Don't continue watching harmful content
2. **THINK** – Think is it true, is this safe, could this hurt someone
3. **REPORT** – Tell trusted adults, use report buttons, block harmful accounts

Digital footprint – is a trace of you that you leave online. Every action you make leaves a footprint that can identify you.

Active digital footprint happens when you share data on purpose (Posting a photo on social media, writing comments, liking videos, filling out an online form)

Passive digital footprint happens when your data is collected without you knowing (Website tracking your location, online stores tracking your search history, server recording your IP address)

Guidelines for handling the content

Before we publish any information online, we should consider the rules related to information and communication which consists of:

1. **Privacy** – Personal information should stay safe
2. **Accuracy** – Check before sharing information
3. **Property** – Respect other people's work
4. **Access** – Decide who can see your content

Copyright – creators own their work and only they can use it

Creative common – Some creators allow people to use their work for free, but they still own it.

TERMS



BY

Attribution

Others can copy, distribute, display, perform and remix your work if they credit your name as requested by you



ND

No Derivative Works

Others can only copy, distribute, display or perform verbatim copies of your work



SA

Share Alike

Others can distribute your work only under a license identical to the one you have chosen for your work



NC

Non-Commercial

Others can copy, distribute, display, perform or remix your work but for non-commercial purposes only.

Computer parts – Inside

Motherboard – Main circuit board. Connects all other components and lets them communicate with each other

Processor (CPU) – This is the brain of the computer; it does all of the work in the computer.

Random Access Memory (RAM) – used for saving information from programs that are being used now. After it loses electricity all the data is deleted. It is **temporary** memory.

Hard Disk Drive (HDD) – used for saving users' information and data. After it loses electricity all of the data will stay. It is **permanent** memory.

Solid State Drive (SSD) – same as HDD, used for saving data. Faster and better than HDD

Graphical card (GPU) – is used to show graphical information on the screen

Power supply – is used to bring electricity to the computer

Computer parts – Outside

Case – A case is just a metal or plastic box that contains all the parts of the computer

Monitor – A device that displays/shows video and graphical information made by the GPU. We divide them into 2 groups: LCD and CRT. **CRT** is a large and heavy monitor, old and not used much. **LCD** is a thin and light monitor, used everywhere.



We divide outside devices into two groups:

Input device – Sends information **into** the computer (mouse, keyboard, scanner, camera, microphone...)

Output device – Shows or plays information **from** the computer (Speaker, printer, monitor, headphones, projectors...)

Software and Applications

Hardware – physical parts, everything we can touch. **Software** – programs and apps, we can't touch it.

Software – program that tells the computer what to do (Operating system, Applications, Games, Web browsers)

Application – is a software that helps users do a task (write documents, browse websites, edit photos, send messages)

We divide applications into 3 platforms:

Computer application – Runs on a desktop/laptop

Mobile application – Runs on phones/tablets

Web application – Runs in a browser

Operating system – is a software that manages the computer (Windows, macOS, Linux, Android, iOS, ChromeOS)

Memory and storage

Memory and storage are used to save information and data on the computer. **Memory** is used to save program information and **storage** is used to save users' information. Storage is divided according to the technology media that we are using:

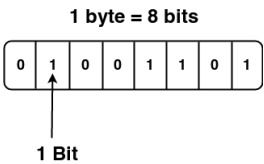
Magnetic storage – HDD is a magnetic storage that uses magnetic disks that spin. Can store lots of data, but it is slower.

Optical storage – Optical storage is usually written and read by a laser. Stores data on CDs and DVDs. Less common today.

Electronic storage – Uses electronic chips to save data, such as flash drives and SSD. They are faster and better than magnetic and optical storage

Data measurement

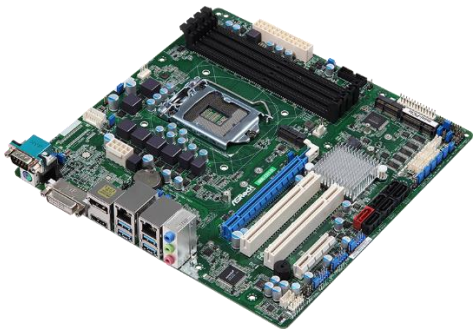
Computer storage is usually **measured** in **Megabytes** and **Gigabytes**. The smallest unit is a **bit**. Because bits are too small to work with, they are combined into a **byte**. 1 byte is equal to 8 bits.



Data Measurement Chart	
Data Measurement	Size
Bit	Single Binary Digit (0 or 1)
Byte	8 bits
Kilobyte (KB)	1,024 Bytes
Megabyte (MB)	1,024 Kilobytes
Gigabyte (GB)	1,024 Megabytes
Terabyte (TB)	1,024 Gigabytes
Petabyte (PB)	1,024 Terabytes
Exabyte (EB)	1,024 Petabytes

Computer storage has many different measurement sizes. Every larger size has 1024 units of the smaller size. For example, a Kilobyte is larger than a Byte. Therefore, 1 kilobyte has 1024 bytes. Next, we have a Megabyte, where 1 Megabyte is 1024 Kilobytes or 1 048 576 bytes (1024 * 1024). After Megabyte we have Gigabyte. 1 Gigabyte is 1024 Megabytes, or 1 048 576 Kilobytes or 1 073 741 824 Bytes... To convert from larger size to smaller size we multiply with 1024. For example, 3Mb = 3072Kb (3*1024). To convert from smaller size to larger size we have to divide by 1024. For example, 6043Kb = 5.90Mb (6043/1024).

Bit < Byte < Kilobyte < Megabyte < Gigabyte < Terabyte < Petabyte < Exabyte



Motherboard



Random Access Memory



Processor



Hard Disk Drive



Graphical Card



Power Supply