

Introduction to Computing Systems

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What is a computing device?

📱 A computing device is anything that can take in information, process it, and give an output.

What are some devices you use every day?

What is a Computing System?

A computing system is **two or more computing devices working together**.

They share information and help each other do tasks better.

- A smartwatch syncing with a phone
- A school computer connected to a printer



Why Do We Use Computing Systems?



To share information faster



To connect with others



To combine different tools (camera + phone + GPS)



To play multiplayer games, stream shows, or do schoolwork

How Do Devices Communicate?

Wi-Fi

Uses radio waves to send data through the air

Connects devices to the internet or to each other

Needs a router or hotspot to connect



Bluetooth

A short-range wireless way to connect two devices

Works best when devices are close (like in the same room)



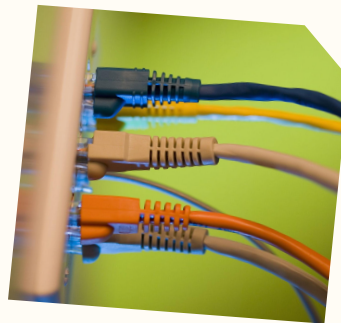
Wires/Cables (USB/HDMI)

A physical connection between devices

Super fast, doesn't rely on Wi-Fi

USB = transfer files or charge phones

HDMI = connect screens (laptop to a TV)



Example of a Computing System

Smartphone 📱	Smartwatch ⌚
<u>Hardware</u>: Touchscreen, battery, processor, speaker, microphone <u>Software</u>: Messaging app, fitness tracking app, operating system (like iOS or Android) <u>Function</u>: Sends notifications, stores apps and data, connects to the internet	<u>Hardware</u>: Small screen, battery, heart rate sensor, accelerometer <u>Software</u>: Fitness app, notification system, simple operating system (OS) <u>Function</u>: Tracks steps, shows time, receives notifications from phone

Together, they form a computing system!
The smartwatch gets info from the phone and gives data back too!



How Do These Devices Talk to Each Other?

Bluetooth!

It's a wireless way for devices to send info nearby

The watch gets notifications and sends fitness data back

They stay connected as long as they're close together

What might happen if Bluetooth is turned off?

Would the devices still work together?

Match the System!

- Phone
- Smart TV
- Laptop
- Printer
- Gaming Console
- Streaming Remote
- Bluetooth Headphones
- Desktop Computer
- Controller
- Google Drive

ANSWERS!

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QUIZ TIME!