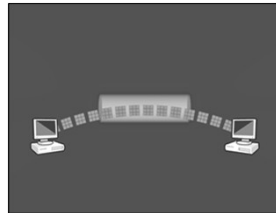
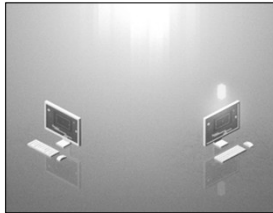


Networks and digital Communication/ Client and Servers



Computer Network



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Networks and digital Communication/ Computer networks



What is a Computer network?

A network is two or more computers connected together to share resources.

- share files
- share printer
- share internet

Examples:

- Computer lab
- Home Wi-fi
- Library Computers

Think of it like roads connecting houses.



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Networks and digital Communication/ Computer networks



How do Computers connect?



Wi-Fi

Invisible radio waves, no wires needed! Range ~100 feet indoors.



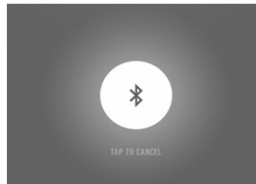
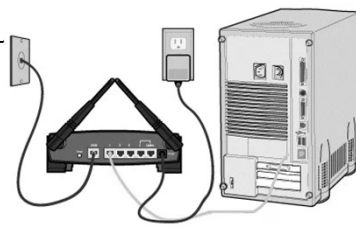
Ethernet Cable

Physical wire connecting computers. Speeds up to 10 Gigabits/second.



Bluetooth

Short distance connections, like headphones. Range ~30 feet.



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Sharing Resources on a Network

Sharing is caring on a network! Computers can share files, printers, and even the Internet.

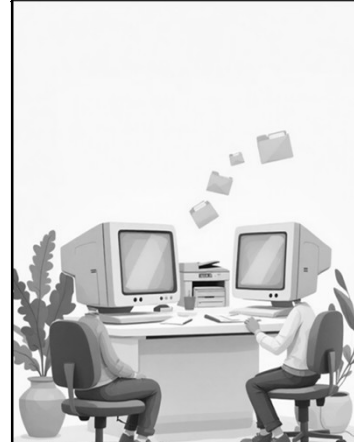
Files
Sharing homework with classmates, sending pictures to family.

Printers

One printer for everyone in the class.

Internet

Accessing websites and online games.



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Networks and digital Communication/ Computer networks



Activity Time Network Scavenger Hunt

Find Devices

Find devices connected to your network (at school or home).

Identify Connections

What types of connections are they using?

Draw a Map

Draw a map of your network!



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Networks and digital Communication/ Client and Servers



Client and Servers

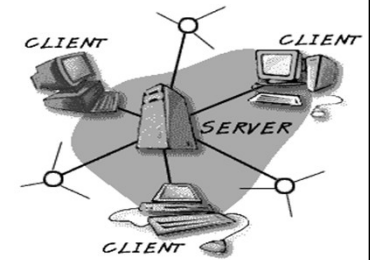


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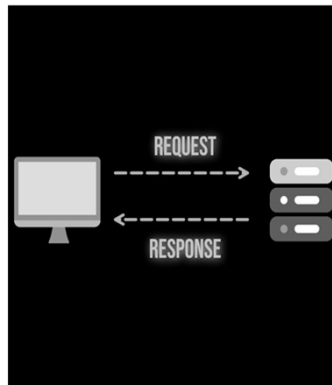
Networks and digital Communication/ Client and Servers



Understanding the Client-Server Model

- Let's Learn How Computers Talk!

- What is a Client?:** A computer or device that asks for something, like a website.
- What is a Server?:** A special computer that gives the client what it asks for.
- How They Work Together:** Client asks → Server answers. That's how the Internet works!



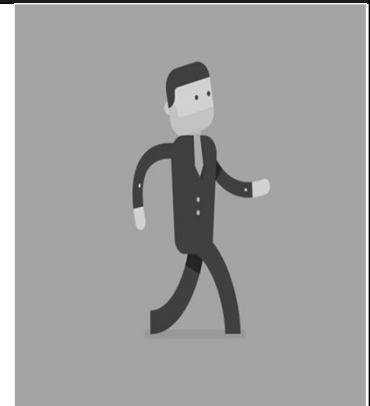
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Who is the Client?(the one who asks)

- The User:** You or your device asking for something, like opening a website.
- Sends a Request:** The client sends a message to ask for a page, video, or info.
- Waits for Response:** The client waits for the server to send back what was asked.



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Networks and digital Communication/ Client and Servers



Who is the server?(the one who answers)



- Big Helper Computer:** Stores and sends information like web pages or videos.
- Listens for Requests:** The server is always ready to hear from clients.
- Sends Responses:** It sends the correct content back to the client.

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How Client and Server Talk?



Step 1: Ask

The client sends a message asking the server for something.



Step 2: Listen

The server gets the request and finds the right information.



Step 3: Answer

The server sends the answer back to the client.

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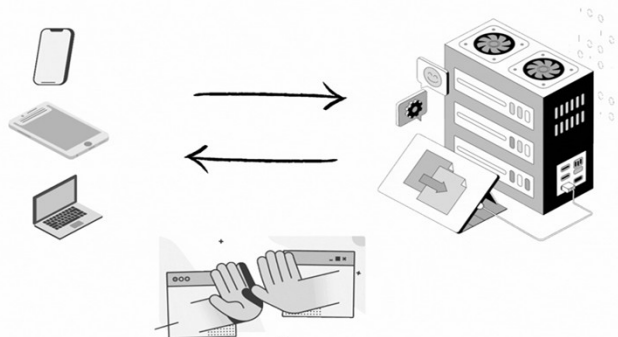
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Networks and digital Communication/ Client and Servers



Client-Server Communication



Networks and digital Communication/ Client and Server



Client-Server Activity

Let's play Client and Server!

1. One student acts as the Client (asks a question).
 2. The Server reads and responds (with answers, drawings, songs, etc.).
 - - "What is 2 + 2?" → Server says: "4"
 - - "Show me a cat" → Server draws a cat
 3. Switch roles so everyone gets a turn.
 - Time the responses (simulate network speed!)
 - Throw in a fake 'error message' for tricky questions
- Material needed: Paper and markers/color pencil.



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