AFA
AMERICAN FILM ACADEMY

Building with HTML and CSS

INTO ACTION ACADEMY

What we'll cover

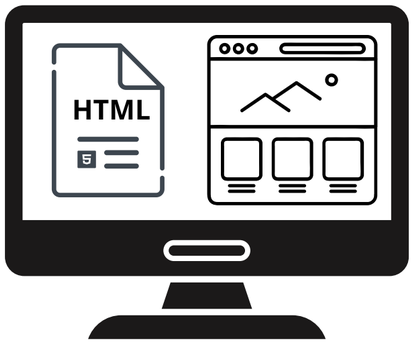
1. The Internet
2. Client - Server Architecture
3. Domain names and IP
4. Hosting
5. DNS

Networks

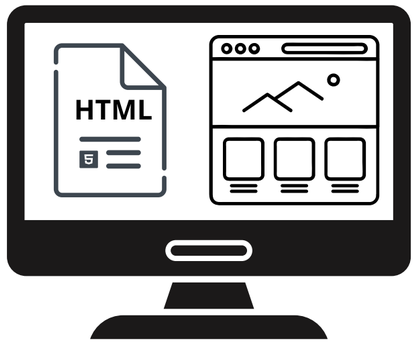
Devices communicating with each other

Device A

Device A

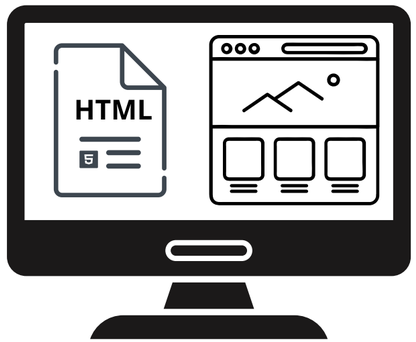


Device A

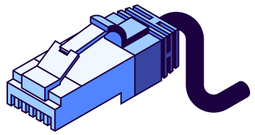


Device A

Device B



Device A



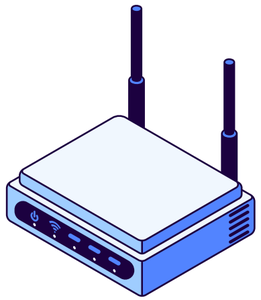
Ethernet

Device B


HTML
Device A
Device B


HTML
HTML
Device A
Device B

Device A



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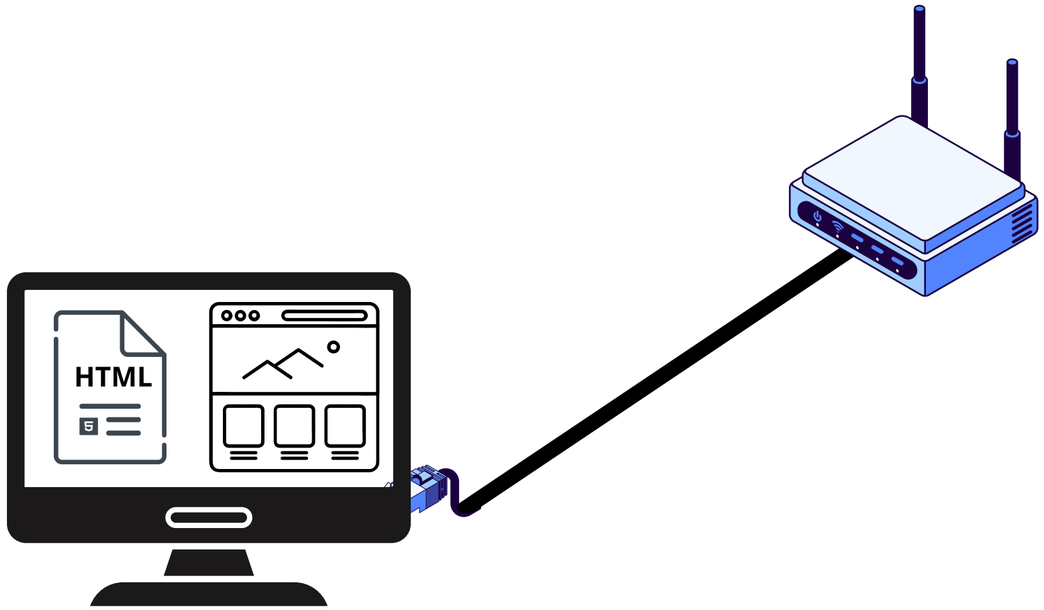
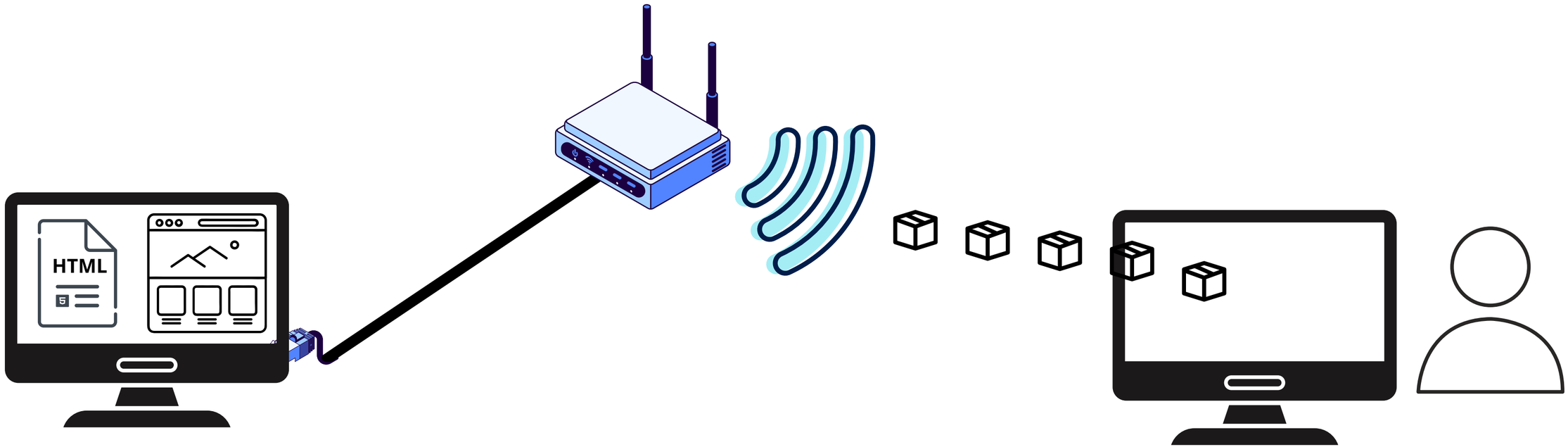
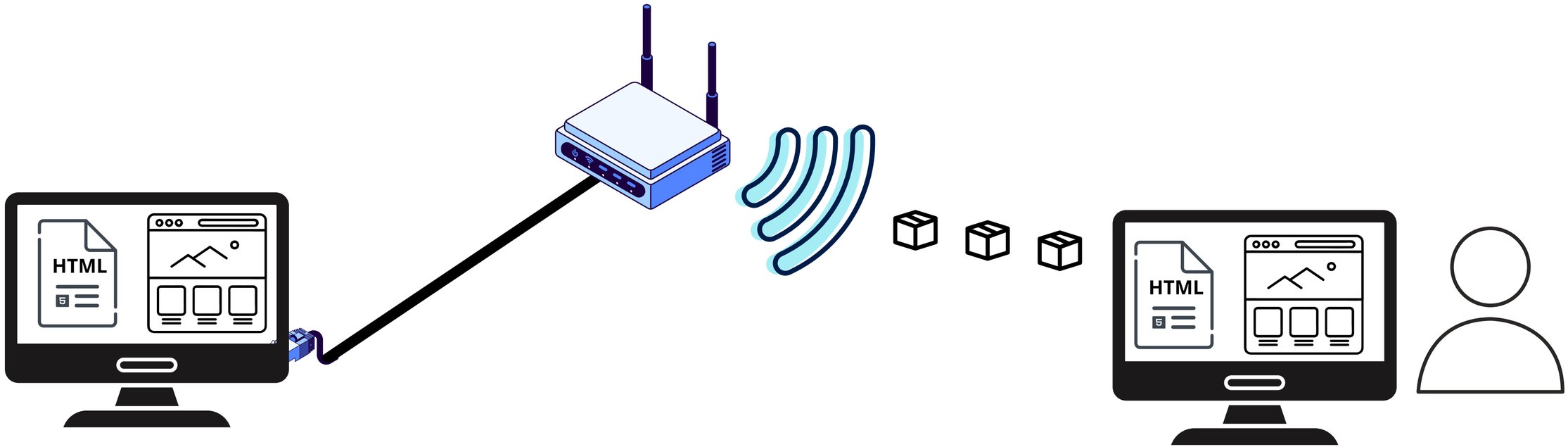
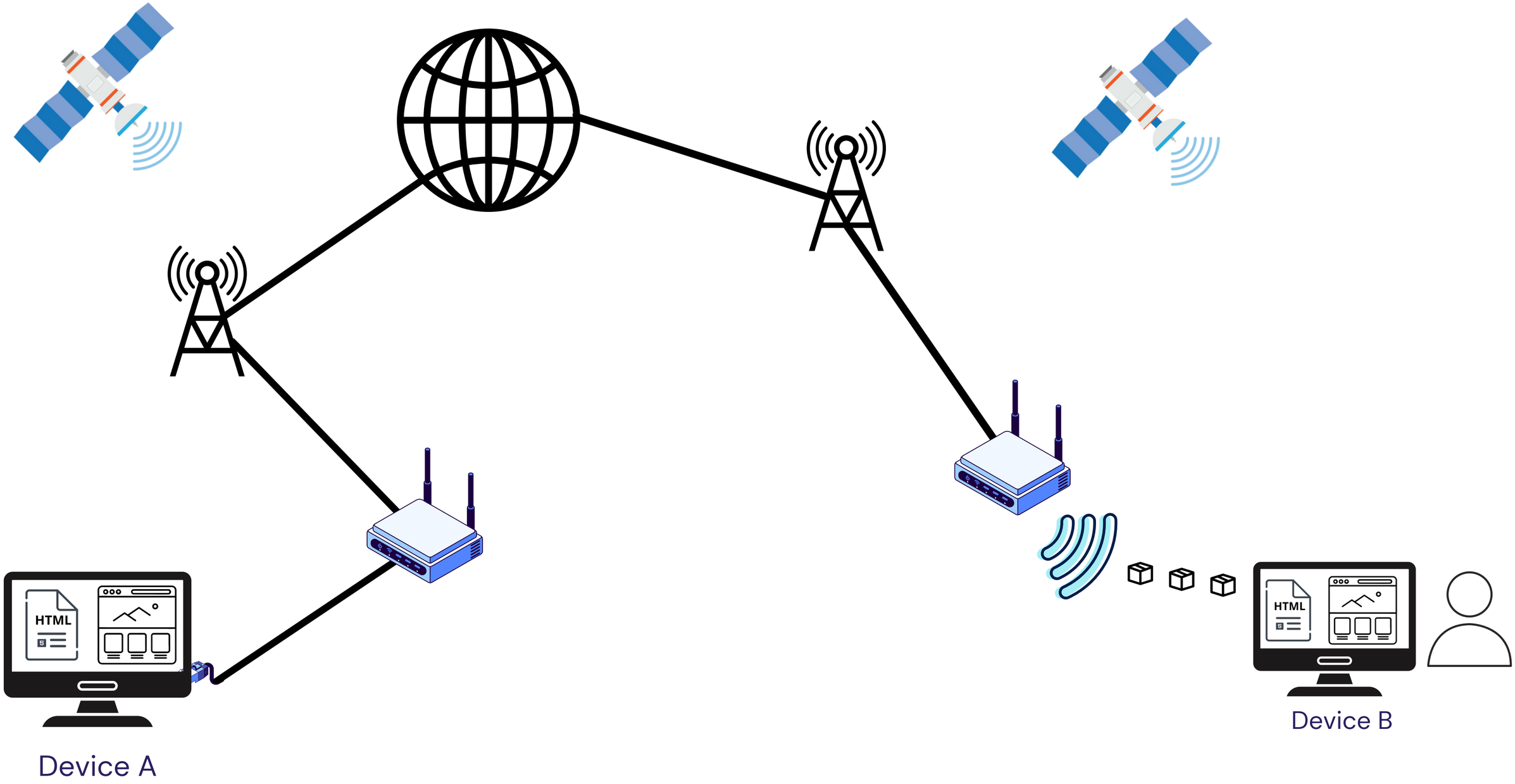


Device A

Device B


HTML
Device A
Device B


HTML
HTML
Device A
Device B


HTML
HTML
Device A
Device B

The Internet

- At its core, the internet is a giant system of connected computers.
- It links millions of smaller networks (like your home Wi-Fi, your school’s network, or your phone’s data connection).
- These networks talk to each other using shared rules, called protocols.

https://internet-map.net/

Client Server Model

The client-server model is how most of the internet works. It describes how two types of devices—clients and servers—communicate to exchange data.

The Client - Requester

- A client is the device or software that asks for something.

- It could be:
  - A web browser on your phone or laptop.
  - A mobile app.
  - Any tool that sends a request.

Example:
When you open Chrome and type www.google.com, your browser is the client.
It sends a request: “Please give me Google’s homepage.”

The Server - Responder

- A server is a powerful computer (or software) that listens for requests and sends back data.
- It’s always on and waiting to serve clients.

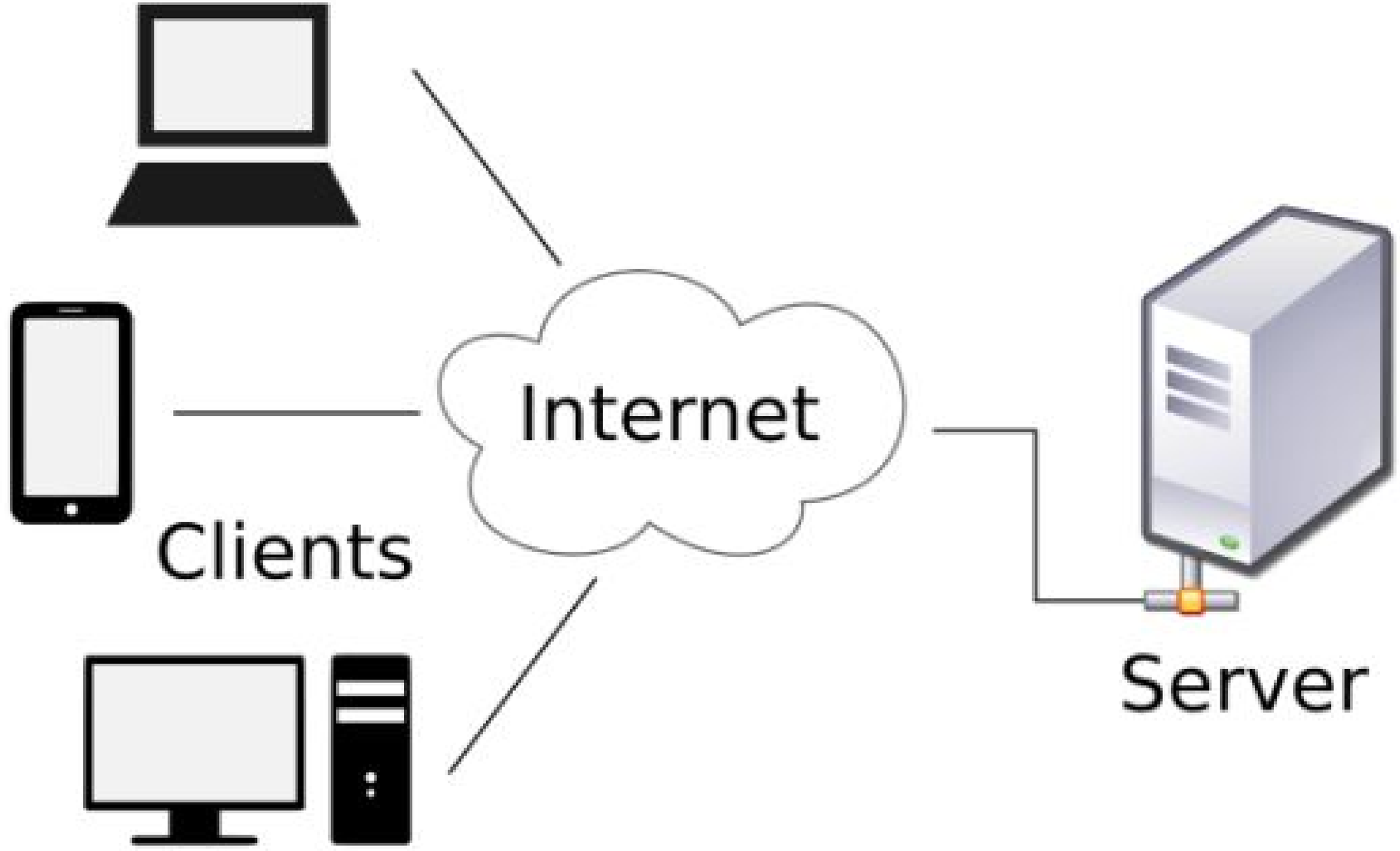
Example:

- Google’s server receives your request, finds the homepage, and sends it back to your browser.

The Internet - The system

- The internet acts like a delivery system that carries the request from the client to the server.
- It’s made up of routers, cables, towers, and satellites that help move data from one place to another.

Think of it like the road system that connects homes (clients) to stores (servers).

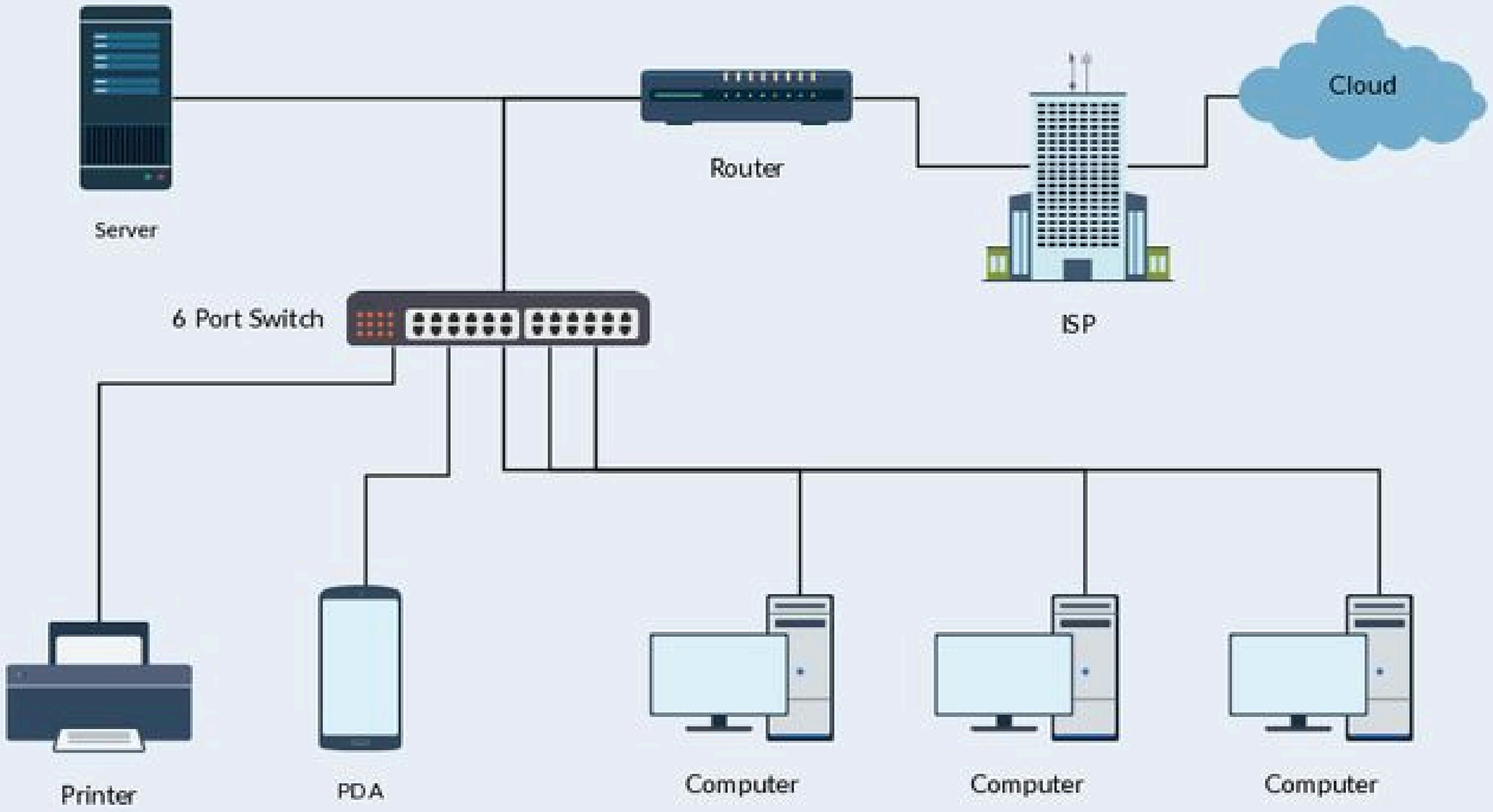

Internet
Clients
Server


10:01
Riga
16°
Showers
H:20° L:9°
Weather
WEDNESDAY
25
@BenGeskin
Calendar
Reminders
Calendar
Clock
Google Photos
Settings
Notes
Google Maps
Facebook
Messenger
YouTube
Gmail
Spotify
Telegram
Instagram
Twitter

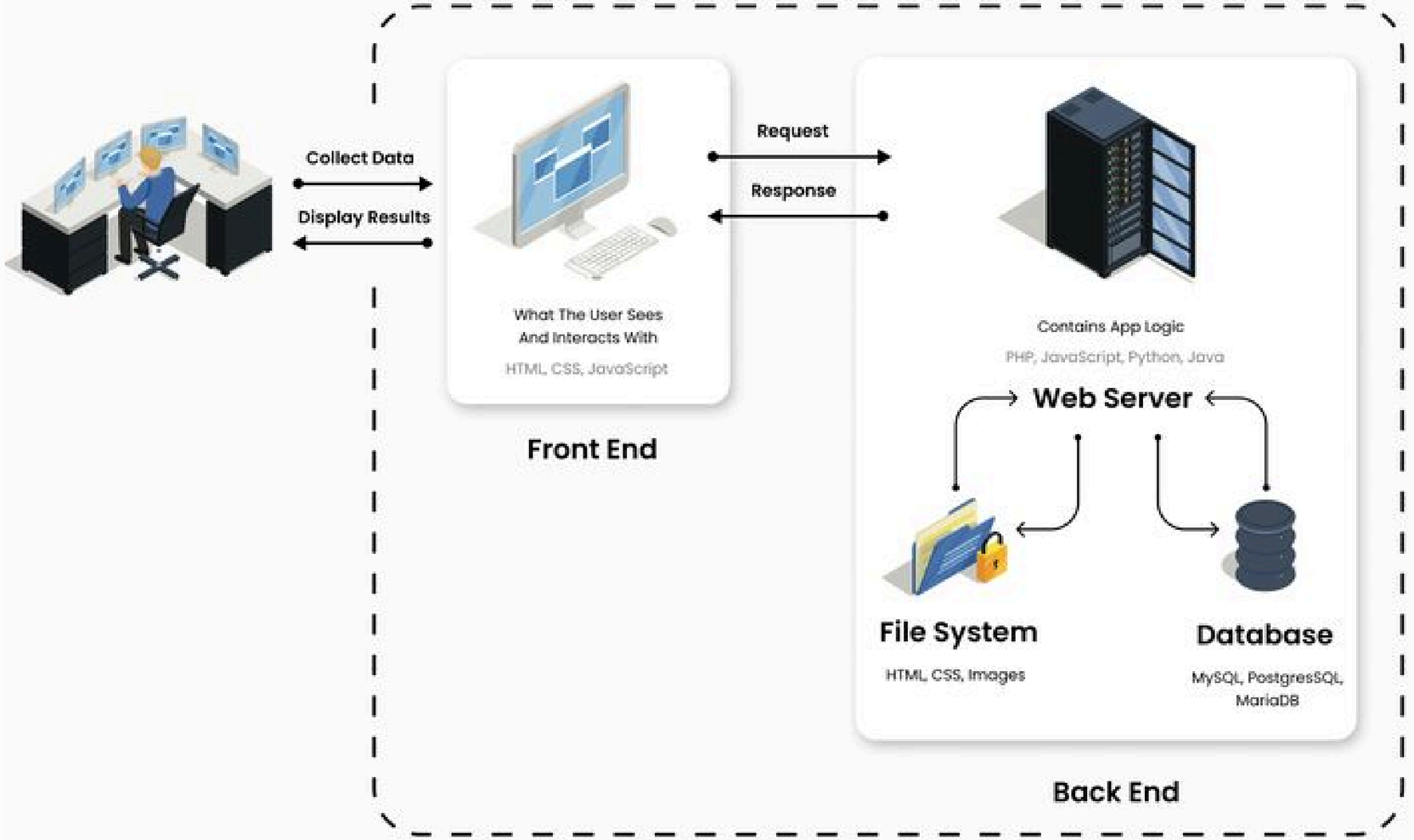

NCI
NCI

Why we need servers

- Central Storage & Access: Store apps, websites, and data in one place that clients can reach anytime.
- High Availability: Run 24/7 with backup power and networking so services stay online.
- Scalability: Distribute user requests across many machines to handle spikes in traffic.
- Security & Redundancy: Keep data safe in secure data centers with backups and fail-over.


Server
Router
Cloud
ISP
6 Port Switch
Printer
PDA
Computer
Computer
Computer

Web App Architecture Diagram: How It Works



Web Application Architecture

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How does your device know where to find that server on the internet?

How does typing something like amazon.com lead to the exact server storing Amazon’s website?

Domain and Hosting

Hosting

- Hosting is like the physical space where your website lives.
- It’s a server that stores all your files: images, HTML, CSS, videos, etc.
- Just like every shop needs a place to exist in the city, every website needs hosting to exist on the internet.

Example: A shop’s shelves hold products. A web host’s server holds your website files.

Domain

- A domain is the name people use to find your website.
- Instead of telling people your server's long IP address (like a confusing number), you give them a memorable name like myshop.com.

Example: Instead of saying “Go to building 192.168.4.73 on 5th Ave,” you say “Visit ‘ChocoDelight.com.’”

Hosting a website

Once you have Domain and Hosting:

a. You point your domain to your hosting server (by updating DNS records).
b. Now, when someone types your domain, the internet knows which server to go to.
c. The server delivers your website files to their browser.

How does the Internet know where to go?

Domain Name System (DNS)

- DNS stands for Domain Name System.
- It is like the phonebook of the internet.
- When you type a website like www.example.com, DNS helps your browser find the exact server (IP address) where the website lives.

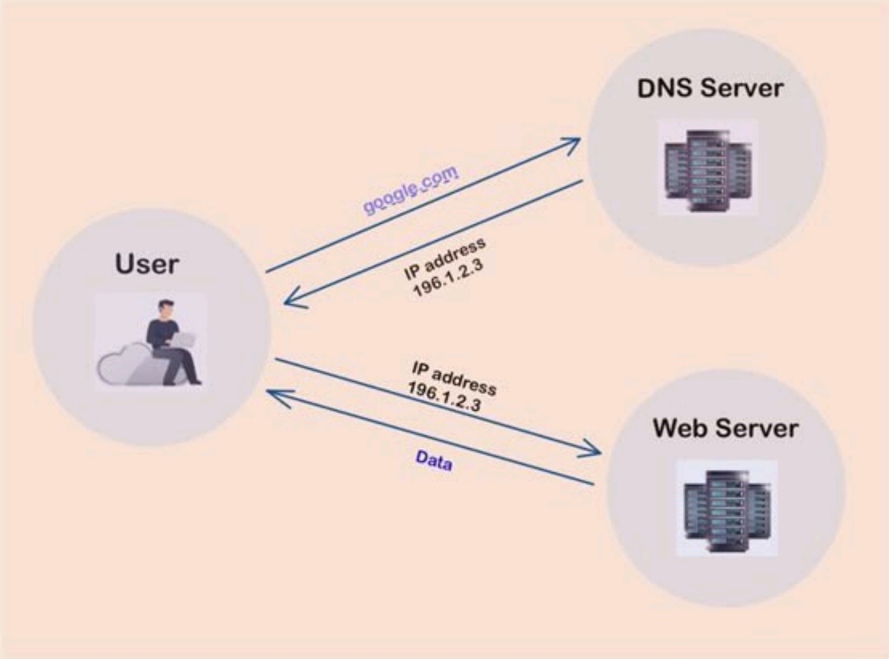
What is DNS?

DNS stands for Domain Name System.

DNS translates domain names to IP addresses for easy user access.

When a user types google.com in the web browser, the DNS server converts the website name to its corresponding IP address and returns it to the user.

Using the IP address, a web browser communicates with the Google web server and fetches the requested data.



Why DNS?

- Computers talk in IP addresses (e.g., 172.217.5.110), but humans remember names better.
- Just like we save names in our phone contacts instead of memorizing numbers, DNS maps domain names to IP addresses.
- Without DNS, you'd have to type something like 142.250.72.206 to open google.com.

End of Presentation