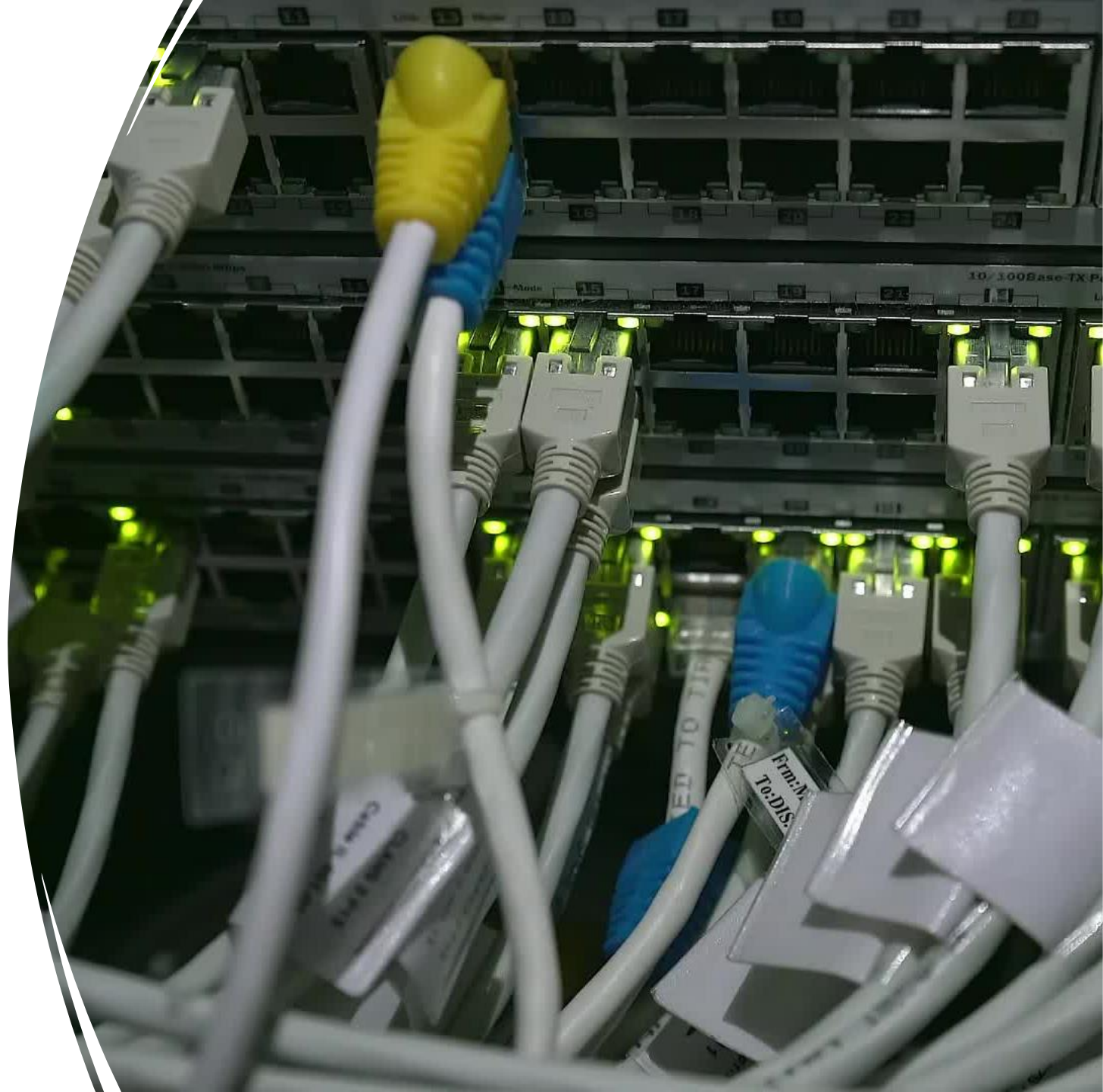


Client-Server Communication

Understanding how PCs (clients) communicate with servers to exchange information.



The Request & Response Model

- Clients send requests to servers. Servers process these requests and send back appropriate responses.

URLs and Domain Names

- URLs specify the address of resources. Domain names are part of the URL and help in locating the server.
- i.e. www.amazon.com, www.google.com and so on.

HTTP & HTTPS Protocols

- Protocols define rules for communication. HTTP and HTTPS are protocols that define how messages are formatted and transmitted on the web.

Friendly Example of Communication

- Imagine ordering food online. You (client) place an order (request). The restaurant (server) prepares the food and delivers it to you (response).

The Role of DNS

- DNS (Domain Name System) translates human-friendly domain names into IP addresses that computers understand. **It's like a phonebook for the internet.**

Common Status Codes



200 OK: Successful request.



404 Not Found: Resource not found.



500 Internal Server Error: Server error.

Detailed Communication Process

1. Client sends request via browser.
2. DNS resolves domain to IP address.
3. Server processes the request.
4. Server sends back the response.
5. Client displays the received data.

Practice Exercise

- Sketch out the steps involved when you enter a website URL in your browser and hit enter until the webpage is displayed.



Solutions to the Exercise

1. Browser checks cache for DNS record.
2. If not found, DNS lookup occurs.
3. Browser sends HTTP request to server IP.
4. Server processes request and sends back data.
5. Browser processes data and displays webpage.