

1. What is a webpage?

A **webpage** is a digital document that contains text, images, audio and videos. Webpages are built using HTML (HyperText Markup Language).

2. What is a website?

A website is a collection of webpages that are linked to each other (like Wikipedia or YouTube).

3. What is a web browser?

A **web browser** is the app or software we use to open and view websites.

- *Examples:* Google Chrome, Apple Safari, Microsoft Edge, and Mozilla Firefox.

4. How do we access a website?

To visit a website, we open a **web browser**. Type the website's unique address (called a **URL**) into the address bar. Browser then sends a request across the internet to fetch the pages and display them for us.

5. What is an URL and list its components?

URL stands for *Uniform Resource Locator*. It is a name for a website's specific internet address.

For example URL like <https://www.nihoc.in/aboutus>:

- **Protocol** (<https://>): The rules used to send the data.
- **Domain Name** ([nihoc.in](https://www.nihoc.in/)): The name of the website's home.
- **Path** ([/aboutus](https://www.nihoc.in/aboutus)): The exact location of the specific page or file you want to see.

6. What is a protocol?

A **protocol** is a set of rules that computers use to talk to each other safely and correctly. In a URL, you usually see **HTTP** or **HTTPS**. This tells the browser exactly how to package and move the data across the web.

7. What is a domain name?

A **domain name** is the human-friendly text address you type into a browser to visit a website (like google.com or bbc.com). It acts like the street address for a physical house, making it easy for us to remember where to go.

8. What is the role of the path in the URL?

The **path** comes after the domain name and works exactly like folders on your computer. It tells the browser exactly which specific page you want to open.

Example: In amazon.com/books, the path is /books, which takes you straight to the book section instead of the main homepage.

9. What is an IP address?

Computers do not understand words like "google.com". They use numbers. An **IP (Internet Protocol) address** is a unique string of numbers assigned to every single device connected to the internet. It looks something like 192.168.1.1 or 172.217.7.14.

10. What is the relationship between a URL and an IP address?

Every **URL** has a matching **IP address**.

- The **URL** is for humans (easy to read and remember).
- The **IP address** is for computers (easy to process).
- *The Analogy:* A URL is like a friend's name in your phone's contact list (e.g., "Alex"), and the IP address is their actual phone number (e.g., 9876543210).

11. What is a Domain Name Server (DNS)?

A **DNS (Domain Name System)** is often called the "phonebook of the internet." It is a massive, digital registry that keeps track of which domain name belongs to which IP address.

12. How does a DNS work?

When you type a domain name into your browser the below steps take place in sequence

1. **You request a site:** You type wikipedia.org.
2. **The browser asks the DNS:** "Hey DNS, what is the IP number for wikipedia.org?"
3. **The DNS looks it up:** The DNS checks its massive "phonebook/register" matrix.
4. **The DNS replies:** It sends back the exact number (e.g., 198.35.26.96).
5. **The browser loads the site:** Your browser uses that number to find the exact computer holding the website and displays it on your screen.