

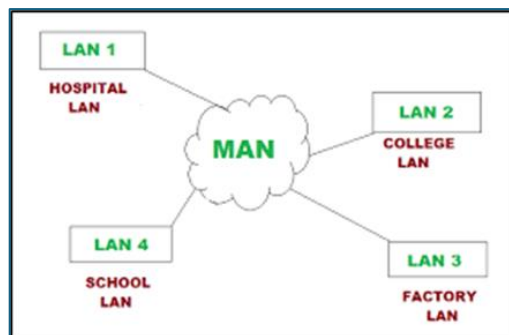
Introduction to Internet and Web Browsers

1. Computer Networks Basics

A **computer network** is a system where multiple computers are connected to share resources, data, and applications. Networks can be classified based on their size and range:

- **LAN (Local Area Network):** Covers a small area like a home, office, or building.

WAN (Wide Area Network): Covers a large geographical area like cities or countries. The Internet is the largest WAN.



2. Concept of the Internet

The **Internet** is a global network of computers connected using standardized protocols (TCP/IP). It allows users to share information, communicate, and access services worldwide.

Internet Applications:

The internet has many applications in all fields. The most important points that describe Internet Applications can be summarized in the following concepts:

1. **Online Communication:** Internet applications enable instant communication worldwide through email, messaging apps, voice calls, and video conferencing.

2. Information Access: They provide fast access to global information resources such as search engines, digital libraries, and educational databases.

3. Social Interaction: Internet applications allow social networking, online communities, and professional connections across geographical boundaries.

4. Online Commerce: They support electronic transactions, including online shopping, banking services, and digital payments.

5. Cloud Collaboration: They enable real-time teamwork using shared documents, cloud storage, and collaborative platforms.

6. E-Learning Support: Internet applications provide virtual classrooms, online assessments, and learning management systems for distance education.

7. Multimedia Services: They allow streaming of video, music, podcasts, and online gaming services for education and entertainment purposes.

3. Basics of Connecting to the Internet

To connect to the Internet, the following are needed:

- **ISP (Internet Service Provider):** Provides Internet connection.
- **Modem/Router:** Device to access the Internet.
- **Devices:** Computer, laptop, tablet, or smartphone.
- **Connection Types:**
 - Wired (Ethernet)
 - Wireless (Wi-Fi, Mobile Data)

4. World Wide Web (WWW)

The **WWW** is a collection of interconnected documents and resources linked by hyperlinks and URLs. It operates over the Internet using HTTP/HTTPS protocols.

5. Web Browsing Software

A **web browser** is software that allows users to access and view web pages. Popular browsers include:

- Google Chrome
- Mozilla Firefox
- Microsoft Edge
- Safari



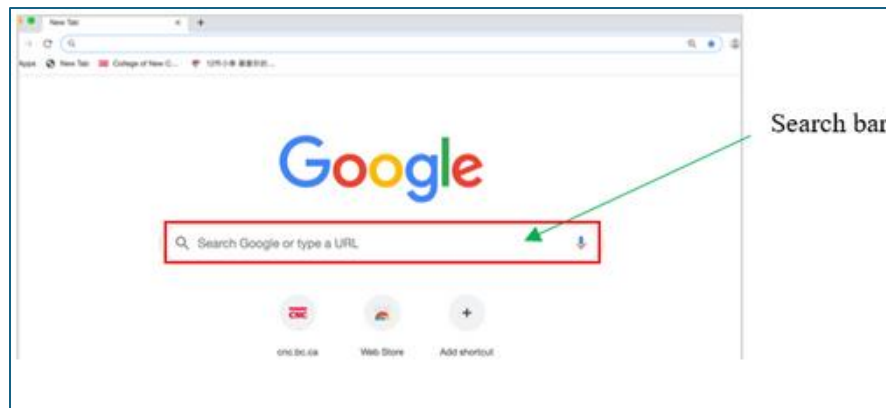
6. Search Engines

A **search engine** helps users find information on the web using keywords. Popular search engines:

- Google
- Bing
- Yahoo

Search the Internet Using a Web Search Engine

- 1- Open a search engine in a web browser (such as Google in Chrome).
- 2- Type a few specific keywords or phrases to describe whatever you wish to search in the search bar. Search engines look for the keywords in your query.
- 3- Press the Enter key on the keyboard.
- 4- Repeat the above steps if necessary.

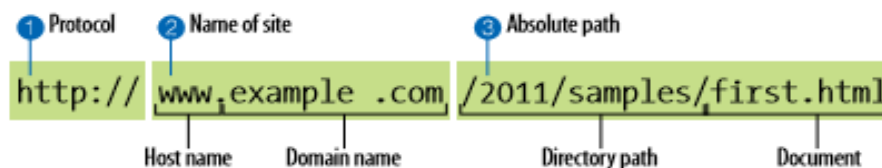


7. Understanding URL (Uniform Resource Locator)

The **URL** is the address of a web page. Example: <https://www.example.com/page1>

Components of URL:

- Protocol: `https://`
- Domain name: `www.example.com`
- Path: `/page1`



8. Domain Name

A **domain name** is a human-readable address for a website.

- Example: www.google.com
- Domains are registered with domain registrars.
- Top-Level Domains (TLDs) examples:
 - .com: commercial enterprise.
 - .edu: educational institution.
 - .gov: government entity.
 - .mil: military entity.
 - .net: network access provider.
 - .org: usually nonprofit organizations

9. IP Address

An **IP address**, which stands for "**Internet Protocol**," is a unique number assigned to each device on a network.

