Web Basics and Overview

Web Vocabulary

- In 1990 and 1991,Tim Berners-Lee created the World Wide Web at the European Laboratory for Particle Physics (CERN) in Geneva, Switzerland

- The original purpose of the **World Wide Web (WWW)** was to provide easy access to cross-referenced documents that existed on the CERN computer network

- **Hypertext linking** allows you to quickly open other Web pages

Web Vocabulary

- A document on the Web is called a **Web page**
- A Web page is identified by a unique address called the Uniform Resource Locator (**URL**)
- A URL is also commonly referred to as a **Web address**
- A URL is a type of Uniform Resource Identifier (**URI**)
- A **Web site** refers to the location on the Internet of the Web pages and related files

Web Vocabulary

- Web pages are displayed using a program called a **Web browser**

- A **Web server** is a computer that delivers Web pages

- The most popular Web server software is Apache HTTP Server (**Apache**)

- The second most popular Web server is Microsoft Internet Information Services (**IIS**) for Windows

Web ≠ WWW ≠ Internet

- **Internet:** a physical network connecting millions of computers using the same protocols for sharing/transmitting information (TCP/IP)
  - in reality, the Internet is a network of smaller networks

- **Web:** an internet-based distributed information system.

- **World Wide Web:** a collection of interlinked multimedia documents that are stored on the Internet and accessed using a common protocol (HTTP)

Key distinction: Internet is hardware; Web is software

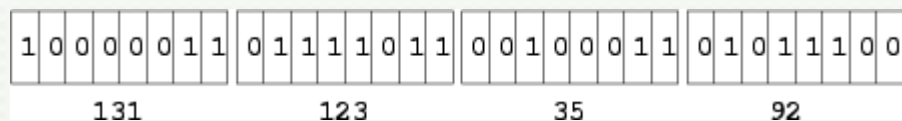Many other Internet-based applications exist

About Networking

- ## What is computer network?

  A computer network is a high-speed communications medium connecting many, possibly dissimilar ,computers or hosts.
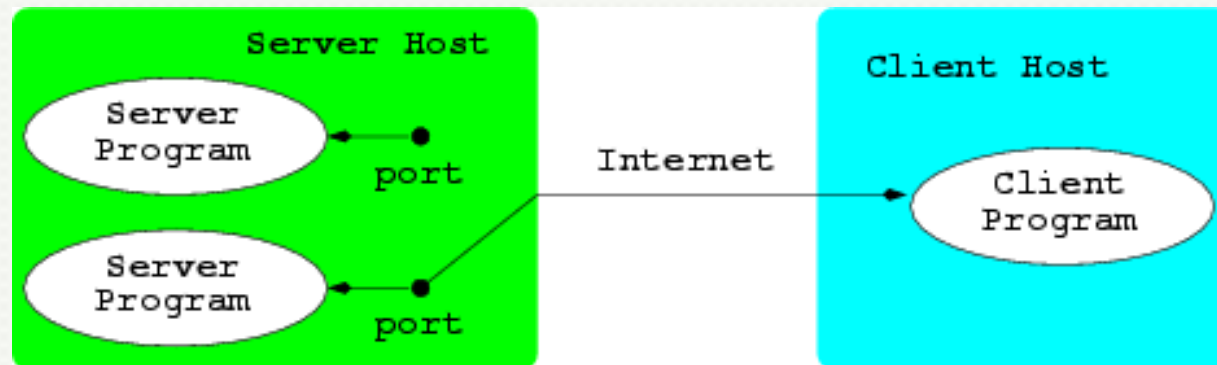
- ## Network Addresses

  An address to a host computer is like a phone number to a telephone. Every host on the internet has a unique network address that identifies the host for communication purposes.

1 0 0 0 0 0 1 1	0 1 1 1 1 0 1 1	0 0 1 0 0 0 1 1	0 1 0 1 1 1 0 0
131	123	35	92

  Each host has a unique IP address represented by 4 bytes in a 32-bit quantity. For example, 131.123.35.92

Client and Server

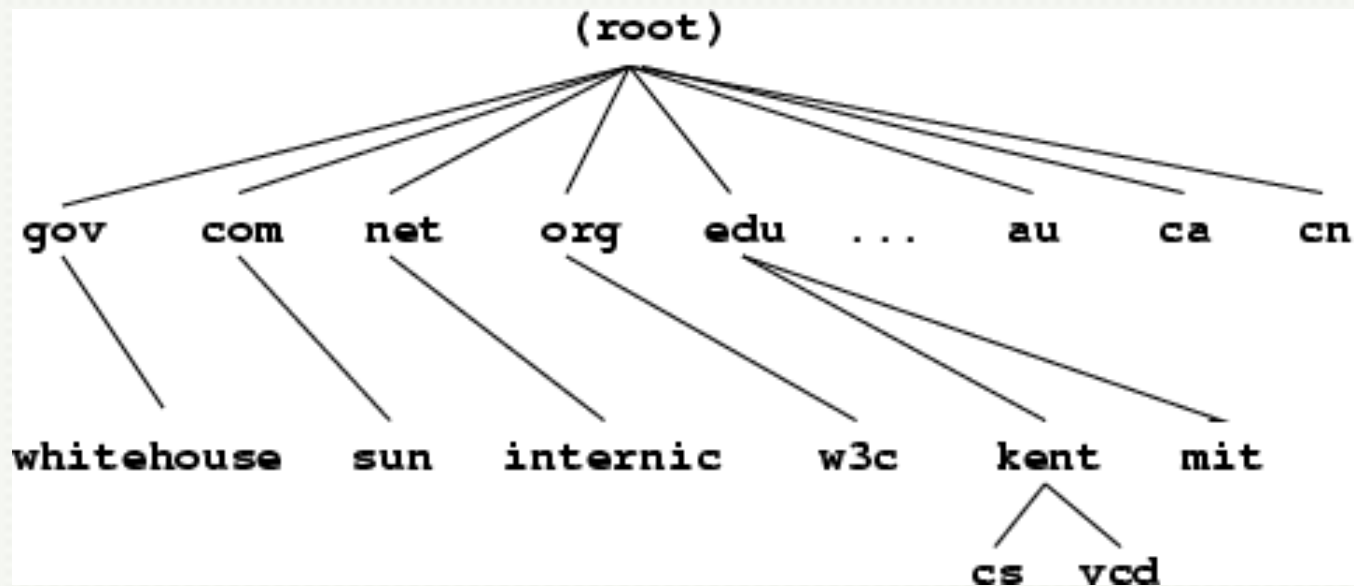A network application involves a server and a client.

HTTP		80
	Port number	
FTP	→	**21**
Telnet		**23**

DNS(Domain name system)

Domain name registration

- **Domain name registration**
  - Pick a domain name that is similar to your business name or that describes your Web site
  - You cannot use a domain name that is already in use or a trademarked name
  - Contact a **domain name registrar** to find out the availability of a domain name and register it
  - Domain names are stored in a master database that is maintained by the InterNIC

http://www.466453.com/
http://www.mamashuojiusuannizhucedeyumingzaichanggoogledounengsousuochulai.cn

Domain name registration

- A Web page is identified by a unique address called the **URL** (Uniform Resource Locator)
- Each URL consists of two basic parts:
  - A **protocol** (usually HTTP) and
  - Either the **domain name** for a Web server or a Web server's **Internet Protocol address**

Scheme	Short for	Used for
http	HyperText Transfer Protocol	Common web pages. Not encrypted
https	Secure HyperText Transfer Protocol	Secure web pages. Encrypted
ftp	File Transfer Protocol	Downloading or uploading files
file		A file on your computer

Scheme://server:port/pathname

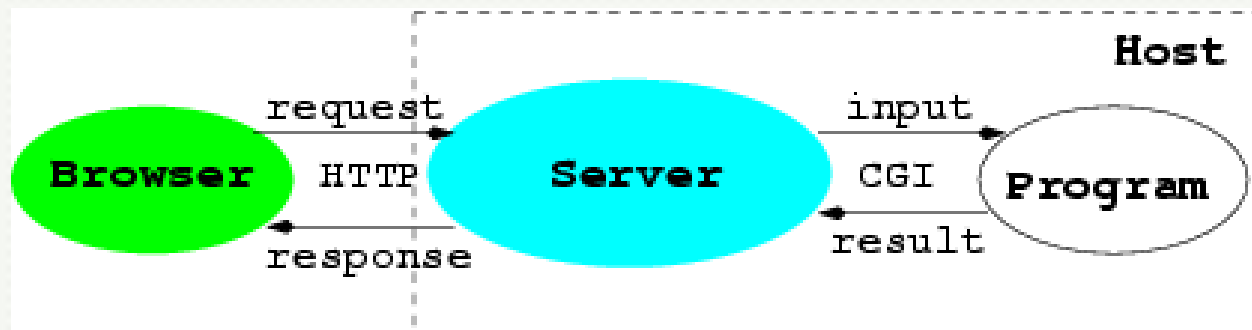**http://www.google.com/help/index.html**

Protocol   Domain name   Directory   Filename

Static vs. Dynamic pages

- most Web pages are *static*
- as the Web moves towards online services and e-commerce, Web pages must also provide *dynamic* content
- *Common Gateway Interface* (CGI) programming
- Active Server Pages (ASP), Java Server Pages(JSP), PHP(PHP:Hypertext Preprocessor), Server Side Includes

The End