

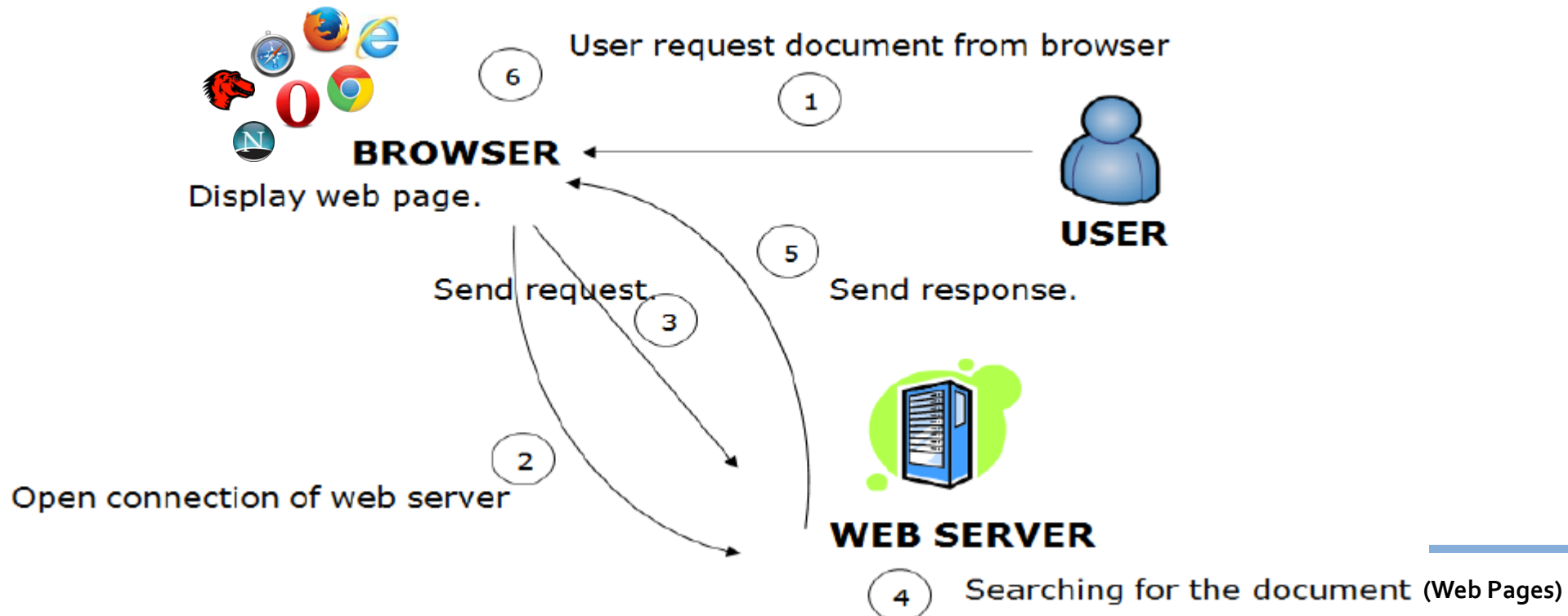
## 19. Web Hosting

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# Web Hosting Introduction

## What is the World Wide Web?

- A network of computers [all over the world](#)
- All the computers can [communicate with each other](#)
- All the computers use a communication protocol called [HTTP](#)



# Web Hosting Introduction (cont'd)

## ❏ How does a Browser Fetch a Web Page?

- A browser fetches a page from a web server by a request
- A request is a standard HTTP request containing a page address
  - Example for address : `http://www.example.com/default.htm`

## ❏ How does a Browser Display a Web Page?

- All web pages contain instructions for display
- The browser displays the page by reading these instructions
  - the most common display instructions are called HTML tags
    - `<p> This is a paragraph </p>`

# Web Hosting Introduction (cont'd)

## What is a Web Server?

- The collection of all your web pages is called your web site
- To publish your web site, you must copy your site to a web server
  - Your own PC can act as a web server if it is connected to a network
- Most common is to use an Internet Service Provider (ISP)

## What is an Internet Service Provider(ISP)?

- ISP provides Internet Services
- A common Internet service is Web hosting
  - Storing your web site on a public server
  - Normally includes email services
  - Often includes domain name registration

# Web Hosting Providers

- ❏ **To make your web site visible to the world, you'll have to store it on a web server**
  - Hosting your own Web site
  - Using an Internet service Provider
  
- ❏ **Hosting your own Web site (Some points to consider)**
  - Hardware Expenses
    - To run a “real” web site, you will have to buy some powerful server hardware
    - Will also need a permanent (24 hours a day) high-speed connection
  - Software Expenses
    - Server-licenses might have limits on number of users
  - Labor Expenses

# Web Hosting Providers (cont'd)

## ❏ Using an Internet Service Provider (some advantages)

- ❏ Connection Speed
  - Very fast connections to the Internet
- ❏ Powerful Hardware
- ❏ Security and Stability
  - Have more than 99% up time, the latest software patches, the best virus protection

## ❏ Things to consider with an ISP

- ❏ 24-hour support
- ❏ Daily backup
- ❏ Traffic Volume
- ❏ Bandwidth or Content Restrictions
- ❏ E-mail Capabilities
- ❏ Front page Extensions
- ❏ Database Access

# Web Hosting Domain Names

## What is a Domain Name?

- A unique name for a web site (example : w3schools.com)
- Domain names must be registered.
- Information about the web site, including the IP address, is stored on DNS
  - Domain Name System
  - DNS server is responsible for informing all other computers on the Internet about the domain name and the web site address

## Registering a Domain

- Can be registered from domain name registration companies
- These companies provide interfaces to search for available domain names, and they offer a variety of domain name extensions that can be registered at the same time

# Web Hosting Domain Names (cont'd)

## Choosing a Domain Name

- It is important to consider the purpose of a domain name, which is to provide an easy way to reach your web site.
- Short
  - A short domain name is easier to type, read, and remember
- Meaningful
  - Select a domain that relates to your site in a way that people will understand
- Clear
  - Avoid a name that is difficult to spell or pronounce
- Exposure
  - In order to maximize your sites exposure, consider including a relevant search term in your domain



# Web Hosting Domain Names (cont'd)

## ❏ Sub Domains

- For example
  - www, <http://store.apple.com>, <http://support.microsoft.com>
- Sub domains can be requested from your web hosting provider

## ❏ False Domain Names – Directory Listings

- For example
  - [www.theircompany.com/yourcompany](http://www.theircompany.com/yourcompany)
- This is not a real domain name, it is a directory – and you should try to avoid it

# Web Hosting Domain Names (cont'd)

## ❏ Expired Domains

- When you register a domain, think of it as a rental. Assuming there are no legal or trademark issues with the domain name, you are free to use it as long as you continue to pay the yearly fee

## ❏ Use Your Domain Name

- Use it on all your web pages, and on all your correspondence, like e-mail and traditional mail
- It is important to let other people be aware of your domain name, and to inform your partners and customers about your web site

# Web Hosting Capacities

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- ❏ **Make sure you get the disk space and the traffic volume you need**
- ❏ **How much disk space?**
  - Expect each HTML page to take up between 5 and 50KB of disk space on your web server, depending on the use of images or other space-consuming elements
  - Make sure you know your needs, before choosing a web host

# Web Hosting Capacities (cont'd)

## Monthly Traffic

- A small or medium web site will consume between 1GB and 5GB of data transfer per month.
  - Average page size \* expected page views per month
    - Average page size : 30KB
    - Expect 50,000 page views per month
    - $0.03\text{MB} * 50,000 = 1.5\text{GB}$
  - Commercial sites often consume more than 100GB of monthly traffic
- Before you sign up with a host provider, make sure to check this
  - What are the restrictions on monthly transfer?
  - Will the web site be closed if it exceeds the volume?
  - Will you be billed a fortune if the web site exceeds the volume?
  - Is upgrading a simple task?

# Web Hosting Capacities (cont'd)

## Connection Speed

- Connection speeds used on the Internet today

Name	Connection	Speed per second
Modem	Analog	14.4-56Kb
D0	Digital (ISDN)	64Kb
T1	Digital	1.55Mb
T3	Digital	43Mb
OC-1	Optical Carrier	52Mb
OC-3	Optical Carrier	156Mb
OC-12	Optical Carrier	622Mb
OC-24	Optical Carrier	1.244Gb
OC-48	Optical Carrier	2.488Gb

- Surf some other web sites on their servers, and try to get a good feeling about their network speed. Also compare the other sites against yours, to see if it looks like you have the same needs.

# Web Hosting E-mail Services

- ❏ Hosting services should include e-mail accounts and e-mail services

- ❏ **E-mail Accounts**

- Hosting solutions should include e-mail accounts for each person in your company
    - john@mycompany.com or John.doe@mycompany.com,  
jdoe@mycompany.com

# Web Hosting E-mail Services (cont'd)

## POP E-mail

- Post Office Protocol
  - Standard client/server protocol for sending and receiving e-mail
- e-mails are received and held on your internet server until you pick it up with a client e-mail program, like Microsoft Outlook or Mozilla Thunderbird
- Was designed to support e-mail access on one single computer

## IMAP Email

- Internet Message Access Protocol
  - Another standard protocol for sending and receiving e-mails
- Represents an improvement over POP
  - Because e-mail stored on an IMAP server can be manipulated from several computers, without having to transfer message back and forth between computers.

# Web Hosting E-mail Services (cont'd)

## ❏ Web-based E-mail

- Enable you to access your e-mail via a web browser
- You log into your e-mail account via the web to send and retrieve e-mail
- Example : Gmail, Hotmail

## ❏ E-mail Forwarding

- Allows you to have multiple e-mail personalities
- With e-mail forwarding, you can setup aliases for other e-mail accounts
  - Example : postmaster@mycompany.com should be forwarded to peter@mycompany.com

## ❏ Mailing Lists

- Some service providers offer mailing list capabilities
- This is valuable if you plan to send out e-mails to a large number of users



# Web Hosting Technologies

## Window Hosting

- Means hosting of web services that runs on the Window operating system
- You should choose Windows hosting if you plan to use ASP(Active Server Pages) as server scripting or you plan to use a database like Microsoft Access or Microsoft SQL Server
- Windows hosting is also the best choice if you plan to develop your web site using Microsoft Expression Web

## Unix Hosting

- Means hosting of web services that runs on the Unix operating system
- It is known for being reliable and stable.

## Linux Hosting

- Means Hosting of web services that runs on the Linux operating system

# Web Hosting Technologies (cont'd)

## CGI

- CGI scripts are executables, that will execute on the server to produce dynamic and interactive web pages
- Most common on Unix or Linux servers

## ASP (Active Server Pages)

- Server-side scripting technology developed by Microsoft
- With ASP you can create dynamic web pages by putting script code inside your HTML pages. The code is executed by the web server before the page is returned to the browser. Both VBScript and JavaScript can be used
- Standard component in Windows 95, 98, 2000 and XP

# Web Hosting Technologies (cont'd)

## PHP

- Widely-used, free, and efficient alternative to competitors such as Microsoft's ASP
- Perfectly suited for Web development, and can be embedded directly into the HTML code
- PHP syntax is very similar to Perl and C
- Often used together with Apache(web server) on various operating systems.
- Also supports ISAPI and can be use with Microsoft's IIS on Windows

## JSP

- Server-side technology much like ASP, developed by SUN
- With JSP you can create dynamic web pages by putting Java code inside your HTML pages. The code is executed by the web server before the page is returned to the browser
- Since JSP uses Java, the technology is not restricted to any server-specific platform

# Web Hosting Technologies (cont'd)

## Cold Fusion

- Server-side scripting language used to develop dynamic web pages
- Developed by Adobe

## Chili!Soft ASP

- A software product that allows ASP to run on UNIX and some other platforms

## Microsoft Expression Web

- Website design tool developed by Microsoft
- Allows users to develop a web site without any deep knowledge of web development
- If you plan to use Expression Web, you should look for a Window hosting solution

# Web Hosting Technologies (cont'd)

## Adobe Dreamweaver

- Website design tool owned by Adobe Systems
- Support for web technologies such as CSS, JavaScript, ASP.NET, ColdFusion, JavaServer Pages, and PHP.
- Available for both Mac and Windows operating system

## Secure Server

- Can transmit data encrypted
- If you plan to do online creditcard transactions or other types of web communication that needs to be protected against unauthorized access, your ISP must provide a secure server

# Host Types

## ❏ Hosting can be FREE, SHARED, DEDICATED

### ❏ Free Hosting

- ❏ Best suited for small sites with low traffic, like personal sites
- ❏ Technical support is often limited, and technical options are few
- ❏ Very often you cannot use your own domain name at a free site

Good:	Bad:
It's free.	No domain names.
Good for family, hobby or personal sites.	Few, limited, or no software options.
Free email is often an option.	Limited security options.
	Limited or no database support.
	Limited technical support.

# Host Types (cont'd)

## Shared (Virtual) Hosting

- Very cost effective
- Your web site gets its own domain name
- Is hosted on a powerful server along with maybe 100 other web sites
- Often offer multiple software solutions like e-mail, database, and different editing options

Good:	Bad:
Low cost. Cost is shared with others.	Reduced security due to many sites on one server.
Good for small business and average traffic.	Restrictions on traffic volume.
Multiple software options.	Restricted database support.
Own domain name.	Restricted software support.
Good support	

# Host Types (cont'd)

## Dedicated Hosting

- Your web site is hosted on a dedicated server
- Most expensive option
- Best suited for large web sites with high traffic, and web sites that use special software
- Very powerful and secure, with almost unlimited software solutions

Good:	Bad:
Good for large business.	Expensive.
Good for high traffic.	Requires higher skills.
Multiple domain names.	
Powerful email solutions.	
Powerful database support.	
Strong (unlimited) software support.	



# Host Types (cont'd)

## Collocated Hosting

- Means “co-location”
- Lets you place your own web server on the premises (locations) of a service provider
  - The same as running your own server in your own office, only that it is located at a place better designed for it.

Good:	Bad:
High bandwidth.	Expensive.
High up-time.	Requires higher skills.
High security.	Harder to configure and debug.
Unlimited software options.	

# Host Types (cont'd)

## Your Checklist

- Before you choose your web host, make sure that
  - The hosting type suites your needs
  - The hosting type is cost effective
  - Upgrading to a better server is possible
  - If needed, upgrading to a dedicated server is possible