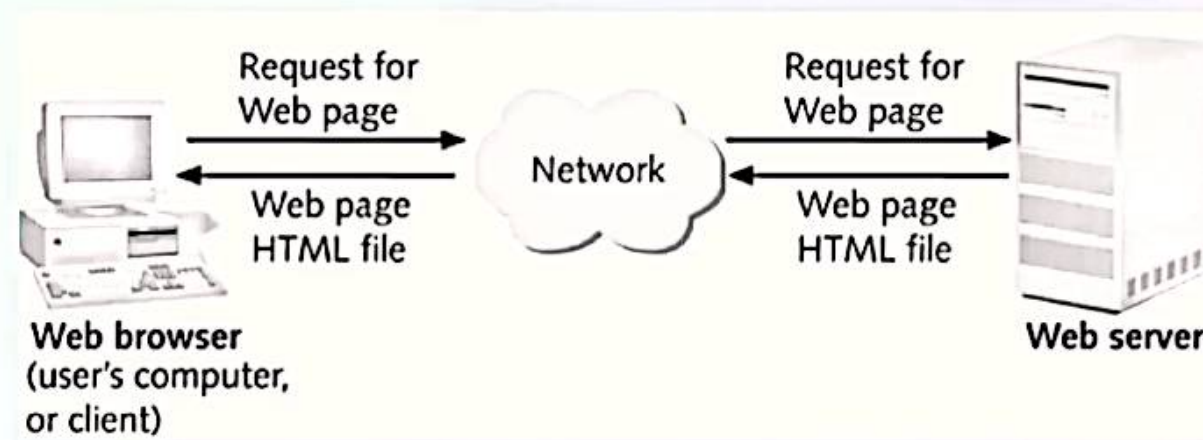


➤ Basic Web Architecture

Talking: H.M.C. Nirman

- ❑ The web is a two-tiered architecture.
 - A web browser displays information content
 - A web server transfers information to the client



➤ Web Browser

Talking: H.M.C. Nirmani

- ❑ A web browser is a software application for retrieving, presenting and traversing information resources on the world wide web.
- ❑ The browsers are primarily intended to access the world wide web.
- ❑ The purposes of a web browser is to bring information to the user.
- ❑ List of Web browsers:

- Windows
- Internet Explorer
- Mozilla Firefox
- Apple Safari
- Google Chrome
- Opera



➤ Web Server

Talking H.M.C. Nirman

- ❑ Web server is a computer program/software that listens for web page requests.
 - Apache
 - Microsoft Internet Information Server (IIS)
- ❑ A web server, it accepts HTTP requests and return HTTP responses with optional data content.

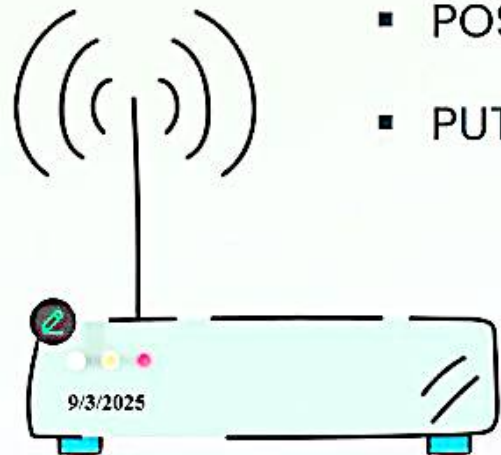


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➤ HTTP/ HTTPS Protocol

Talking H.M.C. Nirman

- ❑ HTTP means for Hypertext Transfer Protocol.
- ❑ It's a set of commands that are sent from a browser and understood by a web server.
- ❑ Some HTTP commands:
 - GET filename : download
 - POST filename : send a web form response
 - PUT filename : upload



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➤ HTTP/ HTTPS Protocol

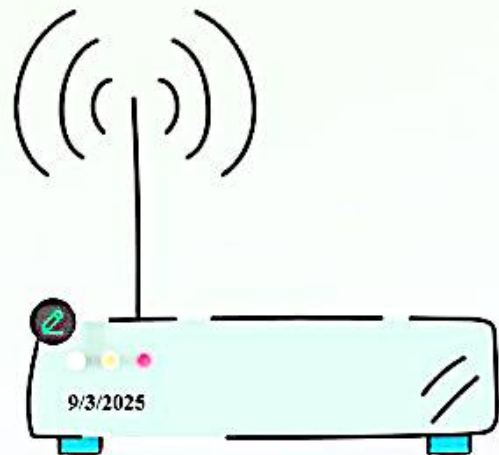
Talking H.M.C. Nirman

❑ HTTP error codes:

- Once we are browsing; if there's something that goes wrong, the web server returns a special "error code" number to the browser, possibly followed by an HTML document.
- Common error codes:

Number	Meaning
200	OK
<u>301-303</u>	page has moved (permanently or temporarily)
<u>403</u>	you are forbidden to access this page
<u>404</u>	page not found
500	internal server error

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➤ HTTP/ HTTPS Protocol

Talking H.M.C. Nirman

- ❑ HTTPS means for Hypertext Transfer Protocol Secure.
- ❑ This is the combination of HTTP with SSL/TLS protocol.
- ❑ It is the secure version of the HTTP.
- ❑ It provides encrypted communication and secure identification of a network server.
- ❑ The HTTPS connection are often used for payment transactions on the web and for sensitive transaction in corporate information system.



Activity

- Identify the difference between HTTP and HTTPS

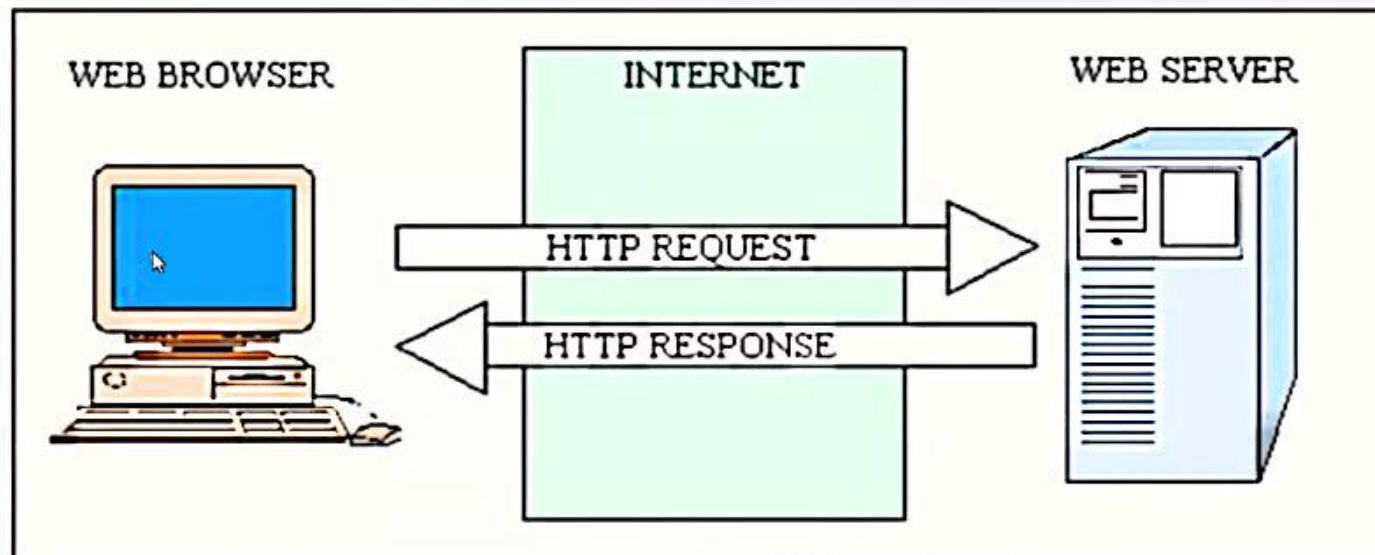


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➤ Communication between Web Browser & Web Server

Talking H.M.C. Nirman



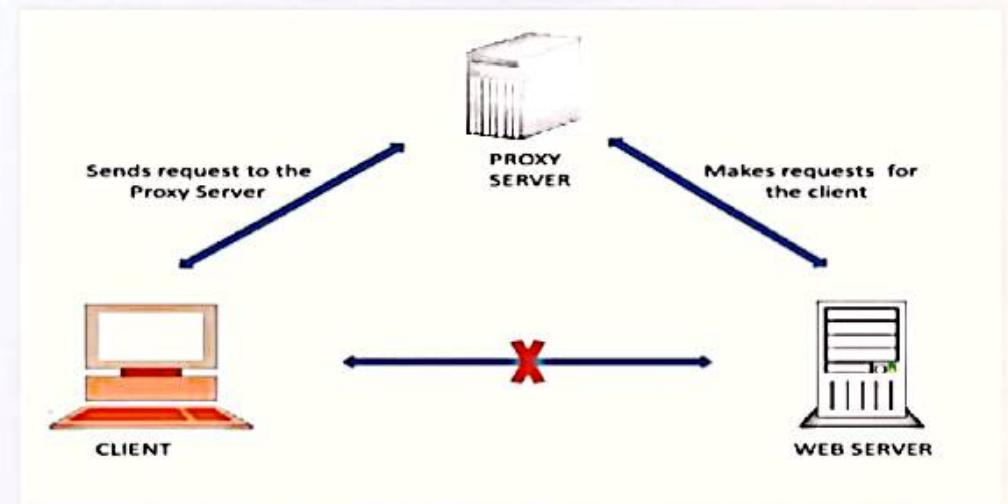
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➤ Proxy Server

Talking: H.M.C. Nirman

- ❑ In a computer network a proxy server is a server that act as a buffer between user computers' and the internet.
- ❑ With the use of proxy server in an enterprise can ensure security and improve the performance.
- ❑ Types of proxy servers:
 - Caching proxy server
 - Web proxy server
 - Content-filtering web proxy
 - Anonymizing proxy server



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Web Hosting

➤ Web Hosting

- ❑ Web hosting is an online service that enables to publish the websites or web applications on the internet.
- ❑ When we sign up for a web hosting service, it basically rent some space on a physical server where it can store all the files and data necessary for the website to work properly.
- ❑ Once we hosted a website on a web hosting service, it will be available all the time for anyone who wants to see it.



➤ Web Hosting

Talking H.M.C. Nirman

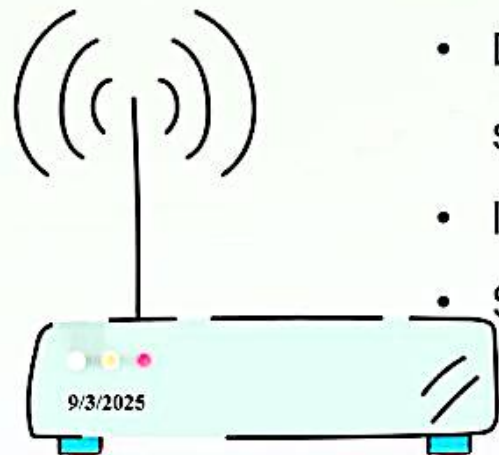
❑ Types of hosting packages:

○ Shared hosting:

- This is perfect for entry-level website hosting.
- In here, it will store multiple websites on the same server.
- With a shared hosting plan, all domains share the same resources as RAM and CPU.

○ Dedicated server hosting:

- Dedicated hosting gives website owners the most control over the server that their website is stored on.
- In here, the server is exclusively stored only one website on it.
- So the full root and admin access is only for the website hosted on it.



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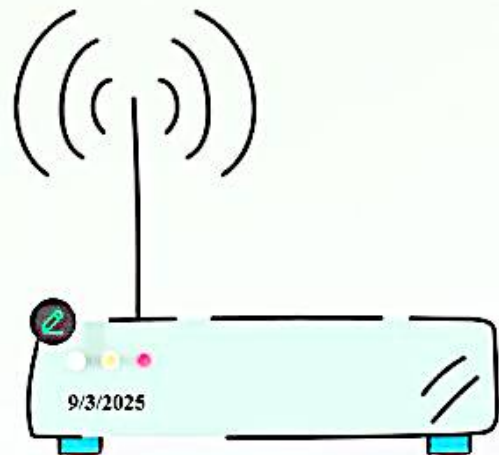
➤ Web Hosting

Talking

☐ Types of hosting packages:

○ Cloud hosting:

- Cloud hosting is the current buzzword of the technology industry.
- It means many computers working together, running applications using combined computing resources.
- This is a hosting solution that works via a network and enable companies to consume the computing resources like a utility.



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Talking: H.M.C. Nirmani

Web Architectures



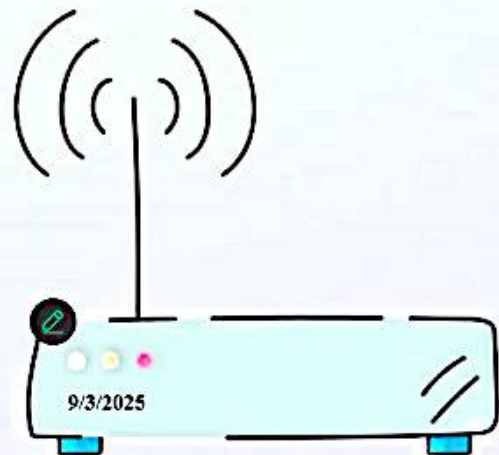
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➤ Static Web Page

Talking: H.M.C. Nirmani

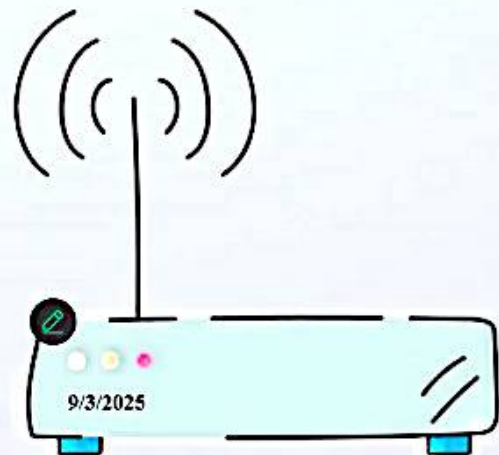
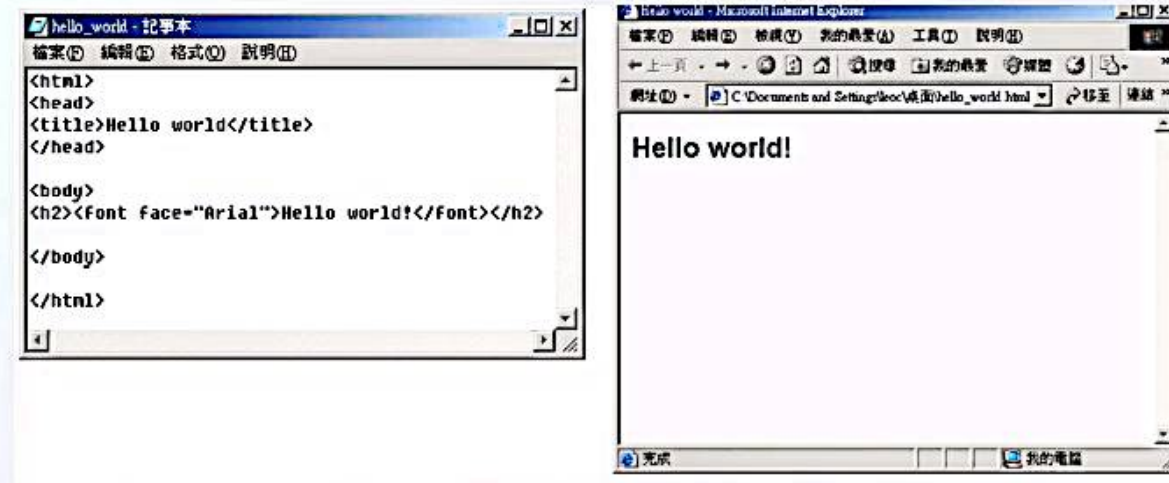
- ❑ A web page with contents that remain fixed and unchanged once it has been created by the author.



➤ Static Web Page

Talking: H.M.C. Nirmani

- ❑ A static document is simply any web page that is saved to disk and passed back to a requesting browser without changes.



➤ Dynamic Web Page

Talking H.M.C. Nirman

- ❑ A dynamic web page is any web page which has content that is changed by a program or script at the time the page is requested.
- ❑ In dynamic web pages the content can be customized according to the need of the user.
- ❑ When a request arrives the web server runs an application program that creates the document.
- ❑ The server returns the output of the program as a response to the browser that requested the document.



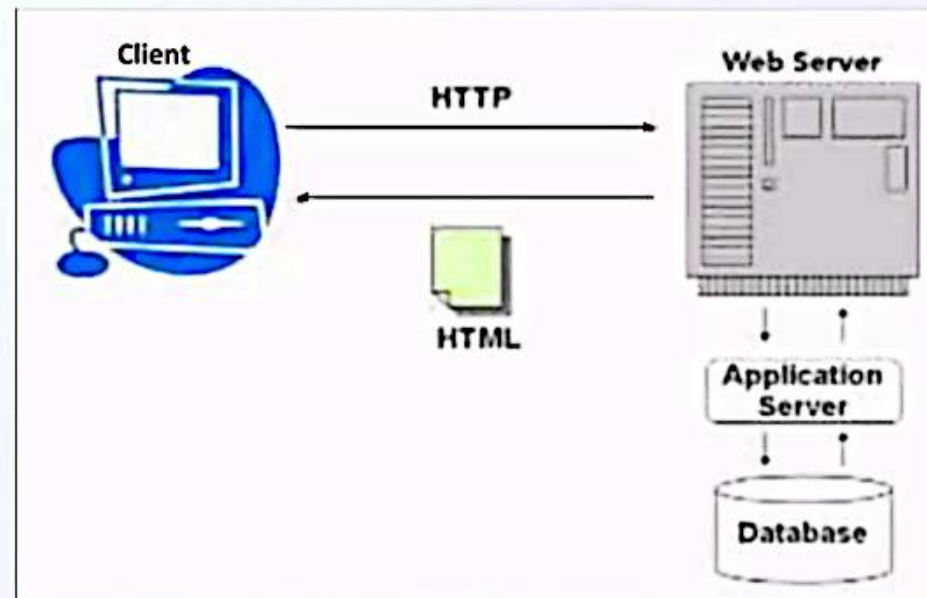
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➤ Dynamic Web Page

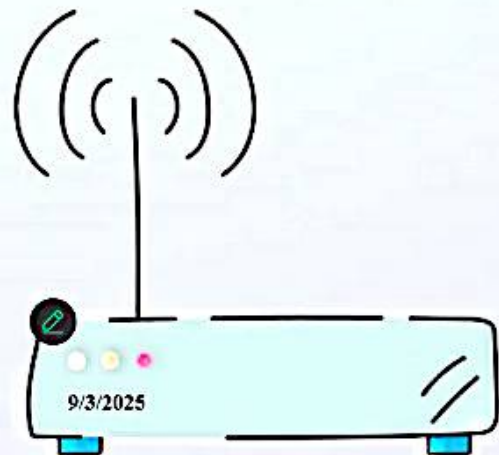
Talking: H.M.C. Nirmani

❑ Example:

- Return the system's current date and time to the browser.



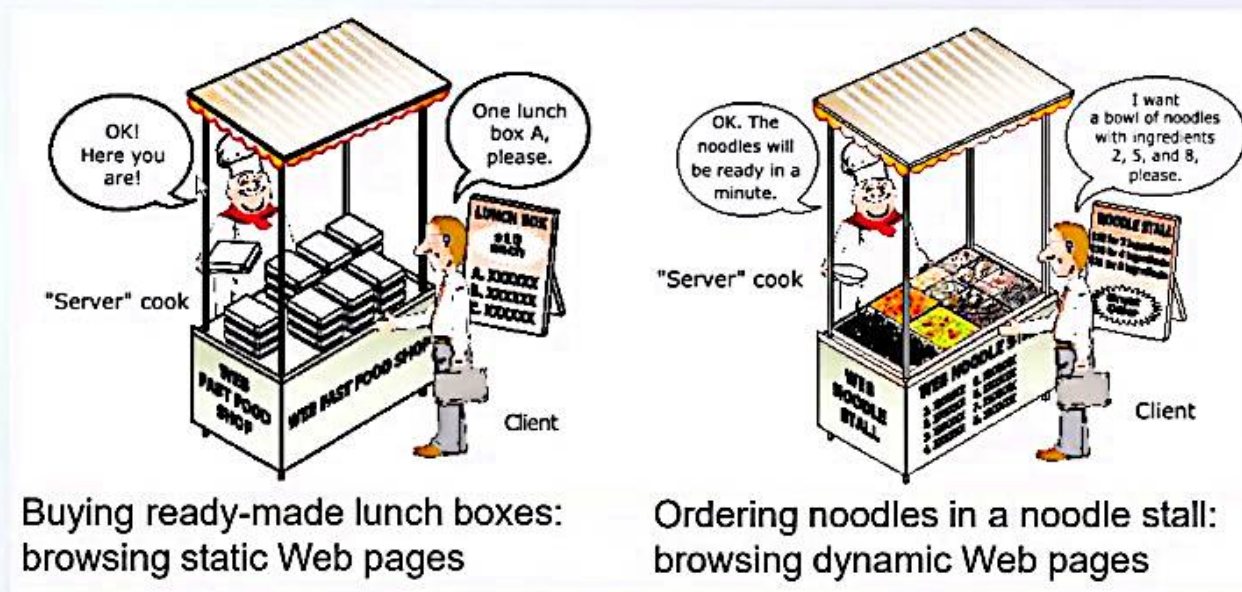
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➤ Static vs Dynamic Web Page

Talking: H.M.C. Nirmani

- Distinguish between Static and Dynamic web page



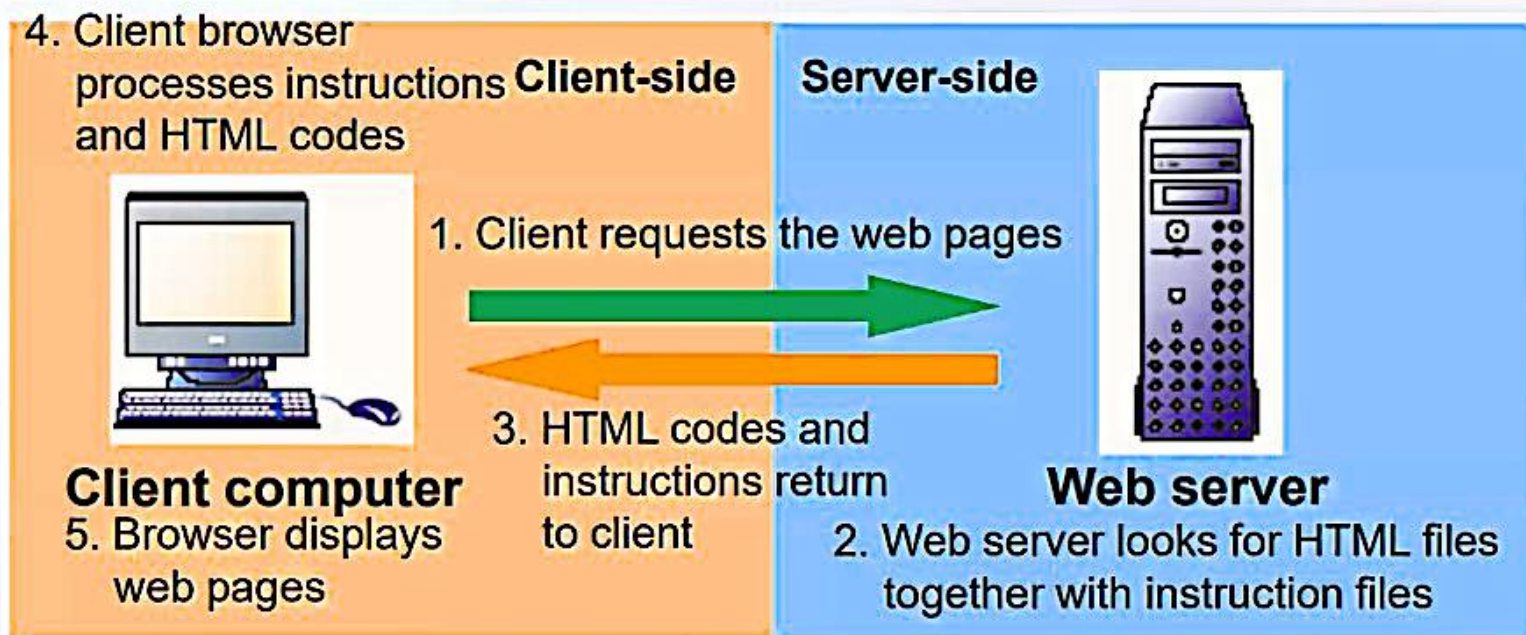
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➤ Client Side Dynamic Web Page

Talking: H.M.C. Nirmani

- ❑ The creation of the web pages takes place in the client's computer.



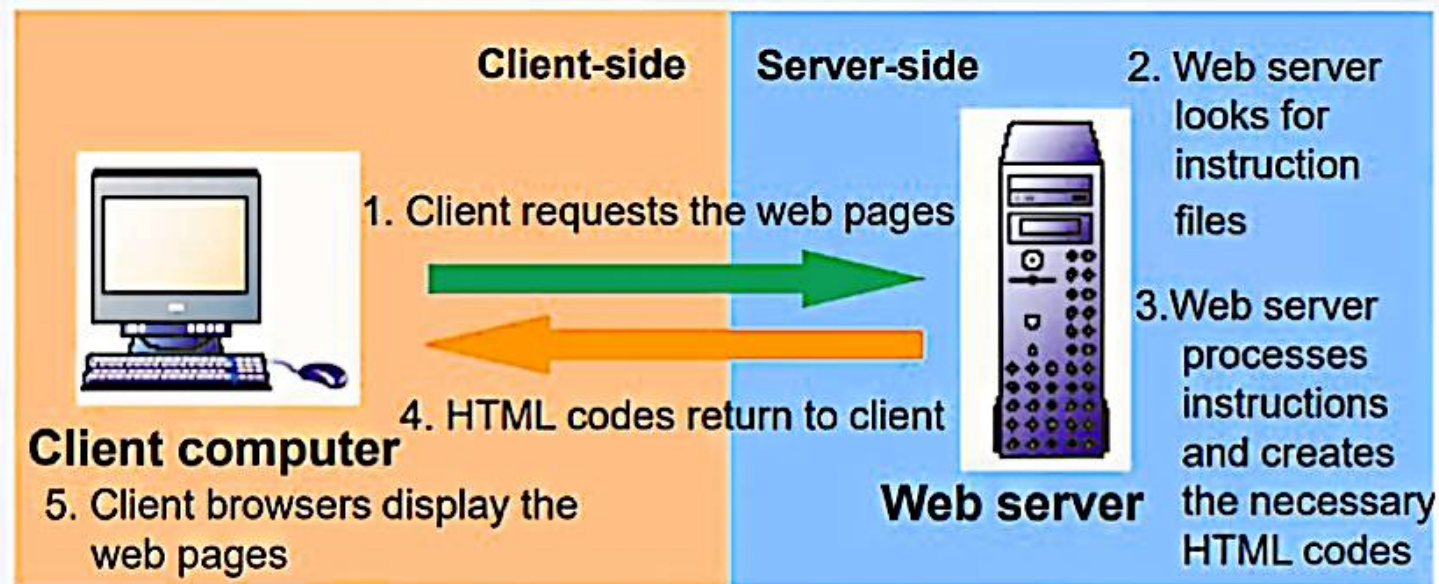
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➤ Server Side Dynamic Web Page

Talking: H.M.C. Nirmani

- ❑ The server is responsible for creating the web pages.



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Activity

- Distinguish between client side dynamic web pages vs server side dynamic web pages



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➤ Which Should I Use?

Talking H.M.C. Nirman

- ☐ If we need to have dynamic client forms with client-side validation, we must use client-side scripting.
- ☐ If we want the site to have highly interactive pages, we should use client-side scripting.
- ☐ If we need to provide the client with advanced functionality that can be created only using ActiveX controls, we must use client-side scripting.
- ☐ If we want to protect the source code, we must use only server-side scripting. All client-side source code is transferred to the browser.

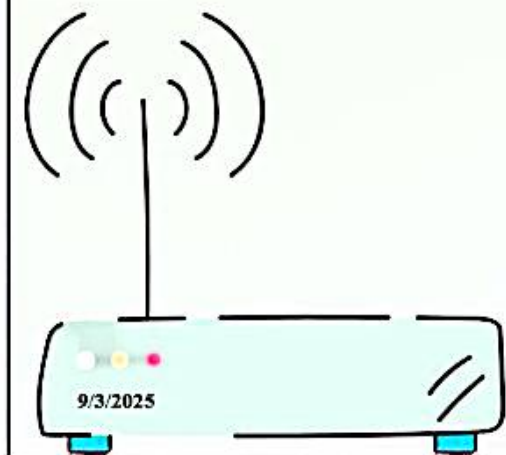


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➤ Which Should I Use?

Talking

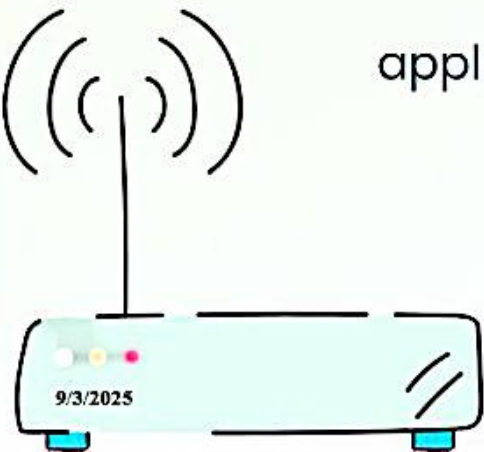
- ☐ If we need to track user information across several Web pages to create a "Web application," we must use server-side scripting.
- ☐ If we need to interact with server-side databases, we must use server-side scripting.
- ☐ If we need to use HTTP server variables or check the capabilities of the user's browser, we must use server-side scripting.



➤ Web Languages / Technologies

Talking H.M.C. Nirman

- ❑ Hyper Text Markup Language (HTML): use for writing web page
- ❑ Cascading Style Sheets (CSS): use for style the web page
- ❑ JavaScript: use for make the web page interactive and programmable
- ❑ Asynchronous JavaScript and XML (Ajax): accessing data for web applications



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