

A large, solid dark blue square occupies the left side of the slide, extending from the top to the bottom and from the left edge to approximately one-third of the way across the frame.

Web Development

edo Systemz

INTERNET

What is Internet?

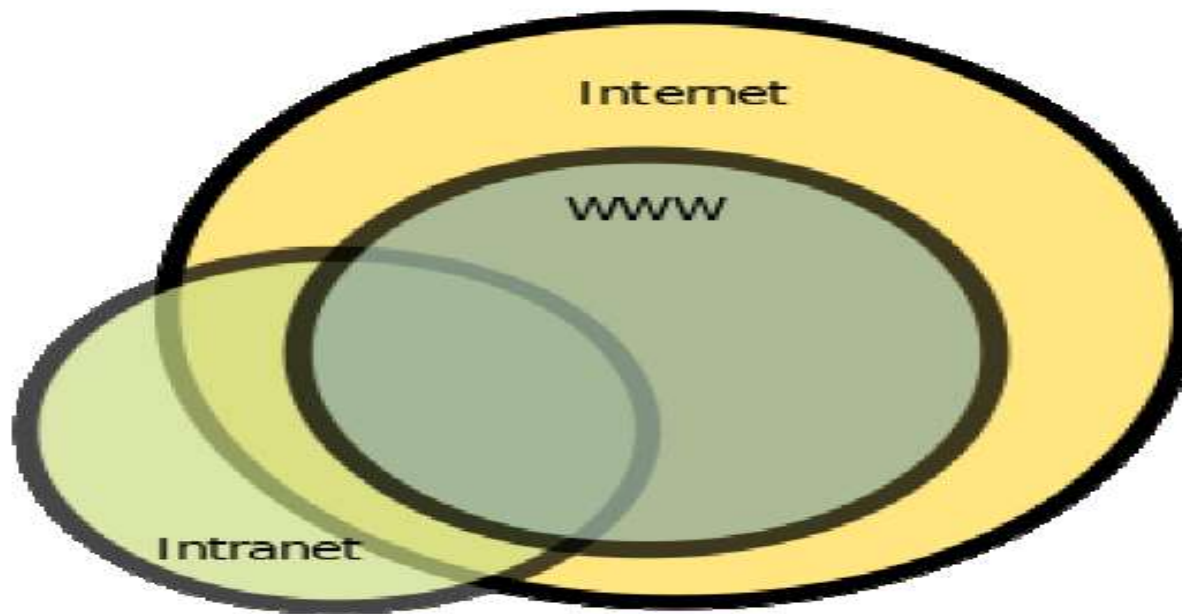
- The network formed by the co-operative interconnection of a large number of computer networks.
- Network of networks.
- No one owns the internet
 - Every person who makes a connection owns a slice of the Internet.
- There is no central administration to the Internet.
- Started in 1969 as a U.S. Department of Defense project called **Advanced Research Projects Agency Network (ARPANET)**
- Evolved into **National Science Foundation Network (NSFNET)** in 1987

NETWORK COMMUNICATION

So what is it actually?

- **A community of people**
 - who use and develop the networks.
- **A collection of resources**
 - that can be reached from those networks.
- **A setup to facilitate collaboration**
 - among members of the research and educational communities, world-wide.
- **The connected networks use the TCP/IP protocol.**

TYPES OF NETWORK

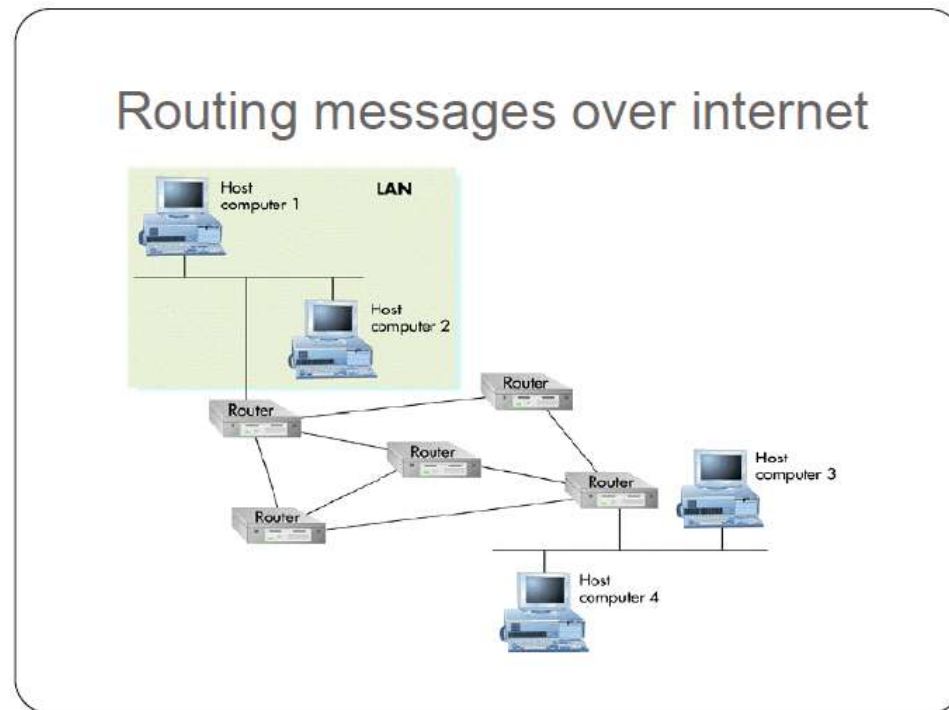


HOW INTERNET WORKS

How Internet works?

- The Internet transmits data from one computer (called a *host*) to another
- If the receiving computer is on a network to which the first computer is directly connected, it can send the message directly
- If the receiving computer is not on a network to which the sending computer is connected, the sending computer relays the message to another computer that can forward it

Routing messages over internet



History of Internet

History of Internet

- 1961 – First packet-switching papers
- 1966 –
 - Merit Network founded
 - ARPANET planning starts
- 1969 – ARPANET carries its first packets
- 1970 – Network Information Center (NIC)
- 1971 – Merit Network's packet-switched network operational
- 1971 – Tymnet packet-switched network
- 1972 –
 - Internet Assigned Numbers Authority (IANA) established
 - First Email message is sent
- 1974 – Telenet/Telnet packet-switched network
- 1976 – X.25 protocol approved
- 1979 – Internet Activities Board (IAB)
- 1980 – USENET news using UUCP
- 1980 – Ethernet standard introduced
- 1981 – BITNET established

History of internet

Merging the networks and creating the Internet:

- 1981 – Computer Science Network (CSNET)
- 1982 – TCP/IP protocol suite formalized
- 1982 – Simple Mail Transfer Protocol (SMTP)
- 1983 – Domain Name System (DNS)
- 1985 – First .COM domain name registered
- 1986 – Internet Engineering Task Force (IETF)
- 1988 – OSI Reference Model released
- 1989 – Border Gateway Protocol (BGP)
- 1990 – ARPANET decommissioned
- 1990 – Advanced Network and Services (ANS)
- 1991 – World Wide Web (WWW)
- 1992 – Internet Society (ISOC) established
- 1993 – Classless Inter-Domain Routing (CIDR)
- 1993 – InterNIC established
- 1993 – Mosaic web browser released
- 1994 – Full text web search engines

History of internet

Commercialization, privatization, broader access leads to the modern Internet:

- 1995 – New Internet architecture with commercial ISPs connected at NAPs
- 1995 – very high-speed Backbone Network Service (vBNS)
- 1995 – IPv6 proposed
- 1998 – Internet Corporation for Assigned Names and Numbers (ICANN)
- 1999 – IEEE 802.11b wireless networking
- 1999 – Internet2/Abilene Network
- 1999 – vBNS+ allows broader access
- 2001 – New top-level domain names activated
- 2006 – First meeting of the Internet Governance Forum
- 2010 – First internationalized country code top-level domains registered
- 2012 – ICANN begins accepting applications for new generic top-level domain names

Internet services

Internet services or applications

- E-mail- Outlook, Yahoo, Gmail
- Newsgroups and discussion groups
- Internet Relay Chat
- Instant messaging
- FTP-File Transfer Protocol
- Gaming
- Video On Demand
- Internet telephony Voice Over IP – Telephone Services
- File Sharing

WWW

World Wide Web(WWW)

- *A system of interlinked hypertext documents accessed via the Internet*
- Latest revolution in the internet scenario.
- Allows multimedia documents to be shared between machines.
 - Containing text, image, audio, video, animation.
- Basically a huge collection of inter-linked documents.
 - Billions of documents.
 - Inter-linked in any possible way.

WWW

World Wide Web(WWW)

- WWW makes only a portion of what makes up the internet.
- Lets people, organizations and companies publish information as hypertext documents(Web pages) for other people to see.
- "**Web pages**" that are stored on computers around the world and are connected to one another using hyperlinks.
- Web pages can be seen by anyone by "**Web Browser**"
- A group of Web pages that follow the same theme and are connected together with hyperlinks is called a "**Web site.**"
- Web sites and Web pages are written in a coding language that makes it possible to add pictures, sound and interactivity to plain old text, making people's reading experience more exciting.

Web addresses

- Just like every house has a postal code, each Web page has an address describing where it can be found. On the Web these addresses are called URLs (Uniform Resource Locator).

<http://www.google.com/services/index.htm>

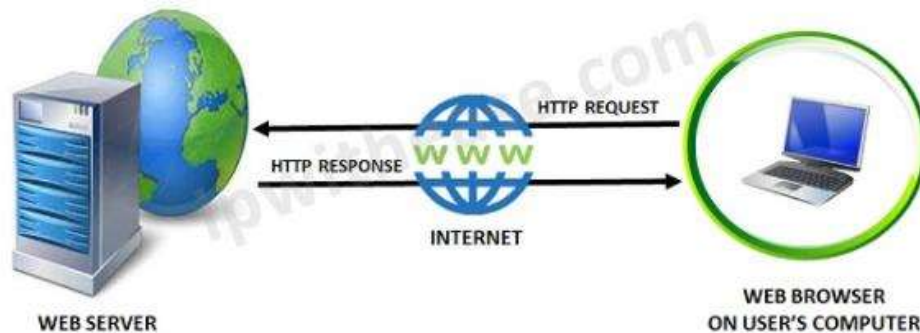
- **http://** - **Protocol** - This part of the address indicates that it is a Web page.
- **www** - This indicates that the Web page you are looking at is part of the World Wide Web. Many Web sites do not use www but are still part of the Web.
- **google.com** - This part of the address is the domain name and indicates the unique address of a Web site.
- **/services/** - The "/" symbol indicates you have moved into a specific directory in the Web sites. Directories are like the folders on your computer and help to organize Web pages in a Web sites.
- **index.htm** - A word with ".htm" or "html" following it indicates the name of the specific page in the Web site you are looking at.

Domain Affiliations

Domain	Affiliations
arts	cultural and entertainment activities
com	business organizations
edu	educational sites
firm	businesses and firms
gov	government sites
info	information service providers
mil	military sites
nom	individuals
net	networking organizations
org	organizations
rec	recreational activities
store	businesses offering goods for purchase
web	entities related to World Wide Web activities
net	networking organizations

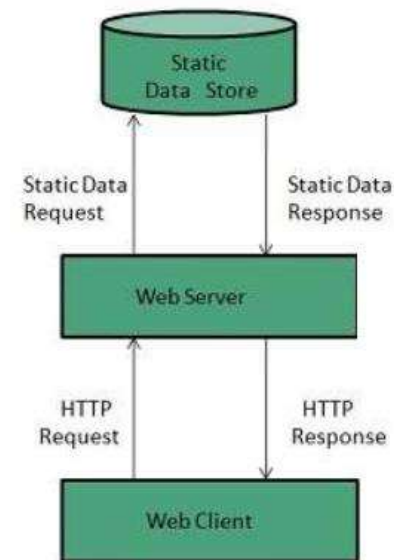
What is Web?

- The Web is the common name for the **World Wide Web (WWW)**
- The Web is just one of the ways that information is **shared over the Internet**.
- The Web consisting of the pages that can be accessed **by a Web browser** such as Internet Explorer, Google Chrome, Mozilla Firefox
- Web pages are formatted in a language called **HTML**.
- The Web uses **HTTP protocol** to transmit data and share information.

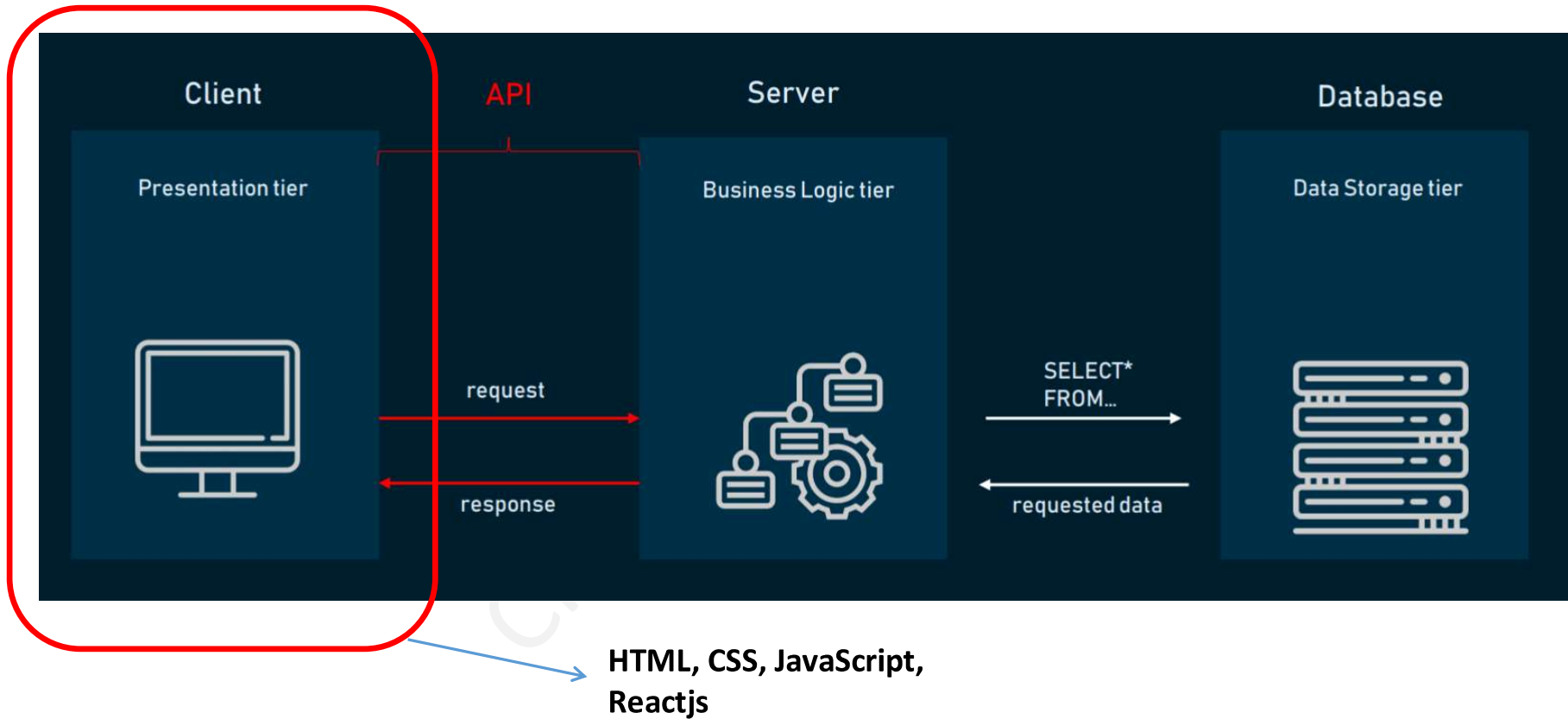


What is Web Server?

- Web server is a computer where the web content is stored
- Web server is used to host the web sites
- When client sends request for a web page, the web server search for the requested page if requested page is found then it will send it to client with an HTTP response.



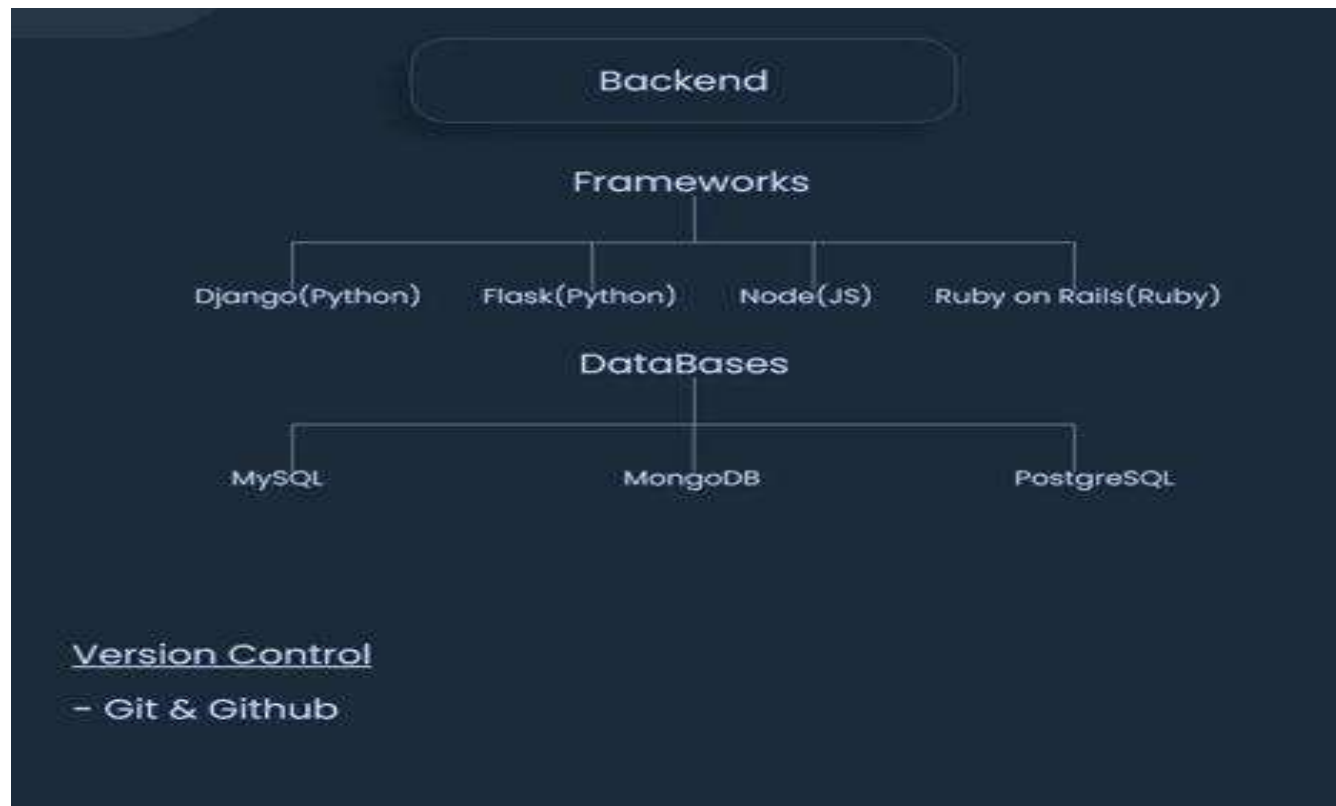
Application Architecture



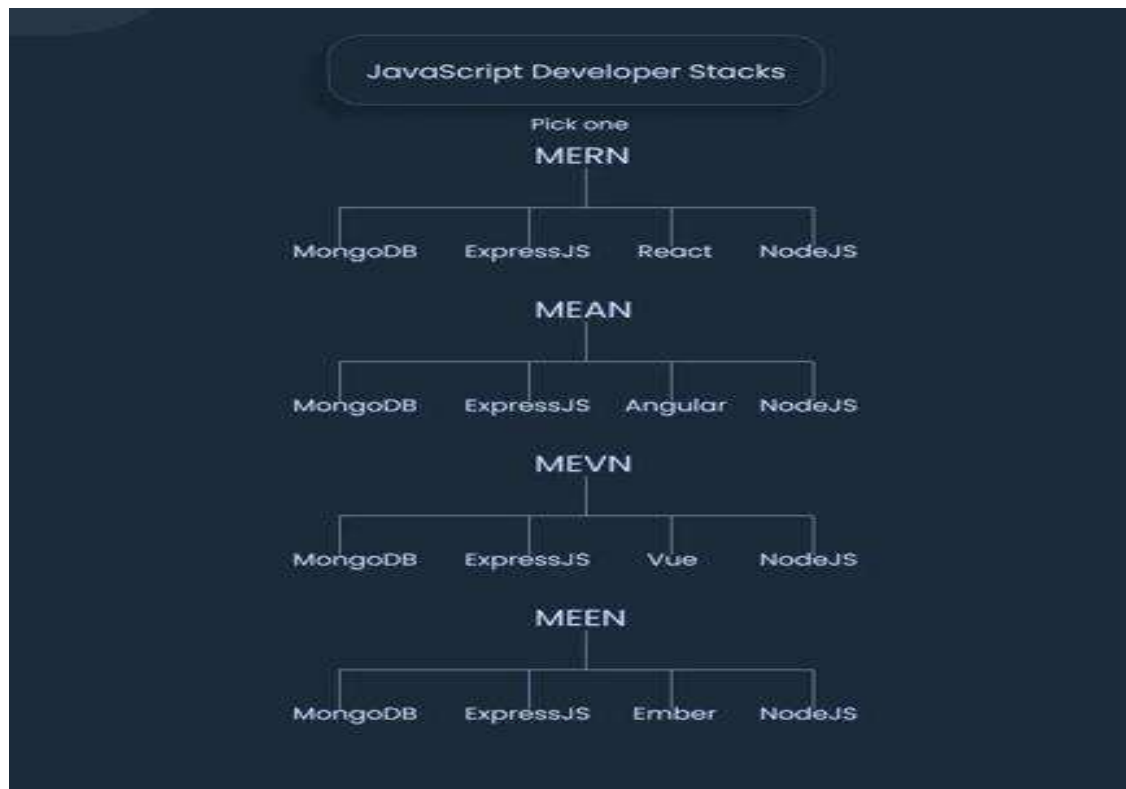
FRONTEND FRAMEWORKS



BACKEND FRAMEWORKS



JAVASCRIPT FRAMEWORKS



What is HTML?

- HTML (HyperText Markup Language) is the most basic building block of the Web.
- HTML describes the structure of a Web page.
- HTML consists of a series of elements.
- HTML elements tell the browser how to display the content.
- HTML elements are represented by tags.
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on.
- Browsers do not display the HTML tags, but use them to render the content of the page