

Web Engineering

Instructor

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Web Engineering

- Actively promotes systematic, disciplined and quantifiable approaches towards successful development of high-quality, usable Web-based systems and applications.
- In particular, Web engineering focuses on the methodologies, techniques and tools that are the foundation of Web application development and which support their design, development, evolution, and evaluation.

What is WEB

- Is it means WWW?
- Then what is WWW?

Information system where documents and other web resources are identified by URLs which may be interlinked by hyperlinks, and are accessible over the Internet.

Network Protocols

Layer	Data unit	Function ^[3]	Examples
7. Application	Data	High-level APIs, including resource sharing, remote file access, directory services and virtual terminals	HTTP, FTP, SMTP, SSH, TELNET
6. Presentation		Translation of data between a networking service and an application; including character encoding, data compression and encryption/decryption	HTML, CSS, GIF
5. Session		Managing communication sessions, i.e. continuous exchange of information in the form of multiple back-and-forth transmissions between two nodes	RPC, PAP, SSL, SQL
4. Transport	Segments	Reliable transmission of data segments between points on a network, including segmentation, acknowledgement and multiplexing	TCP, UDP, NETBEUI
3. Network	Packet/Datagram	Structuring and managing a multi-node network, including addressing, routing and traffic control	IPv4, IPv6, IPsec, AppleTalk, ICMP
2. Data link	Bit/Frame	Reliable transmission of data frames between two nodes connected by a physical layer	PPP, IEEE 802.2, L2TP, MAC, DHCP, LLN
1. Physical	Bit	Transmission and reception of raw bit streams over a physical medium	Ethernet physical layer, DSL, USB, ISDN,

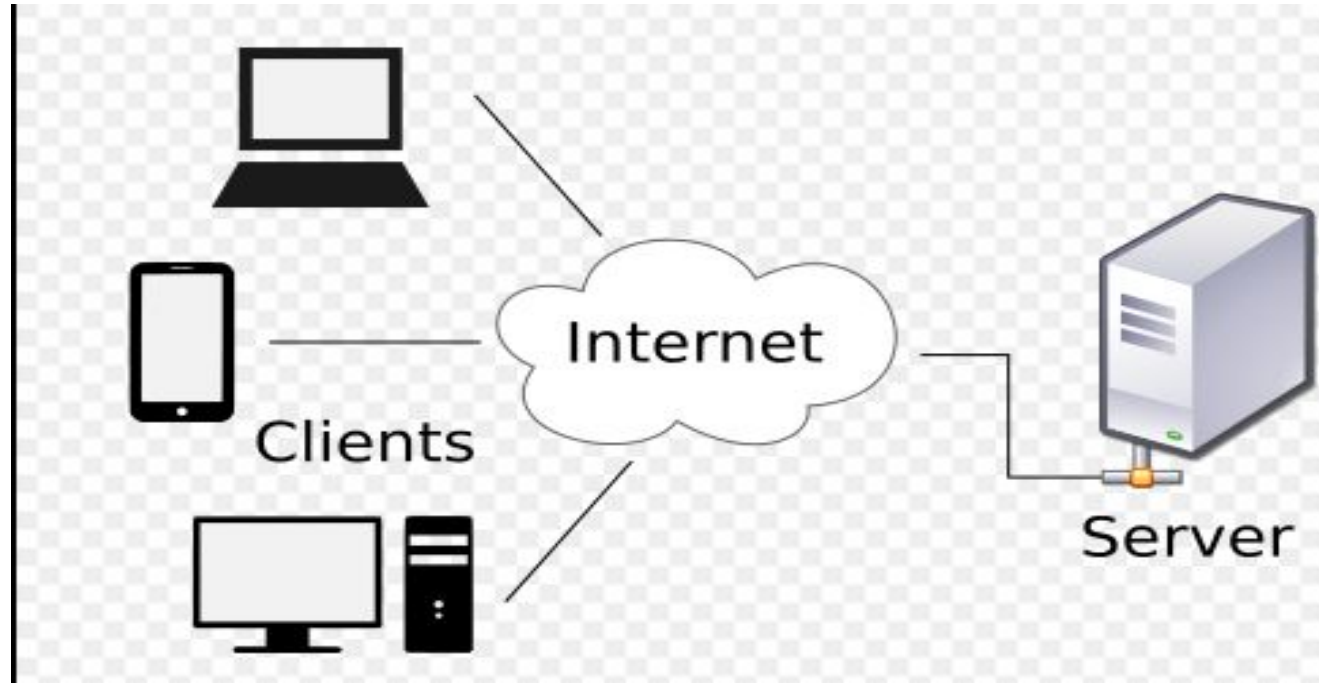
HTTP

- HTTP (Hypertext Transfer Protocol) is the set of rules for transferring files (text, graphic images, sound, video, and other multimedia files) on the [World Wide Web](#).

Web Application

- a **web application** or **web app** is a client-server software application in which the client (or user interface) runs in a web browser. Client requests services from a program hosted at server machine.

Web Application Traditional Architecture



Client or FrontEnd Development Languages

- HTML
- CSS
- Bootstrap
- Angular JS

Back-End Development Languages

- Java
- Python
- Php

Web Application Servers

- Software to manage web applications
- Apache Tomcat
- Glassfish

Databases (DBMS)

- Oracle
- MySql (we would opt this)
- Sql Server 2000

MEAN Stack

MongoDB Express JS Angular JS Node Js

MERN Stack

MongoDB Express JS React JS Node JS