

CSF421 - Computer Networks - SFO

Lecture 02 - Application Layer: HTTP

Request information to a server and receive the information. (Client-to-server)

Server is not mandatory, take information from another client (acting as server)

(Peer-to-Peer; P2P)

HTTP - protocol

www - host

www.ac.bd - domain

tech - path

index.html - file

* web page consists of objects

* everything you can see - text, images etc.

HTTP Messages

(1) Request (client) - GET path (ASCII format)

(11) Response (server)

carriage return - returns to start of the line (\r)

new line (\n)

user agent - Browser

accept - specify the files it can accept

accept-language - select specific language

connection - close (one request; one response)

* If IP is uploaded to server in entity body

* Input is uploaded in URL field of req. line

GET - information retrieval; URL method of data insertion

POST - create new data; can duplicate data / Post method - web page has form input

HEAD - only responds to the header, asks server to leave the requested output out of response; Ex. size of file (excludes data + retrieves header)

PUT - checks for duplicates; replaces existing files

DELETE - deletes file

Header lines - what type of data, size, details etc.

Status Code - 404 Error

200 OK

100 continue

\r\n after header - extra line → represents the data is starting from next line.

Status codes - 200, 301, 400, 404, 505

Error - client-side & Server-side

Cookies - Browser specific

HTTP - Stateless (cannot show previous objects when you visit the website)

↳ + cookies - Stateful (can show you previous/similar objects)

* Generates a cookie ID for the user/client

* a database keeps record of which cookies were generated for which client

* set cookie (different browser has different cookie file)

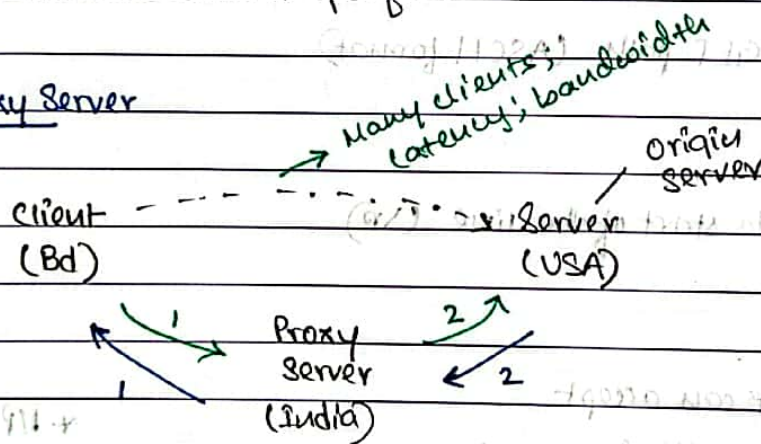
↳ sets your cookie ID on the cookie file

↳ requests w/ cookie ID

Chrome - visited a website, cannot see previous results

↳ cookies are browser specific,

Proxy Server



client 02

- initially does not have requested file

- for client 02, the proxy server already has a copy of the requested file

State cache - old data; does not have updated data

↳ conditional GET - (i) 200 ok - there is an update

(between proxy

& origin server)

(ii) 304 not modified - no update

the data that the proxy had - state