README

Makefile is provided in the src repository to compile the code into .class files

Compile : **make**

Run: **java SimpleServer**

Implementation Details

-The server runs on port 4244

Server prints its hostname and port on the console

It accepts a client socket connection and processes it in a new Thread called ClientHandler so as to not block the main thread

-ClientHandler is a separate thread of execution to handle a client request

Inside run(), it reads the GET request and processes the same

It parses the request to get the resource file name

It then searches for www folder and tries to locate the file in www

Upon finding the file, it prepares a response HTTP 1.1 200 OK

It creates a response body containing – Date, Server Name, Last-Modified Date, Content-type and Content-Length. It then puts in the file in bytes and outputs to client connection through outputstream

If the file is not found, an output of 404 Not Found would be sent

Once the request is processed & file is found, it increments the count of requested resource in a key-value pair datastructure containing resource name and number of times it is requested.

Server prints this information along with client IP and port in the format, resourceName|IP|Port|Count

The thread completes its task and returns.

Sample Input

sdesai12@remote02:~$ wget http://remote01.cs.binghamton.edu:4244/sample.html

Sample Output

**(Client side)**

--2020-10-01 19:29:54-- http://remote01.cs.binghamton.edu:4244/sample.html

Resolving remote01.cs.binghamton.edu (remote01.cs.binghamton.edu)... 128.226.114.201

Connecting to remote01.cs.binghamton.edu (remote01.cs.binghamton.edu)|128.226.114.201|:4244... connected.

HTTP request sent, awaiting response... 200 OK

Length: unspecified

Saving to: ‘sample.html’

sample.html [ <=> ] 243 --.-KB/s in 0.001s

2020-10-01 19:29:54 (293 KB/s) - ‘sample.html’ saved [243]

**Sample.html**

Content-Type: text/html

Date: Thu, 01 Oct 2020 23:29:54 GMT

Last-Modified: Thu, 01 Oct 2020 23:29:18 GMT

Content-Length : 107

<!DOCTYPE html>

<html>

<body>

<h1>Test: First Heading</h1>

<p>Test: first paragraph.</p>

</body>

</html>

**(Server side)**

-------Got a new connection

Read GET /sample.html HTTP/1.1

-Server Hostname:remote01

-Server Port4244

Read User-Agent: Wget/1.20.1 (linux-gnu)

Read Accept: \*/\*

Read Accept-Encoding: identity

Read Host: remote01.cs.binghamton.edu:4244

Read Connection: Keep-Alive

sample.html|128.226.114.202|56258|1

Out of loop



