Http Client: Questions to Answer

HTTP 1.1 Client - Simple GET - Questions

1. What status code is returned for each page?

2. Where did you change the code from simple.html to noSuchPage.html?

3. What port is used for these pages?

4. When surfing to these pages in the browser: why don't we write the port?

5. What headers are returned for each request? What does each of them mean?

Secure From Scratch

LAB: HTTP 1.1 Client - Different Server

15 min

Change the http client to "surf" to: http://httpbin.org

Answer the questions:

1. How many code lines did you need to change?

2. What happens if you write a different *hostname* in each of those code lines?

3. In which code lines can you use the site's ip address?
   HINT: Use ping *httpbin.org* to get its ip address

4. What happens if you don't send the *Hostname* header?

Secure From Scratch

LAB: HTTP 1.1 Client - Code Improvements

7 min

Change the code so you can control the hostname, port, path from one place - the beginning of the main method:

```
String hostname = "www.securefromscratch.com";

int port = 80;

String path = "/simple.html";
```

Secure From Scratch

LAB: HTTP 1.1 Client - Saving to a File
20 min

1. In the line that defines *bodyOutputFilename,* change the initialization to a filename:

   ```
   String bodyOutputFilename = "a.html";
   ```

2. Execute the client and open *a.html*. What happened?

3. Change the code so only the body (without response status, headers) is saved into the file.
   HINT: the loop in *outputToConsole()* should break after the last header - but only if we are saving to a file.

4. Re-run the client and open the file in a browser.

Secure From Scratch

LAB: HTTP 1.1 Client - Saving to a File

20 min

1. Change *bodyOutputFilename* to *"flag.gif"*

2. Change the hostname, path, port so the client access: *http://www.flags.net/images/largeflags/ISRA0001.GIF*

3. Execute the client and open *flag.gif*. What happened?

4. Look at the headers.
   a) Which header told us it is a gif file?
   b) Which header told us the number of bytes in the gif file? (make sure *flag.gif*'s size is 3278 bytes)

Accessing BusyBee with our own Simple Http Client

Secure From Scratch

LAB: HTTP 1.1 Client - Access BusyBee

10 min

Open another instance of the IDE.

Load and execute BusyBee's server.

With the http client, try to access:
http://localhost:8080/index.html
http://localhost:8080/main/main.html

What response do you get for each attempt? Why?

Secure From Scratch

LAB: HTTP 1.1 Client - A Better Access of BusyBee

10 min

In the browser - login to busybee.

In the DevTools look for the JSESSIONID cookie.

Add this header to the headers sent by the http client:
Cookie: JSESSIONID=<*copy/paste value from browser*>\r\n

1. Try to access http://localhost:8080/main/main.html.
   Why does it work?

2. (Continued in next slide)

Secure From Scratch

LAB: HTTP 1.1 Client - A Better Access of BusyBee (continued)

8 min

2. Can you access http://localhost:8080/tasks?

3. Who's tasks do you see?

4. What is the output format? (according to *Content-Type*)

5. What do you need to do to see another user's tasks?

6. What happens if you restart the BusyBee server and run the http client again? Why?