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CTT – COMPUTER NETWORK

PROJECT

PROJECT-01: SOCKET PROGRAMMING

I. Information

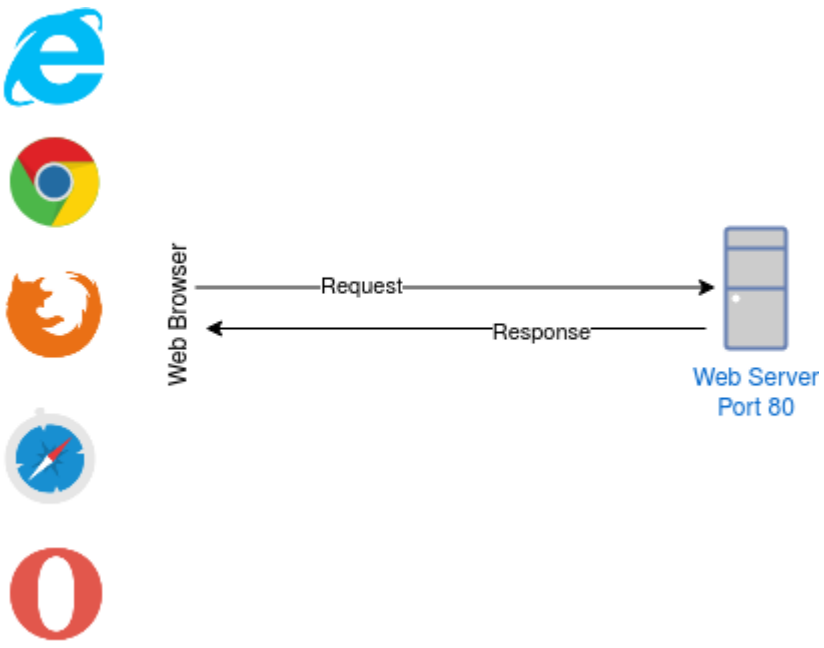
ID:	PROJECT-01
Estimated time:	4 weeks
Deadline:	
Type:	Group (maximum 2 students)
Submission:	Via Moodle
Teacher assisstant:	Chung Thuy Linh
Contact:	ctlinh@fit.hcmus.edu.vn

II. Learning outcome

The student will reach to:

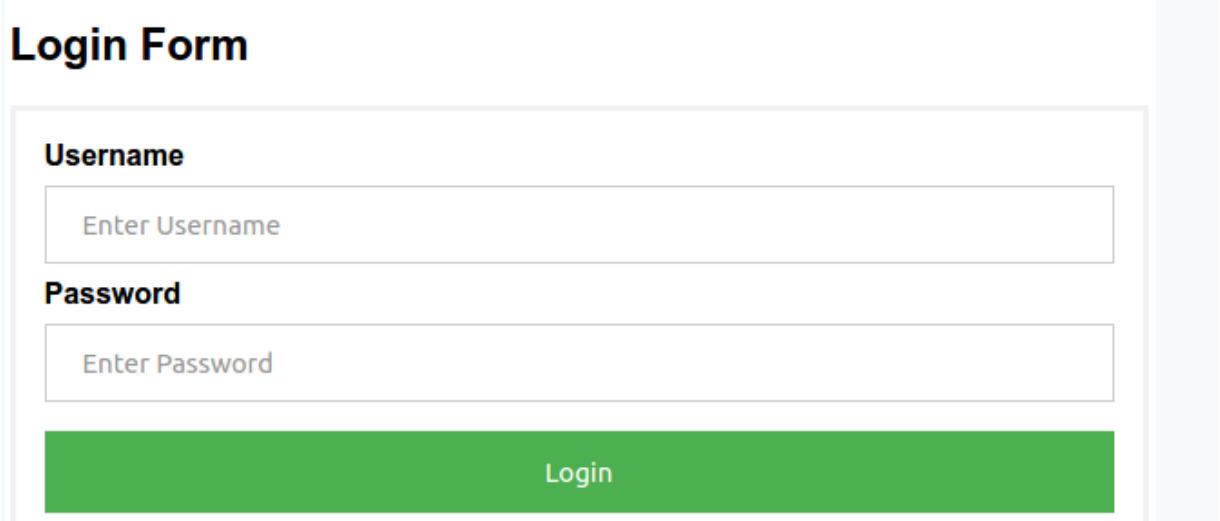
- Understand how to connect two application via a network, specify at the transport layer
- Explore to socket programming: client – server architechture
- Deep understanding of HTTP protocol, a protocol at the application layer

III. Description:

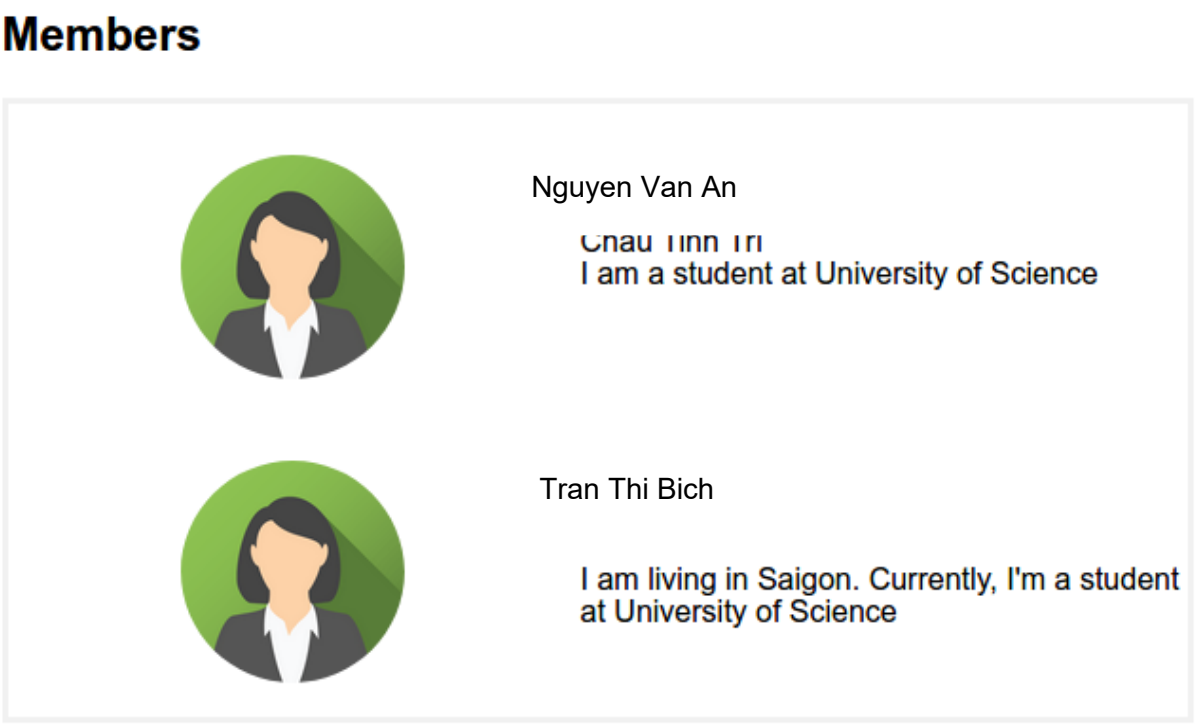


Write a web server application (using socket programming) to return the following web page content:

1. Page **index.html**: Perform the submiss form for the user to log in such as:



2. From the index.html page above, the user enters the username "admin" and the password "admin", using the HTTP method as POST to send it to the Web Server application.
    1. If the correct information is logged in (admin/admin), please redirect to the **info.html** page (Refer: https://developer.mozilla.org/en-US/docs/Web/HTTP/Redirections). This page contains pictures and information about your team's members.



2. If the login information is wrong, then the status code 404 is returned to the browser. Page **404.html** can be designed as follows

3. Create web page **files.html**, display a list of files that allow users to download these files through a Web browser. Request the Web server to send "Transfer-Encoding: chunked" format, not Content-Length (https://www.w3.org/Protocols/rfc2616/rfc2616-sec3.html, https://en.wikipedia.org/wiki/Chunked_transfer_encoding)
4. ***On the server*** there will be ***a folder "download"*** containing all files (without subfolder), the files.html page will display a list of files so the user can select any file to download. (File types includes: videos, text, sound, images)

Name	Last modified	Size	Description
Parent Directory		-	
Chapter1-Intro.ppt	2017-10-30 19:56	11M	
Chapter2-Application.ppt	2017-10-30 19:56	4.9M	
Chapter3-Transport.ppt	2017-10-30 19:56	3.5M	
Chapter4-Network-1.ppt	2017-10-30 19:56	4.4M	
Chapter5-Network-2.pptx	2017-10-30 19:56	3.7M	
Chapter6-DataLink.pptx	2017-10-30 19:56	2.7M	
Chapter7-Wireless.pptx	2017-10-30 19:56	2.0M	

IV. Requirements:

- *Attention:*
  - Does not require login session management and cookie management.

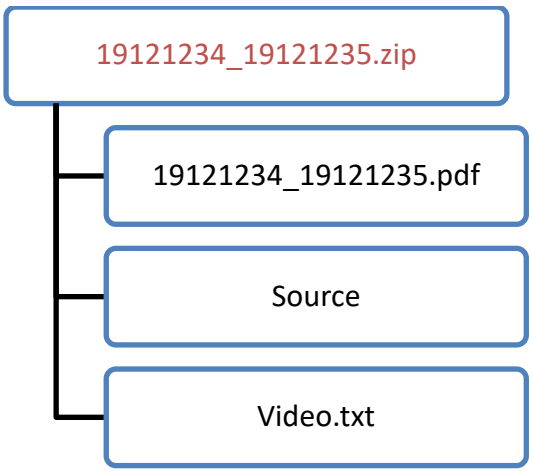
  - Do not use Server HTTP libraries available like IIS, Apache, nginx, nodejs, you must write a simple Web Server by yourself.
- Language: any kind of programming language you familiar with. (These languages can be supported by teacher: C/C++, Python, Java)
- Please submit your project via moodle site with the following format: **Student-ID1_Student-ID2.zip** included:

Student-ID1_Student-ID2.pdf: the report file describles your main idea: how to implement the application, how to test your application, the refer link/ documents you used. Take the screenshots of test/ demo step.

Source: a folder contents your souce code (included your download folder if nedded)

Video.txt: contents your demo link (backup in the worst case)

Example:



V. Assessment:

Oral exam: question & anwser with your teacher assisstant

Test your applicatioon on local and different hosts

VI. Referrences

Socket programming tutorial videos and documents on Moodle site

VII. Another Rules:

- All the students in a group must join the oral exam to pass this project
- No cheating from the orther group or the previous courses/ internet source