Computer Engineering Department
Computer Networks 2 (10636455)

HTTP Project
Spring 2020/2021

Description:

You are asked to develop a Java Web Client and multiple Server-side applications (PHP server and Servlet) to upload and download Images.

The assignment has two parts:
Part 1. You will develop a Java Client application that connects to servers by using HTTP protocol.

Part 2. You will develop two server-side applications by using different programming languages (PHP Server and Servlet). Both applications will have the same functionalities, which is receiving HTTP requests from the Java client and responding with corresponding HTTP responses.

Part 1 (Java Client):

In this part, you are required to develop a Java application to Upload and down load images to the Server.

The following functionalities should be available:

1. The Application should Allow the user to enter a password and Name. Do not Allow uploading or downloading images unless the User is Authorized.
2. *The Application should show the Files that are Available for Download in A List or Drop Box. The files can be pdf, images, or text files. **These should be showed in <u>three</u> separate lists. So create three list for these file,, one for each type.***
3. The Application should allow the user *to upload a new image or a pdf file or a text file.* The new image should be added by the server to the list of images that can be downloaded. A new pdf file should be added to the pdf list. And a new text file should be added to the text list
4. Develop a GUI for the java client that has drop-boxes, text fields, buttons to interact with the server. Use the POST method for the images, pdf files, and text files.
5. The image to be uploaded should be displayed in an image box and also any selected downloaded image should be stored and displayed by the application.
6. Also, the pdf, text files and Images also should be displayed by using:

a. Use notepad++ or notepad to display the image. Notepad or Notepad++ should be launched with the selected file from your application
b. Use adobe acrobat reader or edge or chrome to display the image and pdf files.
c. Image files must also be displayed by image boxes in your application.

Help to Implement 6:
1. Do a search on how launch a program from the command line : example

   ➢ To Launch Notepadd++ and show file example.tx. First Launch the command line and type:
   Start notepad++ example.txt
    where example.txt is a file with some text in the same folder.
   ➢ However we need to launch this from inside the java application.. so do a search on how to do that you need to use :
   Process process = Runtime.getRuntime().exec(SomeCommand);
   ➢ You need to look into starting the command line from the java application by using the command: cmd /c start cmd.exe then append starting chrome ..etc. search on this.

Part 2 (Server Side):
In this part, you are required to develop 2 servers (PHP and Servlet) with identical functionalities. The
server receives HTTP requests from the java client application and responds with corresponding responses.
- The servers need a small database to store information required by the Application. You need one database (use MySQL) for both.
- Fill the database with a few numbers of entries (authorized users and their password).
- Keep the Names of Available images for download in the server. The actual images should be stored as files. Also you need a list for pdf files, and a third for text files.
- You can use more than one php page or servlet if you need. You do not have to use sessions. I will not take points for that. But Do not Allow the User to download/upload images unless the user is Authorized. Implement this in a reasonable manner.
- Start by putting some images to be allowed for download.

Submission Notes:
- You can work either individually or with a partner. Groups of three members or more are not allowed unless I agree on that.
- You have to submit all your source files on Moodle (this includes, database file imported from MySQL, Java projects and PHP server files)
- A video demo should be submitted to show the implemented functionalities. The video should be uploaded into Google drive (or any similar cloud storage service of your choice) and a sharable link should be submitted to Moodle. You are advised to screen-record your demo by using ZOOM because it produced high-quality videos with acceptable file size.