Mauve

SERVER

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Git hub project https://github.com/Mathugo/Mauve_Server

Functionalities

Asynchronous programming :

The server can manage several clients using <Thread> class. It can :
- remove a specific client if there is an error
- communicate (recv(), send())
- close() socket and stream()

Clients are stored in a dynamic ArrayList.

Operation by arguments :

If the server receives a buffer : *<command> <arg1> <arg2> ... <argn>*

Then <Factory> class start and compare arguments

Exemple : The server receives : *list_musics* from the Client i19-lefo1-t2-89-85-249-248.ft.lns.abo.bbox.fr

The <Factory> class is launched with *list_musics* as buffer. Thus, it compares and start the list_musics() function.

List of the commands :

- Download musics (server -> client)

- Upload musics (client <- server)

- List musics

- GetMetaData

Bash programming :

Scripts written in bash to **install, build and execute** properly on any linux derivative operating system.

Note : You can execute the server with argument

Exemple : *./exe.sh 4444* -> Specified the port 4444 to bind

ISSUES

Download :

Issues with lost packets or with unclosed streams. Client cannot receives more than one file at a time.

GetMetaData :

Because of the system architecture on the pi 3, we were not able to install properly java tools like : *apache tika, J2ME, mp3agic*

So we decided to use command line tool : eyeD3 which gives informations about an mp3 file in rfc822 format (gender, artist, album etc..)

UML

Thread

+Run()

ClientRun

-sock: Socket
-ser: Server
-in: BufferedReader
-out: PrintStream
-buffer: String
-name: String

+ClientRun(Socket psock, Server pser)
+getSock(): Socket
+getBuffer(): String
+getClName(): String
+recv()
+send(String pbuffer)
+run()

+1.*

Server

-port: int
-server: SocketServer
-current_cl: Socket
-Clients: ArrayList<ClientRun>
-buffer: String
-ServerIsRunning: bool

+Server(int pport)
+AcceptClient()
+getClients(): Clients
+start()
+close_all()
+RemoveClient(ClientRun cl)

+1

Factory

-buffer: String
-cl: Client
-clSock: Socket
-BUFFER-FILE-SIZE: int
-OriginPath: String

+Factory(ClientRun pcl)
+compare()
+list-musics()
+download(String filename)
+upload(String filename)
+getMetaData(String filename)
+command(String cmd): String