/\*--------------------------------------------------------

1. Name / Date: Arturo Chaidez III September 24, 2020

2. Java version used, if not the official version for the class:

openjdk version "15" 2020-09-15

OpenJDK Runtime Environment (build 15+36-1562)

OpenJDK 64-Bit Server VM (build 15+36-1562, mixed mode, sharing)

3. Precise command-line compilation examples / instructions:

Run in 3 separate terminals:

> javac JokeServer.java

> javac JokeClient.java

> javac JokeClientAdmin.java

4. Precise examples / instructions to run this program:

In separate shell windows:

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5. List of files needed for running the program.

1. JokeServer.java

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5. checklist-joke.html.

5. Notes:

Do not have a secondary server. When switching between jokes/proverbs, it does

save and returns to the proper list order. None of the MultipleServers checklist has been done.

It does not randomize correctly at times. My fourth joke and proverbs stay fourth

sometimes, a bug. I have also seen two of the same in one list before randomizing

----------------------------------------------------------\*/

import java.io.\*;

import java.net.\*;

import java.util.Arrays;

import java.util.HashMap;

import java.util.Random;

//format goes: JokeServer, ClientData, AdminLooper, AdminWorker, JokeWorker

//From lectures, using HashMaps to store jokes and proverbs

/\*Suggestions from classmates on D2L, Store on a HashMap. \*/

//store jokes/proverbs on Server. Maybe it can be done in ServerThread?

public class JokeServer {

/\* Setting- allows admin to switch between jokes and proverbs

\* Name, id- store client info on HashMap. Use large random number \*/

static String *setting* = "Joke";

static String *name*;

static String *id* = "";

//need arrays to store told jokes/proverbs

static int[] *toldJokes*;

static int[] *toldProverbs*;

//create a class to store client data

static ClientData *client*;

//HashMaps to store info from client. Classmate on D2L suggested HashMaps

static HashMap<String, String> *jokes* = new HashMap<>();

static HashMap<String, String> *proverbs* = new HashMap<>();

static HashMap<String, ClientData> *clientFiles* = new HashMap<>();

//get jokes

public static String getJoke(String key) {

//NBA Hall of Famer Charles Barkley

*jokes*.put("JA", "You got to believe in yourself. I believe" +

" I'm the best-looking guy in the world and I might be right.");

//Seinfeld quote

*jokes*.put("JB", "Did you know that the original title for War " +

"and Peace was War, What Is It Good For?");

//Quote from the show Parks and Rec

*jokes*.put("JC", "Jogging is the worst. I know it keeps you healthy, but God, at what cost?");

*jokes*.put("JD", "I googled your symptoms and it says here you could " +

"have network connectivity problems.");

/\*key should be JA, JB, etc. + Client name + joke \*/

//CheckList point requires us to return it in this format

return key + " " + *name* + ": " + *jokes*.get(key);

}

//get proverbs

public static String getProverb(String key) {

/\*From a classmate from CSC447. He was explaining

\* prof wants us to complete this method without builtin functions\*/

*proverbs*.put("PA", "Sometimes we need to push a marble " +

"across the floor with our noses.");

/\*From former NY Yankees outfielder Oscar Gamble. Rumor is this was his response to

\* allegations that there is racism being a ballplayer, or that playing for the Yankees

\* feels like a circus. I think its insightful but funny.\*/

*proverbs*.put("PB", "They don't think it be like it is, but it do.");

//Famous Ali quote

*proverbs*.put("PC", "Float like a butterfly and sting like a bee.");

//Baseball HOF Yogi Berra

*proverbs*.put("PD", "Baseball is ninety percent mental. The other half is physical.");

/\*key should be PA, PB, etc. + Client name + proverb \*/

//CheckList point requires us to return it in this format

return key + " " + *name* + ": " + *proverbs*.get(key);

}

public static void main(String[] args) throws IOException {

Socket sock;

int queueLen = 6; //how many requests our server can handle at a time

//ports normally in 45750-55000 range, never below 1025

int port = 4545; //prof wants 4545 port

//from Prof

AdminLooper ad = new AdminLooper(); // create a thread

Thread t = new Thread(ad);

t.start(); // start it, waits for input from administration

//create server socket using ints above

ServerSocket servSock = new ServerSocket(port, queueLen);

// print out correct port number

System.*out*.println("Arturo Chaidez's Joke Server 1.0, using port " + port);

while (true) {

sock = servSock.accept();

new JokeWorker(sock).run();

}

}

}

//IntelliJ not recognizing I made this class?

//It is allowing me to use JavaServer.ClientData,however...

/\*Figured out why!!! I had my { } all wrong and ClientData was not its own

\* class....\*/

class ClientData {

//basic info

String name;

String id;

int[] toldJokes = {0, 0, 0, 0};

int[] toldProverbs = {0, 0, 0, 0};

//Store info as objects/arrays

//allows server to keep track what jokes have been said and avoid reusing

public void setToldJokes(int[] toldJokes) {

this.toldJokes = toldJokes;

}

public int[] getToldJokes() {

return toldJokes;

}

public int[] getToldProverbs() {

return toldProverbs;

}

public void newName(String name) {

this.name = name;

}

public void newId(String id) {

this.id = id;

}

public void setToldProverbs(int[] toldProverbs) {

this.toldProverbs = toldProverbs;

}

}

//to toggle between joke/proverb

class AdminLooper implements Runnable {

//All of this straight from prof example. Similar to what we have in main

public static boolean *adminSwitch* = true;

public void run() {

System.*out*.println("In the admin looper thread.");

int queueLen = 6;

int port = 5050; // Prof wants 5050 for admin client

Socket sock;

try {

ServerSocket servsock = new ServerSocket(port, queueLen);

while (*adminSwitch*) {

// admin connection

sock = servsock.accept();

new AdminWorker(sock).start();

}

} catch (IOException ioe) {

System.*out*.println(ioe);

}

}

}

//thread for Admin worker. Nearly the same as Worker thread in InetServer

class AdminWorker extends Thread {

Socket adminSock;

AdminWorker (Socket s) {adminSock = s;}

public void run() {

//same in/out as before

PrintStream adminOut = null;

BufferedReader adminIn = null;

try {

adminIn = new BufferedReader(new InputStreamReader(adminSock.getInputStream()));

adminOut = new PrintStream((adminSock.getOutputStream()));

try {

JokeServer.*name* = adminIn.readLine();

//check if clientAdmin wants to switch between settings.

if (JokeServer.*setting*.equals("Joke")) {

JokeServer.*setting* = "Proverb";

//System.out.println(JokeServer.name);

}

else {

JokeServer.*setting* = "Joke";

//System.out.println(JokeServer.name);

}

String settingChanged = "Changing to " + JokeServer.*setting* + " setting.";

//print it out on screens

System.*out*.println(settingChanged);

adminOut.println(settingChanged);

} catch (IOException x) {

System.*out*.println("Sever Error!");

x.printStackTrace(); //tells us where error happened

}

adminSock.close(); //close it down, boys.

} catch (IOException e) {

System.*out*.println(e); //for errors about input and output stream

}

}

}

//again, JokeWorker nearly the same as InetWorker thread

// Lots of code, controls randomizing joke/proverbs and keeping track of it

class JokeWorker extends Thread {

//set up socket and constructor

Socket jokeSock;

JokeWorker(Socket s) { jokeSock = s; }

public void run() {

/\*decided not to call this clientIn and clientOut. Hard to keep track what "client"

\* I am using, too many things named client. Maybe try to rename some stuff?\*/

PrintStream out = null;

BufferedReader in = null;

try {

in = new BufferedReader(new InputStreamReader(jokeSock.getInputStream()));

out = new PrintStream((jokeSock.getOutputStream()));

try {

//read line client gave.

JokeServer.*name* = in.readLine();

System.*out*.println("Getting Client info");

//Reads in ID from Client

JokeServer.*id* = in.readLine();

//if client has been here, get their info!

if (JokeServer.*clientFiles*.containsKey(JokeServer.*id*)) {

JokeServer.*client* = JokeServer.*clientFiles*.get(JokeServer.*id*);

JokeServer.*id* = JokeServer.*clientFiles*.get(JokeServer.*id*).id;

JokeServer.*name* = JokeServer.*clientFiles*.get(JokeServer.*id*).name;

JokeServer.*toldJokes* = JokeServer.*clientFiles*.get(JokeServer.*id*).toldJokes;

JokeServer.*toldProverbs* = JokeServer.*clientFiles*.get(JokeServer.*id*).toldProverbs;

} else {

//No idea why it will not accept ClientData without JokeServer (JokeServer.ClientData)

//made a ClientData class, says it does not exist?

/\*Figured out why!!! I had my { } all wrong and ClientData was not its own

\* class....\*/

ClientData newClient = new ClientData();

newClient.newName(JokeServer.*name*);

newClient.newId(JokeServer.*id*);

JokeServer.*clientFiles*.put(JokeServer.*id*, newClient);

JokeServer.*client* = JokeServer.*clientFiles*.get(JokeServer.*id*);

}

//send name to client

sendToClient(JokeServer.*name*, out);

} catch (IOException x) {

System.*out*.println("Server read error");

x.printStackTrace();

}

jokeSock.close(); //close socket

} catch (

IOException ioe) {

System.*out*.println(ioe);

}

}

//method to determine next joke/proverb

//used in senToClient

//Will not accept ClientData...

/\*Figured out why!!! I had my { } all wrong and ClientData was not its own

\* class....\*/

public Line newLine(ClientData client) {

/\*only need to use one variable to store joke/proverb, since

\* setting is only set to one at a time \*/

String nextLine = "";

HashMap<String, String> jokeMap = new HashMap<>();

HashMap<String, String> proverbMap = new HashMap<>();

jokeMap.put("0", "JA");

jokeMap.put("1", "JB");

jokeMap.put("2", "JC");

jokeMap.put("3", "JD");

proverbMap.put("0", "PA");

proverbMap.put("1", "PB");

proverbMap.put("2", "PC");

proverbMap.put("3", "PD");

Line savedLine = new Line();

Random randomNumber = new Random();

//use a random generator to pick a random joke/proverb

//was doing .nextInt(4) but was not randomizing correctly, trying 5

//5 gives me an error. Try ((3-0) +1 )

//that did not work. just stick to 4

int pickRandom= randomNumber.nextInt(4);

/\* if/else statement. If server is in joke setting, get next joke, make sure we

\* dont need to randomize again, reset jokes. Else, do the same for proverb\*/

if (JokeServer.*setting*.equals("Joke")) {

//set bool to true. Can loop to find if all jokes have been used.

boolean allJokesUsed = true;

int[] toldJokes = client.getToldJokes();

//loop if all Jokes have been used. If one has not been used, set it to false

for (int x = 0; x < toldJokes.length; x++) {

if (toldJokes[x] != 1) {

allJokesUsed = false;

break;

}

}

//if all jokes have been seen, reset array to 0

if (allJokesUsed) {

Arrays.*fill*(toldJokes, 0);

System.*out*.println("Seen all jokes, new random order.");

}

//pick a random joke if they have not been used. Use it as nextLine

if (toldJokes[pickRandom] == 0 && allJokesUsed) {

toldJokes[pickRandom] = 1;

client.setToldJokes(toldJokes);

nextLine = jokeMap.get(String.*valueOf*(pickRandom));

savedLine.nextJoke = nextLine;

return savedLine;

}

/\*if randomly picked joke already used, loop through to find an unused

\* joke. Can't do loop first because then it would not be random\*/

else {

for (int x = 0; x < toldJokes.length; x++) {

if (toldJokes[x] == 0) {

toldJokes[x] = 1;

client.setToldJokes(toldJokes);

nextLine = jokeMap.get(String.*valueOf*(x));

savedLine.nextJoke = nextLine;

break;

}

}

return savedLine;

}

}

//else used for proverbs. Same steps

else {

boolean allProverbsUsed = true;

int[] toldProverbs = client.getToldProverbs();

for (int x = 0; x < toldProverbs.length; x++) {

if (toldProverbs[x] != 1) {

allProverbsUsed = false;

break;

}

}

//reset proverbs

if (allProverbsUsed) {

Arrays.*fill*(toldProverbs, 0);

System.*out*.println("Seen all proverbs, new random order");

}

if (toldProverbs[pickRandom] == 0 && allProverbsUsed) {

toldProverbs[pickRandom] = 1;

client.setToldJokes(toldProverbs);

nextLine = proverbMap.get(String.*valueOf*(pickRandom));

savedLine.nextJoke = nextLine;

return savedLine;

}

/\*if randomly picked proverb already used, loop through to find an unused

\* proverb. Can't do loop first because then it would not be random\*/

else {

for (int x = 0; x < toldProverbs.length; x++) {

if (toldProverbs[x] == 0) {

toldProverbs[x] = 1;

client.setToldProverbs(toldProverbs);

nextLine = proverbMap.get(String.*valueOf*(x));

savedLine.nextJoke = nextLine;

break;

}

}

}

return savedLine;

}

}

class Line {

String jokeList;

String proverbList;

String nextJoke;

//lists for jokes and proverbs

public String getJokeList() {

return jokeList;

}

public String getProverbList() {

return proverbList;

}

}

//Method Sends jokes to client

//I never use String name. Just keep for now

public void sendToClient(String name, PrintStream out) {

Line savedLine = newLine(JokeServer.*client*);

//if the setting is in Joke Mode, get joke list and send unused joke

if (JokeServer.*setting*.equals("Joke")) {

if (savedLine.getJokeList() != null) {

out.println(savedLine.getJokeList());

}

out.println(JokeServer.*getJoke*(savedLine.nextJoke));

}

//do the same but for proverbs

else {

if (savedLine.getProverbList() != null) {

out.println(savedLine.getProverbList());

}

out.println(JokeServer.*getProverb*(savedLine.nextJoke));

}

}

}

/\*--------------------------------------------------------

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Do not have a secondary server. When switching between jokes/proverbs, it does

save and returns to the proper list order. None of the MultipleServers checklist has been done.

It does not randomize correctly. My fourth joke and proverbs stay fourth sometimes, a bug.

I have also seen two of the same in one list before randomizing.

----------------------------------------------------------\*/

import java.io.\*;

import java.net.\*;

//Similar to InetClient. A lot less work than JokeServer

public class JokeClient {

public static void main(String[] args) {

String serverName;

//Same as InetClient

if (args.length < 1) {

serverName = "localhost";

System.*out*.println("Connected to server one: localhost, port 4545");

} else {

serverName = args[0];

System.*out*.println("Connected to server one: localhost, port 4545");

}

//prof wants primary port to be 4545

System.*out*.println("Welcome to Arturo Chaidez's Joke server, port 4545.");

//prof wants admin port to be 5050

System.*out*.println(("ClientAdmin port 5050"));

BufferedReader in = new BufferedReader(new InputStreamReader(System.*in*));

try {

//need to get client name and ID

String name;

String input;

int id = 0;

System.*out*.println("You must be pretty bored to connect here..give me your name...");

name = in.readLine();

//IDK how to use UUID, come back to it later. Random is the same concept

//This is acceptable according to prof.

//followed format suggested online

id = 0 + (int) (Math.*random*() \* ((10000000 - 0) + 1));

System.*out*.println("Click enter for a joke. Once " +

"you realize this place isn't very funny, (quit) to get out.");

do {

//get info

input = in.readLine();

//make sure client did not quit right away

//.equals() wont work. stick to indexOf

if (input.indexOf("quit") <0 ) {

/\*Send name, unique id, and serverName to Server \*/

*printLine*(name, id, serverName);

}

}

//exit out when told

while (input.indexOf("quit") <0);

System.*out*.println("I see you got bored. Program ended");

} catch (IOException x) {

x.printStackTrace();

}

}

//since we are not using IP addresses, do not need the toText Prof gave us for Inet

//seems to be working without it

//Similar as printRemoteAddress in Inet. Need to get jokes/proverbs

static void printLine(String name, int id, String serverName) {

Socket sock;

BufferedReader fromServer;

PrintStream toServer;

String textFromServer;

try {

sock = new Socket(serverName, 4545); //it wont let me change setting here

//I am dumb, changing between jokes and proverbs happen in the AdminClient

//error was probably unrelated too

fromServer = new BufferedReader((new InputStreamReader(sock.getInputStream())));

toServer = new PrintStream(sock.getOutputStream());

//Send info to Server

toServer.println(name);

toServer.println(id);

//get lines from Server. Probably only need 1, but do 5 to be sure

//some jokes proverbs kind of long.

for(int i = 1; i <= 5; i++) {

textFromServer = fromServer.readLine();

if (textFromServer != null) {

System.*out*.println(textFromServer);

}

}

sock.close(); //done, can close socket

} catch (IOException x) { //usual error

System.*out*.println("Error: Socket error.");

x.printStackTrace();

}

}

}

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----------------------------------------------------------\*/

import java.io.\*; //used to retrieve the I/O libraries

import java.net.\*; //used to retrieve the Java networking libraries

//THIS is where we change between server

/\*I was trying to do it all on Client, misread instructions. I thought this

\* had to do with primary/secondary servers. \*/

public class JokeClientAdmin {

//switch between jokes and proverbs

private static String *setting* ;

static boolean *changeSetting* = false;

// This is the main method.

public static void main(String[] args) {

//this is the same as Inet

String serverName;

//Same as InetClient

if (args.length < 1) {

serverName = "localhost";

System.*out*.println("Now connected server to one, port: 5050");

} else {

serverName = args[0];

System.*out*.println("Now connected to server one, port: 5050");

}

System.*out*.println(("Arturo Chaidez's JokeClientAdmin"));

BufferedReader in = new BufferedReader(new InputStreamReader(System.*in*));

try {

//get input

String adminInput = "";

System.*out*.println(

"Click enter to switch settings, or type (quit) to end program.");

do {

//check input from client

adminInput = in.readLine();

//if they do not quit and clicked enter, toggle to other setting

//when I use equal(), it quits after one click. not sure why

if (adminInput.indexOf("quit") < 0) {

*talkToServer*(adminInput, serverName);

System.*out*.println("Changed setting");

}

} while (adminInput.indexOf("quit") < 0); //user quit

System.*out*.println("Client has ended program.");

} catch (IOException x) {

x.printStackTrace();

}

}

static void talkToServer(String name, String serverName) {

//same as usual

Socket sock;

BufferedReader fromServer;

PrintStream toServer;

String textFromServer;

try {

//make socket

sock = new Socket(serverName, 5050);

fromServer = new BufferedReader((new InputStreamReader(sock.getInputStream())));

toServer = new PrintStream(sock.getOutputStream());

//double check what this does?

//doesn't seen to do anything. It should only be "" anyway

/\*Classmates had it print something on JokeServer, will try to figure it out later \*/

toServer.println(name);

//switch to other setting

if (*changeSetting*) {

//writing name

toServer.println(*setting*);

// Read 3 lines, probably too many

for(int i = 1; i <= 3; i++) {

textFromServer = fromServer.readLine();

if (textFromServer != null) {

System.*out*.println(textFromServer);

}

}

*changeSetting* = false;

}

//complete

sock.close();

} catch (IOException x) { //same error check

System.*out*.println("Error: Socket error.");

x.printStackTrace();

}

}

}

/ Test 1 - Connecting to one Client, showing all jokes and it randomizing (mostly)

//Does not seem to want to randomize JD or PD at times (last joke and proverb)

//JokeServer startup

> javac JokeServer.java

> java JokeServer

In the admin looper thread.

Arturo Chaidez's Joke Server 1.0 , using port 4545

//JokeClient startup and name given

> javac JokeClient.java

> java JokeClient

Welcome to Arturo Chaidez's Joke server, port 4545.

ClientAdmin port 5050

You must be pretty bored to connect here..give me your name...

Art

Click enter for a joke. Once you realize this place isn't very funny, (quit) to get out.

//Jokes given back, 3 times for every joke

JA Art- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JB Art- Did you know that the original title for War and Peace was War, What Is It Good For?

JC Art- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art- I googled your symptoms and it says here you could have network connectivity problems.

JB Art- Did you know that the original title for War and Peace was War, What Is It Good For?

JA Art- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JC Art- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art- I googled your symptoms and it says here you could have network connectivity problems.

JC Art- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JA Art- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JB Art- Did you know that the original title for War and Peace was War, What Is It Good For?

JD Art- I googled your symptoms and it says here you could have network connectivity problems.

//Output coming from JavaServer

Getting Client info

Getting Client info

Getting Client info

Getting Client info

Getting Client info

Seen all jokes, new random order.

Getting Client info

Getting Client info

Getting Client info

Getting Client info

Seen all jokes, new random order.

Getting Client info

Getting Client info

Getting Client info

//Test 2- Starting up JokeClientAdmin. Switching to Proverbs and 3 sets of jokes again

> javac JokeClientAdmin.java

> java JokeClientAdmin

Arturo Chaidez's JokeClientAdmin

Click enter to switch settings, or type (quit) to end program.

Changed setting

//Proverbs in JokeClient

PA Art- Sometimes we need to push a marble across the floor with our noses.

PB Art- They don't think it be like it is, but it do.

PC Art- Float like a butterfly and sting like a bee.

PD Art- Baseball is ninety percent mental. The other half is physical.

PB Art- They don't think it be like it is, but it do.

PA Art- Sometimes we need to push a marble across the floor with our noses.

PC Art- Float like a butterfly and sting like a bee.

PD Art- Baseball is ninety percent mental. The other half is physical.

PC Art- Float like a butterfly and sting like a bee.

PA Art- Sometimes we need to push a marble across the floor with our noses.

PB Art- They don't think it be like it is, but it do.

PD Art- Baseball is ninety percent mental. The other half is physical.

//Output from JokeServer

Changing to Proverb setting.

Getting Client info

Getting Client info

Getting Client info

Getting Client info

Getting Client info

Seen all proverbs, new random order

Getting Client info

Getting Client info

Getting Client info

Getting Client info

Seen all proverbs, new random order

Getting Client info

Getting Client info

Getting Client info

//Test 3a- Opening up a second client, will run proverbs twice

Welcome to Arturo Chaidez's Joke server, port 4545.

ClientAdmin port 5050

You must be pretty bored to connect here..give me your name...

Art2

Click enter for a joke. Once you realize this place isn't very funny, (quit) to get out.

PA Art2- Sometimes we need to push a marble across the floor with our noses.

PB Art2- They don't think it be like it is, but it do.

PC Art2- Float like a butterfly and sting like a bee.

PD Art2- Baseball is ninety percent mental. The other half is physical.

PC Art2- Float like a butterfly and sting like a bee.

PA Art2- Sometimes we need to push a marble across the floor with our noses.

PB Art2- They don't think it be like it is, but it do.

PD Art2- Baseball is ninety percent mental. The other half is physical.

//JokeServer output

Getting Client info

Getting Client info

Getting Client info

Getting Client info

Getting Client info

Seen all proverbs, new random order

Getting Client info

Getting Client info

Getting Client info

//Part 3b- Second Client running jokes twice

//JokeClientAdmin Output

Changed setting

//JokeClient Output

JC Art2- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JA Art2- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JB Art2- Did you know that the original title for War and Peace was War, What Is It Good For?

JD Art2- I googled your symptoms and it says here you could have network connectivity problems.

JB Art2- Did you know that the original title for War and Peace was War, What Is It Good For?

JA Art2- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JC Art2- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art2- I googled your symptoms and it says here you could have network connectivity problems.

//JokeServer output

Changing to Joke setting.

Getting Client info

Seen all jokes, new random order.

Getting Client info

Getting Client info

Getting Client info

Getting Client info

Seen all jokes, new random order.

Getting Client info

Getting Client info

Getting Client info

//Part 4- Will alternate 2 lines in Client1 (Art1) and 2 in Client2(Art2). Only showing Client output

//Client1

JB Art- Did you know that the original title for War and Peace was War, What Is It Good For?

JA Art- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

//Client2

JA Art2- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JB Art2- Did you know that the original title for War and Peace was War, What Is It Good For?

//Client1

JC Art- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art- I googled your symptoms and it says here you could have network connectivity problems.

//Client2

JC Art2- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art2- I googled your symptoms and it says here you could have network connectivity problems.

//Client1

JA Art- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JB Art- Did you know that the original title for War and Peace was War, What Is It Good For?

//Client2

JA Art2- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JB Art2- Did you know that the original title for War and Peace was War, What Is It Good For?

//Client1

JC Art- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art- I googled your symptoms and it says here you could have network connectivity problems.

//Client2- \*\*\*JD no longer last?

JB Art2- Did you know that the original title for War and Peace was War, What Is It Good For?

JC Art2- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

//Test 5- 4 lines for each client. Switching to proverb

// \*\*\* Suddenly JD is random?

//Client1

PC Art- Float like a butterfly and sting like a bee.

PD Art- Baseball is ninety percent mental. The other half is physical.

PA Art- Sometimes we need to push a marble across the floor with our noses.

PB Art- They don't think it be like it is, but it do.

//Client2

PD Art2- Baseball is ninety percent mental. The other half is physical.

PA Art2- Sometimes we need to push a marble across the floor with our noses.

PB Art2- They don't think it be like it is, but it do.

PC Art2- Float like a butterfly and sting like a bee.

//Client1 \*\*\* two PD? Uh oh…

PC Art- Float like a butterfly and sting like a bee.

PD Art- Baseball is ninety percent mental. The other half is physical.

PD Art- Baseball is ninety percent mental. The other half is physical.

PA Art- Sometimes we need to push a marble across the floor with our noses.

//Client2- JD twice in a roll

PD Art2- Baseball is ninety percent mental. The other half is physical.

PD Art2- Baseball is ninety percent mental. The other half is physical.

PA Art2- Sometimes we need to push a marble across the floor with our noses.

PB Art2- They don't think it be like it is, but it do.

//Client1

PB Art- They don't think it be like it is, but it do.

PC Art- Float like a butterfly and sting like a bee.

PD Art- Baseball is ninety percent mental. The other half is physical.

PA Art- Sometimes we need to push a marble across the floor with our noses.

//Client2

PC Art2- Float like a butterfly and sting like a bee.

PD Art2- Baseball is ninety percent mental. The other half is physical.

PA Art2- Sometimes we need to push a marble across the floor with our noses.

PB Art2- They don't think it be like it is, but it do.

//Will now close both Clients, open a new one. Switch to proverb right away

//Client1

quit

I see you got bored. Program ended

//Client2

quit

I see you got bored. Program ended

//Client3

java JokeClient

Welcome to Arturo Chaidez's Joke server, port 4545.

ClientAdmin port 5050

You must be pretty bored to connect here..give me your name...

Art3

Click enter for a joke. Once you realize this place isn't very funny, (quit) to get out.

PA Art3- Sometimes we need to push a marble across the floor with our noses.

PB Art3- They don't think it be like it is, but it do.

PC Art3- Float like a butterfly and sting like a bee.

PD Art3- Baseball is ninety percent mental. The other half is physical.

PC Art3- Float like a butterfly and sting like a bee.

PA Art3- Sometimes we need to push a marble across the floor with our noses.

PB Art3- They don't think it be like it is, but it do.

PD Art3- Baseball is ninety percent mental. The other half is physical.

PC Art3- Float like a butterfly and sting like a bee.

PA Art3- Sometimes we need to push a marble across the floor with our noses.

PB Art3- They don't think it be like it is, but it do.

PD Art3- Baseball is ninety percent mental. The other half is physical.

//Same issue with PD always being last. Switch to jokes and began clicking enter a lot

JA Art3- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JC Art3- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art3- I googled your symptoms and it says here you could have network connectivity problems.

JB Art3- Did you know that the original title for War and Peace was War, What Is It Good For?

JA Art3- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JC Art3- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art3- I googled your symptoms and it says here you could have network connectivity problems.

JB Art3- Did you know that the original title for War and Peace was War, What Is It Good For?

//two JD again

JA Art3- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JC Art3- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art3- I googled your symptoms and it says here you could have network connectivity problems.

JD Art3- I googled your symptoms and it says here you could have network connectivity problems.

JA Art3- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JB Art3- Did you know that the original title for War and Peace was War, What Is It Good For?

JC Art3- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JB Art3- Did you know that the original title for War and Peace was War, What Is It Good For?

//now two JC!

JA Art3- You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JC Art3- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art3- I googled your symptoms and it says here you could have network connectivity problems.

JC Art3- Jogging is the worst. I know it keeps you healthy, but God, at what cost?

//Closing down everything, take a break, and come up with the experiments.

//JokeClientAdmin

quit

Client has ended program.

//Client3

quit

I see you got bored. Program ended

//JokeServer- realized I do not know how to shutdown JokeServer

^X^C

//Changed some code, added required println for JokeClient and JokeClientAdmin

//Checklist- Correctly maintains converstations with interleaved Joke/Proverb modes

//Hard to prove through copy and paste, does not help my code does not randomize well

//Client1

JA Art1: You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JB Art1: Did you know that the original title for War and Peace was War, What Is It Good For?

JC Art1: Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art1: I googled your symptoms and it says here you could have network connectivity problems.

JC Art1: Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JA Art1: You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JB Art1: Did you know that the original title for War and Peace was War, What Is It Good For?

//Client2 - opened up as same time as Client1, but requests happened after Client1

JA Art2: You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JB Art2: Did you know that the original title for War and Peace was War, What Is It Good For?

JC Art2: Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art2: I googled your symptoms and it says here you could have network connectivity problems.

JC Art2: Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JA Art2: You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

//Client3 opened up after both, request 8 times

JA Art3: You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JB Art3: Did you know that the original title for War and Peace was War, What Is It Good For?

JC Art3: Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art3: I googled your symptoms and it says here you could have network connectivity problems.

JA Art3: You got to believe in yourself. I believe I'm the best-looking guy in the world and I might be right.

JB Art3: Did you know that the original title for War and Peace was War, What Is It Good For?

JC Art3: Jogging is the worst. I know it keeps you healthy, but God, at what cost?

JD Art3: I googled your symptoms and it says here you could have network connectivity problems.

//Go back and finish list of Client1 Client2

JD Art1: I googled your symptoms and it says here you could have network connectivity problems.

JB Art2: Did you know that the original title for War and Peace was War, What Is It Good For?

JD Art2: I googled your symptoms and it says here you could have network connectivity problems.

//CheckList- Maintains client conversations without interference from other clients

//Seems to do it, hard to prove with copy and paste

//Switch proverb, now enter once in a row for each

PA Art1: Sometimes we need to push a marble across the floor with our noses.

PA Art2: Sometimes we need to push a marble across the floor with our noses.

PA Art3: Sometimes we need to push a marble across the floor with our noses.

PB Art3: They don't think it be like it is, but it do.

PB Art2: They don't think it be like it is, but it do.

PB Art3: They don't think it be like it is, but it do.

PC Art1: Float like a butterfly and sting like a bee.

PC Art2: Float like a butterfly and sting like a bee.

PC Art3: Float like a butterfly and sting like a bee.

PD Art1: Baseball is ninety percent mental. The other half is physical.

PD Art2: Baseball is ninety percent mental. The other half is physical.

PD Art3: Baseball is ninety percent mental. The other half is physical.

//now suddenly randomizing differently between client

PD Art1: Baseball is ninety percent mental. The other half is physical.

PA Art2: Sometimes we need to push a marble across the floor with our noses.

PC Art3: Float like a butterfly and sting like a bee.

PA Art1: Sometimes we need to push a marble across the floor with our noses.

PA Art2: Sometimes we need to push a marble across the floor with our noses.

PC Art3: Float like a butterfly and sting like a bee.

PB Art1: They don't think it be like it is, but it do.

PB Art2: They don't think it be like it is, but it do.

PA Art3: Sometimes we need to push a marble across the floor with our noses.

PC Art1: Float like a butterfly and sting like a bee.

PA Art2: Sometimes we need to push a marble across the floor with our noses.

PB Art3: They don't think it be like it is, but it do.

//ended tests