CS 380

Project 1

My repository for this class is under CS 380 – Computer Networks

<https://github.com/jarodNakamoto/College-CS-Courses.git>

Source Code Below:

ChatClient.java

import java.io.InputStream;

import java.io.BufferedReader;

import java.io.InputStreamReader;

import java.io.OutputStream;

import java.io.PrintStream;

import java.net.Socket;

import java.util.Scanner;

import java.util.Random;

public final class ChatClient {

public static volatile Socket socket;

public final static int THREAD\_SLEEP = 1000;

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

Runnable MessageHandler = () -> {

Random random = new Random();

try

{

//recieves messages

InputStream is = socket.getInputStream();

InputStreamReader isr = new InputStreamReader(is, "UTF-8");

BufferedReader br = new BufferedReader(isr);

//receive server message

String str;

while(true)

{

str = br.readLine();

//stops thread if receives null from server

if(str.equals(null))

{

System.out.println("Disconnected from server");

return;

}

//prints server message to console

System.out.println(str);

Thread.sleep(random.nextInt(THREAD\_SLEEP));

}

}

catch(Exception e)

{

System.out.println("Receiver Thread: " + e.toString());

try{

socket.close();

}

catch(Exception er)

{

System.out.println("Socket failed to close");

}

return;

}

};

Runnable MessageSender = () -> {

Random random = new Random();

try

{

//sends stuff to server

OutputStream os = socket.getOutputStream();

PrintStream out = new PrintStream(os, true, "UTF-8");

String address = socket.getInetAddress().getHostAddress();

//User input messages

Scanner sc = new Scanner(System.in);

String input = "";

while(!socket.isClosed())

{

//get user input

input = sc.nextLine();

//stop if they type exit

if(input.equalsIgnoreCase("exit"))

{

socket.close();

return;

}

//send to server

out.println(input);

Thread.sleep(random.nextInt(THREAD\_SLEEP));

}

}

catch(Exception e)

{

System.out.println("Sender Thread: " + e.toString());

return;

}

};

System.out.println("Your first message should be your username.");

try

{

//connect to the server

socket = new Socket("18.221.102.182", 38001);

Thread messageReceiver = new Thread(MessageHandler);

Thread messageSender = new Thread(MessageSender);

messageSender.start();

messageReceiver.start();

}

catch(Exception e)

{

System.out.println("Main Thread: " + e.toString());

}

}

}