

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();
```

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        //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());
}
}
}

```