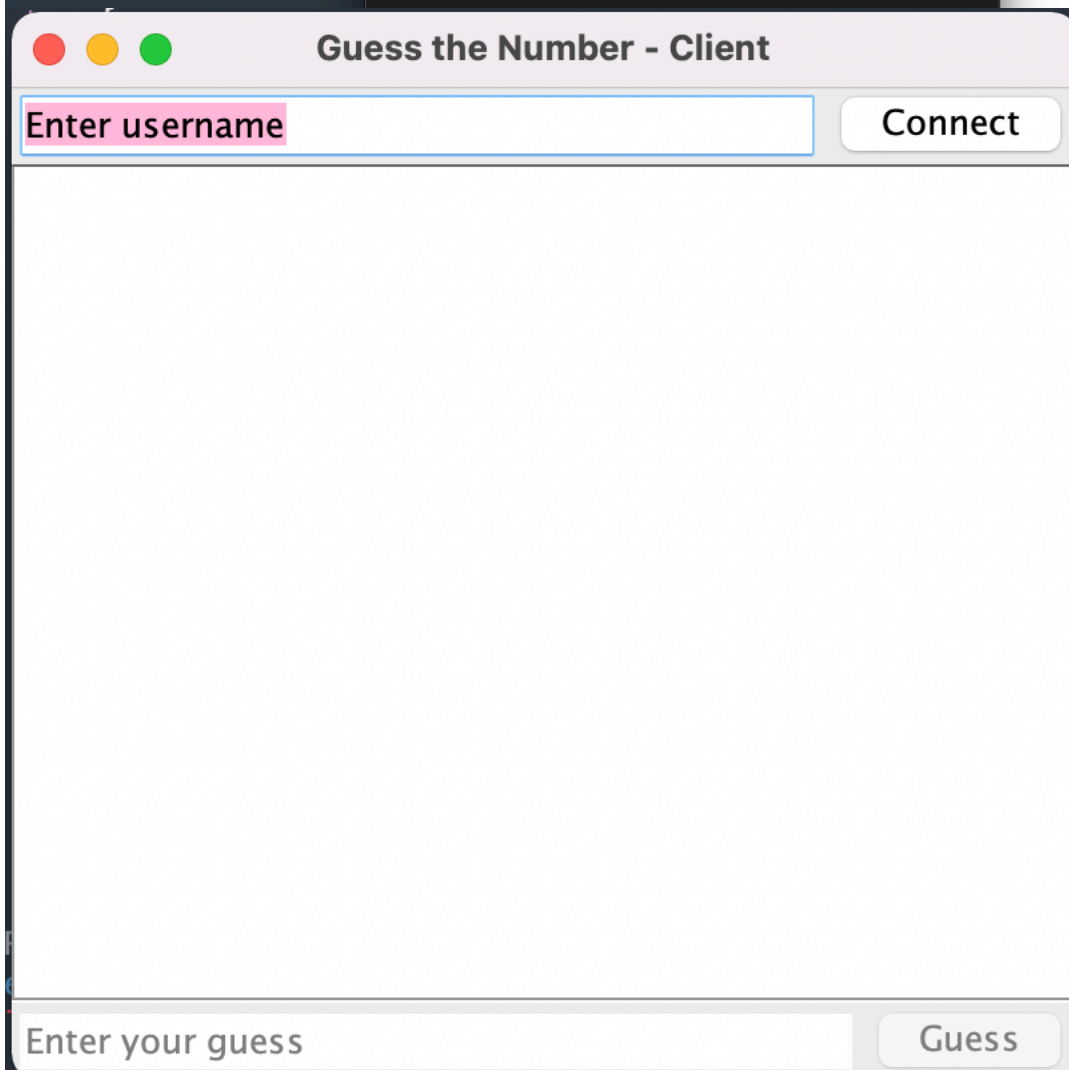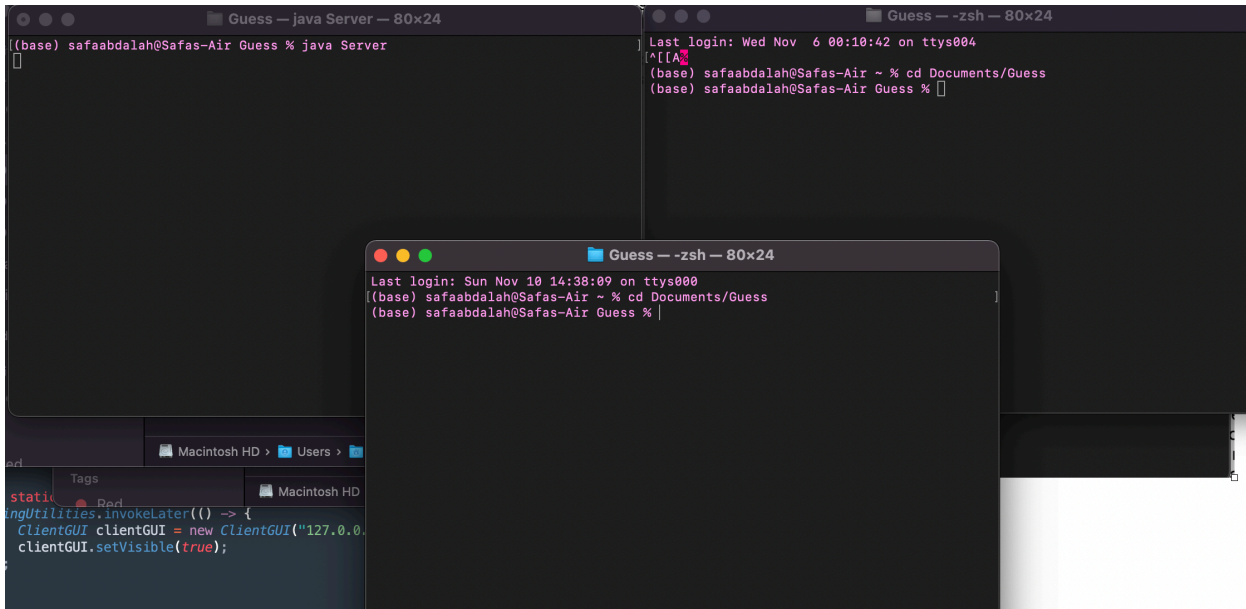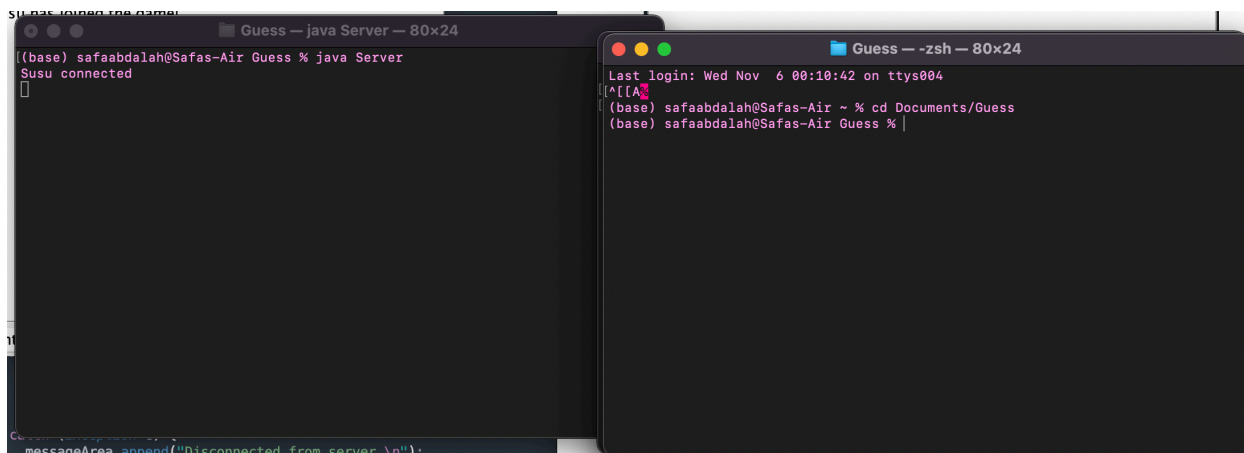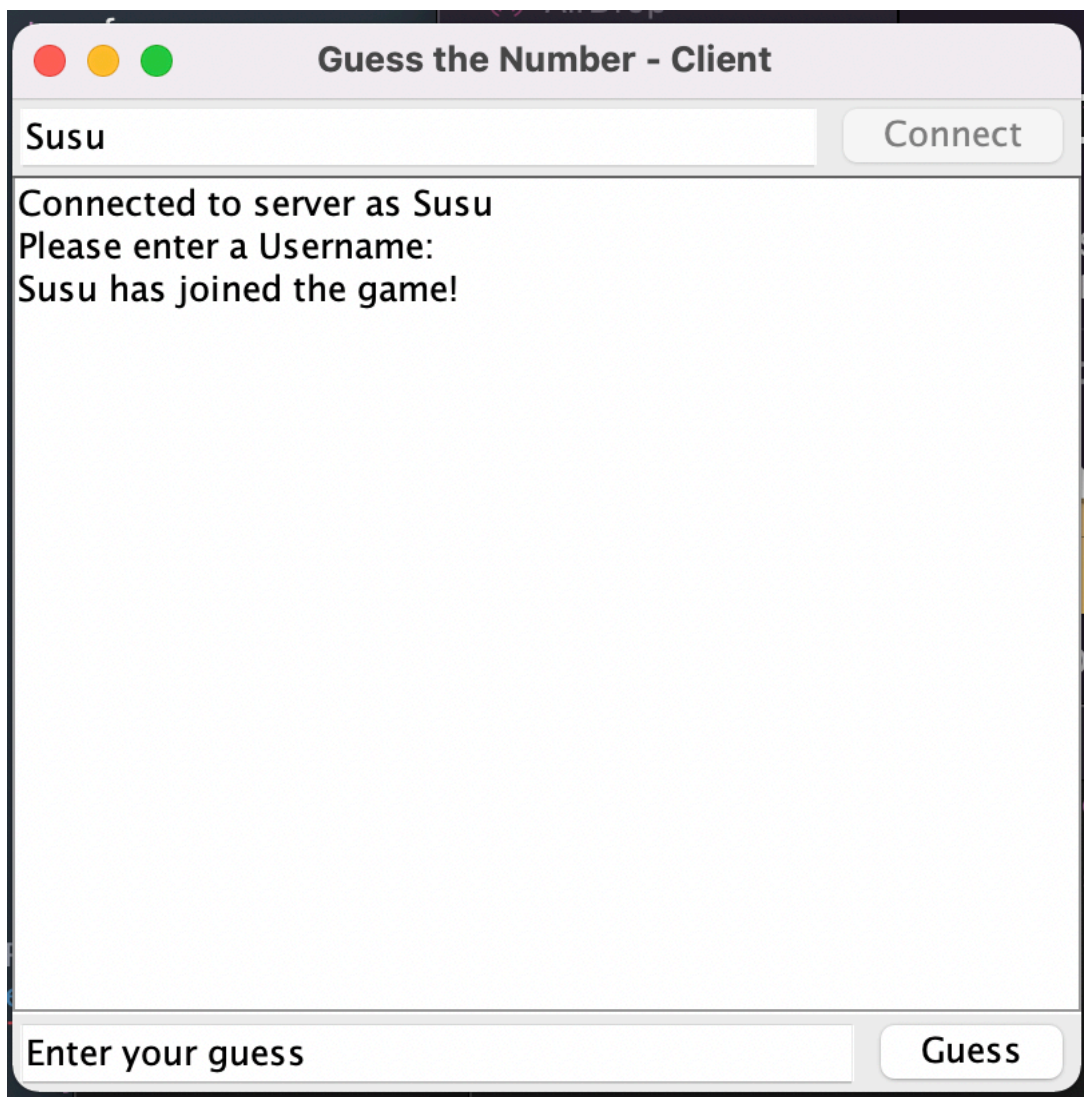# CSCI 4311 Networking and Telecommunications
Programming Assignment 2 Report

In this Assignment I did a very similar Implementation to my first assignment with added features. I honestly just edited my first assignment so that instead of the server and client working as a simple TCP chat it worked as a simple Guess the word Game. The server creates a random number so I imported java.util.Random for this and I basically learned this from My AI class where you can do Random random = new Random(); Still pretty interesting. This is instead of what I normally was used to which is Math.random —> and then to include the number to be within a reasonable range you specify it like random.nextInt(100) +1 to include 100 (cuz u know how index is like index 100 is actually the number 99). So once I setup a random number I needed to have a game and handle like an instance of that game as well as creating a condition that there must be two clients for this game to begin. So that's where I did in my loop which I already had before while(!done) within the overridden *run* method.
I check for the connection size to be EXPLICITLY 2 and if it's not already started then I make a new game. Think of a case where a third client joins , well the game is already started so no new game should happen. So then what to do with the game? Well I already had a bunch of good things that the server can do like "broadcast" so for most I utilized my server's capabilities and just edited it for the desired purpose. I just added a StartNewGame() method which is where the room number is handled and where the boolean is ticked on to true. It's a cheating way to make a game because really it's mainly handled as an instance through a true/false. I didn't have much time however I tried to make up. For it with Client which was transformed into GUI. So hopefully you would have a much better and easier time grading it. I got help from the scene builder to do the GUI because honestly I don't like to code GUI especially since the first programming language I learned in high school was visual basic and the code for the GUI was implemented for us in whatever version of visual studio we had. After experiencing something as easy as click and drag buttons and code each part with ease I never enjoyed any other type of GUI process. But that's beside the point. The logic in the Client did not change much but the Client has the localhost and the port hard coded into it since, it was not required for this assignment. :D I really hope this is enough to explain the process. Really I can explain to you the GUI parts but I have a feeling this is not what you are asking for in this assignment. So in conclusion, slight changes were made to the server I already had (and arguably it was simpler than hwk1) as well as not really any change for client other than the GUI. I included a readme on how to compile and run the code. Below are screenshots on how to do that as well as the assignment itself in action.

Guess — java Server — 80×24

(base) safaabdalah@Safas-Air Guess % java Server

Guess — -zsh — 80×24

Last login: Wed Nov 6 00:10:42 on ttys004
^[[A%
(base) safaabdalah@Safas-Air ~ % cd Documents/Guess
(base) safaabdalah@Safas-Air Guess %

Guess — -zsh — 80×24

Last login: Sun Nov 10 14:38:09 on ttys000
[(base) safaabdalah@Safas-Air ~ % cd Documents/Guess
(base) safaabdalah@Safas-Air Guess %

Macintosh HD > Users >

Tags
Red

Macintosh HD

```
static
ingUtilities.invokeLater(() -> {
    ClientGUI clientGUI = new ClientGUI("127.0.0.
    clientGUI.setVisible(true);
```

Guess the Number - Client

Enter username   Connect

Enter your guess   Guess

Guess the Number - Client

Susu

Connect

Connected to server as Susu
Please enter a Username:
Susu has joined the game!

Enter your guess

Guess

Guess — java Server — 80×24

```
(base) safaabdalah@Safas-Air Guess % java Server
Susu connected
```

Guess — -zsh — 80×24

```
Last login: Wed Nov  6 00:10:42 on ttys004
[^[[A
(base) safaabdalah@Safas-Air ~ % cd Documents/Guess
(base) safaabdalah@Safas-Air Guess % 
```

messageArea.append("Disconnected from server.\n");

```
Guess — java Server — 80×24

(base) safaabdalah@Safas-Air Guess % java Server
Susu connected
Fufu connected
```

Gu

```
serverip, int serverPort,
```

Guess the Number - Client
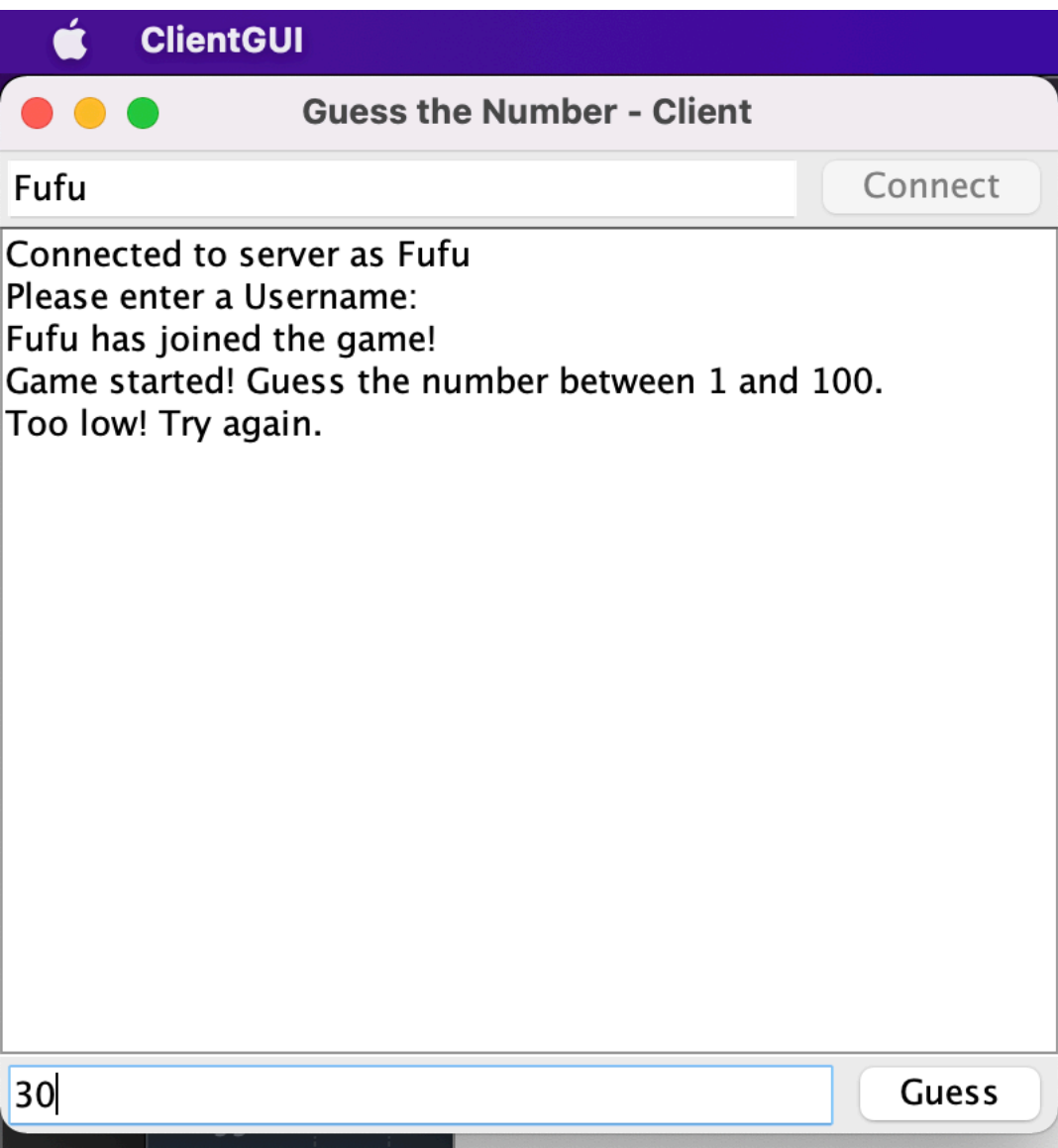
Susu   Connect

Connected to server as Susu
Please enter a Username:
Susu has joined the game!
Fufu has joined the game!
Game started! Guess the number between 1 and 100.
Too low! Try again.

Guess

The guess was 15

ClientGUI

Guess the Number - Client

Fufu

Connect

Connected to server as Fufu
Please enter a Username:
Fufu has joined the game!
Game started! Guess the number between 1 and 100.
Too low! Try again.

30

Guess

The guess was 30

Guess the Number - Client

Susu

Connect

Connected to server as Susu
Please enter a Username:
Susu has joined the game!
Fufu has joined the game!
Game started! Guess the number between 1 and 100.
Too low! Try again.
Too high! Try again.

100

Guess

The guess was 100

After more attempts: