

Assignment : 3

JAYANTHI T
1817119

CHAT APPLICATION IN JAVA :

Server Program :

```
import java.io.*;
import java.net.*;

class serversame{
    public static void main(String[] args){
        try{
            ServerSocket ss = new ServerSocket(1201);
            Socket s = ss.accept();

            DataInputStream din = new
DataInputStream(s.getInputStream());
            DataOutputStream dout = new
DataOutputStream(s.getOutputStream());

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

            String msgin = "",msgout = "";

            while(!msgin.equals("End")){
                msgin = din.readUTF();
                System.out.println("Client says : "+msgin);
                msgout = br.readLine();
                dout.writeUTF(msgout);
                dout.flush();
            }
            s.close();

        }catch(Exception e){
```

```

        //handle exceptions
    }
}

```

Client Program :

```

import java.io.*;
import java.net.*;

class clientsame{
    public static void main(String[] args){
        try{
            Socket s = new Socket("localhost",1201);
            DataInputStream din = new
DataInputStream(s.getInputStream());
            DataOutputStream dout = new
DataOutputStream(s.getOutputStream());

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

            String msgin = "",msgout = "";

            while(!msgin.equals("End")){
                msgout = br.readLine();
                dout.writeUTF(msgout);
                msgin = din.readUTF();
                System.out.println("Server says : "+msgin);
            }

        }catch(Exception e){
            //handle exceptions
        }
    }
}

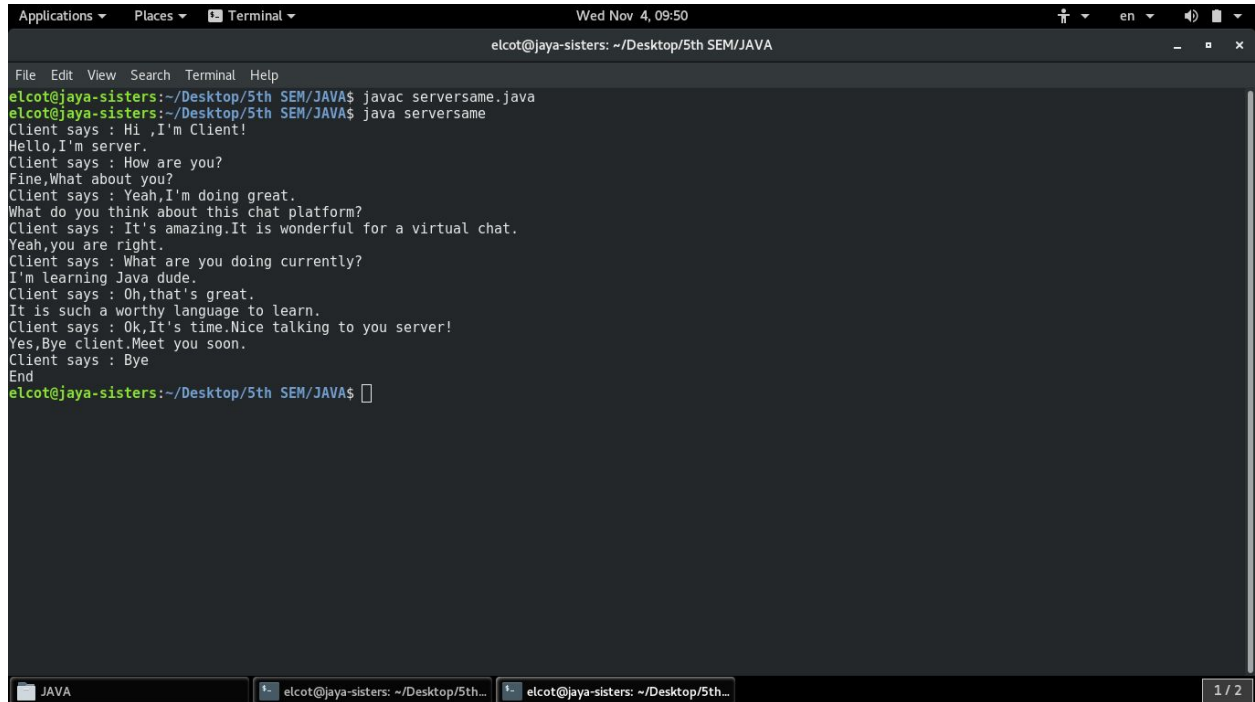
```

Output :

- ❖ First run the server program and then the client.

The output will be like this,

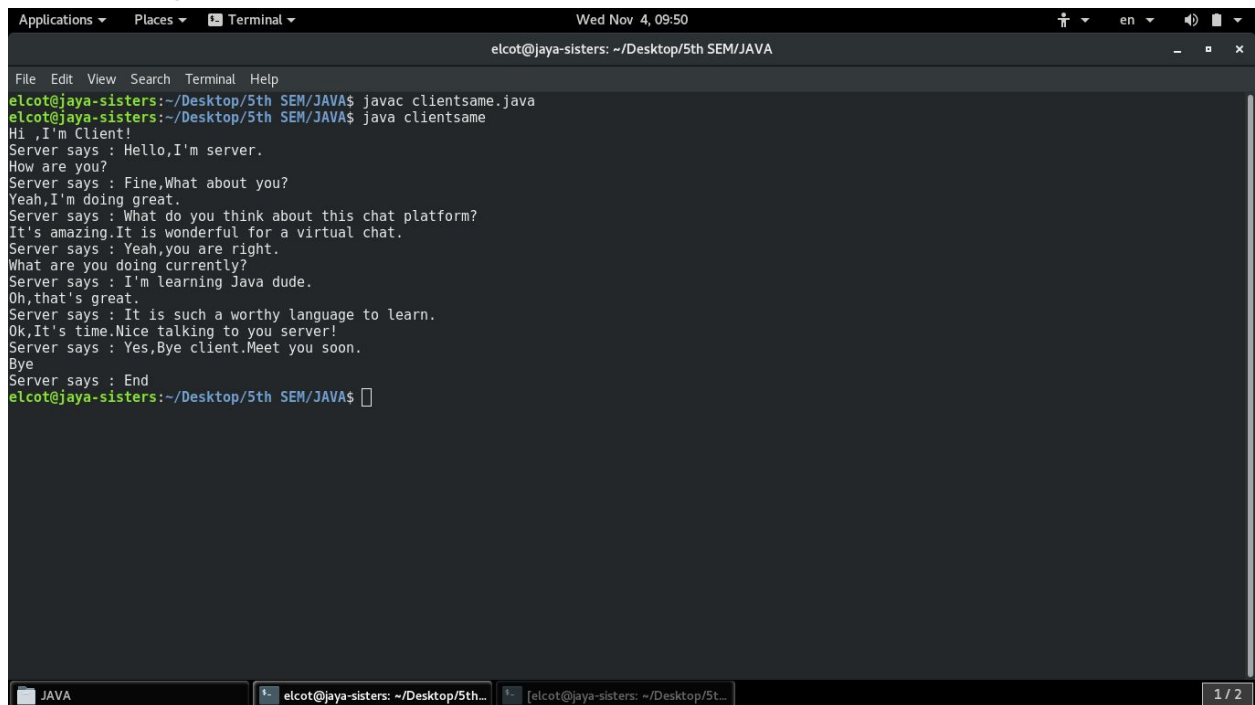
Server Program Output Window :



A screenshot of a terminal window titled "elcot@jaya-sisters: ~/Desktop/5th SEM/JAVA". The terminal shows the execution of a Java server program. The user runs `javac serversame.java` and `java serversame`. The program output shows a chat conversation between a client and a server. The client sends messages like "Hi ,I'm Client!", "Hello,I'm server.", "Client says : How are you?", "Fine,What about you?", "Client says : Yeah,I'm doing great.", "What do you think about this chat platform?", "Client says : It's amazing.It is wonderful for a virtual chat.", "Yeah,you are right.", "Client says : What are you doing currently?", "I'm learning Java dude.", "Client says : Oh,that's great.", "It is such a worthy language to learn.", "Client says : Ok,It's time.Nice talking to you server!", "Yes,Bye client.Meet you soon.", and "Client says : Bye". The server responds with "Hello,I'm server.", "Fine,What about you?", "Yeah,I'm doing great.", "What do you think about this chat platform?", "It's amazing.It is wonderful for a virtual chat.", "Yeah,you are right.", "I'm learning Java dude.", "Oh,that's great.", "It is such a worthy language to learn.", "Ok,It's time.Nice talking to you server!", "Yes,Bye client.Meet you soon.", and "End". The terminal ends with the prompt `elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$`.

```
File Edit View Search Terminal Help
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac serversame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java serversame
Client says : Hi ,I'm Client!
Hello,I'm server.
Client says : How are you?
Fine,What about you?
Client says : Yeah,I'm doing great.
What do you think about this chat platform?
Client says : It's amazing.It is wonderful for a virtual chat.
Yeah,you are right.
Client says : What are you doing currently?
I'm learning Java dude.
Client says : Oh,that's great.
It is such a worthy language to learn.
Client says : Ok,It's time.Nice talking to you server!
Yes,Bye client.Meet you soon.
Client says : Bye
End
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$
```

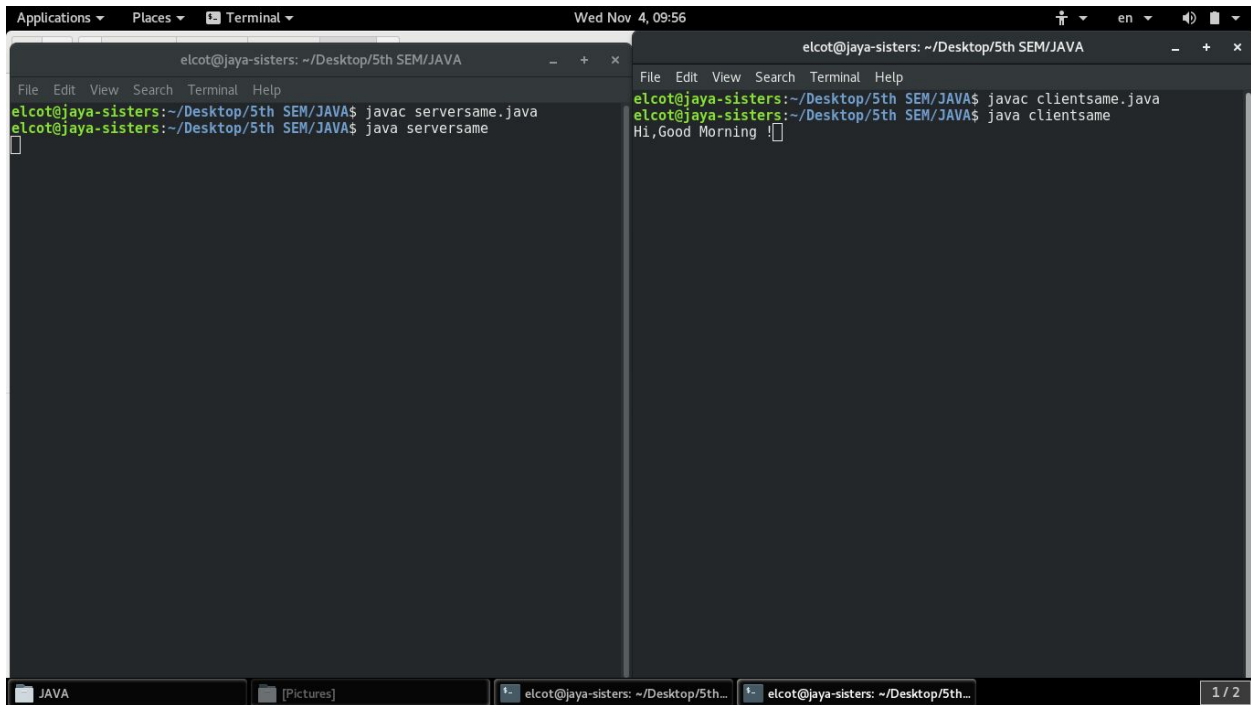
Client Program Output Window :



A screenshot of a terminal window titled "elcot@jaya-sisters: ~/Desktop/5th SEM/JAVA". The terminal shows the execution of a Java client program. The user runs `javac clientsame.java` and `java clientsame`. The program output shows a chat conversation between a client and a server. The client sends messages like "Hi ,I'm Client!", "Server says : Hello,I'm server.", "How are you?", "Server says : Fine,What about you?", "Yeah,I'm doing great.", "Server says : What do you think about this chat platform?", "It's amazing.It is wonderful for a virtual chat.", "Server says : Yeah,you are right.", "What are you doing currently?", "Server says : I'm learning Java dude.", "Oh,that's great.", "Server says : It is such a worthy language to learn.", "Ok,It's time.Nice talking to you server!", "Server says : Yes,Bye client.Meet you soon.", and "Bye". The server responds with "Hello,I'm server.", "Fine,What about you?", "Yeah,I'm doing great.", "What do you think about this chat platform?", "It's amazing.It is wonderful for a virtual chat.", "Yeah,you are right.", "I'm learning Java dude.", "Oh,that's great.", "It is such a worthy language to learn.", "Ok,It's time.Nice talking to you server!", "Yes,Bye client.Meet you soon.", and "End". The terminal ends with the prompt `elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$`.

```
File Edit View Search Terminal Help
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac clientsame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java clientsame
Hi ,I'm Client!
Server says : Hello,I'm server.
How are you?
Server says : Fine,What about you?
Yeah,I'm doing great.
Server says : What do you think about this chat platform?
It's amazing.It is wonderful for a virtual chat.
Server says : Yeah,you are right.
What are you doing currently?
Server says : I'm learning Java dude.
Oh,that's great.
Server says : It is such a worthy language to learn.
Ok,It's time.Nice talking to you server!
Server says : Yes,Bye client.Meet you soon.
Bye
Server says : End
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$
```

- ❖ Here both the server and client programs are compiled. Then client sends a message to the server.



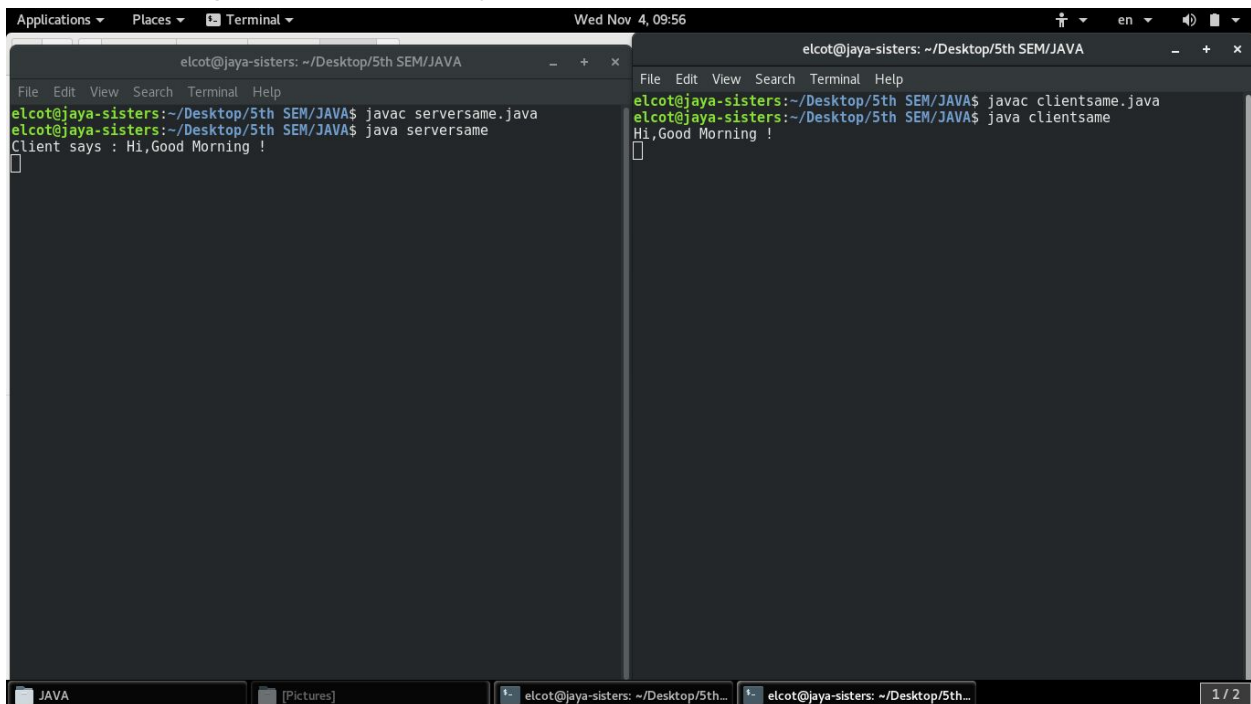
The screenshot shows two terminal windows side-by-side. The left window is titled 'elcot@jaya-sisters: ~/Desktop/5th SEM/JAVA' and contains the following commands and output:

```
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac serversame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java serversame
```

The right window is titled 'elcot@jaya-sisters: ~/Desktop/5th SEM/JAVA' and contains the following commands and output:

```
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac clientsame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java clientsame
Hi,Good Morning !
```

- ❖ When the enter button is pressed after typing the message, the message is immediately delivered to the server.



The screenshot shows the same two terminal windows as before. In the left window, the command 'java serversame' has been executed, and the output 'Client says : Hi,Good Morning !' is visible. In the right window, the command 'java clientsame' has been executed, and the output 'Hi,Good Morning !' is visible.

```
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac serversame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java serversame
Client says : Hi,Good Morning !

elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac clientsame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java clientsame
Hi,Good Morning !
```

- ❖ When the server wants to reply to the client, it can also send the message.

```
elcot@jaya-sisters: ~/Desktop/5th SEM/JAVA
File Edit View Search Terminal Help
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac serversame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java serversame
Client says : Hi,Good Morning !
Good Morning client,Welcome.

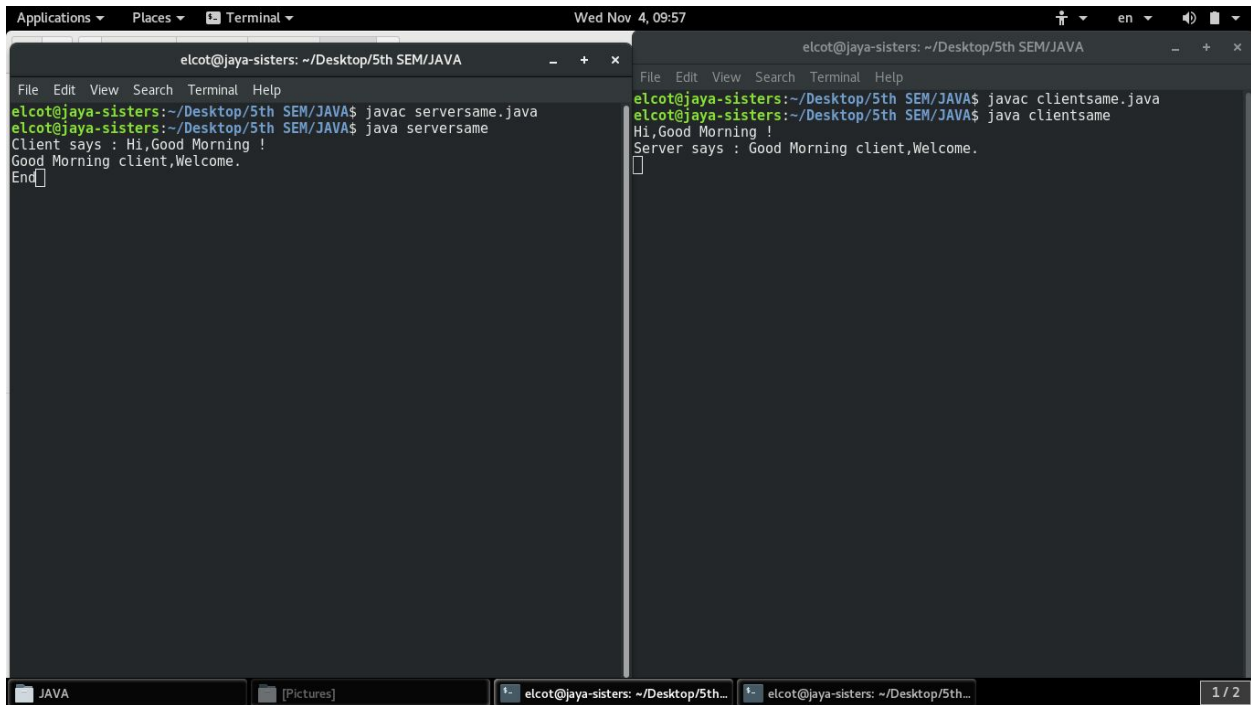
elcot@jaya-sisters: ~/Desktop/5th SEM/JAVA
File Edit View Search Terminal Help
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac clientsame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java clientsame
Hi,Good Morning !
```

- ❖ On clicking the enter button, the server's message is delivered to the client's window.

```
elcot@jaya-sisters: ~/Desktop/5th SEM/JAVA
File Edit View Search Terminal Help
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac serversame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java serversame
Client says : Hi,Good Morning !
Good Morning client,Welcome.

elcot@jaya-sisters: ~/Desktop/5th SEM/JAVA
File Edit View Search Terminal Help
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac clientsame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java clientsame
Hi,Good Morning !
Server says : Good Morning client,Welcome.
```

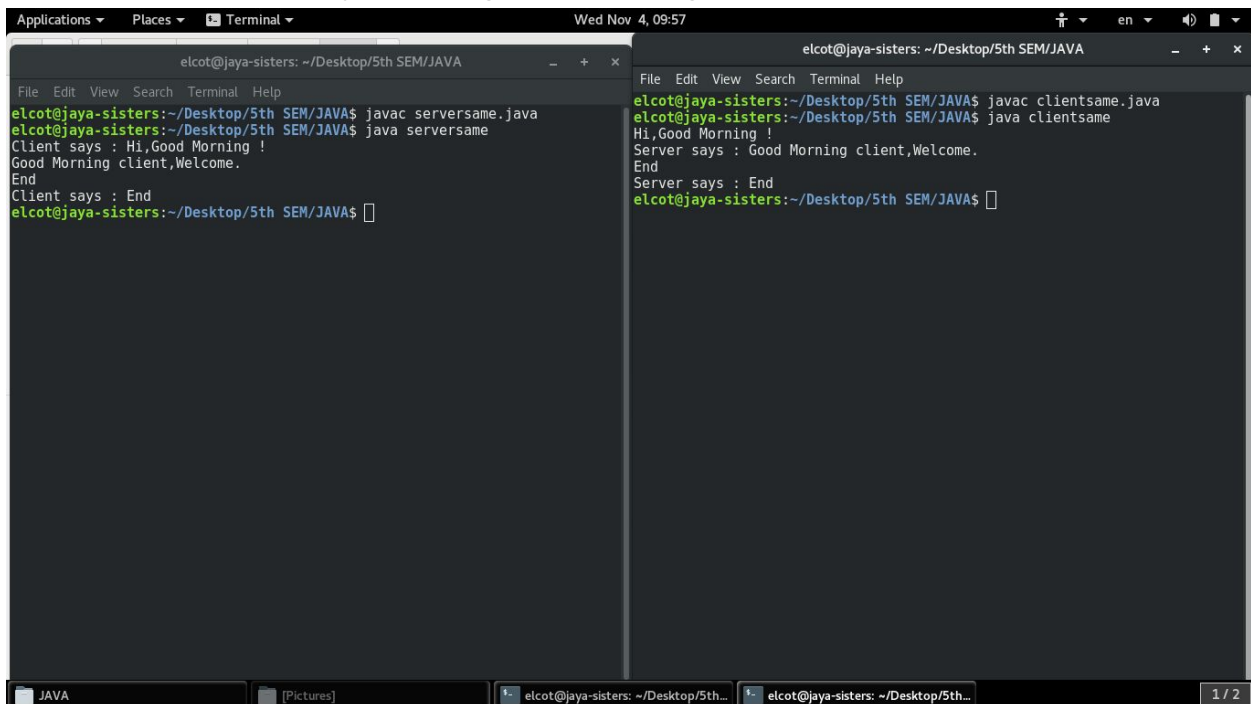
- ❖ Here the server wants to end the conversation. So it types the message "End".



```
elcot@jaya-sisters: ~/Desktop/5th SEM/JAVA
File Edit View Search Terminal Help
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac serversame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java serversame
Client says : Hi,Good Morning !
Good Morning client,Welcome.
End

elcot@jaya-sisters: ~/Desktop/5th SEM/JAVA
File Edit View Search Terminal Help
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac clientsame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java clientsame
Hi,Good Morning !
Server says : Good Morning client,Welcome.
```

- ❖ And so the conversation is ended. The client can also end the conversation by sending the message, "End".



```
elcot@jaya-sisters: ~/Desktop/5th SEM/JAVA
File Edit View Search Terminal Help
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac serversame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java serversame
Client says : Hi,Good Morning !
Good Morning client,Welcome.
End
Client says : End
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$

elcot@jaya-sisters: ~/Desktop/5th SEM/JAVA
File Edit View Search Terminal Help
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ javac clientsame.java
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$ java clientsame
Hi,Good Morning !
Server says : Good Morning client,Welcome.
End
Server says : End
elcot@jaya-sisters:~/Desktop/5th SEM/JAVA$
```