```
package client;
import ocsf.client.*;
import common.*;
import java.io.*;
public class ChatClient extends AbstractClient{
ChatIF clientUI;
boolean isLogin;
public ChatClient(String host, int port, ChatIF clientUI) throws IOException{
 super(host, port);
 this.clientUI = clientUI;
 isLogin=false;
 openConnection();
 clientUI.display("You current status is not logged in.");
public void handleMessageFromServer(Object msg){
 if(msg.toString().substring(0,7).equals("Welcome"))
   this.isLogin=true;
 clientUI.display(msg.toString());
}
public void handleMessageFromClientUI(String message){
 if(message.charAt(0) == '#')
   String[] command;
   {\tt command} = {\tt message.split("\backslash s+");}
   this.handleCommandFromClientUI(command);
 else{}
  if(\texttt{isLogin}) \big\{
    try{
      this.sendToServer(message);
    catch(IOException e){
      clientUI.display("<System> Could not send message to server. Terminating client.");
      quit();
    }
   else clientUI.display("<System> Not Loged in");
}
public void handleCommandFromClientUI(String[] command){
 \mathbf{try}\{
   if(command[0].equals("#quit")){
    if(isLogin)
     this.sendToServer("#logoff");
    clientUI.display("<System> Session has ended.");
    this.quit();
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else if(command[0].equals("#logoff")){
if(isLogin){
 this.sendToServer("#logoff");
 this.closeConnection();
 isLogin=false;
 clientUI.display("<System> You have Logged off from the server.");
else clientUI.display("<System> You have already logged off.");
else if(command[0].equals("#sethost")){
if(isLogin) clientUI.display("<System> Please log off first");
 this.setHost(command[1]);
 clientUI.display("<System> New host ("+ command[1] + ") has been set.");
else if(command[0].equals("#setport")){
if(isLogin) clientUI.display("<System> Please log off first");
else {
 try{
  this.setPort(Integer.parseInt(command[1]));
  clientUI.display("<System> New port ("+ command[1] + ") has been set.");
 catch(NumberFormatException e){
  clientUI.display("<System> Invalid port");
else if(command[0].equals("#login")){
if(isLogin) clientUI.display("<System> You have already logged in.");
 else {
 try{ this.openConnection();
 this.sendToServer("#login "+ command[1] + " "+ command[2]);
 catch(ArrayIndexOutOfBoundsException e){
  clientUI.display("<System> Invalid Input .");
else if(command[0].equals("#gethost")){
if(isLogin) clientUI.display(this.getHost());
else clientUI.display("<System> You are currently not connected.");
else if(command[0].equals("#getport")){
if(isLogin) clientUI.display(""+this.getPort());
else clientUI.display("<System> You are currently not connected.");
else if(command[0].equals("#reg")){
clientUI.display("<System> Requesting ...");
 this.sendToServer(command[0] + " "+ command[1] + " "+ command[2] + " "+ command[3]);
else if(command[0].equals("#regInfo")){
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clientUI.display("<System> Sending infomation ...");
       this.sendToServer(command[0] + " "+ command[1]);
      else clientUI.display("<System> Command not found.");
     catch(IOException e){
      clientUI.display("<System> Could not reach server. Terminating client.");
      quit();
   }
   public void quit(){
     \mathbf{try}
      closeConnection();
     catch(IOException e){}
     System.exit(0);
   public void connectionException(Exception exception){
     \mathbf{try}
      this.closeConnection();
      isLogin=false;
      clientUI.display("<System> The connection to the Server ("+ this.getHost() + ":"+
this.getPort() + ") has been disconnected.");
     catch(IOException e){
      clientUI.display("<System> Unexpected error. Program terminates.");
      quit();
```