CT3535 Assignment B2

Source Code

ServerSocket.java:

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

public class SocketServer{

	public static ArrayList<String> TokenList = new ArrayList<String>();

	public static void main(String[] args) throws IOException{
		//Creates a new server with port 4444
		ServerSocket TokenServer = new ServerSocket(4444);

		while(true) {
			//Creates a socket based on the server
			Socket socket = TokenServer.accept();

			//For input and output between the server and the client
			PrintWriter out = new
PrintWriter(socket.getOutputStream(), true);
			BufferedReader in = new BufferedReader(new
InputStreamReader (socket.getInputStream()));

			//Takes the input from the client command prompt
			String str;

			while((str = in.readLine()) != null) {
				//Splits the input into the command & the token to
be input
				String[] li = str.split(" ");

				//If block if client query is SUBMIT
				if(li[0].equals("SUBMIT")) {

					//If clause for when list is full
					if(TokenList.size()==10) {
						out.println("Error, list is full.");
						out.flush();
					}

					//Else if clause for when the input is
already in the list
					else if(TokenList.contains(li[1])){
						out.println("OK.");
						out.flush();
					}

					//Adds value otherwise
					else {
						TokenList.add(li[1]);
						out.println("OK");
						out.flush();
					}
				}
				//Else-if block for if client query is REMOVE
```

```
                        else if(li[0].equals("REMOVE")) {
                              //Checks if the TokenList contains the value,
then removes it
                              if(TokenList.contains(li[1])) {
                                    TokenList.remove(li[1]);
                                    out.println("OK");
                                    out.flush();
                              }

                              //Otherwise, tells the user there's an error
                              else {
                                    out.println("Error, value not found in
list.");
                                    out.flush();
                              }
                        }
                        //Otherwise close the Server
                        else if(li[0].equals("QUIT")) {
                              in.close();
                              TokenServer.close();
                        }
                        //prints out invalid statment otherwise
                        else {
                              out.println("Invalid.");
                              out.flush();
                        }
                  }
            }
      }
}
```

Screenshot:

```
Enter commands of the form "CONNECT IP-address", "SUBMIT <token>", "REMOVE <token>" or "BYE"
 where <token> stands for an arbitrary word.
CONNECT 127.0.0.1
Connecting to server at 127.0.0.1, port 4444...
Connected to server.
SUBMIT aaa
Sending message to server: SUBMIT aaa...
Message "SUBMIT aaa" Sent.
Response from server: OK
SUBMIT bbb
Sending message to server: SUBMIT bbb...
Message "SUBMIT bbb" Sent.
Response from server: OK
REMOVE aaa
Sending message to server: REMOVE aaa...
Message "REMOVE aaa" Sent.
Response from server: OK
REMOVE aaa
Sending message to server: REMOVE aaa...
Message "REMOVE aaa" Sent.
Response from server: Error, value not found in list.
SUBMIT ccc
Sending message to server: SUBMIT ccc...
Message "SUBMIT ccc" Sent.
Response from server: OK
BYE
Disconnecting from server...
Sending message to server: QUIT...
Message "QUIT" Sent.
Connection to server closed.
Goodbye!
```