CSE471: DATA COMMUNICATIONS AND COMPUTER NETWORKS
YEDITEPE UNIVERSITY
FALL 2019
ASSIGNMENT 3 – DUE DATE NOVEMBER 11TH, 2019

In this assignment you will improve your existing TCP Chat Room application you were given as a lab work.

For this purpose, the *TCPMultiServer & ServerHelper*, which handles client connections and relaying messages will be improved by adding **multi chat room** capability. During the initialization process of the server, the program should ask the number of the simultaneous chat rooms it will handle for that particular run.

```
Server is started...
Please a number to create chat rooms: 3
Creating 3 chat rooms...
Ready to accept connections...
```

For the client part, as soon as the client connects it should return a list of chat rooms and their current users in a list. The client should enter his/her name and a number representing the chat room to join.

```
Client is started...
Connected to server...
Chat Room 1 has james ben kathy
Chat Room 2 has bob bill
Chat Room 3 has tom
Please enter your name: john
Please a number to join a chat room: 2
Joining chat room #2 with name john
```

The server should also implement a chat room switching feature such that when it receives a string like "switch_channel 1" from the client, it should switch the chat room for the corresponding client to chat room number 1.

```
hello
bob: hey!
bill: hi all
switch_channel 1
Switching to channel number 1 containing james ben kathy
```

Submit your assignments in a zip file, which has your student number as name, through the COADSYS (http://coadsys.yeditepe.edu.tr/) latest by the end of Monday, November 11th, 2019