

**National Institute of Technology Calicut**  
**Department of Computer Science and Engineering**  
**CS3093D:Networks Laboratory**

**Assignment #4-Evaluation Question**

1. Design a reliable online discussion room for one Principal Investigator (PI) and three Co-Principal Investigators (Co-PIs) working in NITC under a joint project titled "COBRA". With respect to the client server architecture, PI is the server and the Co-PIs are the clients. Let us assume that the PI has shared a common password (a random number) to the Co-PIs through a mobile phone. PI has assigned a task on networking protocol stack design for the COBRA project to be finalized by Co-PIs. Therefore, CO-PIs are planning for an online discussion to finalize the design assigned by PI. To join the discussion room, the password is required for authentication. If the password is entered by Co-PI, the PI verifies it. After the successful authentication, the access is granted to the Co-PI and a message pops out saying "Welcome to project COBRA". He/She has to send a "Hi" message to all the connected Co-PIs to notify his presence. Similarly, he/she will send a "Bye" message while leaving the session. Every message is prefixed with the name of the PI and Co-PI to know the sender of the message. Every time, Co-PI joins the session for discussion, the PI sends a list of currently connected Co-PIs.

Andrew (Co-PI)	Stallings (Co-PI)	Forouzon (Co-PI)	Richard (PI)
Enter the password:234513 Welcome to Project COBRA No other Co-PIs connected. Pl. wait.			I am listening on port 8182
Stallings Connected	Enter the password:234513 Welcome to Project COBRA The Co-PIs connected are: 1. Andrew		Andrew connected
[Andrew]: Hi Stallings	[Andrew]: Hi Stallings [Stallings]: Hello Andrew		Stallings Connected
[Stallings]: Hello Andrew		Enter the password:234513 Forouzon Connected	
Forouzon Connected	Welcome to Project COBRA	The Co-PIs connected are: 1. Andrew 2. Stallings [Forouzon]:Hi everyone.	Forouzon Connected
[Forouzon]:Hi everyone.	[Forouzon]:Hi everyone. [Stallings]:Shall we start the discussion?		
[Stallings]:Shall we start the discussion? [Andrew]: Yes	[Andrew]: Yes	[Stallings]:Shall we start the discussion?	
[Forouzon]:Yes. I have got an urgent work. I will leave now and join later.	[Forouzon]:Yes. I have got an urgent work. I will leave now and join later.	[Andrew]: Yes [Forouzon]:Yes. I have got an urgent work. I will leave now and join later.	
[Forouzon]:Bye Forouzon left the discussion	[Forouzon]:Bye Forouzon left the discussion	[Forouzon]:Bye	Forouzon left the discussion
.	.	.	.
.	.	.	.
.	.	.	.