

Examination 2

Date: 19/02/2018

Time: 3Hr

Max. Marks: 20

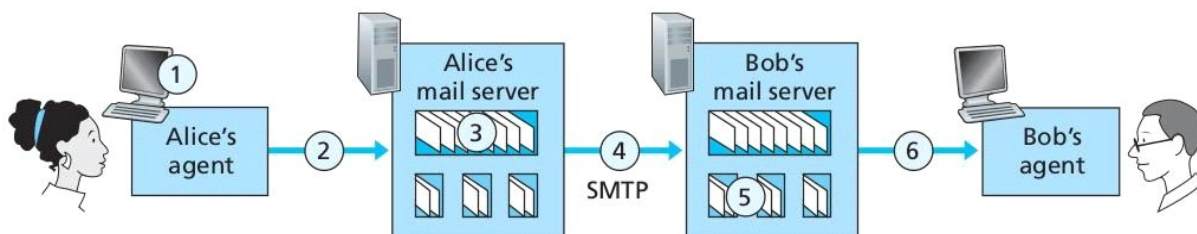
Implementation of SMTP protocol

Simulate the Simple Mail Transfer Protocol (SMTP) and a mail access protocol. You must develop the following programs as part of this implementation.

- 1) Mail servers (Sender side SMTP server and Receiver side SMTP server)
- 2) Client programs (sender and receiver)

Functionality required:

1. A Client logs into a SMTP server with which it is already registered (Server should maintain a list of user names (like *abc@xyz.com*) and their passwords; passwords need not be encrypted).
2. Client should be able to create a text message and send to any of the users whose user names are already with it.
3. For this, the client sends the message to the SMTP server (*Sender side SMTP server*) in which it is already logged in and the message is stored inside the server.
4. *Sender side SMTP server* makes a connection to the *Receiver side SMTP server* and verifies the validity of the receiver user names.
5. If the receiver user is a valid user, then the *Sender side SMTP server* delivers the message to the *Receiver side SMTP server* which keeps the message in the mail box of the recipient.
6. The message will be read by the recipient (client) whenever he/she logs into the Receiver side SMTP server.



Your implementation must allow connection from multiple clients to either of the servers. Clients must be parameterized to accept **loopback address** or the hostname **localhost** as the server identification, along with the **port numbers** through command line.

Message format should be as follows:

From: sender@abc.com
To: receiver@xyz.com
message body

You may handle user names, passwords and the messages at the Server sides using data structures of your choice.

Submit your codes and design documents to the Moodle course page with the naming conventions already followed in previous experiments. ZIP all your files into a single file and upload it.