

In the Name of the Dearest  
**Computer Networks**  
**Project 1**  
**Message Service**

In this project we are considering a message service which relays messages between users.

### **Required Functionality**

The final solution shall consist of two logical parts, a client and a server whose functionality is defined below.

- The server shall be able to handle
  - Multiple users, their status (on-line/off-line) and their mailboxes.
  - The messages between the users according to their status:
    - Put the messages in users mailbox in off-line case
    - Relay the message to the user in on-line case
- The client shall be able to:
  - Connecting to the user defined server with provided user credentials
  - Take user messages and send them to the server
  - Receive user messages and show them to the user (on-line and off-line messages)
  - Check the status of a user defined user

### **Implementation Methodology**

- The students shall present their logical design along with the implemented code and the application itself.
- Students are free to choose any design methodology they want and present their logical design in any way they want, however; it shall be documented on paper or in electronically formats.
- Students shall define the protocol between the client and server and document it appropriately in the logical design phase.
- Students are free to choose implementation language; nevertheless, they shall use socket programming API.
- The implementation code shall be appropriately documented to reflect the logical design.
- A running version of applications' binaries shall be provided with the code.

## **Teamwork**

It is preferred to prepare their solution in a collaborative manner.

- The teams shall consist of up to 4 people.
- The role of each team member in various phases of the project and their contribution to the team shall be defined.

## **Submission and Extra Information/Assistance**

- Projects shall be submitted in two weeks from announcement date (April 7, 2005).
- For more information and/or questions; please contact **kefayati@ce.sharif.edu** or **falaki@ce.sharif.edu**.
- Please put “[CE443]” as a keyword in your subject.