Question No 1:

Apart of their normal duty, Security guards of FAST-NU have to perform another task. That is, they have to mark attendance of all the faculty members at the time of their arrival. This certainly affects their job. FAST admin decided to adopt the solution proposed by a student of computer network class and the solution is explained below.

Every time when a faculty member enters his/her room and turned on his PC, a running program should send a message signal to the attendance server. And the attendance server should reply back with the current time. Attendance sever will also maintain the record of the attendance.

Being students of computer networks, you learned how to write a simple TCP server and client. All you have to do is to write a server which should respond to the client's request in the following way.

1. *Client will run a program and just provide his password.*

2. *There will be already available 1 txt file that contains following information*

    Name of Faculty Member and Subject he/she is currently teaching

*Client will send a message to Server in this format "**TIME IN: Ali Hassan PF**"*

*Server will respond with message "**TIME IN NOTED: 9/17/12 9:00:00 am**"*

Maximum no of pending clients could be 5

Server will also maintain the record of attendance in text files department wise. Currently you can consider 6 subjects (PF, OOP, Data Structure, Algo, CNET, COAL) so you have to create 6 different files for each subject and save attendance record of each faculty member in respective file. Output Format of each text File will be like this.

Serial No	**Subject**	**Date**	**Time**	**Name**
1	PF	9/17/12	12:35:00 pm	Ali Hassan

Server should keep running until all 10 clients have marked their attendance. After that it should terminate gracefully.

Note: Time format could vary depending on your implementation.