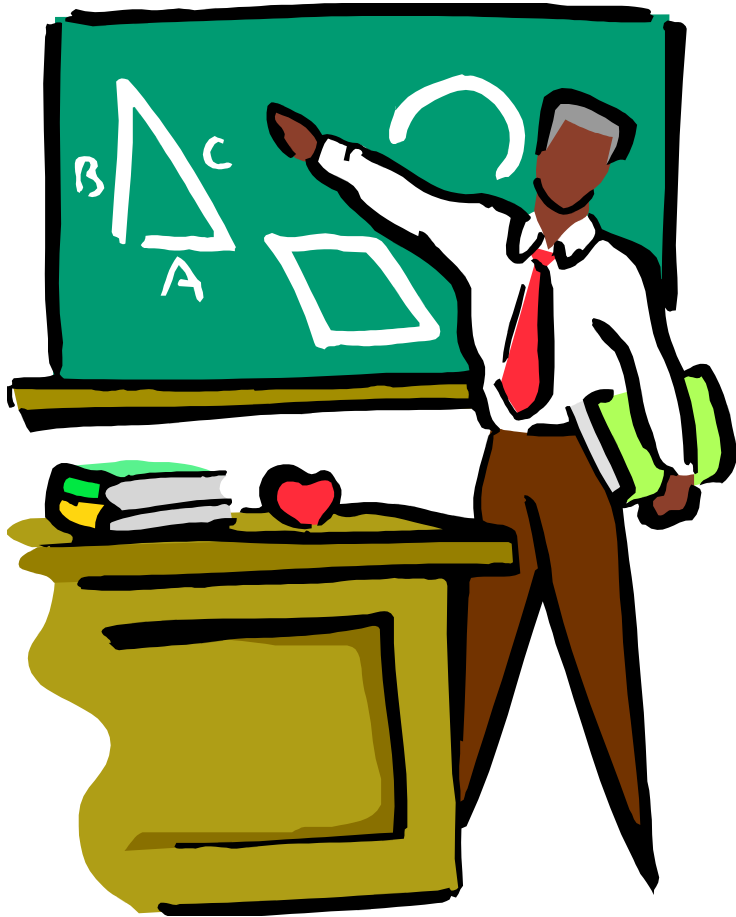




Term Long Project (40% of the final grade)



Year long project



- 1 - What?
- 2 - How?
- 3 – Expected outcome



What?

Design and implementation of:

- **Selected simple application layer protocols**
- **A concrete application that uses the simple application layer protocols**



What?

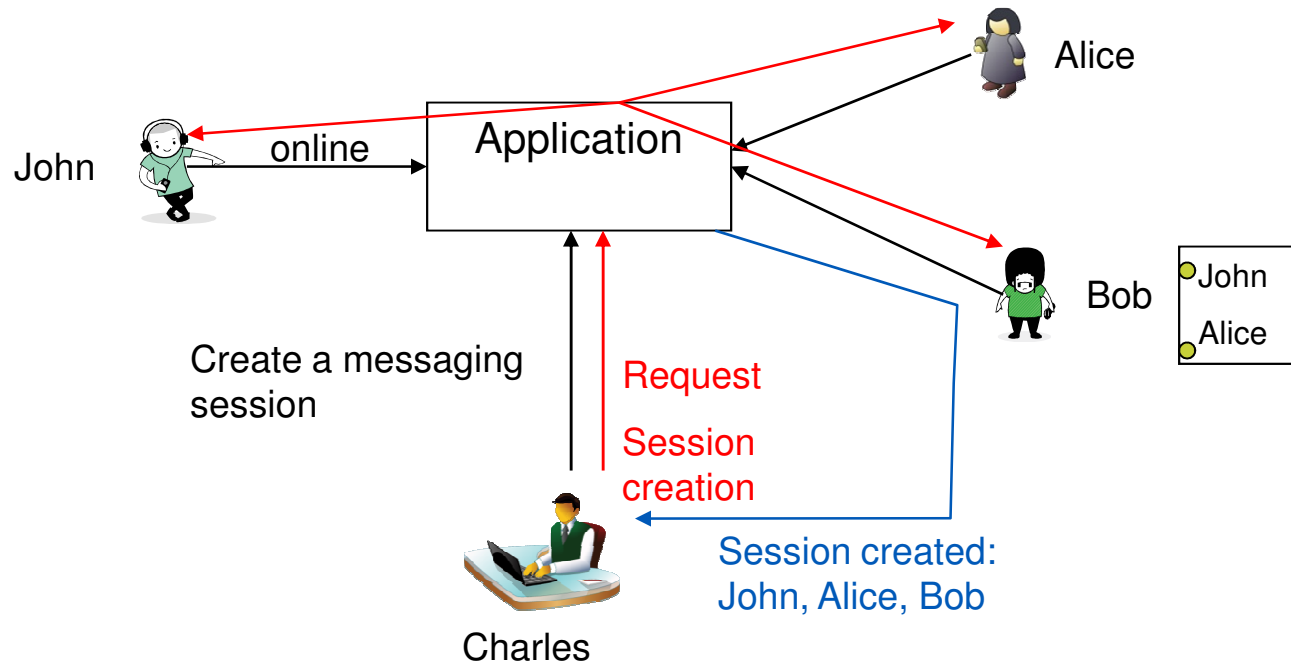
A Presence – based messaging application

A client-server application running on top of TCP or UDP, which creates a messaging session between a given number of users when they are online

- Interested users publish their presence to the application
- The session initiator (client) sends an initiation request to the application (server), along with the preferred number of the users in the session
- The application checks the number of available users
- If the minimum number of users is available, the application initiates a session among them
- When the session is initiated, the users can exchange messages and exchange files
- The session initiator terminates the session



What?





How?

- Design and implement simple protocols for:
 - Publishing presence information (i.e. on-line / off-line status)
 - Initiating and terminating sessions
 - Exchanging files
 - Exchanging on-line messages
- The implementation should be done using socket programming
 - No existing application layer protocol should be re-used.



How?

- Recommended group size: 4 students / per group
- Groups of 3 students, 2 students and even 1 student are acceptable (although not recommended)
- Every group (independently of its size) should handle the whole project as defined – However:
 - Each group of 3 will have 5 points bonus
 - Each group of 2 will have 10 points bonus
 - Group of 1 will have 15 points bonus
- A group which will not submit the full expected outcome (i.e. report + demo) will get 0 point



Expected outcome 1: Report

- The project report (20 pages maximum) should include:
 - Which transport protocol did you use and why?
 - Protocols design (e.g. messages, rules):
 - Presence
 - File sharing
 - Session setup and termination
 - Messaging
 - Protocols implementation
 - Describe briefly the main parts of your implementation (classes, sequence diagrams,...)
 - Who did what



Expected outcome 2: Demo

- A live demo