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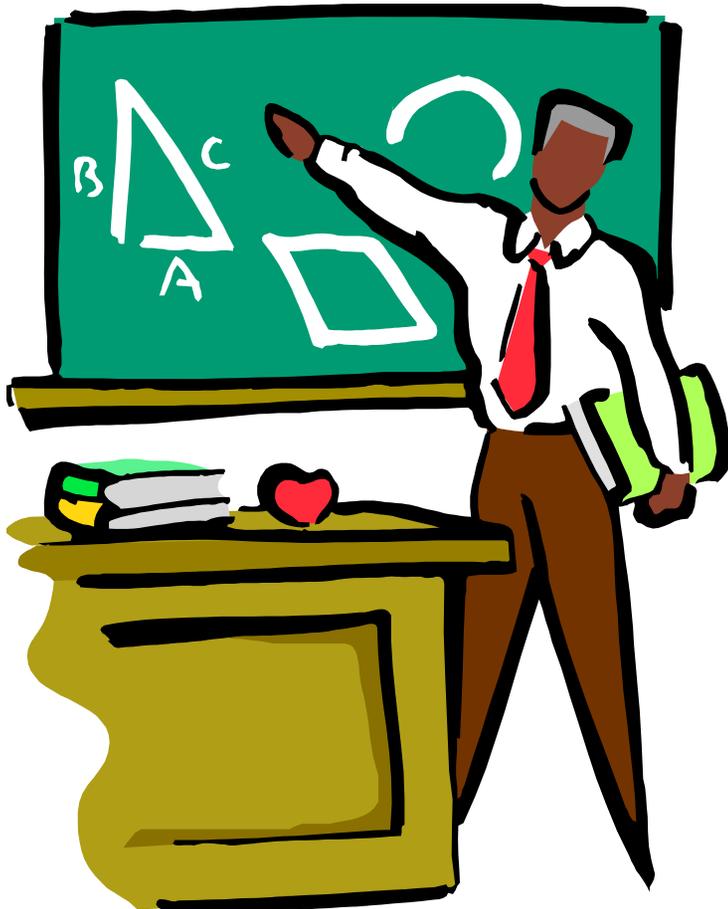
# **Project Specification**

## **Multimedia Session:**

# **Planning, establishment, termination**



# Multimedia session planning, establishment and termination



- 1 - Overview and assumptions
- 2 - Breaking it into phases
- 3 - What students should do



# Overview and assumption

## Overview

- A client / server application running on top of TCP/UDP that allows an end-user to:
  1. Check the availability of other end-users for a multimedia session at a given time of the day
  2. Ask the end-users who are available for the session if they are willing to join at the given time
  3. Establish the session with the end-users who are available and willing
  4. Exchange media during the session
  5. Terminate the session



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# Overview and assumption

## Assumption

Every end-user has an electronic agenda she/he can populate through an end-user interface



## Breaking it into phases

### Phase I

1. The end-user willing to establish the session sends an availability request to a centralized electronic session manager
2. The centralized session manager consults electronically the agendas of the potential participants and replies back, specifying the time slot where all potential participants are available.



## Breaking it into phases

### Phase II

1. The end-user willing to establish the session sends a request (through the centralized session manager) to all potential participants to inquire whether they are willing to join at the given time
2. Every end-user who receives the request replies back and states whether or not she/he is willing to participate at the given time



## Breaking it into phases

### Phase III

1. The end-user willing to establish the session sends a session establishment (through the centralized manager) to all those who are willing to participate
2. The session is established



# Breaking it into phases

## Phase IV

Media is exchanged (text as a minimum)

Voice and video could be added



## Breaking it into phases

### Phase V

The session initiator sends a request (through the session manager) to end the session

Session is ended



# What students should do

## Scope

- Design and implement simple protocols for:
  - Participants availability checking
  - Session setup
  - Media exchange
  - Session termination

Note: The implementation should be done using socket programming  
– However, existing application layer protocols (e.g. SIP) may also be re-used for parts of the project.



# What students should do

## Groups

- The project should ideally be done in groups of 4
- However groups of small size are allowed:
  - These groups should work on the whole project as specified, but will have bonus points.
    - Group of 3: 5 points bonus
    - Group of 2: 10 points bonus
    - Group of 1 : 15 points bonus
- Note: The project will be graded nil if none of the phases could be demonstrated.



# What students should do

## Output

- Short presentation
- Live demo
- Project report
  - Should include
    - Which protocols were used/re-used and why?
    - Protocol design (e.g. messages, rules governing their exchange)
    - Implementation
    - Who did what?
  - Note: The report should be 20 pages max