Project Description

In this course, students are expected to work in a group of three on a project. The goal of the project is to help you to learn some interesting applications not covered in the class and then to teach the class. It is your choice to select the topic, but you can also pick up a topic from a list of suggested projects included below. For students at 400 level, implementation involving C/Java programming is required. On the other hand, in depth literature survey or an original research work on a relevant topic is preferred for those at 500 level.

Each student/group is required to submit an 1-page proposal outlining the project, a project report, and to provide an oral presentation (no more than 15 minutes) at the end of the semester. The final report should follow the following format:

- Cover page that includes your names and IDs
- Main body should include the following sections:
  - Abstract: Brief yet descriptive
  - Introduction: Issue/Scope to address
  - Main section
  - Conclusions
  - References
  - Appendices, including your C/Java codes with comments/explanations

The (tentative) time line for the project is as follows:

- List of team members for each group must be submitted within 3 weeks from now.
- Project proposal must be turned in by Feb. 24. You should meet with the instructor well in advance for a discussion about the chosen topic.
- Project report is due on the last day of the semester, which is May 5.
- The project presentations shall be organized in the last week of the semester.

List of potential topics:

- Instant messaging application and chats
- Voice over IP over Ethernet/Wireless
- Video streaming over wireless networks
- Quality of service
- Peer-to-peer file sharing protocols
- Wireless standards, such as WiFi, WiMAX, ZigBee
- Online gaming, computer games
427 - Examples of Previous Projects

- Wireless ZigBee Point-to-point Connection
- Internet Relay Chat
- Embedded Wireless Network
- Peer-to-Peer Network
- Lightweight Messaging Client
- Software App. for Automated Industrial Machines
- gSOAP Web Services
- PIC Protocols
- Bluetooth-based Messenger
- Embedded Web Services
- WiFi Video Streaming
- Interactive ARQ Algorithm Demonstration
- Cellular Networking using GSM/GPRS

527 - Examples of Previous Projects

- Link-State Routing
- Wireless Sensor Networks
- Full Duplex in Cognitive Radio Networks
- Hybrid Peer-to-Peer System for Distributed Data Sharing
- Fountain Codes
- Forward Error Control Coding for Video Streaming