ICOM 5019 (Secc. 151) Network Applications Design

Time: Lecture: Tuesday 3:00 – 3:50 p.m.
Labs: Tuesday 3:50 - 5:50 p.m., & Thursday 3:00 – 4:50 p.m. Spring 2004
Room: S 105C
Office Hours: Tuesday & Thursday (M J) 1:30 – 3:00 p.m. or by appointment.

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Prerequisite: Knowledge on computer networks, and computer programming.

Course Description:

(Four hours of laboratory work and one hour of discussion per week). In this design course, student teams will write a proposal and carry out the proposed project to design a network application system. In particular, students will design and implement a web system that may be used for e-commerce, e-government, or other applications.

Course Objectives:

The course has the following objectives:

- Learn Application Layer Protocols.
- Learn web design techniques.
- Hands-on experience in design and implementation of a network application system.

Course Outlines: (Subject to Changes)

- Introduction
- The Application Layer
- HTML and Web Design
  - HTML Basics
  - HTML Tables
  - HTML Forms
  - Cascading Style Sheets (CSS)
  - XHTML and Emerging Trends
  - Graphics
  - Animation, Sound, and Video
  - JavaScript
  - Java Applets and ActiveX Objects
  - PHP4
  - Active Server Pages (ASP)
- Security and Performance
- Final Project presentations and demonstrations
Textbook and References:

- Recommended references:
  - Various web sites provided during the class.

Project:

The design and implementation project is the major part of the class. You should pick a design project topic early and meet the intermediate deadlines. You are required to work in a team of two persons.

Project Proposal:
Each team is required to submit a Project Proposal, which should be a 1-2 pages problem statement: what kind of system do you want to design and to implement? And your objective: what do you want to achieve?

Design Document & Final Report:
Each team is required to submit a Design Document & Final Report, which should include your detailed design steps and methods, and the outcomes of your design and implementation.

Project Presentation and Demonstration:
Each team should prepare a 30 minutes presentation for your project. Presentation shall be made with the media or tool you feel most effective. I recommend MS PowerPoint slides. Each team should give a demonstration of your project after the project presentation.

Due Date:

Project Proposal: Tuesday, February 24, 2004
Design Document & Final Report: Tuesday, April 20, 2004
Presentation Slides: Tuesday, April 27, 2004

Grading:

Projects 80%; Quiz 1: 10%; Quiz 2: 10%.