Introduction

This course includes a required class project. The goal of the project is for students to make an in-depth study of a topic relevant for the course. Students have freedom to choose the topic and approach for studying it that is of most interest and best suited to them. It is expected that all projects will require some amount of research and reading. Additional work required for the project will depend on the type of project. A few potential types are (this list is not intended to be exhaustive):

- Do a performance/characterization study on some aspect of operating/distributed systems. Possible ideas:
  - Collect and analyze data on an aspect of operating system performance such as CPU, memory or file systems.
  - Collect and analyze data on a networked application such as DNS, streaming media, p2p, Web, or mobile apps.
  - Develop a benchmark for an aspect of system performance.

- Research a project in a particular area including much reading of literature and gathering of material. An important part of this type of project is synthesis of the material.

- Test and analyze algorithms, techniques or mechanisms for some aspect of operating/distributed systems. For example, examine the implementation and performance of two or more RPC mechanisms.

- Examine the structure/internals of an actual operating/distributed system.

Students need to choose a project and submit a proposal regarding its details. Students may work in two-person groups if the nature of the project is a fit for two people. Individual projects are also acceptable.

Due Dates

The project has four due dates:

1. Proposal (Due: October 10, 2005)

Each group will turn in a typed proposal (one or two pages) defining the project and explaining the work to be done. Students should identify any known references and software that will be used for the project.

This proposal should clearly explain the final product and include a preliminary schedule. Proposals will be approved or disapproved but not graded.
2. Project Design Report / Progress Report (Due: November 7, 2005)

This report should clearly state the current status of the project. At this point all references and software needed for the completion of the project should have been obtained. All reports should include a bibliography and be five to ten typed pages long. This report will be graded.

3. Project Presentation (Due: November/December, 2005)

During the latter stages of the course, each project group (individual) will make an oral presentation during class time. This presentation will explain and summarize the project. Questions will be asked by the other members of the class. This presentation will be graded.

4. Final Project and Report (Due: December 13, 2005)

The final report should be a well-presented technical report discussing your project. All reports should include a bibliography and be ten to twenty pages in length. If your project involved the gathering and reading of literature then your report should synthesize what you read and not be merely a concatenation of individual paper reviews. If your project included any programming effort, you should explain how the program works, give specific sample runs and analyze the results. If there is a substantial amount of coding I may ask a group to schedule a demo during the last week of the semester. The final report may include parts of your progress report. Please turn in your graded progress report with your final report.

NOTE: If you do not have a viable idea for an alternative project or need help in getting a group partner, please discuss this with me by October 3rd.