Course Project

Objective. The purpose of this project is to provide you an opportunity to build a cool networking application or solve a real computer network issue. There is some flexibility in what you do and how you do it. This document outlines the requirements and the milestones of this project. Please read all sections of this document and the suggested topics and start early.

This project is divided into three phases. Each phase provides a well-defined point for the instructor to provide feedback and evaluate your team's effort. Here are the details of what is expected and what needs to be delivered for each phase.

Grading: This project accounts for 20% of the final course grade, allocated among the three phases as follows: Phase I (3%), Phase II (10%), Phase III (7%).

Phase I: Project Proposal and Team Forming [Due Feb 18]

Each project is undertaken by an individual or a team of 2 to 5 students. It is strongly recommended that you work in a team. You can greatly benefit from the discussions with other team members and accomplish a project with better quality in a team. Moreover, after graduation you will most likely work in a group. So working on a team project will help you to become an effective team player in your future working environment.

Your team can propose to conduct any networking-related project of your interest. For you reference, a list of suggested topics is provided at the OAK system. The instructor will assess your proposed topic. And if it is believed to have suitable scope and difficulty, the proposal will be approved and you can go ahead for the next phase. Otherwise, you have to revise or refine the topic. Your team can schedule an appointment with the instructor to go over your proposed topic before you submit the proposal. By the due date, you need to submit a proposal which includes the following information.

- Title of your topic.
- Names of your team members.
- The goal of your project. If the project aims to build a networking application or system, explain what the system will do. If the project explores a networking issue, explain what problem your project will research.
- Your approach to conduct the project. For system-oriented project, describe how you would implement your system and what experiments you would like to conduct to test your system. For research-oriented project, describe how you plan to analyze the network problem.
- Rough timeline and milestone of your project.

Phase II: Progress Design Presentation [Due April 08/April 10]

You are required to finish the design of your system by phase II and report your progress in class (e.g., in Powerpoint presentation). Depending on the time availability and the number of projects that we will have in the class, each project presentation will take about 15-20 minutes. Your presentation should: 1) tell what your project is about; 2) describe what design or implementation is required to complete the project.
For system-oriented projects, present the system functional specifications, modules and interfaces. For research-oriented projects, present your method/algorithm. Also please identify any challenges you have faced in your project; 3) show any preliminary results or system demonstration.

Please rehearse your presentation well. Your presentation will be peer-evaluated and the evaluation results will be factored into your final project grade.

**Phase III: Final Report and Code Submission [Due April 26]**

In this phase, you will evaluate your design and wrap up your project. The final deliverables are listed as follows.

- Final report. The final report should include your system design as well as evaluation results. It needs to be well-organized, and well-written.
- Team member peer evaluation. A brief evaluation report of each team member's contribution in this project needs to be submitted along with final report.
- System implementation code. If your project involves system implementation, please submit the source code along with your final report.