EECS 481
Research Paper

Assigned: 15JA04
Proposal Due: 22JA04
Draft (Optional) Due: by 04MR04
Final Paper Due: 2 weeks after return of draft, or 16MR04, whichever is latest

Only the grade for form may go up between the draft and final papers. The grade for content will remain the same. It is expected that approximately 40% of the grade will be derived based upon form and 60% will be derived based upon content.

Objective
The purpose of the research paper is to do research and write a critical paper on a relevant software engineering topic. In addition, the student is expected to follow a prescribed format for the paper (attached).

Topics
Each student is expected to generate a topic for their paper. The topic must be a currently relevant or historically significant Software Engineering topic. As an example, the history of MS-Word is not a good topic. However, the history of revision control applied to MS-Word is a good topic.

Personal interest is always the best source for a topic. The text (or other SWE texts) is also a good source for topics. Some topic suggestions are:
1. Consider a recent (past 10-15 years) software or SWE failure. What were the causes of the failure? Would good SWE practices have avoided the failure?
2. Describe the SWE process at your place of work. In what ways is the process rigorous? In what ways could the process be improved?
3. Pick your favorite 'evil empire' (e.g., MS or AOL). In what ways has the empire contributed to the science and art of SWE? In what ways has the empire hindered the science and art of SWE?
4. Describe a recent hack / virus / Trojan horse. Did it show a weakness in SWE? In general, or in a particular application?
5. What are various organizational structures that have been used in small / large software development projects? Which structures work best for which types of projects?

Proposal
The proposal must follow the format of the remainder of the paper. The proposal must be 1 page or less. The content of the proposal should be as follows:
* Title of paper
* Author
* 2-5 sentences of background
* 1-2 sentences describing SWE question that paper addresses
* 5-7 sentences describing why the topic is relevant
* > 3 References, at least 2 of which are not web-based (course text may be used as reference)

Paper
The paper should be approximately ~~10~~ 5 pages long and in the described format. The organization of the paper is as follows:
* Title
* Author
* Abstract: an abstract is a brief summary of the paper. It is equivalent to an executive summary.
* Introduction: the introduction is a brief description of the topic. It should also explain why the topic is interesting and relevant.
* Previous Research (History): this section describes previous research in your topic area. Based upon your references, what discoveries have already been made?
* Body: this is the main section of the paper. Subheadings may / should be used to develop the concepts in the paper.
* Summary: summary of the major points from the paper.
* References