Essay Instructions

This essay assignment asks that you begin with a particular question raised from our reading and discussions (for example, questions on comprehending APIs, how developers comprehend, or change impact) and analyze that issue in terms of at least two papers, one that we've covered in class and on that we have not. First you need a question, an issue related to program comprehension that interests you and that you feel you can analyze. Then you need to find at least two readings that relate to that question in a way you can use in your own analysis of the issue.

First, though, let's define *analysis*, a fundamental characteristic of critical thinking. Analysis as applied to writing means that you separate something into its parts so that you can better understand it. You can begin with a question that grabs your attention, and then use that question as a lens for looking into the various parts of the issue raised by the question. Your question will concentrate your attention on relevant features of the issue you're interested in and help you eliminate irrelevant features. Once you've identified the relevant features of the issue to be examined, you then look at their significance or meaning.

This essay asks for a two-part structure common to language: ask a question and then try to answer it by analyzing its parts (again, using at least two papers). In a way this is like mini-research in that we've researched through our readings together and now you are ready to write about a primary characteristic of a specific issue. For this essay, you are analyzing an issue, not developing an argument.

For example: What are the problems faced by tools that support change-impact analysis?

- Possible relevant features: analysis (static vs. dynamic) techniques, distinguishing benign from harmful changes, integrating into developer workflows
- Possible readings: "Identifying program, test, and environmental changes that affect behavior" (Holmes & Notkin,), "Integrated impact analysis for managing software changes" (Gethers et al., 2012)

Note that you should generally *not* use your personal experiences in this essay. This is not a personal essay. Your content development for this essay arises from what you've read and how you analyze it. You will be quoting from and paraphrasing ideas from others' texts.

Additional Requirements

Your essay must satisfy the following requirements. Failure to do so will result in deductions.

- Submit via the **Essay** Dropbox in eCourseware.
- Submit as a Word document, using the template at
    http://www.cs.memphis.edu/~sdf/comp7085/assignments/Essay_Template.doc.
    (Let me know ASAP if this is a problem for you.)
- 1500-word minimum—not including front matter and references. (See Word's **Word Count** feature.)
- Reference at least 5 conference papers or journal articles. (Books, webpages, etc. do <u>not</u> count.) Although your paper should emphasize 2 papers on program comprehension, you must reference at least three other papers (which may or may not be specifically about program comprehension) in making your argument(s).

- Use correct spelling. (See Word's spell checker.)
- Use correct grammar. (Have someone proofread your work.)
- Use the styles/formatting provided by the template. (See Word's **Styles** features.)
  - Especially be careful to use proper citation format.
- Convey your ideas in a clear and concise manner. (See the myriad of writing guides available on the Web and in your local library.)

Proposing Your Topic

You must (verbally) propose your essay topic to me, and I must approve it before you proceed. Your proposal must include

- what question(s) your essay will pursue, and
- which paper from the course you will focus on.

I may make you revise your proposal if it is too similar to another student's.