

## Lab 4. In-class Presentation.

Due Date: 13 March, 2002

Please read these instructions carefully. Complete this assignment with your project group members.

For this assignment, you will prepare a presentation on a software engineering topic. You will practice the presentation and then present to the entire class.

**Audience:** Prepare the presentation for junior software engineers such as yourselves.

**Main Point and Purpose:** The purpose of this assignment is for you to demonstrate that you can prepare and deliver a verbal presentation on a software engineering topic.

### Procedures:

1. Your group is being asked to present a topic to the class in a 10-minute presentation. Before you present, you must practice your talk. Your group will be expected to answer questions during and after the talk. At least 2 members of your group must speak during the presentation.
2. A set of presentation topics is listed below. Your group needs to email me your top three choices in presentation topic by Sunday 3 March, 2002. As most 2 groups will present each topic choice. I will notify you of your topic shortly after I get your request and no later than Monday 4 March, 2002.
  - (a) Read the original research paper by David Parnas on Information Hiding. (This paper will be given to you.) Summarize the content of the research paper in your presentation. Be prepared to answer questions about how this paper is relevant to your 403 project.
  - (b) Read the original research paper by David Parnas on Subsets. (This paper will be given to you.) Summarize the content of the paper in your presentation. Be prepared to answer questions about how this paper is relevant to your 403 project.
  - (c) Read two original essays by David Parnas on ethics and the Strategic Missile Defense System. (These essays are written for an educated but non-technical audience. These essays will be given to you.) Summarize the content of these essays in your presentation. Be prepared to answer questions about the relevance of these essays to the work of software engineers today.
  - (d) Describe in detail the architecture of your restaurant reservation system. Explain the change strategy of this architecture and how it makes likely changes easy to do. Discuss alternatives in depth and explain why these alternatives are not as good. Be sure to discuss specific details of the restaurant reservations system when comparing and contrasting architecture choices. After your talk, I will present your group with hypothetical changes to your 403 project and ask you to explain whether your architecture makes handling of those changes easy.
  - (e) Study a set of readings on debugging and solving difficult problems. (The reading set will be given to you.) Present a summary of the material in class. Also present some real-life examples from the 403 project where
    - you needed to debug your software, or
    - you had trouble getting something workingand describe how you handled it. (Don't request this topic if you have not had any problems while completing the 403 project!)

- (f) Learn about `JUnit`, a framework used to write repeatable unit tests for Java programs. This learning will involve reading some articles on `JUnit` and also using `JUnit` to test some code. Present what `JUnit` is and your experiences in using it. Also learn about `JesTer` and present what `JesTer` is to the class. Be prepared to answer questions about the utility of unit testing and mutation testing when building large software projects.
  - (g) Would you like to release your restaurant reservation system in France or Germany? Learn about ICU, a library designed to ease internationalization and localization of software systems. Present an overview of major issues in internationalization and localization. Also describe what ICU offers to software engineers.
  - (h) Learn about the tool that automates interaction: `expect`. Present what `expect` is and how to use it. Actually use `expect` to automate interaction with a program (you can use some of the examples that come with `expect`) and describe your experiences. Also learn about `DejaGnu` and describe what it is. Be prepared to answer questions about how these tools might help people test.
3. You are required to do a practice talk of this presentation. Complete this practice talk sometime before 13 March, 2002. Those group members who are not speaking should take notes that summarize the strengths and weaknesses of the practice talk. After the practice talk is complete, you should discuss the talk as a group. Determine what can be improved so that your actual presentation is as complete, organized, and well-presented as possible. Also, be sure to time the practice talk and make sure that you do not exceed the 10 minute time limit.

**Deliverables:** Please turn in the following on 13 March, 2002:

1. The notes made during the practice talk
2. One copy of the slides and/or handouts used during the practice talk
3. One copy of the slides and/or handouts to be used during the actual presentation

The actual presentations will occur in class from 13 March, 2002 to 15 March, 2002. Each group should sign up for a 10 minute slot. Sign-up for these slots will be conducted via the 403 web page. Groups that present after 13 March, 2002 will not be allowed to change their slides or handouts after they turn copies in.

On the day you give your actual presentation, please have ready any overhead transparencies that you may need and/or handouts in the proper quantity for distribution to the class.

**Standards and Criteria:** In completing this assignment, demonstrate that you can verbally present software engineering material to a technical audience. You will be graded on the quality of the content *and* the quality of the presentation. Be sure to maintain your fellow classmates' interest while still talking about your topic in depth. The presentation must be organized and easy to follow. You can assume that the audience is familiar with the restaurant reservation and table assignment project and also basic software engineering principles.

Place a hard copy of your slides and/or handouts in each of your binders.