

## Assignment 4

This assignment is a continuation of assignment 3, dealing with software process assessment. As before, your team will be given a procedure to be assessed, and must submit a **report** evaluating this procedure.

### The Procedure to be Evaluated

You will be evaluating an Object-Oriented Reading Technique (OORT). An OORT is a procedure for inspections of OO designs. Your team will be assigned a particular design to which to apply the inspection procedure, and a particular set of OORTs that have been selected for that design. An overview of the OORT procedures will be presented in class on Nov. 17.

We will use the same taxonomy of defect types as in assignment 3. They can be tailored to OO designs as follows:

<i>Defect</i>	<i>General Description</i>	<i>Applied to design</i>
<i>Omission</i>	Necessary information about the system has been omitted from the software artifact.	One or more design diagrams that should contain some concept from the general requirements or from the requirements document do not contain a representation for that concept.
<i>Incorrect Fact</i>	Some information in the software artifact contradicts information in the requirements document or the general domain knowledge.	A design diagram contains a misrepresentation of a concept described in the general requirements or requirements document.
<i>Inconsistency</i>	Information within one part of the software artifact is inconsistent with other information in the software artifact.	A representation of a concept in one design diagram disagrees with a representation of the same concept in either the same or another design diagram.
<i>Ambiguity</i>	Information within the software artifact is ambiguous, i.e. any of a number of interpretations may be derived that should not be the prerogative of the developer doing the implementation.	A representation of a concept in the design is unclear, and could cause a user of the document (developer, low-level designer, etc.) to misinterpret or misunderstand the meaning of the concept.
<i>Extraneous Information</i>	Information is provided that is not needed or used.	The design includes information that, while perhaps true, does not apply to this domain and should not be included in the design

### Evaluating the Procedure

In order to evaluate the procedure, you and your teammate will each be assigned distinct roles, Process Executor and Process Observer, with the same responsibilities as before. However, the roles will be switched from assignment 3, as specified on the accompanying table.

As before, both team members should write the final report, which is due in class on **Dec. 8**.

**You Should Turn In:**

- 1) A final report evaluating the usefulness of your assigned OORTs for achieving the task of defect detection.
  - a) The report should be 3-5 pages in length, double-spaced.
  - b) Your report **MUST** address the following topics:
    - i) An in-depth explanation of the methods you used to understand the procedures, and your evaluation criteria.
    - ii) Your assessment as to whether or not the OORTs were useful for the task they claim to address. If your answer is yes, what are the limits of your evaluation, that is, how broadly can you extrapolate your results? If your answer is no, are there any hints in your analysis of situations in which OORTs would be more applicable?
    - iii) Does your analysis reveal anything about ways to improve the OORTs, either to make them *work* or to make them *work better*? Why or why not?
    - iv) You may choose to compare the OORT procedure to the PBR procedure that you applied in assignment 2, to help clarify what you found beneficial or not about the OORTs.
- 2) The list of defects found by the Executor. A form for reporting defects will be placed on the class web page.
- 3) The notes taken by the Observer.

**The due date for all items is Dec. 8.**

Your grades will be based on: the quality of your final report, as determined by the instructor, and how well you conformed to the procedures that you were asked to apply (OORT and the Observer roles). Your grades will **NOT** depend on your specific answers, e.g. the number of faults that you report, or whether or not you found the techniques valuable.

NOTE: This assignment is part of a study. As always, working with another student will be considered cheating, but for the purposes of the study it is especially crucial that you do not discuss your work with other students in the class. The motivation and design of the study will be discussed in class later this semester.