

Assignments for Lecture 12

Deliverables

1. Try to find an application for the Command Pattern to your project. If you find one, incorporate it into your phase 2 design. If you cannot find one, give an example of how you tried but it did not seem appropriate.

Questionnaire

1. For your phase one project, discuss with your group the bugs that were found in your system when you tested it. Choose several (there must be at least two?). Consider how the error occurred, and discuss it with respect to the following error classes from Petrosky:

i) New application: could have used a state or activity model for simulating - might have helped seeing the problem beforehand.

ii) Perils of previous success: doing a type of computation you have done before, so copied a general idea for doing something without thinking it through, and some detail was incorrectly implemented. Idea is that even if it is like something you have seen and done successfully before, need to rethink the analysis that made it work the first time you did it.

iii) Tunnel vision: focus on solving some aspect of the problem that is foremost in your mind, and ignore other aspects that are not thought through or done properly.

iv) Logical error: you had an algorithm that was supposed to perform some action, and it was logically or mathematically incorrect.

v) Redesign. You had a design that seemed to work and you thought of a new case to put in. This had unexpected consequences and introduced a new failure mode into your program

Study question

1. List the six different kinds of generalization or uses of inheritance, and for each indicate which satisfies the "is a" rule. Provide a brief explanation for your answers.

2. Suppose that there is an "on" and a matching "off" variation for each of a set of commands. This means that to undo an executed command you just execute the opposite of the one that was just performed. In the example in the book, the remote has an undo button. How is the book example designed so that when the undo button is pushed the correct opposite command is performed?