

Study Questions and Questionnaire for Lecture 3

Study questions

- a) Consider the multi/exp example. Suggest 2 ways to fix the interface problem, one of which involves changing exp() and the other changing mult()
- b) For a repaired version of the exp()/mult() example, construct an assertion oriented verification of exp() similar to the one carried out for mult()

Questionnaire

Provide a few words of explanation for each answer.

- a) Do you think the basic structures allowed in structured programming assist in teaching new programmers and designers how to design their code? i.e. do they assist in the transference of expert knowledge to less than expert designers and programmers?
- b) Does the knowledge that mental simulation is a key tool for experts help to understand the structured programming and why it should be practiced?
- c) Do verification proofs, of the type covered in this lecture, help to train programmers in more systematic, error free mental simulation of program behavior.
- d) Have you previously used the top down metaphor in your programming. If so, was it useful in giving a general approach to a design. If so, did explicitly knowing about the metaphor, and practicing its use, lead you further on the path to becoming an expert programmer/designer?