Homework 1

SNU 4541.664A Program Analysis

Spring 2006

Prof. Kwangkeun Yi

due: 3/16 13:00 in class

Exercise 1 Write an essay (3 pages maximum) after reading the articles in Papers/Orientation of the course homepage.□

Exercise 2 Prove why

$$\bigcap\{X|\phi(X) \subseteq X\}$$

is the least fixed point of ϕ. (Lecture slides Part1 p.10) □

Exercise 3 In order to understand what static analysis can do in reality, you have to experience a realistic analyzer. In this homework, you need to use Airac5 and report the followings:

- Report 10 C programs where the analyzer find true bugs.

- Report 10 C programs where the analyzer disappoints you by finding false bugs.

- Discuss why bugs are true/false.

- Discuss on what do you think we have to do to improve the analysis.

The more realistic the C programs the better.

You have to use Airac5 v1.5 that will be available from 3/11(Sat) 00:00 in ropas.snu.ac.kr/airac5. □