

Static Program Analysis SS 2011 Graded Project 2

In this project you are to design and implement a shape analysis to prove partial correctness of given C code!

At <http://rw4.cs.uni-saarland.de/teaching/sp11/projects/tutorialmanager.c> you find an implementation of a simple tutorial group manager. This implementation provides C structure definitions and function code for managing students in two tutorial groups. Along with each function you will find an analysis challenge. Design and implement with TVLA a static analysis that is able to prove partial correctness of these functions by meeting the stated analysis challenges.

In contrast to the first project, each group is expected to present their shape analysis in a small presentation of about 10 to 15 minutes. Also, you have to submit a concept paper describing how you plan to design your analysis, e.g., what predicates you plan to use. In this paper, you are to state the milestones of your project and their deadlines.

You are allowed to work in groups of 2 students on the projects. Your concept draft has to be submitted before Friday, July 8th, 16.00 hrs. Your program, predicate, action, and input definition files have to be submitted before Friday, August 5th, 16.00 hrs. Your presentations are planned to take place between Monday, August 8th, to Friday, August 12th. Later submissions will not be accepted. Keep in mind that your projects will be graded.