CS6004: Code Optimization for Object-Oriented Languages

Spring 2024 (Due: Jan 30th, 2024)

Assignment PA1: Starting with Soot.

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1 Assignment Objective

Getting started with the `Soot` framework.

2 Detailed Specification

- First objective of this assignment is to setup Soot on your device. We have provided the `.jar` file over piazza, make sure to use that `.jar` file.

- Second objective is to understand the `Jimple` IR and how to use the IR to perform different analyses. For that you can use any of the existing analyses present in the `Soot` framework. You need to create five different testcases, run at least one forward and one backward analysis in Soot and notedown your observations for each analysis in a observations.txt file.

2.1 Evaluation

Your submission must be named rollnum-pa1.zip, where rollnum is your roll-number in small letters. Upon unzipping the submission, we should get a directory named rollnum-pa1. The main class inside this directory should be named PA1.java. Your submission should consist only of Java files (that is, no jars or class files). The submission should have five testcases, along with their corresponding Jimple equivalents, and submit a file named observations.txt containing detailed explanations and observations for each testcase. We will run the code using the version of Soot shared with you.

3 Plagiarism Warning

You are allowed to discuss publicly on piazza, but are supposed to do the assignment completely individually. If plagiarism is found:

- First instance: 0 marks in the assignment
- Second instance: FR grade in the course
- Third instance: report to institutional committee

-*-*-*- Do the assignment honestly, enjoy learning the course. -*-*-*-