

# EE 382V Software Evolution Project Progress Report 2

## Generating Coverage for Regression Testing

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The phase 2 of our project marks the starting point of the implementation phase of our tool. In this phase, we discussed the software architecture of our tool and managed to integrate a Regression Testing Selection (RTS) tool as part of our product.

Firstly, we designed the software architecture of our tool. Initially, the tool runs all the tests to generate an initial coverage report when there is no converge report record for the program. Then for every modification which the users make to the program, the RTS will select the tests which are “impacted” by the modifications. The selected test suites will be run to generate a new report. With the old coverage report, the new coverage report, and the list of selected test suites, we can generate the updated coverage for the regression testing.

Secondly, we need to look for a RTS which can be used in Java to select or test on the “impacted” test suites. We found two RTSs: Ekstazi and Starts. We tried Ekstazi but we couldn’t find a correct way to integrate it into our tool. We then tried Starts and after some trials we figured out how to integrate it with Jacoco to generate a “partial” report(only for selected test suites).

For our next step, we are going to focus on data recording and processing from the JaCoCo coverage reports and implementation of the execution workflow of our tool.