EE 382V Software Evolution Project Progress Report 3

Generating Coverage for Regression Testing

Jianwen Dong (jd48784)
Yizhuo Du (yd4788)

In phase 3 of our project, we completed the first half of the implementation of the regression testing coverage tool. For the result of this phase, the tool can store the coverage information in an appropriate format based on the JaCoCo reports. Moreover, we need to utilize the RTS to select the chosen test cases that need running after updating the source code.

Firstly, we designed and implemented the “TestSuiteCoverageState” class to process the coverage data and store it in a map. In this map, the key is the filename and the value is the coverage information (number of lines in the file, and missed line numbers). Initially, the map is empty. During the first run of all test suites, the coverage information of each source file is stored in the map by processing the converge report of JaCoCo.

Secondly, we implemented the “MavenInvocationHelper” class to automatically run Maven commands and RTS commands. In the class, there are two major components: the “TestLoggingHandler” and “RTSLoggingHandler”. The “TestingLoggingHandler” is mainly responsible for running the tests automatically and the “RTSLoggingHandler” is responsible for run the RTS tool and generate the information for the chosen test suits based on the modification on source code.

For our next step, we are going to finish the implementation of our coverage tool by updating the coverage state map based on the old report and the new coverage information. In addition, we are going to make the tool generate an intuitive and informative coverage report.