



HYBRID DATA APPROACH FOR SELECTING EFFECTIVE TEST CASES DURING THE REGRESSION TESTING

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Abstract- In the software industry, software testing becomes more important in the entire software development life cycle. Software testing is one of the fundamental components of software quality assurances. Software Testing Life Cycle (STLC) is a process involved in testing the complete software, which includes Regression Testing, Unit Testing, Smoke Testing, Integration Testing, Interface Testing, System Testing & etc. In the STLC of Regression testing, test case selection is one of the most important concerns for effective testing as well as cost of the testing process. During the Regression testing, executing all the test cases from existing test suite is not possible because that takes more time to test the modified software. This paper proposes new Hybrid approach that consists of modified Greedy approach for handling the test case selection and Genetic Algorithm uses effective parameter like Initial Population, Fitness Value, Test Case Combination, Test Case Crossover and Test Case Mutation for optimizing the tied test suite. By doing this, effective test cases are selected and minimized the tied test suite to reduce the cost of the testing process. Finally the result of proposed approach compared with conventional greedy approach and proved that our approach is more effective than other existing approach.

Index terms: Software Testing, Regression Testing, Test Reduction, Test Optimization, Test Data Generation.