**Prioritizing event sequences test cases based on faults**

ABSTRACT

Software testing is known as a time-consuming process and tied to time limitations and budget. Any modifications during testing may delay the completion timeline of the project once it no longer under control. Due to that reason, various approaches have been proposed to reduce time, cost and resources. Test case prioritization (TCP) is one of them with the goal to ensure faster detection of faults for an ordered test suite, and it is is more effective than the original test suite. In this paper, the researchers proposed a prioritization algorithm for the event sequences test cases based on faults. Weighted priority has been applied to assign a weight for each test case. The aim of this paper is to avoid selecting any random test case more than once if the test case has the same weight. An experiment has been conducted using one subject program taken from the benchmark source for a comparative study. While the Average Percentage of Fault Detected (APFD) has been selected as an evaluation metric to measure the effectiveness of the enSSP technique and the weighted approach technique. The results depict that the weighted approach technique is more effective in terms of detecting faults and more successful in producing a unique weight for each test case.