Abstract

Software testing is the last phase of the development cycle. The important role in software
development is software Testing. In today’s software industry, the design of software
tests is mostly based on the tester’s expertise, while test automation tools are limited to
execution of preplanned tests only. Testing effort can be classified into three parts, they are
test case generation, test execution and test evaluation. This paper presents a novel approach
to generate the automated test paths. Due to the delay in the development of software, testing
has to be done in a short time. This led to automation of testing because its efficiency and also
requires less man power. In this proposed approach, by using one of the most standard Unified
Modeling Language (UML) Activity Diagram, construct the Activity Dependency table(ADT),
then generate the Test paths. Then the test path are prioritized by using the Tabu search
algorithm. The prioritized test path can be used in system testing, regressing testing and
integration testing. Then also form the Cyclomatic diagram to check the efficiency of the test
scenario.

References
A Novel Approach for Automated Test Path Generation using TABU Search Algorithm

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**Index Terms**

Computer Science
Algorithms

**Keywords**

Software Testing  Test Cases  Uml (unified Modeling Language)  Activity Diagram  Tabu Search Algorithm  Activity Dependency Table (adt)  Prioritization