Abstract

Software Testing is one of the most important parts of the software development lifecycle. Functional and structural testing are the most widely used testing methods to test software. Testing effectiveness can be achieved by the State Transition Testing (STT) which is commonly used for carrying out functional testing of software systems. The tester is required to test all the possible transitions in the system under built. Structural testing relies on identifying effective
paths of the code. Aim of the current paper is to present a strategy by applying ant colony optimization technique, for the generation of test sequences for state transitions of the system as well as path generation for the Control Flow Graph of the software code using the basic property and behavior of the ants. This Proposed strategy gives maximum software coverage with minimal redundancy.

References


Index Terms

Computer Science  Emerging Trends in Technology

Keywords

Software Testing  Ant Colony Optimization (aco)  State Transition Testing (stt) Control Flow Graph (cfg)