Abstract

In this paper, Software system reliability allocation during the software product design phase of SDLC. A system is made up of several elements or components in simple or complex systems. We used Architecture-based approach for modeling software reliability optimization problem, on this basis a dynamic programming has been used to allocate the reliability to each component so as to minimize the cost of designing phase of software while meeting the chosen reliability. The result of our research show an optimal solution or near optimal to the problem of choosing the component containing the software can be achieved with lower cost.
Assessment of Architecture-based Software System Reliability Allocation on Components using a Dynamic Programming


Index Terms
Computer Science
Software Engineering

Keywords
Software reliability  Reliability Allocation  Reliability Estimation  Software model  Dynamic Programming

Architecture