Abstract

Software Reliability is an important facet of software quality. Software reliability is the probability of the failure free operation of a computer program for a specified period of time in a specified environment. Software Reliability is dynamic and stochastic. It differs from the hardware reliability in that it reflects design perfection, rather than manufacturing perfection. This article provides an overview of Software Reliability which can be categorized into: modeling, measurement and improvement, and then examines different modeling technique and metrics for software reliability, however, there is no single model that is universal to all the situations. The article will also provide an overview of improving software reliability and then provides various ways to improve software reliability in the life cycle of software development.
Reference

- Kishor S. Trivedi, “Probability and statistics with reliability, queuing and computer science applications,” John Wiley and Sons Ltd., Chichester, UK, 2001


**Index Terms**

- Computer Science
- Software Engineering

**Key words**

- Reliability
- Modeling
- Simulation
- Software
- Engineering