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ABSTRACT

The software is becoming an integral part of the human life and the dependency over software is increasing exponentially with the advancement of technology. The usage of software is inevitable to many aerospace, medical, industrial, military, and even commercial systems. Hence, there is a need of reliable software system that will be operational without failure, for the specified period of time, in given environmental conditions. Reliability is one of the important aspects of the software quality. The fault exists in the software causes failure to the system and hence reduces the reliability. The proposed model is a variant of Jelinski-Moranda software reliability growth model. This model assumes that faults in the software may be dependent on each other. Whenever a software failure detected, the concerned fault is removed immediately with probability *p* and no new error(s) are introduced. It is further assumed that the fault removal /correction process may correct the part of remaining failures too.

This model is more realistic then Jelinski-Moranda model and provides the better reliability estimation of the software system.

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