

Assessing the instrument reliability and validity of risk mitigation for anti software ageing model during software maintenance

ABSTRACT

Longer software lifecycle is important to ensure its ability to provide on-going function and services. However, software relevancy and importance may reduce once its performance and quality degrades through inevitable ageing progress. Even though software ageing is inevitable, the progress of ageing in software could be slowed down and delayed. To achieve this, we may need to determine and understand the causes contributing to this phenomenon. Little attention had been paid to address software ageing from software engineering perspective, ageing caused by failures to modify the software or from the results of software changes. Hence, this motivate the study to determine the risks of performing software changes that influence software ageing occurrences and propose a method to tackle software ageing from software engineering perspective to reduce risks impact before it become apparent through risk mitigation. This paper discusses on the reliability and validity of instrument designed to conduct a study among software practitioners in order to gain insight on the risks of performing changes to software influencing software ageing and determine risk mitigation effect on the relationship between software ageing and anti software ageing. Preliminary study was conducted through content validity interview and pilot study. The results from pilot study conducted shows the items in the questionnaire has a good level of reliability to measure each variable in the model, hence the instrument can be used for further studies.

Keyword: Risk mitigation; Anti software ageing; Software ageing; Software maintenance