ID 496

Automated Software Bug Management System for Small-Scale Organization

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During software running, even errors due to system complexity and inadequate testing may occur. Troubleshooting plays an important role in software development and evaluation steps. Due to rapid changing technology, the whole system should adapt according to the situation, including matters such as well-skilful persons, technology and data. The bug management process has several steps, and controlling those steps is a huge challenge. Behind the situation, the small-scale Software companies need resources other than local organizations. This research focuses on identifying local small-scale organization behaviours, since they have fewer financial problems and less technological literacy of operating some licensed automation tools used in the software bug management industry. The research raises how automation techniques solve financial challenges faced by small-scale organizations. A research methodology approach which analyses previous studies and collected data is observed, and that information is validated according to the small-scale organization requirement. Finally, a proposed a system to overcome the situation is introduced, which is a web-based application that hosts the cloud. The proposed system implementation provides a facility for real-time communication between SQA, developers, and other team members via comments on each reported bug, while it assigns bugs to all the job roles represented by the agile software development life cycle, to reach historical bug records. Facility to embed the technical evidence as a report to the bug for a better understanding of the developer is also introduced. This facility generates reports for tracking each developer and tester's performance of that particular local organization. The proposed system uses an open-source development framework.

Keywords: *bugs, automation, management, financial, developer, literacy, small-scale*