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IMPLEMENTATION OF BUG TRACKING SYSTEM WITH SCRUM METHODOLOGY USING COSINE SIMILARITY ALGORITHM

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Abstract –

A bug is a system error that causes a mismatch between user expectations to actualization. Bugs often arise from programmatical mistakes, and a prompt resolution is mandatory so that the users' business processes are assured. However, the author has noted a low efficiency of developers' bug solving. After research, the cause is the lack of knowledge management, especially in bug tracking. The lacking of such has resulted in the repetition of the error. The developers often made the same mistake that the others had encountered. The above has moved the author to build a bug tracking system (BTS) that can enhance the efficiency of bug solving. The author has developed the application using Django, MySQL, and Scrum. Scrum's agile approaches enable dynamic and rapid development. In addition, BTS utilized a content-based filtering algorithm known as Cosine Similarity. This study results in the implementation of BTS with comprehensive capabilities. Users can manage bugs and compare them to others to find potential duplication into minimizing data redundancy. The author has implemented the BTS towards groups of undergraduate students that actively work on application-related projects. Through a user acceptance survey, they find improvement in the quality and efficiency of their bug solving.

Keywords – *Bug, Bug Tracking System, Knowledge Management, Cosine Similarity*