

## **A Cost Effective Approach to Develop Mid-Size Enterprise Software Adopted the Waterfall Model**

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**Abstract :** Organizational tendencies towards computer-based information processing have been observed noticeably in the third-world countries. Many enterprises are taking major initiatives towards computerized working environment because of massive benefits of computer-based information processing. However, designing and developing information resource management software for small and mid-size enterprises under budget costs and strict deadline is always challenging for software engineers. Therefore, we introduced an approach to design mid-size enterprise software by using the Waterfall model, which is one of the SDLC (Software Development Life Cycles), in a cost effective way. To fulfill research objectives, in this study, we developed mid-sized enterprise software named "BSK Management System" that assists enterprise software clients with information resource management and perform complex organizational tasks. Waterfall model phases have been applied to ensure that all functions, user requirements, strategic goals, and objectives are met. In addition, Rich Picture, Structured English, and Data Dictionary have been implemented and investigated properly in engineering manner. Furthermore, an assessment survey with 20 participants has been conducted to investigate the usability and performance of the proposed software. The survey results indicated that our system featured simple interfaces, easy operation and maintenance, quick processing, and reliable and accurate transactions.

**Keywords :** end-user application development, enterprise software design, information resource management, usability

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