

## ABSTRACT

Agile Unified Process (AUP) has been known as a suitable methodology for small-to-medium software development projects. This methodology focuses on the rapid iterations, small and frequent releases, capable of handling changing requirements from user, and involving user in the software development process. However, little is known that AUP can be effectively used for vague and incomplete system requirements. This study reveals how AUP is the most suitable software development methodology for such system requirements. An owner of a local gold jewelry store wishes to develop a new computerized system, but he does not know the system requirements for the software to be built. The purpose of the software is to help the owner in monitoring and controlling the main business processes in the jewelry store. In the beginning of the software development, it is very hard for the owner to mention what he really needs. However, since the owner is actively involved during the software development, he can slowly refine the system requirements with the help from the development team. AUP Phases can be accurately followed and proved to be very useful and suitable for the vague system requirements. Rapid iterations, small and frequent releases of the software modules lead to the completion of the software project on time. The resulting software is successfully tested with live transactions.

**Keywords:** Agile Unified Process (AUP), Software Development Methodology, RUP.