ABSTRACT

Technological developments have had a significant impact in various industrial sectors, including the property and accommodation business such as boarding houses. One example is a strategic boarding house in Semarang City facing various obstacles in the boarding house marketing and management system, such as manual promotion and conventional payment recording. This reduces the competitiveness of Kos Giraldi when compared to other boarding houses that have utilized digital technology. To overcome these problems, this study aims to design and develop a web-based boarding house room reservation application using the ICONIX *Process* method. The ICONIX *Process* method is applied in a structured manner through the stages of Domain Modeling, Use Case Modeling, Robustness Analysis, and Sequence Diagram. The application developed provides main features, such as room search, online reservation, and payment notification. This application allows prospective residents to find boarding rooms according to their needs quickly and easily, and helps boarding house owners in managing room data, prospective residents, and payments digitally. The results show that this web-based application successfully meets the needs of users, both prospective residents and boarding house owners. This application is able to present real-time information about room availability, facilities, and prices, thus facilitating the *process* of searching and booking rooms without the need for direct visits. With the integrated reservation and data management features, the app is able to improve time optimization, information accuracy, and user experience in the boarding room reservation *process*. Overall, this application provides a relevant solution to the problems in managing and finding boarding rooms.

Keywords*: ICONIX Process, Boarding House, Management, Reservation, Website*