

ABSTRACT

The Tangaya Tourism Awareness Group in Saniang Baka Village manages nature tourism, camping, and edu-tourism activities. The current booking system relies on WhatsApp, which leads to a backlog of messages and a potential decline in service quality, especially during peak holiday seasons. To address this issue, an application was designed using the Extreme Programming (XP) methodology, selected for its flexibility. The system design phase is depicted with Unified Modeling Language (UML) and an Entity Relationship Diagram (ERD) for database modeling. The implementation utilizes the Dart programming language and the Flutter framework for the user interface, along with Firebase for real-time data management and user authentication. A functional Android application was successfully developed with two access levels: visitor and admin. Black Box Testing and User Acceptance Testing (UAT) demonstrated that all features function as expected and that user requirements have been validly met. This application is expected to serve as an effective solution for managing bookings, scheduling, and ensuring the validity of visitor data.

Keywords: Android, Extreme Programming, Flutter, Pokdarwis