

## ABSTRACT

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*DEVELOPMENT OF THE 'IN OUT' ONLINE ATTENDANCE APPLICATION FOR ANDROID USING THE FLUTTER FRAMEWORK AND FIREBASE DATABASE*

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*Keywords: Android, Attendance, Firebase, Flutter.*

*(xiii + 132 + Appendices)*

*PT. Sarana Bumi Indonesia is a facility service company operating in the pest management sector. Previously, the employee attendance process at PT. Sarana Bumi Indonesia was conducted manually, resulting in inefficiency. Therefore, an Android-based employee attendance application was developed for PT. Sarana Bumi Indonesia. This application can automatically and systematically record attendance, providing greater security and improving the efficiency of the employee attendance and absence process. The application was developed using the Flutter Framework and Firebase Database for Android, which records employees' check-in and check-out times in real-time, captures location coordinates, facial recognition, provides daily employee reports, facilitates leave requests, and compiles attendance records. The development of this application followed the SDLC (Software Development Life Cycle) approach. After testing the application on five Android smartphones, it was concluded that the application functions well on all these devices, with an appropriate display, clear images, and all features working perfectly. Black box testing also indicated that the application operates and functions as expected, with the display matching the results of the planned test scenarios.*

*References (2013 – 2024)*