

# ***DESIGN AND DEVELOPMENT OF AN ANDROID-BASED MOSQUITO LARVAE MONITORING APPLICATION USING AN AGILE APPROACH***

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## ***ABSTRACT***

*Dengue Hemorrhagic Fever (DHF) is one of the health problems that still frequently occurs, especially in tropical regions. Mosquito larvae monitoring activities are an important effort in preventing the spread of DHF in the community. The process of mosquito larvae monitoring in the working area of Sukomoro Public Health Center, Nganjuk Regency, is still carried out manually, causing data recording to take a long time and monitoring results to be poorly documented. This study aims to design and develop an Android-based mosquito larvae monitoring application using the Agile approach. The system was developed using Flutter as the framework, Laravel as the backend, and MySQL as the database. The implementation results show that the application provides features such as registration, login, forgot password, monitoring report submission, report verification, cadre data management, report history, and report recap. System testing using Blackbox Testing with the Equivalence Partitioning technique achieved a 100% success rate from 68 test cases. Usability evaluation using the System Usability Scale (SUS) after the development iteration obtained a score of 80.83 from Jumantik Cadres and 85 from Public Health Center Officers, which fall into the Acceptable category with an Excellent adjective rating. The results indicate that the application can support mosquito larvae monitoring, reporting, and verification processes in a more effective, structured, and well-documented manner.*

**Keywords:** *Dengue Hemorrhagic Fever, Mosquito Larvae, Android, Agile, Blackbox Testing, System Usability Scale (SUS)*