ABSTRACT

Heart disease is a leading cause of death in Indonesia, making patient management and condition monitoring crucial. This research aims to develop and implement an Application Programming Interface (API) using the Laravel framework for tracking systems for patients with heart disease. We designed the API to detect and monitor patients' health conditions in real-time using data from Internet of Things (IoT) devices and provide early warnings of abnormal conditions. The API facilitates efficient integration between IoT devices and a monitoring dashboard application, allowing medical personnel to oversee patients' vital signs easily. We employed the Prototyping process model for this research, which enables iterative system development and user feedback. The system uses a monolithic architecture, simplifying application management and maintenance. We tested black box with Postman to ensure the API functions according to the specified requirements. Our research demonstrated that the monitoring system accurately and in real-time provides patient condition information, aiding medical personnel in making quick and precise decisions. The system also includes an automatic notification feature that alerts medical staff during emergencies. The test results confirm that all developed APIs function correctly and meet the needs of the monitoring systems for patients with heart disease.

Keywords—API, heart disease, monolithic architecture, patient monitoring system, software engineering