

ABSTRACT

In emergency situations such as a heart attack, severe illness, or an accident, vehicles play a crucial role. The presence of vehicles such as ambulances can mitigate the risk of a situation worsening. Given the importance of emergency vehicles like ambulances, an effective solution for ambulance booking mechanisms is necessary. Ambulance bookings are expected to improve if customers and hospitals can track ambulances that are in operation. This research aims to develop a booking application system that assists patients in emergencies and medical personnel in handling emergency service requests. The system development was carried out using an iterative incremental development method.

The development process began with data collection, followed by data analysis to understand business processes and determine system requirements, and then system development based on the analysis results. The research produced a mobile-based ambulance booking and tracking application. The application has two types of users, each with its own set of features. For the first user, the customer, there are features for registration, login, password recovery, booking an ambulance, tracking ambulance location, viewing the ambulance list, viewing ambulance details, checking booking history, viewing the profile, and updating the profile. For the second user, the driver, there are features for login, a homepage displaying incoming or assigned bookings, and tracking the patient's pickup location.

The testing conducted during the application development process yielded satisfactory results that met expectations. Testing with potential users also produced satisfying results, achieving a score of 88.3 with a grade of A. The application is expected to enhance the quality of emergency medical services and save more lives by speeding up response times.

Keywords— ambulance, tracking, mobile application, asset tracking