RANCANG BANGUN SISTEM LAYANAN PENGADUAN *ONLINE* MAHASISWA UNIVERSITAS MALIKUSSALEH TERHADAP FASILITAS DAN INFRASTRUKTUR KAMPUS BERBASIS ANDROID

ABSTRAK

Fasilitas dan infrastruktur kampus merupakan salah satu faktor penting dalam mendukung kelancaran aktivitas akademik dan non-akademik di lingkungan perguruan tinggi. Namun, proses pengaduan terkait kerusakan fasilitas dan infrastruktur di Universitas Malikussaleh masih dilakukan secara manual sehingga menyebabkan proses pelaporan dan penanganan pengaduan menjadi kurang efektif dan memerlukan waktu yang relatif lama. Selain itu, mahasiswa juga mengalami kesulitan dalam menyampaikan pengaduan serta memantau status penanganan laporan yang telah diajukan. Oleh karena itu, penelitian ini bertujuan untuk merancang dan membangun Sistem Pengaduan *Online* Mahasiswa (SIPOMA) berbasis Android sebagai media pengaduan fasilitas dan infrastruktur kampus di Universitas Malikussaleh. Metode penelitian yang digunakan adalah *Research and Development* (R&D) dengan metode pengembangan sistem *Agile*. Proses pengembangan sistem dilakukan secara bertahap meliputi identifikasi masalah, studi literatur, pengumpulan data, perancangan sistem, pengkodean, pengujian, evaluasi, serta revisi dan penyempurnaan sistem. Aplikasi dibangun menggunakan framework Flutter dengan bahasa pemrograman Dart, database MySQL, dan web service berbasis PHP. Sistem ini terdiri dari aplikasi Android untuk mahasiswa serta website pengelolaan pengaduan yang digunakan oleh petugas, admin, dan divisi terkait. Hasil penelitian menunjukkan bahwa aplikasi SIPOMA berhasil dibangun dengan fitur utama berupa registrasi dan login, pengajuan pengaduan disertai foto pendukung, notifikasi status pengaduan, riwayat pengaduan, survei, serta pengelolaan data pengaduan melalui website. Berdasarkan hasil pengujian *Black Box Testing*, seluruh fitur sistem dapat berjalan sesuai dengan fungsi yang diharapkan. Selain itu, hasil *User Acceptance Test* (UAT) memperoleh rata-rata persentase sebesar 87% dengan kategori Sangat Baik. Hasil tersebut menunjukkan bahwa aplikasi SIPOMA telah mampu memenuhi kebutuhan pengguna dan layak digunakan sebagai media pengaduan fasilitas dan infrastruktur kampus di lingkungan Universitas Malikussaleh.

Kata Kunci: Sistem Pengaduan, Android, *Agile*, *Black Box Testing*, *User Acceptance Test* (UAT).

DESIGN OF AN ANDROID-BASED ONLINE COMPLAINT SERVICE SYSTEM FOR STUDENTS AT MALIKUSSALEH UNIVERSITY REGARDING CAMPUS FACILITIES AND INFRASTRUCTURE

ABSTRACT

Campus facilities and infrastructure are crucial factors in supporting the smooth running of academic and non-academic activities within the university environment. However, the complaint process regarding damaged facilities and infrastructure at Malikussaleh University is still carried out manually, making the reporting and handling of complaints ineffective and relatively time-consuming. Furthermore, students also experience difficulties in submitting complaints and monitoring the status of their submitted reports. Therefore, this study aims to design and develop an Android-based Student Online Complaint System (SIPOMA) as a platform for complaints regarding campus facilities and infrastructure at Malikussaleh University. The research method used is Research and Development (R&D) with an Agile system development approach. The system development process is carried out in stages, including problem identification, literature review, data collection, system design, coding, testing, evaluation, and system revision and refinement. The application was developed using the Flutter framework with the Dart programming language, a MySQL database, and a PHP-based web service. This system consists of an Android application for students and a complaint management website used by administrators, staff, and relevant divisions. The research results indicate that the SIPOMA application was successfully developed, with key features including registration and login, complaint submission with supporting photos, complaint status notifications, complaint history, surveys, and complaint data management via the website. Based on Black Box Testing results, all system features functioned as expected. Furthermore, the User Acceptance Test (UAT) achieved an average rating of 87%, categorized as Very Good. These results indicate that the SIPOMA application has met user needs and is suitable for use as a complaint management platform for campus facilities and infrastructure at Malikussaleh University.

Keywords: *Complaint System, Android, Agile, Black Box Testing, User Acceptance Test (UAT).*