

RANCANG BANGUN SISTEM *TRYOUT* BERBASIS *WEB* DAN PELAPORAN AKADEMIK SISWA DI SDIT AL IMAN

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ABSTRAK

Pelaksanaan *tryout* di SDIT Al Iman masih dilakukan secara manual berbasis kertas (*paper-based*), sehingga proses pengerjaan, koreksi, dan rekapitulasi nilai memerlukan waktu yang lama, rentan terhadap *human error*, serta menyebabkan keterlambatan penyampaian hasil kepada siswa dan orang tua. Penelitian ini bertujuan membangun sistem informasi *tryout* berbasis web yang mampu mengotomatisasi proses *tryout*, mulai dari pengerjaan soal hingga pelaporan hasil secara *real-time*. Pengembangan sistem menggunakan model *Waterfall* yang meliputi analisis kebutuhan, perancangan, implementasi, dan pengujian. Pengumpulan data dilakukan melalui wawancara, observasi, dan studi literatur, sedangkan analisis kebutuhan menggunakan metode PIECES. Sistem dikembangkan menggunakan PHP dengan framework Laravel dan basis data MySQL. Hasil pengujian menunjukkan bahwa seluruh 42 skenario pada *Black Box Testing* dan 30 skenario pada *User Acceptance Testing* (UAT) berhasil dijalankan sesuai dengan kebutuhan yang telah ditetapkan. Pengujian dengan *load testing* juga menunjukkan bahwa sistem mampu menangani akses hingga 90 pengguna secara bersamaan dengan performa yang tetap stabil. Keberhasilan pengujian tersebut mengonfirmasi bahwa sistem ini merupakan solusi tepat untuk mengoptimalkan manajemen dan pelaporan akademik hasil *tryout* di sekolah.

Kata Kunci : sistem informasi *tryout*, *framework* Laravel, *Waterfall*, pelaporan akademik, PIECES

DESIGN AND DEVELOPMENT OF A WEB-BASED TRYOUT AND STUDENT ACADEMIC REPORTING SYSTEM AT SDIT AL IMAN

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ABSTRACT

The tryout process at SDIT Al Iman is still conducted manually using a paper-based system, resulting in time-consuming test administration, grading, and score recapitulation. This approach is also prone to human error and delays the delivery of results to students and parents. This study aims to develop a web-based tryout information system that automates the entire tryout process, from test completion to real-time result reporting. The system was developed using the Waterfall model, which consists of the requirements analysis, system design, implementation, and testing phases. Data were collected through interviews, observations, and literature studies, while system requirements were analyzed using the PIECES framework. The system was developed using PHP with the Laravel framework and MySQL as the database management system. The testing results showed that all 42 Black Box Testing scenarios and 30 User Acceptance Testing (UAT) scenarios were successfully completed in accordance with the specified requirements. Load testing results also indicated that the system was able to handle concurrent access by up to 90 users while maintaining stable performance. These results confirm that the developed system is an effective solution for optimizing the management and academic reporting of tryout results at the school.

Keywords: tryout information system, Laravel framework, Waterfall, academic report, PIECES