

PERANCANGAN SISTEM INFORMASI PEMBAYARAN PENDIDIKAN BERBASIS WEB DENGAN *ROLE-BASED ACCESS CONTROL* PADA LEMBAGA PENDIDIKAN PESANTREN

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ABSTRAK

Pengelolaan pembayaran Sumbangan Pembinaan Pendidikan (SPP) di lingkungan pesantren masih banyak dilakukan secara manual sehingga berpotensi menimbulkan kesalahan pencatatan, keterlambatan pelaporan, dan risiko keamanan data. Penelitian ini bertujuan untuk merancang dan membangun sistem informasi pembayaran SPP berbasis web dengan menerapkan RBAC pada Pondok Pesantren Ikramul Qur'an. Sistem dikembangkan menggunakan *framework Laravel* dan basis data *MySQL* dengan empat peran pengguna, yaitu Super Admin, Bendahara, Pimpinan, dan Wali Santri, di mana setiap peran memiliki hak akses yang berbeda sesuai tanggung jawabnya. Pengujian sistem dilakukan menggunakan metode *Blackbox Testing* untuk menguji fungsi-fungsi utama sistem. Hasil pengujian menunjukkan bahwa seluruh fitur sistem, meliputi autentikasi pengguna, pengelolaan tagihan, proses pembayaran dan verifikasi, pengelolaan pengguna dan hak akses, serta pembuatan laporan keuangan, dapat berjalan dengan baik dan sesuai dengan kebutuhan yang telah ditetapkan. Penerapan RBAC terbukti mampu membatasi akses pengguna secara efektif, sehingga sistem dinilai dapat meningkatkan efisiensi administrasi, transparansi pengelolaan keuangan, serta keamanan data pembayaran SPP di lingkungan pondok pesantren.

Kata Kunci: Sistem Informasi Pembayaran SPP, *RBAC*, *Laravel*, *Blackbox Testing*.

DESIGN OF A WEB-BASED EDUCATIONAL PAYMENT INFORMATION SYSTEM WITH ROLE- BASED ACCESS CONTROL IN ISLAMIC BOARDING SCHOOL INSTITUTIONS

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ABSTRACT

The management of Educational Development Contribution (SPP) payments in Islamic boarding school environments is still largely carried out manually, which may lead to recording errors, delays in reporting, and data security risks. This study aims to design and develop a web-based SPP payment information system by implementing RBAC at Pondok Pesantren Ikramul Qur'an. The system was developed using the Laravel framework and MySQL database, involving four user roles, namely Super Admin, Treasurer, Principal, and Student Guardian, each of which has different access rights according to their responsibilities. System testing was conducted using the Blackbox Testing method to evaluate the main functional features of the system. The test results indicate that all system features, including user authentication, bill management, payment and verification processes, user and access rights management, as well as financial report generation, function properly and meet the defined requirements. The implementation of RBAC has proven effective in restricting user access appropriately, thereby enhancing administrative efficiency, financial management transparency, and the security of SPP payment data within the Islamic boarding school environment.

Keywords: SPP Payment Information System, RBAC, Laravel, Blackbox Testing.