

INTISARI

Pengelolaan dana sosial dan donasi di lingkungan Departemen Teknik Elektro dan Informatika (DTEDI) saat ini masih menghadapi kendala administratif akibat fragmentasi data dan inefisiensi proses manual. Penggunaan media pencatatan terbuka tidak hanya menyebabkan redundansi pekerjaan bagi pengelola, tetapi juga memunculkan isu privasi di mana transparansi nominal yang dapat dilihat oleh seluruh anggota memicu hambatan psikologis bagi donatur. Penelitian ini bertujuan untuk merancang dan membangun sistem informasi donasi internal berbasis web guna memusatkan data, mengotomatisasi administrasi, dan menjaga kerahasiaan antar-pengguna. Pengembangan sistem ini menggunakan pendekatan *System Development Life Cycle* (SDLC) dengan model *Prototype*. Pemilihan metode ini didasarkan pada kemampuannya dalam mengakomodasi umpan balik yang iteratif dan evaluasi berulang bersama pengguna, sehingga sistem akhir yang dihasilkan dapat secara presisi menjawab kebutuhan fungsional sivitas akademika departemen. Secara implementasi, sistem dibangun menggunakan *framework* Laravel dan basis data MySQL. Keamanan sistem dijamin melalui integrasi autentikasi Google Single Sign-On (SSO) berbasis *whitelist*. Untuk memfasilitasi transaksi yang efisien, diimplementasikan mekanisme dompet digital internal yang terintegrasi dengan *payment gateway* Midtrans, sehingga donasi berulang dapat dilakukan tanpa pembebanan biaya layanan berkali-kali. Sistem juga dilengkapi otomasi notifikasi email untuk resi dan pengingat donasi. Berdasarkan hasil *Black Box Testing*, seluruh fungsionalitas sistem (100%) dinyatakan valid tanpa cacat logika. Lebih lanjut, hasil *User Acceptance Testing* (UAT) menunjukkan tingkat kelayakan sebesar 96,7% dari sisi administrator dan 91,9% dari sisi staf akademik, yang menempatkan sistem pada kategori sangat layak digunakan. Kesimpulannya, sistem informasi donasi ini berhasil diimplementasikan untuk memberikan solusi atas permasalahan administratif dan privasi di DTEDI. Sistem terbukti mampu membatasi akses secara eksklusif, menghilangkan beban biaya transaksi pada donasi berulang, serta meningkatkan transparansi dan keterlibatan pengguna melalui pemberitahuan yang otomatis dan *real-time*.

Kata kunci: Sistem Informasi Donasi, Laravel, Payment Gateway, Midtrans, Single Sign-On

ABSTRACT

The management of social funds and donations within the Department of Electrical Engineering and Informatics (DTEDI) currently faces administrative challenges due to data fragmentation and inefficient manual processes. The use of open recording media not only causes work redundancy for administrators but also raises privacy issues, where the visibility of donation amounts to all members triggers psychological barriers for donors. This research aims to design and build a web-based internal donation information system to centralize data, automate administration, and maintain confidentiality between users. The system development utilized the System Development Life Cycle (SDLC) approach with a Prototype model. This method was chosen because of its ability to accommodate iterative feedback and continuous evaluation with users, ensuring the final system precisely meets the functional needs of the department's academic community. In terms of implementation, the system was built using the Laravel framework and MySQL database. System security is guaranteed through the integration of whitelist-based Google Single Sign-On (SSO) authentication. To facilitate efficient transactions, an internal digital wallet mechanism integrated with the Midtrans payment gateway was implemented, allowing recurring donations to be made without multiple service fee charges. The system is also equipped with automated email notifications for receipts and donation reminders. Based on Black Box testing results, all system functionalities (100%) were declared valid with no logical defects. Furthermore, User Acceptance Testing (UAT) results showed a feasibility rate of 96.7% from administrators and 91.9% from academic staff, placing the system in the highly feasible category for use. In conclusion, this donation information system was successfully implemented to provide solutions for the administrative and privacy issues in DTEDI. The system has proven capable of exclusively restricting access, eliminating transaction fee burdens on recurring donations, and improving transparency and user engagement through automated and real-time notifications.

Key words: Donation Information System, Laravel, Payment Gateway, Midtrans, Single Sign-On