

RANCANG BANGUN SISTEM INFORMASI *LOST AND FOUND* BERBASIS *WEBSITE* PADA PT KAI *COMMUTER*

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ABSTRAK

PT KAI *Commuter* masih menghadapi kendala dalam pengelolaan layanan *Lost and Found* karena proses pencatatan, pencarian, verifikasi, dan pelacakan barang masih dilakukan secara manual menggunakan formulir fisik dan *Google Spreadsheet*. Kondisi tersebut menyebabkan proses administrasi menjadi kurang efisien, meningkatkan risiko kesalahan pencatatan, serta menyulitkan pemantauan status barang. Penelitian ini bertujuan untuk merancang dan membangun Sistem Informasi *Lost and Found* berbasis *website* guna meningkatkan efektivitas dan efisiensi pengelolaan barang hilang dan barang temuan di PT KAI *Commuter*. Pengembangan sistem menggunakan metode *Agile* melalui tahapan analisis kebutuhan, perancangan menggunakan *Unified Modeling Language* (UML), implementasi, pengujian, dan evaluasi secara iteratif. Sistem dikembangkan menggunakan teknologi berbasis *web* dengan fitur autentikasi pengguna, pengelolaan laporan kehilangan dan penemuan, pencocokan data barang berbasis *Artificial Intelligence* (AI), pemantauan status, pengelolaan gudang dan inventori, penyusunan laporan, serta notifikasi melalui email. Pengujian dilakukan menggunakan metode *Black Box Testing* dan *User Acceptance Testing* (UAT). Hasil *Black Box Testing* menunjukkan bahwa seluruh 67 *test case* berhasil dijalankan dengan tingkat keberhasilan 100%, sedangkan hasil UAT menunjukkan seluruh 5 kebutuhan pengguna berhasil dipenuhi dengan tingkat penerimaan pengguna sebesar 100%. Hasil penelitian menunjukkan bahwa sistem mampu meningkatkan efisiensi proses pengelolaan *Lost and Found*, mempercepat pencarian informasi, meningkatkan akurasi data, mempermudah pemantauan status barang, serta mendukung transformasi digital layanan *Lost and Found* di PT KAI *Commuter*.

Kata Kunci: *Lost and Found*, Sistem Informasi, *Website*, *Agile*, *Black Box Testing*

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ABSTRACT

PT KAI Commuter still faces challenges in managing its Lost and Found service because the processes of recording, searching, verifying, and tracking lost items are performed manually using paper forms and Google Spreadsheets. This condition reduces operational efficiency, increases the risk of data entry errors, and makes item status monitoring more difficult. This study aims to design and develop a web-based Lost and Found Information System to improve the effectiveness and efficiency of lost property management at PT KAI Commuter. The system was developed using the Agile methodology through iterative phases of requirements analysis, Unified Modeling Language (UML) design, implementation, testing, and evaluation. The proposed web-based system provides user authentication, lost and found report management, Artificial Intelligence (AI)-based item matching, status monitoring, warehouse and inventory management, report generation, and email notification features. System testing was conducted using the Black Box Testing and User Acceptance Testing (UAT) methods. The Black Box Testing results showed that all 67 test cases were successfully executed with a 100% success rate, while the UAT results indicated that all five user requirements were successfully fulfilled, achieving a 100% user acceptance rate. The developed system improves the efficiency of Lost and Found management, accelerates information processing, enhances data accuracy, simplifies item status monitoring, and supports the digital transformation of Lost and Found services at PT KAI Commuter.

Keywords: *Lost and Found, Information System, Website, Agile, Black Box Testing*