

ABSTRAK
RANCANG BANGUN SISTEM PENGELOLAAN ASET BERBASIS
***QR CODE* PADA JURUSAN TEKNIK KOMPUTER POLITEKNIK NEGERI**
SRIWIJAYA

(M. Indra Jaya Pratama Kusuma, 2026: 388 halaman)

Jurusan Teknik Komputer Politeknik Negeri Sriwijaya mengelola aset yang tersebar pada 14 laboratorium. Sebelum pengembangan sistem, pencatatan inventaris, peminjaman barang dan laboratorium, pelaporan kerusakan dan kehilangan, serta rekonsiliasi dengan data Barang Milik Negara (BMN) pusat belum terintegrasi. Penelitian ini bertujuan merancang dan membangun Sistem Pengelolaan Aset Berbasis *QR Code* menggunakan *PHP Native* dan *MySQL* dengan metode *Prototype* melalui lima iterasi. Sistem mengintegrasikan lima peran pengguna dan mendukung pengajuan kebutuhan, serah terima, inventarisasi per unit dengan *QR Code*, peminjaman barang dan laboratorium, pelaporan kerusakan dan kehilangan, rekonsiliasi BMN, verifikasi lokasi aktual, *stok opname*, mutasi, pemeliharaan, usulan penghapusan, serta penyusunan laporan resmi. Pengujian *Google Lighthouse* dilakukan pada 10 halaman, masing-masing sebanyak tiga kali. Rata-rata skor yang diperoleh adalah *Performance* 94,40, *Accessibility* 87,20, *Best Practices* 100,00, dan *SEO* 91,00; tiga kategori termasuk *Good*, sedangkan *Accessibility* termasuk *Needs Improvement*. Pengujian *System Usability Scale (SUS)* terhadap 20 responden menghasilkan skor rata-rata 71,5, median 72,5, dan simpangan baku 14,40. Berdasarkan *acceptability range* dan *adjective rating*, sistem termasuk *Acceptable* dengan kategori *Good*. Hasil tersebut menunjukkan bahwa sistem telah mendukung proses pengelolaan aset secara terintegrasi, tetapi masih memerlukan penyempurnaan pada aspek aksesibilitas dan konsistensi pengalaman pengguna.

Kata kunci : *pengelolaan aset; QR Code; Prototype; Google Lighthouse; System Usability Scale.*

ABSTRACT
DESIGN AND DEVELOPMENT OF A QR CODE-BASED ASSET
MANAGEMENT SYSTEM AT THE COMPUTER ENGINEERING
DEPARTMENT OF POLITEKNIK NEGERI SRIWIJAYA

(M. Indra Jaya Pratama Kusuma, 2026: 388 pages)

The Computer Engineering Department of Politeknik Negeri Sriwijaya manages assets distributed across 14 laboratories. Before the system was developed, inventory recording, equipment and laboratory borrowing, damage and loss reporting, and reconciliation with central State-Owned Assets (BMN) data were not integrated. This study aimed to design and develop a QR Code-based asset management system using native PHP and MySQL through five Prototype iterations. The system integrates five user roles and supports needs submission, goods handover, unit-level QR Code inventory, equipment and laboratory borrowing, damage and loss reporting, BMN reconciliation, actual-location verification, stocktaking, asset transfers, maintenance, disposal proposals, and formal reporting. Google Lighthouse testing was conducted on 10 pages, with three runs per page. The mean scores were 94.40 for Performance, 87.20 for Accessibility, 100.00 for Best Practices, and 91.00 for SEO; three categories were rated Good, while Accessibility was rated Needs Improvement. System Usability Scale (SUS) testing involving 20 respondents produced a mean score of 71.5, a median of 72.5, and a standard deviation of 14.40. Based on the acceptability range and adjective rating, the system was classified as Acceptable and Good. These results indicate that the system supports integrated asset-management processes, although accessibility and consistency of the user experience still require improvement.

Keywords : *asset management; QR Code; Prototype; Google Lighthouse; System Usability Scale.*