

Siti Nur Khofifah, 2026. Pengembangan Sistem Informasi Perpustakaan Berbasis Web pada SMK Nurul Amanah. Skripsi, Program Studi Pendidikan Informatika, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Trunodjoyo Madura. Dosen Pembimbing: Nuru Aini, S.Kom., M.Kom.

ABSTRAK

Perpustakaan SMK Nurul Amanah masih menerapkan pengelolaan data buku, anggota, peminjaman, pengembalian, dan pengunjung secara manual sehingga kurang efektif dan berpotensi menimbulkan kesalahan pencatatan. Penelitian ini bertujuan mengembangkan Sistem Informasi Perpustakaan Berbasis Web serta mengetahui tingkat kelayakannya berdasarkan standar ISO 25010. Metode yang digunakan adalah *Research and Development* (R&D) dengan model *Waterfall* yang meliputi analisis kebutuhan, perancangan, implementasi, pengujian, dan pemeliharaan. Sistem dikembangkan menggunakan *framework Laravel* dan basis data MySQL. Hasil penelitian menunjukkan bahwa sistem berhasil dikembangkan sesuai kebutuhan pengguna dengan fitur pengelolaan data perpustakaan dan laporan. Hasil pengujian memperoleh nilai *functional suitability* sebesar 97,27%, *usability* sebesar 88,37%, *portability* sebesar 100%, serta *performance efficiency* dengan *Grade A*, nilai *performance* 91%, *structure* 98%, dan *Largest Contentful Paint* (LCP) 1,4 detik. Aspek *maintainability* juga menunjukkan bahwa sistem mudah dipelihara dan dikembangkan. Berdasarkan hasil pengujian tersebut, sistem dinyatakan sangat layak digunakan untuk mendukung pengelolaan perpustakaan yang lebih efektif, efisien, dan terstruktur.

Kata Kunci: Sistem Informasi Perpustakaan, ISO 25010, Laravel, Web, *Waterfall*.

Siti Nur Khofifah, 2026. Development of a Web-Based Library Information System at SMK Nurul Amanah. Undergraduate Thesis, Informatics Education Study Program, Faculty of Teacher Training and Education, University of Trunodjoyo Madura. Advisor: Nuru Aini, S.Kom., M.Kom.

ABSTRACT

SMK Nurul Amanah Library still manages book, member, borrowing, returning, and visitor data manually, resulting in less effective administration processes and a higher risk of recording errors. This study aims to develop a Web-Based Library Information System and determine its feasibility based on the ISO 25010 standard. The research employed the Research and Development (R&D) method using the Waterfall model, which consists of requirements analysis, design, implementation, testing, and maintenance stages. The system was developed using the Laravel framework and MySQL database. The results showed that the system was successfully developed according to user requirements, providing features for library data management and reporting. Testing results indicated a functional suitability score of 97.27%, a usability score of 88.37%, a portability score of 100%, and performance efficiency with Grade A, a performance score of 91%, a structure score of 98%, and a Largest Contentful Paint (LCP) value of 1.4 seconds. The maintainability aspect also demonstrated that the system is easy to maintain and further develop. Based on these results, the system is considered highly feasible for supporting more effective, efficient, and well-structured library management.

Keywords: Library Information System, ISO 25010, Laravel, Webs, Waterfall.