

INTISARI

Perpustakaan SMA Negeri 1 Cawas masih menghadapi kendala dalam pengelolaan data perpustakaan yang dilakukan secara manual, seperti pencatatan data buku, anggota, transaksi peminjaman dan pengembalian, serta penyusunan laporan, sehingga diperlukan sistem yang dapat membantu meningkatkan efisiensi pengelolaan dan pelayanan perpustakaan. Penelitian ini bertujuan untuk merancang dan mengembangkan Sistem Informasi Perpustakaan Berbasis Web dengan fitur rekomendasi buku menggunakan metode *Simple Additive Weighting* (SAW). Metode pengembangan sistem yang digunakan adalah *Rapid Application Development* (RAD), sedangkan analisis data dilakukan secara deskriptif berdasarkan hasil observasi, wawancara, studi pustaka, kuesioner, dan pengujian sistem. Analisis kebutuhan dilakukan menggunakan analisis SWOT dan perancangan sistem menggunakan *Unified Modeling Language* (UML) yang meliputi *Use Case Diagram*, *Activity Diagram*, *Class Diagram*, dan *Sequence Diagram*. Metode SAW diterapkan menggunakan empat kriteria, yaitu frekuensi peminjaman sebesar 35%, kesesuaian minat sebesar 30%, tahun terbit sebesar 20%, dan stok buku sebesar 15% untuk menghasilkan nilai preferensi dan peringkat buku sebagai dasar rekomendasi kepada siswa. Pengujian sistem dilakukan menggunakan *Black Box Testing* dan *User Acceptance Testing* (UAT). Hasil *Black Box Testing* menunjukkan bahwa seluruh fungsi yang diuji dapat berjalan sesuai dengan kebutuhan, sedangkan hasil UAT dari 34 responden yang terdiri dari 32 siswa dan 2 petugas perpustakaan memperoleh rata-rata persentase sebesar 88% dengan kategori Sangat Sesuai. Hasil tersebut menunjukkan bahwa sistem dapat diterima dan digunakan untuk membantu pengelolaan serta pelayanan perpustakaan di SMA Negeri 1 Cawas.

Kata kunci: Sistem Informasi Perpustakaan, *Rapid Application Development*, *Simple Additive Weighting*, Rekomendasi Buku, *Black Box Testing*, *User Acceptance Testing*.

ABSTRACT

The library at SMA Negeri 1 Cawas still faces challenges in managing library data manually, including book data, member data, borrowing and returning transactions, and report preparation. These conditions can reduce the efficiency of library management and make it difficult for students to obtain information and select books according to their interests. Therefore, this research aims to design and develop a Web-Based Library Information System with a Book Recommendation Feature using the Simple Additive Weighting (SAW) method. The system development method used is Rapid Application Development (RAD), while data analysis was conducted descriptively based on observations, interviews, literature studies, questionnaires, and system testing. Requirements analysis was performed using SWOT analysis, while system design used Unified Modeling Language (UML), consisting of Use Case Diagram, Activity Diagram, Class Diagram, and Sequence Diagram. The SAW method was implemented using four criteria: borrowing frequency with a weight of 35%, interest suitability with 30%, publication year with 20%, and book availability with 15%. The system was tested using Black Box Testing and User Acceptance Testing (UAT). The results of Black Box Testing showed that all tested functions operated according to the specified requirements, while the UAT involving 34 respondents, consisting of 32 students and 2 library staff members, obtained an average score of 88%, categorized as Highly Appropriate. These results indicate that the system can be accepted and used to support library management and services at SMA Negeri 1 Cawas.

Keyword: Library Information System, Rapid Application Development, Simple Additive Weighting, Book Recommendation, Black Box Testing, User Acceptance Testing.