

INTISARI

Penelitian berjudul "Rancang Bangun Sistem Inventaris Barang Berbasis Web dengan Sistem Pendukung Keputusan Menggunakan Metode *Simple Additive Weighting (SAW)* (Studi Kasus: SMP Negeri 2 Karangdowo)" bertujuan mengembangkan sistem inventaris berbasis web yang mampu meningkatkan pengelolaan data inventaris sekaligus membantu menentukan prioritas perbaikan atau penggantian barang dengan Sistem Pendukung Keputusan menggunakan metode SAW yang hanya diterapkan pada kategori barang elektronik dengan kriteria kondisi barang, umur barang, frekuensi penggunaan, dan dampak operasional. Pengembangan sistem menggunakan metode *Rapid Application Development (RAD)*, sedangkan pengujian sistem dilakukan menggunakan *Blackbox Testing* dan *User Acceptance Test (UAT)*.

Hasil penelitian menunjukkan bahwa sistem yang dikembangkan mampu mempermudah proses pengelolaan inventaris, mulai dari pendataan barang, pengelolaan kategori dan ruangan, pencatatan riwayat tindakan, hingga penyusunan laporan inventaris dalam format PDF. Penerapan metode SAW menghasilkan rekomendasi prioritas tindakan terhadap barang elektronik berdasarkan nilai preferensi dari setiap alternatif sehingga membantu petugas inventaris dalam menentukan barang yang perlu diperbaiki atau diganti secara lebih objektif. Hasil pengujian *Blackbox Testing* menunjukkan seluruh fungsi sistem berjalan sesuai kebutuhan, sedangkan hasil UAT menunjukkan sistem dapat diterima dengan baik oleh pengguna.

Berdasarkan hasil penelitian dapat disimpulkan bahwa sistem inventaris barang berbasis web yang dibangun mampu meningkatkan efektivitas pengelolaan inventaris di SMP Negeri 2 Karangdowo. Penerapan metode SAW membantu proses pengambilan keputusan dengan memberikan rekomendasi prioritas tindakan berdasarkan beberapa kriteria, sedangkan metode RAD mendukung pengembangan sistem secara cepat dan sesuai kebutuhan pengguna. Dengan demikian, sistem yang dikembangkan dapat menjadi solusi dalam mendukung pengelolaan inventaris barang secara lebih efektif, terstruktur, dan terkomputerisasi.

Kata kunci: Sistem Inventaris, web, *Rapid Application Development (RAD)*, *Simple Additive Weighting (SAW)*, *User Acceptance Test (UAT)*

ABSTRACT

This study entitled "Design and Development of a Web-Based Inventory System with a Decision Support System Using the Simple Additive Weighting (SAW) Method (Case Study: SMP Negeri 2 Karangdowo)" aims to develop a web-based inventory system that improves inventory data management while assisting in determining the priority of repairing or replacing inventory items. The Decision Support System applies the Simple Additive Weighting (SAW) method exclusively to electronic inventory items based on four criteria: item condition, item age, frequency of use, and operational impact. The system was developed using the Rapid Application Development (RAD) method, while system testing was conducted using Blackbox Testing and the User Acceptance Test (UAT).

The results show that the developed system simplifies inventory management processes, including inventory data entry, category and room management, maintenance history recording, and inventory report generation in PDF format. The implementation of the SAW method provides priority recommendations for electronic items based on the preference value of each alternative, thereby assisting inventory officers in making more objective decisions regarding repair or replacement. The Blackbox Testing results indicate that all system functions operate as expected, while the UAT results demonstrate that the system is well accepted by users.

Based on the findings, it can be concluded that the developed web-based inventory system improves the effectiveness of inventory management at SMP Negeri 2 Karangdowo. The implementation of the SAW method supports decision-making by providing priority recommendations based on multiple criteria, while the RAD method enables rapid system development that meets user requirements. Therefore, the developed system serves as an effective, structured, and computerized solution for inventory management.

Keywords: *Inventory System, Web, Rapid Application Development (RAD), Simple Additive Weighting (SAW), User Acceptance Test (UAT)*