

SISTEM PENDUKUNG KEPUTUSAN PERANKINGAN SISWA MENGUNAKAN METODE SIMPLE ADDITIVE WEIGHTING (SAW) BERBASIS FLUTTER PADA SDN KRAMAT JATI 02

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ABSTRAK

Penentuan peringkat siswa di SDN Kramat Jati 02 saat ini masih manual menggunakan *Excel* berdasarkan rata-rata nilai akademik saja. Proses ini memiliki kelemahan berupa risiko kesalahan *input*, inefisiensi waktu karena proses penilaian yang memakan waktu lama akibat banyaknya *file* terpisah dari masing-masing guru, serta penilaian subjektif karena belum adanya pembobotan kriteria dan pengabaian aspek non-akademik. Penelitian ini bertujuan membangun Sistem Pendukung Keputusan (SPK) berbasis *mobile* menggunakan *framework Flutter* dan *Firestore* dengan metode *Simple Additive Weighting* (SAW). Kriteria yang digunakan meliputi aspek akademik dan non-akademik (sikap, keaktifan, kokurikuler) dengan bobot yang ditentukan melalui wawancara wali kelas. Hasil pengujian menunjukkan sistem mampu melakukan perhitungan secara presisi. Perbandingan hasil menunjukkan adanya pergeseran peringkat yang membuktikan bahwa metode SAW menghasilkan keputusan yang lebih representatif dan objektif dibandingkan metode rata-rata konvensional. Pengujian *black box* mengonfirmasi seluruh fungsionalitas aplikasi berjalan baik dan layak diimplementasikan.

Kata Kunci: Sistem Pendukung Keputusan, *Simple Additive Weighting*, *Flutter*, Perankingan Siswa, *Firestore*.

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ABSTRACT

Student ranking at SDN Kramat Jati 02 is currently manual using Excel based only on academic averages. This process is prone to input errors and time inefficiency due to the lengthy assessment process involving numerous separate files from each teacher, as well as subjective assessments due to the absence of criteria weighting and non-academic aspects. This research aims to develop a mobile-based Decision Support System (DSS) using Flutter and Firebase with the Simple Additive Weighting (SAW) method. Criteria include academic and non-academic aspects (attitude, participation, co-curricular) with weights derived from 3 homeroom teacher interviews. Results show the system performs precise calculations. Comparison reveals ranking shifts, proving that the SAW method produces more representative and objective decisions than conventional average methods. Black box testing confirms all application functionalities operate correctly and are ready for implementation.

Keywords: *Decision Support System, Simple Additive Weighting, Flutter, Student Ranking, Firebase.*