

ABSTRAK

PT PLN (Persero) ULP Rivai mengalami kendala dalam menentukan prioritas penagihan pelanggan menunggak karena belum tersedianya sistem yang mampu melakukan penilaian dan perankingan secara objektif. Penelitian ini bertujuan membangun aplikasi berbasis web untuk menentukan prioritas penagihan pelanggan menunggak dan mengevaluasi kinerja petugas dengan menerapkan metode *Simple Additive Weighting* (SAW). Metode SAW digunakan untuk menilai dan merangking pelanggan berdasarkan kriteria dan bobot yang telah ditentukan sehingga menghasilkan prioritas penagihan yang lebih terukur. Pengembangan sistem dilakukan menggunakan metode *Waterfall* melalui tahapan analisis kebutuhan, perancangan, implementasi, pengujian, dan pemeliharaan. Aplikasi dibangun menggunakan PHP dengan framework Laravel, basis data MySQL, serta pemodelan sistem menggunakan *Unified Modeling Language* (UML). Hasil penelitian menunjukkan bahwa aplikasi mampu mengelola data pelanggan, data petugas, data penilaian, hasil penagihan, proses perankingan pelanggan menggunakan metode SAW, serta monitoring kinerja petugas dalam satu sistem terintegrasi. Pengujian menggunakan *Black Box Testing* menunjukkan seluruh fitur utama berjalan sesuai kebutuhan. Dengan demikian, aplikasi ini dapat membantu proses penentuan prioritas penagihan dan evaluasi kinerja petugas secara lebih efektif, objektif, terstruktur, dan terdokumentasi dengan baik.

Kata kunci: Sistem Pendukung Keputusan, SAW, prioritas penagihan, evaluasi kinerja petugas, aplikasi berbasis web.

ABSTRACT

PT PLN (Persero) ULP Rivai faces difficulties in determining the priority of collecting overdue customer payments due to the absence of a system capable of conducting objective assessment and ranking. This study aims to develop a web-based application for prioritizing overdue customer billing and evaluating staff performance by applying the Simple Additive Weighting (SAW) method. The SAW method is used to assess and rank customers based on predetermined criteria and weights in order to produce more measurable billing priorities. The system was developed using the Waterfall method, which includes requirements analysis, design, implementation, testing, and maintenance. The application was built using PHP with the Laravel framework, MySQL database, and system modeling with Unified Modeling Language (UML). The results show that the application is able to manage customer data, staff data, assessment data, billing results, customer ranking using the SAW method, and staff performance monitoring within an integrated system. Testing using Black Box Testing indicates that all main features function according to system requirements. Therefore, the developed application can support billing priority determination and staff performance evaluation in a more effective, objective, structured, and well-documented manner.

Keywords: Decision Support System, SAW, billing priority, staff performance evaluation, web-based application.