

OPTIMIZATION OF LEAVE AND WORK PERMISSION APPROVAL USING SIMPLE ADDITIVE WEIGHTING (SAW) ALGORITHM FOR PRIORITIZING PERMISSION GRANTING TO EMPLOYEES

Audy Gardilla Eka Syahzabella, Umar Zaky, S.Kom., M.Cs.

Information Systems Study Program, Faculty of Science & Technology

Universitas Teknologi Yogyakarta

Jl. Ringroad Utara Jombor Sleman Yogyakarta

E-mail: audygardillaeka.syahzabella@gmail.com, umarzaky@uty.ac.id

ABSTRACT

In the workplace, managing employee leave and permission is a crucial aspect that influences productivity and job satisfaction. However, the large number of employees complicates the decision-making process related to permission and leave approvals, making it susceptible to inefficiencies and inconsistencies. The lack of uniformity in granting permissions and leave often arises from subjective decision-making. This research employs an approach that integrates the TOGAF ADM and SDLC waterfall methodologies, encompassing stages such as problem identification, problem-solving, system design, implementation, and testing. The Simple Additive Weighting (SAW) algorithm is selected for its ability to handle various criteria, including urgency, submission time, performance, attendance, and length of service, which affect decision-making. The data is analyzed using the SAW algorithm to produce total scores for each leave or permission request. These scores serve as the basis for determining priority in granting permissions, with employees having the highest scores receiving higher priority. The testing results indicate a black-box testing success rate of 100%, while the accuracy performance testing of the SAW algorithm achieved a score of 93.33%. This study concludes that the application of SAW can provide a solution and is expected to serve as a reference for companies in developing a more effective and efficient leave and permission management system.

Keywords: TOGAF, Leave and Permission, Human Resource Management, Decision Support System, Simple Additive Weighting