Development of an Employee Scheduling Application Under Consecutive Days-off Constraints

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Abstract. This paper presents a model of an application for monitoring the scheduling of a company's human resources, which was developed taking into consideration the two important factors: matching the required number of employees on a particular day (request) and the number of employees available on that day (offer), as well as identifying trends that may affect the required number of employees on a given day in the subsequent period. This application offers the following services: access through a main screen of the interface for monitoring the human resource flow and displaying employee categories and a list of them, including a summary of each employee's status. It offers the possibility of adapting the quadratic optimization module for accessing web resources specialized in performing the calculations related to human resource planning and scheduling. The application is accessible and portable and brings an essential advantage to the managers and employees of the company, where it could be used.

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