

of the system. Through the work of this project, we have not only improved the efficiency and security of archive management, but also provided strong technical support for the modernization of archive management.

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UDC 004

DESIGN OF THE INFORMATION SYSTEM FOR DEVELOPMENT AND OPTIMIZATION OF THE PROJECT MANAGEMENT PLATFORM

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Abstract. *This article explores how to build an efficient, flexible and scalable workflow platform by combining microservice architecture with workflow technology to meet the office needs of modern enterprises in a multi-terminal environment.*

Keywords: microservice architecture; workflow technology; mobile office; enterprise informatization; process management.

In today's digital age, online office, learning, shopping and entertainment have become an important part of daily life. With the rapid development of Internet technology, enterprises and individuals are increasingly relying on various online platforms to improve work efficiency and quality of life.

The system for Development and optimization of the project management platform uses the uni-app framework for mobile terminal development, and the back-end service adopts the Spring Boot microservice architecture to communicate with the front-end through the RESTful API. The system design covers the basic management processes within the enterprise, including procurement management, contract management, personnel management, financial management, project management and general functional modules, aiming to improve enterprise work efficiency, promote team collaboration and communication, and ensure the security and confidentiality of data.

The system mainly realizes the following functions:

1. By automating the approval process, the approval cycle can be shortened and the work efficiency of the enterprise can be improved.
2. The content, process, conditions and other information of the approval process shall be fully disclosed to make the entire approval process transparent.
3. Reduce information monopoly and achieve seamless connection between cross-departmental approval and internal approval business of each department.
4. Promote team collaboration and communication, enabling team members to share information and work together in real time, thereby improving team collaboration efficiency and accuracy.
5. Standardize the approval process, archive approval logs and records, and ensure the security of approval data during transmission and storage

In this project, the basic management processes within the enterprise are defined, including procurement management, contract management, personnel management, financial management, project management and general functional modules. Each module shows the interaction between ordinary employees, department managers, directors and CEOs, as well as their roles and responsibilities in different business processes.

The data model of the microservice-based mobile workflow platform mainly includes process grouping, process definition, process instance, process task, and approval task (Fig. 1). The following is the database structure of the workflow engine, which is used to store and manage the various relationships of the business process.

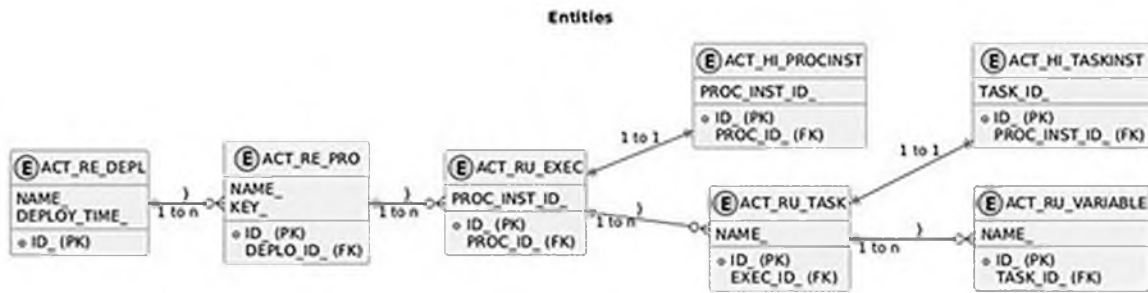


Figure 1 – The data model of the microservice-based mobile workflow platform

Create and manage flowcharts through visual business process modeling tools. Including start nodes, end nodes, user tasks, gateways, etc., you can drag these elements to the canvas to build a process. And set process properties and execution listeners. The figure 2 below shows a contract approval process, which starts with a contract application, goes through different judgment logics, and is approved by the marketing director, project director, and CEO, and finally creates a contract card. It is convenient for users to intuitively manage and optimize business processes.

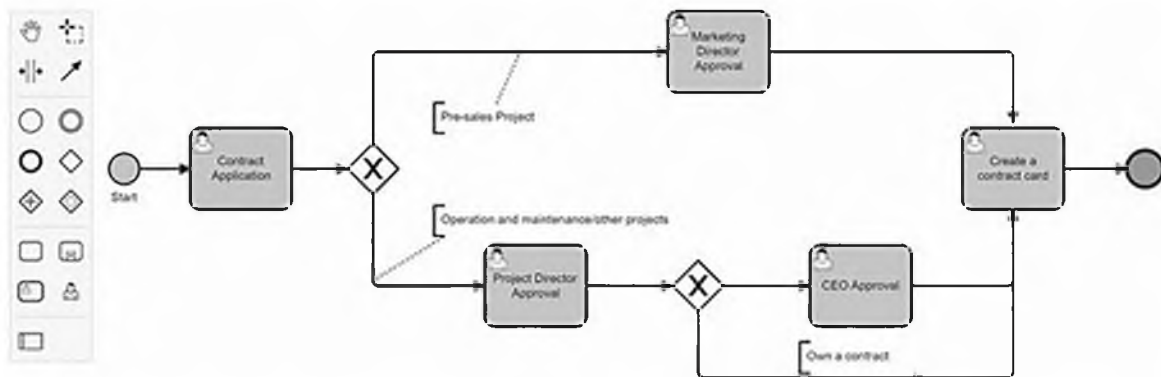


Figure 2 – Contract approval process

Therefore, this paper aims to explore how to build an efficient, flexible and scalable workflow platform by combining microservice architecture with workflow technology to meet the office needs of modern enterprises in a multi-terminal environment. The system developed using a mobile workflow engine may show its unique advantages in simplifying the operation process and customizing the process, which is also the point that this paper needs to reflect, making the system easier to expand and customize.

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