

Geotechnical Project Contract Management System

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Abstract: The contract management system is based on information technology and uses the advanced management ideas of modern enterprises to provide enterprises with all-round and systematic decision-making, planning, control and business performance evaluation of contract management platforms. With the advancement of science and technology, a perfect contract management system has become an important symbol of the healthy operation of the company. However, contract management can not be fully operated in most companies, and improving contract management requires the support of company resources, so how to adjust the contract management completely and scientifically is a major problem. Adhering to the tenet of "serving small and medium-sized enterprises", "Contract Management Expert CMExpert" has been successfully researched and developed, effectively solving the contradiction between simple and powerful and powerful, which provides nearly 100 contract templates, perfect combination of WORD, EXCEL, ACCESS SOFTWARE, CAN IMPORT THE PREVIOUS WORD FORMAT CONTRACT INTO THE SYSTEM, PROTECT THE USER'S INVESTMENT, SO THAT HALF AN HOUR CAN BE USED SMOOTHLY. Combined with the actual situation of various companies in China, the contract management system integrates financial management and project management into contract management, truly showing the purpose of optimizing the company's resources; The automatic contract settlement reminder effectively protects the company's capital operation security; The statistics function enables dragging and dropping fields to achieve different statistics, which really simplifies the tedious statistical process and is very efficient. This system combines the existing contract management, makes some of our adjustments, and can be well applied to some enterprise companies.

Keywords: Geotechnical soil, Contract management.

1. Project Introduction

1.1. Project Background

Informatization is the general trend of today's era, enterprises have begun digital reform, and contract management has become a new product in the network era. With the development of collaborative office from informatization to intelligence, the demand for contract management is becoming more and more diversified and personalized. In the face of more diversified needs, improving the customization and flexibility of the contract management system has become a top priority.

The contract management system of an enterprise refers to the general term for the system that is uniformly managed by the parties to the contract in accordance with the law and a series of operations such as the signing, performance, modification, rescission, planting, and filing of the contract. Among them, the conclusion, performance, modification, etc. of the contract are the contents of contract management. Contract progress management, supervision, control, etc. are the means and methods of contract management, contract management must be the whole process and systematic management within the enterprise. The whole process refers to the management of negotiation, drafting, signing and entry into force of the contract. We must not only pay attention to the management before the signing of the contract, but also pay attention to the management after the signing of the contract, which systematically refers to the content of the contract clauses involved in the execution of the contract, and all departments must manage together.

In the past, during the manual management of contracts, there were many external supply data, chaos, substandard, no unified standards, resulting in the risk of contract execution, involving many internal departments, resulting in

incentralized information, collaboration among departments, inability to monitor and implement in real time, synchronous feedback, low efficiency and other problems. Under the epidemic, enterprises have carried out digital office transformation, shifting offline activities to online, and enterprises have summarized the following points in the early stage, development and transformation stages of enterprises, aiming at some common problems in enterprise contract management

1. The terms of the contract are not standardized enough, which is easy to cause losses to the enterprise.
2. The review efficiency of the contract is low, the number of contracts is large, the content is complicated, and the review efficiency is low.
3. Data cannot be shared, lack of professional communication management platform
4. Difficulty in managing contract collection. The contract management system can solve the above problems well. Its importance is self-evident.

1.2. Development Purposes

Borges, former director of the National Library of Argentina, said of the library: "Heaven is what a library looks like." The advent of libraries made it possible for mankind to step from mortal dust to heaven[1]". In order to satisfy people's thirst for knowledge, while maintaining and improving this thirst for knowledge, the library has become a very important existence. In order to solve the lack of management of traditional libraries in dealing with a large number of borrowers, a large number of books, and the simultaneous management of multiple people, this library management system is being developed for this purpose. The library management system has been non-profit, with the mission of increasing people's intellectual curiosity, and strives to develop a simple, easy-to-use, and friendly

management system that satisfies a large number of borrowers, contains a large number of books for reading, and is managed by multiple administrators at the same time. With the advent of the information age, networks, software, and artificial capabilities have been integrated into people's lives and become indispensable. This library management system relies on the SSH framework to combine libraries that may be created with the Creator to satisfy and enhance people's desire for knowledge and give knowledge.

This system is a project contract management system, which mainly provides two aspects of services for project management

Project contract management, responsible for entering project information, modifying project information, finding project information, and deleting project information.

Project financial management, responsible for detailed records of each project payment.

The requirements for project contract management are described as follows:

Enter project information: The company's project department enters the project information of the engineering team, including the project name, contract signing date, contract amount, actual completion progress, start time, completion time, returned project payment, arrears of project payment, arrears of rush award, total arrears, contact information of project construction leader, project construction leader, contact information of Party A's project leader, and Party A's project leader.

Modify project information: The project department can modify the contract that has been entered in the system.

Find project information: The project department can query the contracts that have been entered in the system, and can query according to the project name and construction team.

Delete project information: The project department can delete the contracts that have been entered in the system.

Statistics and report generation of project contract information: The project department counts the contract information entered in the system and exports and generates reports.

The requirements for project financial management are described as follows:

1. Record the project payment received, among which, each recorded project payment, detailed information is recorded, details include, amount, payment time, specific operator.

2. Modify the contracts entered in the system.

2. Overview of the Main Technologies Used

2.1. Spring

Spring Framework is an open source J2EE application framework, an open source full-stack application framework that implements control reversal container implementation on the Java platform, and is a lightweight container for managing the lifecycle of beans, mainly composed of seven parts, Spring Core, Spring AOP, Spring ORM, Spring DAO, Spring Context, Spring Web, and Spring Web MVC.

2.2. SpringBoot

Spring Boot is a new framework provided by the Pivotal team designed to simplify the initial setup and development of new Spring applications. The framework uses a specific way to configure so that developers no longer need to define

boilerplate configurations.

2.3. Dubbo (Spring Cloud)

Dubbo is a high-performance and excellent service framework open source by Alibaba, which enables applications to implement the output and input functions of services through high-performance RPC, and can be seamlessly integrated with the Spring framework. Dubbo is a high-performance, lightweight and open-source Java RPC framework that provides three core capabilities: interface-oriented remote method invocation, intelligent fault tolerance and load balancing, and service auto-registration and discovery.

2.4. Maven

Maven Project Object Model (POM), project management tool software that can manage project builds, reports, and documentation with a short piece of descriptive information.

2.5. Git

Git is an open-source distributed version control system that can efficiently and at high speed handle version management of projects from very small to very large.

2.6. Mysql

MySQL is a relational database management system that increases speed and flexibility by keeping data in different tables instead of putting all the data in one big warehouse, and it supports multiple operating systems such as Linux, MAC, Windows, etc. MySQL uses the most commonly used SQL statement specification and has good scalability and scalability. At the same time, multiprocessor concurrency is supported, the execution efficiency is relatively high, and the network support is good. MySQL also has a lot of software that allows MySQL to run graphically. MySQL supports multiple storage engines as processors for different tables, providing high-speed storage and retrieval as well as full-text search.

2.7. Mybatis

MyBatis was originally an Apache open source project, iBatis, which was migrated from the Apache Software Foundation to Google Code in 2010, renamed MyBatis, is a Java-based persistence layer framework.

3. Market Analysis

Market analysis is the analysis of various factors of market supply and demand changes and their dynamics and trends. The analysis of the market during the development of a software is essential. In the process of analyzing the market, collect relevant information and data, adopt appropriate methods, analyze and study, explore the law of market changes, and understand the market demand for all aspects of products.

3.1. Market Demand

Analysis of market demand is an indispensable in the process of system development, the necessary analysis of market demand before development, can determine the performance required by the system, compare similar products, listen to the suggestions of peer experts, determine the necessary functions and standards of the system. Summarize the exact requirements so that the system can be developed and operated smoothly.

Through analyzing and exploring the market changes of contract management system, we find that with the continuous development and innovation of computer technology, computers, as a product of the era of knowledge economy, are more and more widely used in major fields. As a comprehensive and systematic contract management platform, the contract management system with full functions can provide indispensable benefits for the healthy operation of the company, and has a wide range of needs in today's market.

3.2. Market Advantages

The advantages of analytical systems in the market are the starting point for the development of the entire system. By analyzing market advantages to determine the functions required for the system, it is crucial to whether the entire system can be developed correctly and smoothly.

3.2.1. Overall advantages of the system

At present, the importance of contract management in enterprises has not been paid attention to by the public, and the market mechanism of its engineering projects needs to be improved. Through the market analysis of the management system, it is found that the traditional manual contract management information is not centralized and the real-time is not strong, resulting in the collaboration of various departments, the formation of business processes, the implementation of the monitoring system is not efficient, time-consuming and laborious, etc., making it far inferior to the higher-end and more advanced computer hardware equipment and high-quality auxiliary software to manage the operation. Compared with the traditional manual management system, consumers are more willing to use the contract management system in the form of new computer software, and the Northeast Geotechnical Contract Management System is obtained by analyzing the overall market demand of the contract management system.

3.2.2. System advantages

Understanding the demand for contract management systems and sales trends, we found that for a long time, due to manual work in contract management, the contract approval process was not clear, and there were long and error-prone contract turnover times between departments. Contract management system is a set of management system customized for the current contract management business characteristics, Northeast Geotechnical contract management system for project contract management system, project management mainly provides two aspects of services:

Project contract management: responsible for entering project information, modifying project information, finding project information, and deleting project information.

Project financial management: responsible for detailed records of each project payment.

In line with the purpose of further improving the internal contract management system and standardizing the contract management mechanism, the system reflects the contract information more timely, accurately and comprehensively, and assists the enterprise management decision-making, so as to realize the intelligent contract management of the enterprise, reduce the management cost, improve the internal management level, and provide first-hand information for the enterprise decision-making level to timely understand the work of the contract management business layer.

3.2.3. System competitiveness advantages

By understanding the market share of different contract management systems, the scope of role of Northeast Geotechnical Contract Management System was determined. First determine the business requirements and system goals, the contract management management system is used by the company to manage the details of each project and the management of the project contract in the project payment. All these two aspects of project management are within the responsibility of the system, and other company project content is not within the responsibility of the system. Northeast Contract Management System has great advantages in today's market with diversified queries on contract bills of quantities, and it is also superior among many contract management software of competitiveness.

4. Manage the Impact of The System on The Company and Society

4.1. Social benefits brought by the management system to the company:

Every company will have a number of management systems that are responsible for the management of affairs in all parts of the company, from large to small. The improvement of the management system can promote the company's economic benefits and prevent the occurrence of litigation, playing an irreplaceable role.

4.1.1. Collaborative benefits

The contract management system establishes a bridge for employees to communicate with each other in real time, realizes the comprehensive unification and real-time sharing of data, and improves information utilization and team collaboration capabilities. The democratized employee management can be realized, and employees and enterprises have obtained a benign development space.

4.1.2. Information Benefits

The contract management system can be integrated with other third-party office software to reduce the repeated entry of enterprise data and information redundancy. An enterprise information platform has been established to promote the process of informatization.

4.1.3. Human Benefits

The contract management system reduces the manpower input cost of the enterprise, improves the overall office efficiency, and enhances the overall strength and core competitiveness of the enterprise. It improves the level of overall human resource management of the enterprise, establishes a good brand image of the enterprise, and brings better social benefits.

4.1.4. Statistical benefits

The contract management system realizes the automatic statistics of data, and the results are more accurate, providing a reliable basis for enterprise managers to make scientific and reasonable decisions in a timely manner.

4.1.5. Management Benefits

Standardize basic data management, contract management system adopts centralized data management, can effectively change the current situation of enterprise information distribution is relatively scattered, can provide a good platform support for enterprises to achieve complete and standardized data management.

4.2. Benefits of the management system for contract managers

Improve management efficiency, contract management system can handle enterprise management affairs conveniently and quickly; The early warning platform can assist contract managers to deal with daily management affairs more easily, and the flexible definition of report management provides strong technical support for the statistical analysis of the management department.

4.3. Benefits of the management system to users

Provide users with comprehensive contract management solutions, contract management system combined with enterprise management consulting, can provide customers with comprehensive contract management solutions; For example, through the openness and flexibility of the system, the work results of professional consulting can be effectively solidified, which provides sufficient platform support for the improvement of customer contract management capabilities and levels.

4.4. Manage the impact of the system on society

4.4.1. Increase productivity

The original intention and basic task of the contract management system is to increase productivity. The ability of management systems to store and process information quickly and accurately can significantly reduce time, errors, and costs associated with processing information.

4.4.2. Transform the economic form

Today, the economies of developed countries in the world have begun to transform from the post-industrial economy era to the information economy, and the management system is

an important driving force in this development process. The management system will become a strategic resource for enterprises, which will further liberate human beings from heavy physical and mental work, and bring social employment issues, health problems, privacy, security, and interest issues. will cause a change in the entire virtual network. At the same time, change the way of life and habits of human beings.

4.4.3. Realize economic globalization

Enterprise economy refers to the comprehensive situation reflected in the gross production value, production scale, total production volume and efficiency, technical content, marketing means and other aspects of the use of resources obtained in accordance with the law to engage in economic activities under certain social conditions.

The globalized economy has transformed most large enterprises into multinational corporations. Through the Internet, they sell their products and services all over the world. At the same time, take advantage of more and cheaper labor from other countries. As a result, many multinational companies have established Internet-based management systems covering subsidiaries around the world. Manage the overall operation of the enterprise more effectively. So as to provide timely and accurate information and decision-making for the top management of the enterprise.

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