

DEVELOPMENT OF A PUBLISHING ELIGIBILITY INFORMATION SYSTEM WEB-BASED GUARANTEE INSURANCE CERTIFICATE

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Abstract: When working on a project that carries significant risk, the project owner asks the contractor for a letter of guarantee as a form of seriousness in carrying out the work for a certain time. One of the guarantor companies in the Bangka Belitung Islands Province is PT. Jamkrida Bangka which issues a surety bond certificate as an additional agreement to the main agreement between the project owner and the contractor. The system for submitting surety bond guarantee certificates at PT Jamkrida Bangka is still done manually starting from applying, completing the supporting document requirements, checking the suitability of the applicant's supporting documents, paying the guarantee fee, and printing the surety bond certificate as proof of guarantee. The system currently running will be developed into a web-based system to increase the speed of the administrative service process when applicants submit applications for surety bonds. The web-based system was developed using the Object-Oriented Analysis and Design method and Unified Modeling Language (UML) as a tool to develop in line with user needs. The system design can also provide easy access for applicants who are far from PT offices. Jamkrida in Pangkalpinang.

Keywords: guarantee certificate; surety bonds; web-based systems;

Abstrak: Pada pengerjaan proyek yang beresiko cukup besar, maka pihak pemilik proyek meminta surat jaminan kepada pihak kontraktor sebagai bentuk kesungguhan melaksanakan pekerjaannya selama waktu tertentu. Di Provinsi Kepulauan Bangka Belitung, salah satu Perusahaan penjamin adalah PT. Jamkrida Bangka yang mengeluarkan sertifikat surety bond sebagai perjanjian tambahan dari perjanjian pokok antara pemilik proyek dengan kontraktor. Sistem pengajuan sertifikat jaminan surety bond di PT Jamkrida Bangka masih dilakukan secara manual mulai dari mengajukan permohonan, melengkapi persyaratan dokumen pendukung, memeriksa kesesuaian dokumen pendukung pemohon, pembayaran biaya jaminan, dan pencetakan sertifikat surety bond sebagai bukti jaminan. Sistem yang saat ini berjalan akan dikembangkan menjadi sistem berbasis web untuk meningkatkan kecepatan proses layanan administrasi saat permohonan mengajukan permohonan jaminan surety bond. Sistem berbasis web dikembangkan dengan metode Object-Oriented Analysis and Design dan Unified Modelling Language (UML) sebagai alat bantu, agar sistem dapat berkembang selaras dengan kebutuhan pengguna. Sistem yang dirancang juga mampu memberikan kemudahan akses bagi pemohon yang secara geografis cukup jauh dari kantor PT. Jamkrida di Pangkalpinang.

Kata kunci: sistem berbasis web; sertifikat penjaminan; surety bond

INTRODUCTION

A Surety Bond is a general insurance product in the form of a guarantee against risk in the form of an additional agreement to the main agreement/contract between the Employer/Project Owner and the Contractor/Executor. Surety Bond is an alternative to Bank Guarantee which acts as a solution to guarantee the risk of loss that may be experienced by the Owner / Employer in the agreement/contract due to default.

According to the Financial Services Authority (OJK), a Surety Bond is a 3-party agreement between the Surety (Insurance) and Principal (Contractor) to guarantee the interests of the Obligee (Project Owner), where if the Principal fails to carry out its obligations as agreed with the Obligee, Surety will be responsible for the Obligee to complete the Principal's obligations[1].

PT. Jamkrida Babel is a Regionally Owned Business Entity Limited Liability Company for Bangka Belitung Islands Regional Credit Guarantee which is abbreviated to PT Jamkrida Babel, which was formed and established based on the Regional Regulation of the Bangka Belitung Islands Province Number: 3 of 2010 dated 30 June 2010 and Notarial Deed Number: 51 of 2010. gal 30 March 2012, which was ratified by the Ministry of Law and Human Rights Number: AHU-44699.AH.0101.2012 Dated 15 August 2012 and business license in the field of Guarantee from the Board of Commissioners of the Financial Services Authority (OJK) Number: KEP-94/D. 05/2014 dated 12 August 2014. Inaugurating its operations by the Governor of the Bangka Belitung Islands on 29 September 2014, PT Jamkrida Babel carries out a credit guarantee business in the Bangka

Belitung Islands region. Starting from underwriting consumer/multi-purpose credit and micro-credit at the Regional Development Bank of South Sumatra and Bangka Belitung (Bank Sumsel Babel), now the company is expanding its business focus by carrying out the Surety Bond business and guaranteeing general credit and consumer credit. in other financing and banking companies in the Bangka Belitung Islands region[2]

When carrying out a project, the project owner must ensure that the Contractor can complete the work by the contract. To obtain this certainty, the project owner asks the Contractor for financial guarantees in the form of cash or assets belonging to the contractor of the agreed value. In general, contractors have difficulty providing the requested guarantees. Contractors generally submit a guarantee for the implementation of the project to a third party in the form of an insurance company which issues a guarantee in the form of a Surety Bond. If in the future the Contractor intentionally or unintentionally defaults or breaches his contract, the guarantee can be withdrawn by the Project Owner by the agreed terms. Therefore, a Surety Bond is needed in the Work Agreement/Contract between the Project Owner and the Contractor[3].

The guarantee of safe project continuity for the project owner and contractor in the Surety Bond has several forms of guarantee, namely:

- a. Bid Bond which guarantees the Project Owner for losses due to the Contractor winning the tender resigning/breaking his promise to the conditions specified in the tender document, the value of which is between 1-2% of the project value.
- b. Maintenance Guarantee (Maintenance Bond/Retention Bond) Guarantees the Project Owner for losses due to

- the Contractor not carrying out maintenance, or repairing damage after the work is completed as stipulated in the contract, with a value of 5-10% of the project value
- c. Advance Payment Bond Guarantees the Project Owner that the contractor will be able to return the advance payment he has received from the Project Owner by the provisions agreed in the contract, to facilitate project financing, the value of which is 10-30% of project value,
 - d. A performance bond guarantees the Project Owner for losses due to the Contractor not carrying out the project according to the provisions in the contract (failing to carry out the project), which is worth 5-10% of the project value.

Based on the guarantee provisions provided by PT Jamkrida Babel in the surety bond product, project owners will submit guarantee insurance to PT Jamkrida Babel as a guarantee company. The ability of a guarantee company to continue to overcome risks depends on the company's ability to create profits or value for shareholders. With the number of developments and customers that will be guaranteed increasing, the role of information systems is needed to help make the work of employees easier.

According to procedures or mechanisms in the guarantee business. PT. Jamkrida Babel is required to issue guarantee certificates for collateral recipients. This is to indicate that the recipient of the guarantee has indeed been guaranteed by PT. Jamkrida Babel. In issuing guarantees, a system is needed so that the issued certificate does not take a long time.

And so that guarantee recipients can immediately carry out their work. PT. Jamkrida Babel has a partner in running

its business, the partner with which it is currently collaborating is PT. South Sumatra Regional Development Bank Babel, PT. BPR Ukabima Lestari, and PT. BPR Kapital Mandiri. To guarantee People's Business Credit which is currently a government program to help MSMEs, PT. Jamkrida Babel collaborates with PT. South Sumatra Babel Regional Development Bank in its credit distribution. Meanwhile with the government, PT. Jamkrida Babel also issues surety bond certificates, which consist of bid guarantee certificates, performance guarantees, down payment guarantees, and maintenance guarantees. The issuance of these certificates currently still uses a manual system, so it takes 30 – 60 minutes to issue 1 certificate.

Currently PT. Jamkrida Babel still provides manual procedures for issuing bond certificates. The order of the business process is that the project owner submits a guarantee application letter containing the agreement of the benjamin (bank appointed by the contractor) to pay compensation if the contractor does not fulfill its obligations.

Project owners who are currently working, especially in construction work, are aware of the importance of guarantees against the risk of failure that may occur. The following are several studies that discuss the use of surety bonds in development project work. At PT Generasi Prima Solusi, submitting surety bonds online simplifies the process, so that the service is more accurate and efficient[4].

PT Jamkrida Jawa Tengah has a surety bond claim procedure for checking the completeness of supporting documents. If the documents are complete, then the claim is paid in cash to the obligee by transferring to the account appointed by the obligee[5].

PT Penjaminan Jamkrido Syariah

Medan branch serves applications for guarantees for the implementation of development projects in the Medan area through underwriting procedures as an effort to assess project feasibility[6].

PT. Bumiputera Muda 1967, also uses underwriting procedures with the 5c principles for risk selection for surety bond products for prospective customers[7].

PT. AJS Bumiputera KPS. Medan uses the underwriting process as a stage that determines whether claims submitted to the company are successfully accepted or not[8].

PT. Indonesian Credit Insurance Bekasi Branch issues surety bonds through an underwriting process to analyze the feasibility of a project to receive collateral[9].

The importance of the underwriting process in the surety bond application process is described in the existing procedures at PT. Bumida Field Branch General Insurance 1967[10].

General insurance companies that carry out guarantee insurance business can still continue their business in accordance with OJK regulation no. 69/POJK.05/2016[11].

METHOD

This research uses an object-oriented method. Systems developed using the object-oriented paradigm are currently the most popular way to analyze, design, and develop application systems, especially large ones. Designing systems is a complex activity of aligning critical interests and choices at every step with incomplete information[12].

System development with OOAD has several keys to object-oriented design, namely: the central role of objects,

the idea of classes, abstract specifications of functionality, a language for defining the system, standard solutions, an analysis process for modeling the system, an understanding of extensibility and adaptability.

Unified Modeling Language, or UML, is a graphical modeling language that describes the main elements of a software system and explains how UML can be applied to software development projects. In other words, UML is just a language, notation, or syntax, which can be used as a software development tool[13].

Development of a guarantee insurance system at PT. Bima Perkasindo is a computer-based information system to improve policy issuance services more quickly and reduce principals who have defaults[14].

System development using OOAD and UML methodologies as tools, so that development can be carried out modularly and adapted to current system needs. With an object-oriented methodology, software design can identify software properties more accurately.

RESULTS AND DISCUSSION

The information system design for surety bond guarantee services at PT Jamkrida Bangka Belitung begins with an analysis of the current system which is notated with an activity diagram. The business processes that occur start from the obligation registration process, then the surety bond certificate issuance process, then the guarantee payment process, and finally the report preparation process.

The next stage is identifying the needs of the proposed system. The proposed system design is denoted by a use case diagram which displays the interac-

tion between the system and the user.

System interactions with users are grouped using package diagram notation.

The following is the UML notation for package diagrams and use case diagrams that correspond to the results of requirements identification. Image 1 below shows the user's interaction with the system. There are two users in this system, namely staff and customers. This web-based system provides interactions that make it easy for customers to register, complete documents and upload them, pay security deposits according to the type of security being applied for, and see the process of applying for a surety bond until they receive a security certificate as proof of security.

Image 2 to 8 below show the interface design that bridges communication between the user and the system. This interface design makes it easier for customers who apply for a surety bond certificate at PT Jamkrida Babel to register, complete the required documents, pay the guarantee, and print the surety bond guarantee certificate online

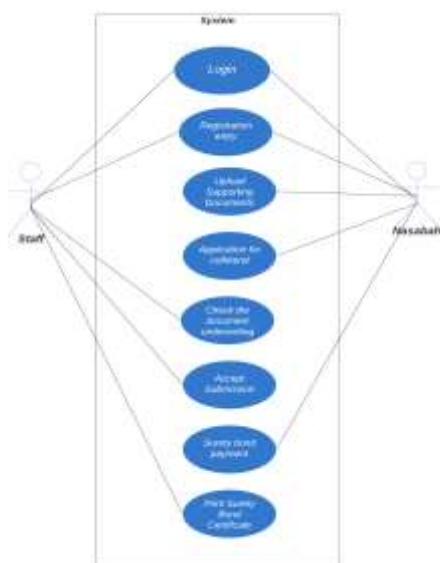


Image 1. Use Case Diagram

Image 1 is a use case diagram that displays system interactions with staff and customers as actors. Staff interact with the system through use case registration entry, check the document underwriting, account submission, and print surety bond certificate. Meanwhile, customers interact with the system through use case registration entry, uploading supporting documents, and surety bond payment. This use case diagram divides what processes can be accessed by staff only, customers only, and those that can be accessed by both.



Image 2.Login

Image 2 is the interface design for system login for actors interacting with the system.



Image 3. Registration Entry

Image 3 is the interface design for staff and customers. The customer inputs all the data requested by the system to complete the registration. After the customer inputs the data, the staff will then log in and check the completeness of the customer's registration requirements and validate the registration status.



Image 4. Upload Supporting Documents

Image 4 is the interface design for customers to attach additional documents if the registration process has previously been validated by staff.



Image 5. Check Document Underwriting

Image 5 is the interface design for staff to check all registration documents

and supporting documents that have been input by the actor into the system.



Image 6. Accept Submission

Image 6 is the interface design for staff to provide approval for a customer's surety bond application.



Image 7. Surety Bond Payment

Image 7 is the interface design for customers to confirm that they have paid the surety bond guarantee fee



Image 8. Print Surety Bond Certificate

Image 8 is the interface design for staff printing surety bond certificates. After the certificate is printed, customers are asked to come to the office to come and sign the certificate in person to reduce the risk of mistaken customer identity.

CONCLUSION

The Bangka Belitung Islands Province, which is developing and requires a lot of development of facilities and infrastructure, apparently needs support for project implementation guarantees such as surety bonds managed by PT. Jamkrida.

Surety bond guarantee managed and issued by PT. Jamkrida takes the form of a bid guarantee, down payment guarantee, performance guarantee, and maintenance guarantee. All types of offers must go through a manual selection process of documents and supporting requirements. Based on the results of the identification of needs, the surety bond application service system was upgraded to a web-based system to simplify the surety bond application service, speed up

the supporting document selection process, and expand the reach of customers who may be outside the city of Pangkalpinang.

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