Analysis and Design of the Reporting System for the Return of the Treasurer Period of Government Agencies at the Directorate General of Taxes (DGT)

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Abstract— *The Government Treasurer has the obligation to report withholding and/or collecting tax made within one Tax Period to the registered Tax Office (KPP). Reporting on withholding and/ or collecting and payment taxes has a different reporting deadline date, this payment must follow tax payment mechanism. The function of the withholding tax system is the backbone of the tax system, especially in building integrated tax supervisory system. However, the role of the Government Treasurer is not optimal because of the wide scope of work and the responsibility of the Government Treasurer which is still one of the obstacles. The purpose of this study is to design information systems requirement of tax reporting for Taxpayers, especially Government Treasurer, which can provide convenience in the process of administering, filling out and reporting tax returns. Observation techniques, interviews and document studies are used as the basis for qualitative analysis to obtain the design of the system. Modeling uses Unified Model Language (UML) which generates Use Case Diagrams, Activity Diagrams, and Class Diagrams. At the design stage, it produces Data Management Design, and Physical Architecture Design. This research was made in the hope of providing input on similar research, as well as a reference for research related to the Treasurer's Tax Return, and the design of information systems.*

Keywords— *Analysis, Treasurer, Design, SPT, UML.*

I. INTRODUCTION

In Law Number 6 of 1983 about General Taxation Provisions and Procedures as amended several times, most recently by Law Number 28 of 2007 (KUP Law), it is stated that taxpayers (WP) are individuals or entities, including taxpayers, tax withholder, and tax collectors. The treasurer as the collector and withholder of taxes is the Treasurer of the Central Government and the Treasurer of the Local Government. In addition, according to Law Number 1 of 2004 about the State Treasury, the management of the APBD is carried out by the State Treasury Officers, who is a person who has duties and authorities in financial management in each Ministry / Institution (K / L) to the smallest unit, starting from the functions of planning, implementation, and accountability.

The Government Treasurer has the obligation to report withholding and/or collecting, and payment taxes made within one Tax Period to the registered Tax Office (KPP). Reporting on withholding and/ or collecting and payment taxes is carried out using SPT Masa PPN 1107 PUT, SPT Masa Article 15, SPT Masa Article 21, SPT Masa Article 22 and SPT Masa Article 23/ 26 with each SPT Masa has a different reporting deadline date, as well as making tax deposits in accordance with the payment mechanism. The function of the withholding tax system is also the backbone of the tax system, especially in building a built-in control or integrated supervisory system. However, the role of the Government Treasurer is not optimal because of the wide scope of work and the responsibility of the Government Treasurer which is still one of the obstacles. In addition to the wide scope of work for Taxpayers, the Government Treasurer is also still not simple, such as:

1. There are at least 5 (five) SPT Masa that must be reported every month using a different form;
2. The tax reporting application used is different for each type of tax return;
3. The selection of a tax account for tax payments must be selected manually;
4. Applications for making tax payments are still separate;
5. SPT Masa reporting must still be submitted to the registered Tax Service Office (KPP).

This research was conducted on the business processes of Tax Reporting for Government Treasurers which include recording data on withholding evidence and / or proof of collection, formation of tax returns, recording data on proof of deposit and reporting of tax returns, designing information systems made including stages of analysis that produce Use Case Diagrams, Activity Diagrams, and Class Diagrams, as well as design stages that produce Data Management Design, and Physical Architecture Design.

Some of the previous studies to support the research carried out are:

1. Research conducted by Richart (2017) regarding requirement analysis, and managing information systems on internal control processes in asset management at the Directorate General of SDPPI. In the study, using a waterfall development method that begins with the analysis of problems and needs, then poured in a use case to provide an overview of the needs of the system, actors, functions, system limitations, to describe the relationship of their interrelationships.
2. Research conducted by Hyung Chul Lee (2016) who examines electronic tax invoices and analyzes their effect on tax compliance through transparency of business transactions and taxpayer services and concluded that the imposition of an electronic tax collection system improves Taxpayer Compliance in South Korea.

3. The research conducted by Teixeira, Xambre, Figueiredo, & Alvelos (2016) was to build a Project Management Information System (PMIS) in a consulting company. The approach used is requirement engineering with three stages, namely requirements elicitation, conceptual models, and implementation models, but research is only carried out at the requirements stage of elicitation and conceptual models. Modeling is performed using Unified Modeling Language (UML).

II. RESEARCH METHODS

According to Husein Omar (2013), objek research explains what and or who is the object of research, where and when research is carried out, and other things are also considered necessary. The object of this study is the Tax Reporting System used by the Government Treasurer. The location of the research at the Directorate General of Taxes and the time used for this study from June 2021 to August 2021.

This research uses a case study research methodology, where the case under study is the Tax Reporting System for Government Treasurer. The method used in this study is qualitative. According to Benbasat, Goldstein and Mead (1987) that research in the field of information systems using case studies is believed to be suitable for obtaining knowledge from practitioners in the field of information systems and can produce or develop theories from these practitioners.
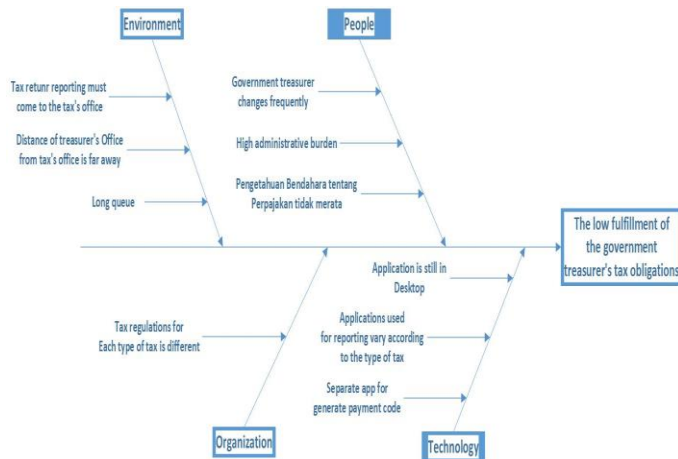

Figure 1. Fishbone Problem Diagram

Based on figure 1, from the environmental side, the root of the problem identified is that taxpayers still have to come to the KPP whenever reporting their tax returns, the distance between the government treasurer's office and the KPP is far and there is a queue when reporting the tax return at the KPP. Meanwhile, from the people's side, the root of the problem is that the position of Government Treasurer often changes, the administrative burden is high and the Government Treasurer's knowledge of taxation is uneven. In terms of organization, the root of the problem is that the tax regulations for each of the tax types are different. Meanwhile, in terms of technology, the root of the problem is that the application to make tax returns is still in the form of a desktop application, the application

used for reporting varies according to the type of tax and to create payment codes using a separate application

From the problems of the four domains, the research stage was made using the SDLC stages, namely planning, analysis, design, and implementation (Dennis, Wixom, & Tegarden, 2014). Thisenelitian is only carried out in the stages of planning, analysis, and design as shown in figure 2.
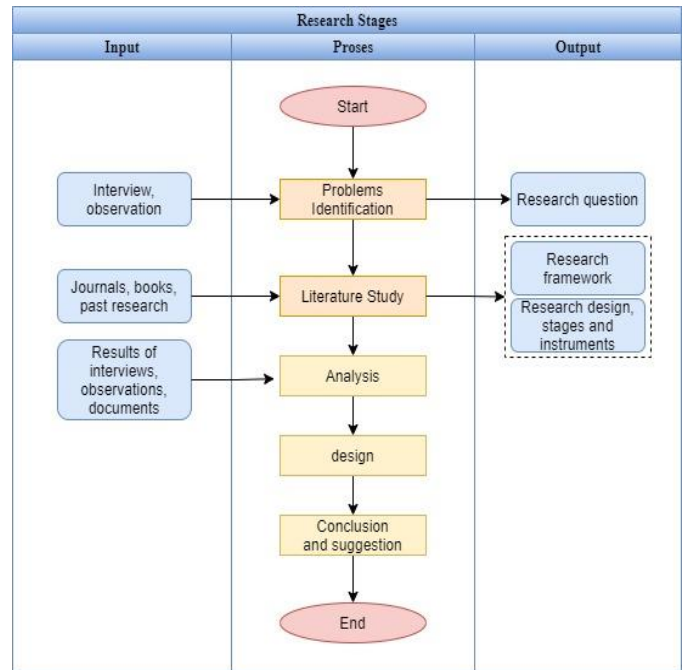

Figure 2. Stages Penelitian

Based on the steps in figure 2, the calculations carried out in this study are as follows:

1. Problems Identification. At this stage, problem identification is carried out by interviews and document studies. Problems that arise and research questions are obtained in this stage.
2. Literature Study. At this stage it is carried out by understanding the appropriate book or journal and looking for the right theory for this research. By studying similar research, it can be used as a comparison to get what method is suitable for this research. This literature study conducted was used to compile the research framework used in this study.
3. Analysis. At this stage it is carried out by coding workmanship technique. The results of the interview and the study of the document are then analyzed by forming groups of data that will have meaning. Then the results of the analysis are poured into UML notations such as use-case, sequence diagram and class diagram.
4. Planning and design. From the modeling results in analysis stage, a design is then carried out. In this study, the design carried out included data management design, and physical architecture design.
5. Drafting Conclusions and Suggestions. After all the steps have been completed, the last step taken in this study is to make conclusions and suggestions for the research that has

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been carried out.

III. RESULTS AND DISCUSSION

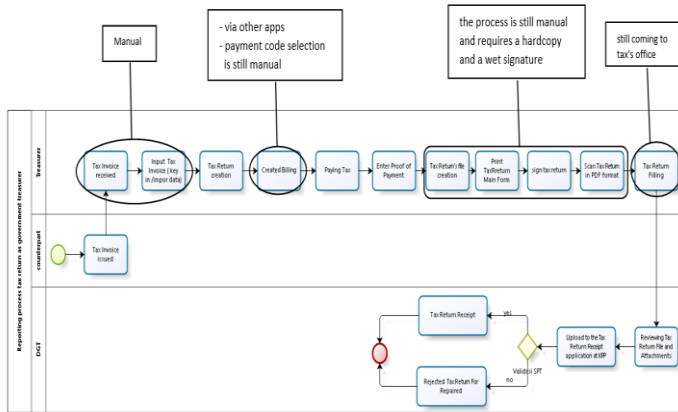#### A. Results of Determining Business Processes to be

Figure 3. Results of the Review of the Flow of Reporting tax returns for the VAT Period of the Government Treasurer

In Figure 3, problem points which are *gaps* that must be met in order for the objectives of this study to be achieved, are determined. The determination process is illustrated in table 1.

TABLE I. Results of the Analysis of Government Treasurer's Tax Return Reporting Problems.

No.	Problem	Treasurer's Complaint	Solution
1	Still *Hardcopy* and wet signature	There are additional activities to print and sign tax returns	Use a digital certificate
2	Create billing still using other applications (e-billing)	must open a different application	There is a feature to makeat billing
3	At the time of creating the billing code, you still have to choose the KJS and MAP code	WP must memorize, if there is an error in making billing and it has been paid there is an additional activity, namely the book-entry process	At the time of creation of the billing code, the KJS and MAP code are filled in
4	The process of making tax returns is still manual and still uses wet signatures	WP is still doing manual recording and has to find an official who is authorized to sign the tax return	There is a prepopulate feature for filling out tax returns and signatures using digital certificates
5	Reporting for each type of tax return (Value Added Tax (VAT), PPh Article 4 paragraph (2), PPh Article 15, PPh Article 21, PPh Article 22, PPh Article 23/26.)	Still using some applications with different users and passwords yang and still desktop based	Combining several tax returns (SPT Unification) so that you only need to make one tax return
6	Still have to come to KPP	Jarak between WP and KPP offices, must adjust the KPP service time	Using an online application so that taxpayers do not need to come to KPP

From table I, it can be seen that to meet the gap, it is necessary to develop a new integrated system that already accommodates the needs of business processes expected and there is no need for manual processes. The results of business processes needed by the system are found in:

1. Business Process of Making of Withholding of Unification Income Tax for recording and uploading;
2. Business Process of Recording Proof of VAT Collection / PPnBM for recording and uploading;
3. Business Process of Making Billing on of Deduction or Proof of Collection;
4. Business Process of Preparing SPT Unification Period;
5. Business Process of Recording Proof of Deposit on Taxes that have been withheld / collected;
6. Business Process of Reporting Tax Returns for the Unification Period;
7. Business Process of Rectification/ Cancellation of Proof of Withholding/ Collection;
8. Business Process of Incidental Tax Return for Unification Income Tax Period;
9. Business Process of Recording Signatories of Proof of Withholding and / or Tax Return of Unification Income Tax Period;
10. Business Process of Subunit Government Agencies User Management.

B. Modeling Use Case Diagrams

A use case is a set of interfaces that connect a system with the actors in it (Boussellaa & Abed, 2015). The results of interviews, observations and regulatory document studies found that there are 10 business processes needed to be accommodated by the system. From the 10 business processes, an analysis was then carried out and 23 use cases were obtained.
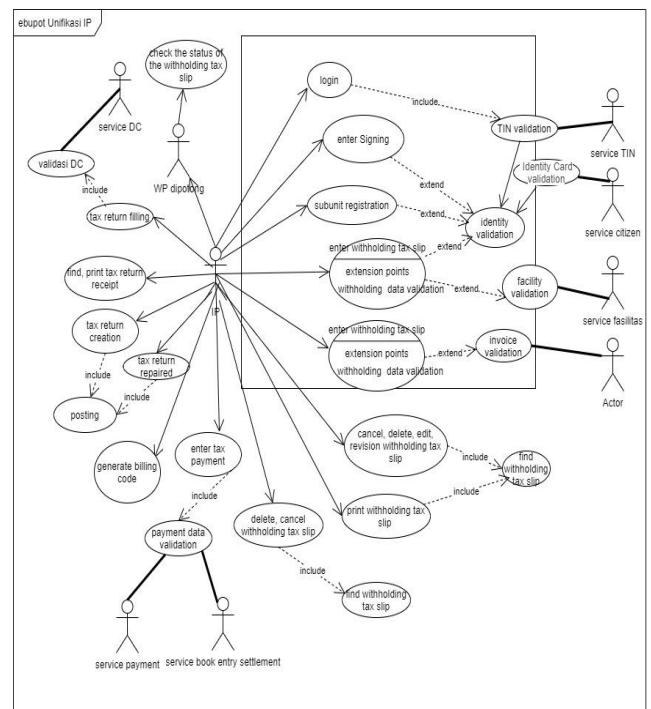

Figure 4. *Use Case Diagram* Results

After getting required processes and drawing them into a use case like figure 4, then modeled the process into the activity diagram. An activity diagram can be an overview of several use cases. Here are some activity diagrams that can be described on this system.
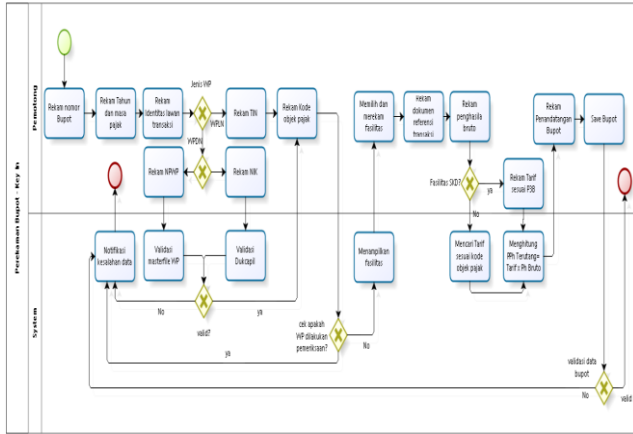

Figure 5. Results of Activity Diagrams Create Evidence of Withholding of Income Tax Unification of Government Agencies through Recording

Figure 5 is this process carried out by Government Agencies who have the status of Tax Withholder and have logged into the e-Bupot application for the Government Agency Unification Period Tax Return.
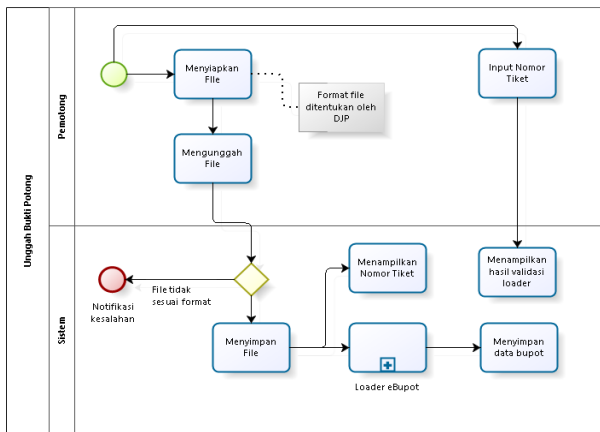

Figure 6. Activity Diagram Results Create Evidence of Withholding of Unification Income Tax for Government Agencies through Uploading

Figure 6 is the making of proof of withholding through in addition to recording on the e-Bupot application for the Unification Period of Government agencies, Taxpayers can also make proof of withholding by uploading the Proof of Withholding file that has been prepared in accordance with the format provided by the Directorate General of Taxes. This file will then be uploaded to the e-Bupot application for the Government Agency Unification Period for validation and issuance of proof of deduction.

Figure 7 is a proses recording by a Government Agency who has the status of a Tax Collector and has logged into the application e-Bupot SPT Unification Period of Government Agencies.
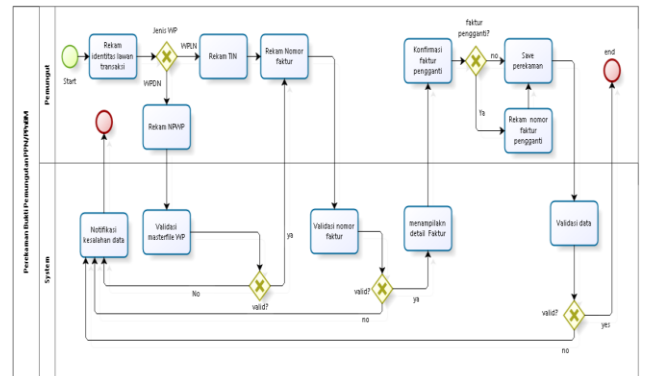

Figure 7. The results of the Activity Diagram Pare recorded and PPnBM
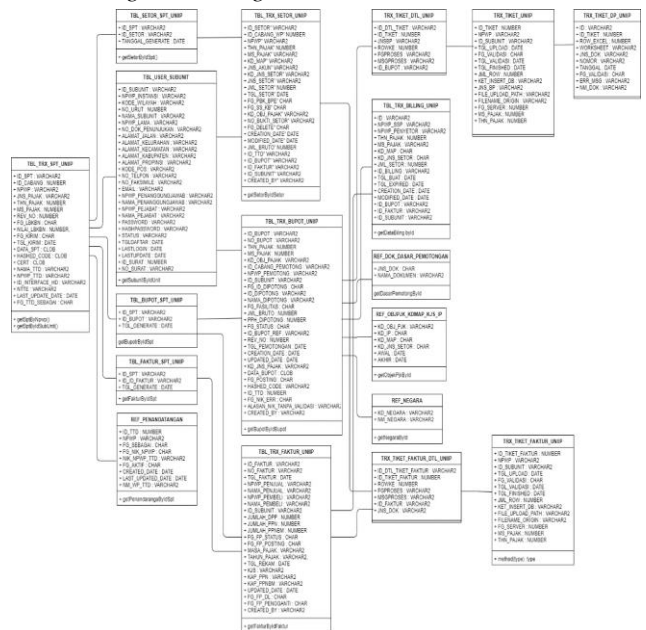
C. Modeling Class Diagrams

Figure 8. Class Diagram Results

Figure 8 shows the class diagram. The condition of the system in question is a system that has been designed based on a use case by identifying object in the system and its relationship.
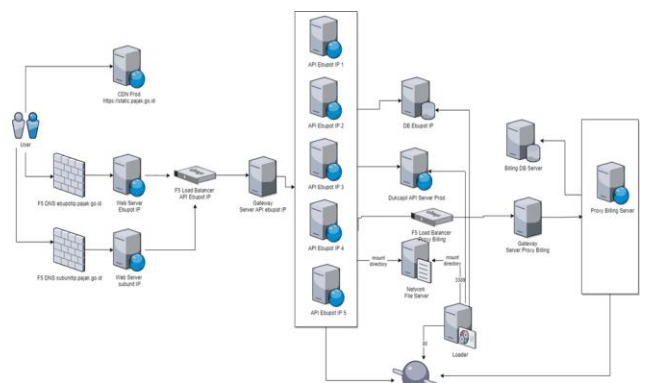

Figure 9. Results of Physical Architecture Design

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D. System Physical Architecture Design

Architectural design of the development infrastructure is designed in such a way by considering the availability of infrastructure and business processes in accordance with applicable regulations, as figure 9.

IV. CONCLUSION

From the analysis carried out, a design of an information system that accommodates the process of reporting tax returns during the Treasurer of Government Agencies was obtained. From the analysis stage, an overview of the existing system and the proposed system is obtained. Some of the processes in this system have not been automized and are used as a system that can commute the required business processes. There are two processes, namely making a billing code and filling in tax invoices can be upgraded through integration with existing systems, namely e-billing and e-invoices. Simplification of tax reporting of the Treasurer of Government Agencies.

This Information System Design can be developed so that it can assist the Treasurer of Government Agencies in terms of tax reporting and before this design is used, user validation should be carried out again by involving users who will become direct users of this system so that it can be equipped with business processes that may still not be identified.

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