

DIGITALIZATION OF THE RESPONSIBILITY REPORT OF THE ASSISTANT TREASURER OF EXPENDITURES BASED ON CLIENT-SERVER

(Case Study: Property Tax (PBB) and Acquisition of Rights over Land and Building Tax
(BPHTB) Management Agency of Cianjur District Revenue).

Emil Herdiana^{*1}, Ahmad Danial², Eva Susilawati³, Yani Irmawati⁴.

¹³⁴Informatics Engineering Study Program, Faculty of Engineering, Universitas Putra Indonesia, Indonesia.

²Informatics Management Study Program, Faculty of Engineering, Universitas Putra Indonesia, Indonesia.

Email: emher@gmail.com, evasusi@unpi-cianjur.ac.id

Article Info

Article history:

Received May, 1, 2024

Revised June, 5, 2024

Accepted July, 13, 2024

Keywords:

Report,
Agency,
Cianjur,
Waterfall,
Server.

ABSTRACT

The Accountability Report (Surat Pertanggungjawaban, SPJ) is crucially needed in government agencies when budget expenditures are made. Activities such as official travel for civil servants (Pegawai negeri sipil, PNS) and non-civil servants (Non PNS), as well as other budget-requiring activities, require an accountability report prepared by the budget user. Typically, agencies have only a Treasurer (Bendahara Pengeluaran, BP), but some require an Assistant Treasurer (Bendahara Pengeluaran Pembantu, BPP) whose function is to assist the Treasurer in managing and organizing budget expenditures through Cash Advances (GU) rather than LS (Third Party/Contract). In the activities of organizing SPJ in the field of Property Tax (PBB) and Land and Building Acquisition Rights (BPHTB) managed by the Revenue Management Agency of Cianjur Regency, there are current vulnerabilities in retrieving old data and risks of data loss. This research aims to assist BPP and BP in their duties. The system development uses the waterfall method with stages including system analysis and definition, system design, implementation, and unit testing. Data collection methods include observation, interviews, and literature review. The system modeling employs UML modeling and is based on client-server architecture using VB.Net programming language and SQL Server 2008 database. The findings of this research can streamline all related parts in terms of SPJ processing, which is beneficial for planning budget expenditures for the following year

Copyright ©2024 The Authors.

This is an open access article under the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Corresponding Author:

Emil Herdiana

Informatics Engineering Study Program, Faculty of Engineering,

Universitas Putra Indonesia, Indonesia

Email: emher@gmail.com

1. INTRODUCTION

The role of information systems (digitalization) in a government institution is crucial for completing tasks efficiently [1]. This is evident in the Regional Revenue Management Agency of Cianjur Regency (Badan pengelola pendapatan daerah, BPPD), where many tasks across various departments remain non-computerized, such as the process of creating Travel Orders (Surat perintah perjalanan dinas, SPPD). Currently, the creation of SPPD is done manually using Microsoft Office Word 2007 and Microsoft Office Excel 2007, resulting in data that is not well integrated and documented [2]. Similarly, the BPP (Bendahara pengeluaran pembantu) reporting process is also manual.

Minister of Finance Regulation Number 190/PMK.05/2012 stipulates that the BP (Bendahara Pengeluaran or Disbursing Officer) is designated to receive, store, disburse, manage, and be accountable for funds for State Expenditures [3]. In carrying out the duties of a treasurer, BP is assisted by BPP (Bendahara Pengeluaran Pembantu or Assistant Disbursing Officer). BPP is designated to receive, store, disburse, manage, and be accountable for funds for State Expenditures in the implementation of the State Budget (Anggaran Pendapatan dan Belanja Negara, APBN) at government offices/units of

ministries/agencies [4]. To enhance the effectiveness and efficiency of budget utilization, the Head of the Agency appoints several BPPs as needed. BPP, in performing their duties, is accountable to BP.

An interesting point is that Civil Servants (Aparatur sipil negara, ASN) serving in agencies may not necessarily have educational backgrounds in finance. Many officials in government agencies appointed as treasurers do not have educational backgrounds in finance, which may limit their ability to manage finances effectively. Due to the necessity of filling positions and the lack of alternative candidates, job responsibilities may be neglected [5][6][7].

The above Minister of Finance regulation also governs domestic official travel, specifying the mechanisms and standardization of official travel expenses [8]. The current documentation process for official travel is assessed as vulnerable to issues related to documentation and retrieval. In managing payment transactions (UP), BPP prepares SPJ (Accountability Letter/Report). The travel and budget expenditure system according to the Budget Implementation Document (Dokumen pelaksana anggaran, DPA) is crucial as it pertains to the financial reports of the institution [9].

The advancement of digital technology, especially in the field of information technology, is one of the triggers for changing human thinking patterns to obtain information quickly and accurately [10]. Computers are essential devices for processing and storing data to bridge and facilitate information exchange between application users and information users. The advantage of computers in processing data enhances the effectiveness and efficiency of an information system [11] [12].

Based on the description above, considering the implementation of computerization in the SPJ data processing system is a fundamental issue in creating good administrative procedures for budget absorption. Therefore, the researcher attempts to build a structured database management information system that encompasses the processing of letters/reports of accountability for the use of funds in a department at BPPD [13].

Researchers attempt data processing in the built system using VB.Net programming, design reports using Crystal Report v 8.5, store databases using SQL Server 2008, and the operating system used is Windows. This is expected to help BPP performance become more efficient and effective, and information regarding budget absorption in each field to be more accurate.

2. METHOD

This research designs an information system for processing the accountability reports of assistant treasury spenders based on a client-server model in one of the divisions within the Regional Revenue Management Agency (BPPD) of Cianjur Regency located at Jl. Pramuka Desa, Bojong, Karangtengah District, Cianjur Regency. There are four work units in BPPD Cianjur Regency: the Secretariat, the Property Tax (PBB) and Land and Building Acquisition Tax (BPHTB) division, the Collection division, and the Local Tax Potential division. The research object is the PBB and BPHTB division.

A. Data Collection Method

The data collection method in this research involves conducting interviews and direct observations. The data is then analyzed and presented based on the development method to produce scientific research [15].

B. System Design Method

In designing this information system, the researcher employs the Waterfall system development model with an object-oriented approach. This choice is appropriate for solving the identified problems because the Waterfall method enhances system performance, ensures higher quality information, and improves system control [16]. The workflow of the Waterfall model in this research is explained as follows:

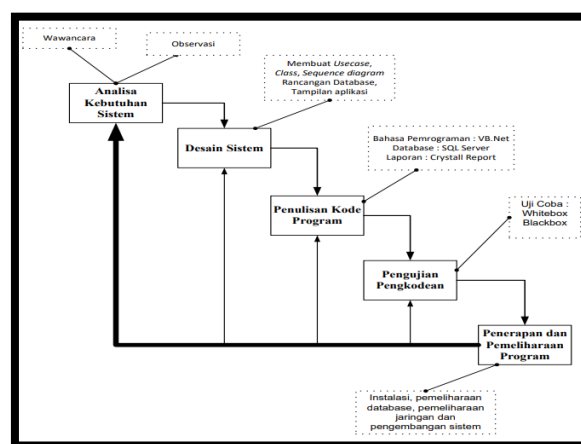


Figure 1. Waterfall model

1. System Requirements Analysis

In this stage of system requirements analysis, the researcher identifies and defines the system requirements. The researcher conducts interviews with the head of the finance department and the treasury spender of BPPD Kab. Cianjur, resulting in guidelines that serve as references for the subsequent stages. The system requirements analysis is presented

in a format understandable to the users. The researcher gathers information about the existing system constraints, enabling them to formulate system requirements to achieve the system development goals.

2. System Design

The design phase is the development of user stories obtained in the previous stage (system requirements analysis). This design phase includes workflow design, database system design, and system interface design.

3. Writing Program Code

In this stage, the design is transformed into program code. The program code generated consists of modules that will be integrated into a complete system. For coding, the researcher uses VB.Net programming language with SQL Server 2008 for the database, and Crystal Report 8.5 for reporting.

4. Program Testing

Testing is conducted by evaluating the software configuration, which includes requirement specifications, design descriptions, and the generated program. The testing uses the black box testing method, focusing on the functional requirements of the software developed.

5. Program Implementation and Maintenance

Implementation refers to the installation process, while maintenance involves routine database maintenance, network maintenance, and system development according to new requirements.

3. RESULTS AND DISCUSSION

A. System Analysis and Design

System requirement analysis is conducted to define the needs that will be used in the development of this information system. From the results of interviews and interviews with sources, and based on existing problems, the author can collect problem data, namely:

1. System Requirements Analysis

- a. There is currently no system providing information on budget realization and remaining Person-Days Work (Hari orang kerja, HOK) from local official travel expenses.
- b. UP transaction recording is still manual using Microsoft Office Excel 2007.
- c. The creation of official notes (submission and payment of invoices funded by UP) still uses Microsoft Office Word 2007, hence the total value of the submission is not automatically known.
- d. The creation of data (assignment letters (surat tugas), visas (visum), cost details, and reports) for SPJ Travel Orders (SPPD) uses Microsoft Office Word 2007 and Microsoft Office Excel 2007, which can lead to data duplication and limitations in checking dates that have been used relatively longer, resulting in invalid remaining Person-Days Work (HOK). Each transaction only has physical history, which poses a significant risk of losing SPPD data.
- e. Searching for SPPD and other SPJ data is relatively time-consuming due to the large number of transactions still stored in documents.
- f. Budget utilization reports and HOK usage still use Microsoft Office Excel 2007.
- g. Data is still scattered across several departments, resulting in an inefficient information flow between departments.

Based on the issues above, the researcher envisions the information system as follows:

- a. The information system provides information regarding budget realization and remaining workdays (HOK) for local business travel expenses.
- b. The system includes facilities for recording UP (Warrant Recording) applications and transactions.
- c. The system provides facilities for creating official notes (submission and payment of bills funded by UP) accessible to department heads for verification (approval) of proposed budgets using GU and verified by the disbursing treasurer to create a disbursement ceremony so that the total value of the application, which applications are accepted, is automatically known.
- d. The availability of facilities for creating SPJ SPPD data and reports so that data duplication can be avoided and information on utilized HOK and remaining HOK becomes valid.
- e. Facilities for searching SPPD and other SPJ data to facilitate obtaining information about SPPD and SPJ.
- f. Facilities for budget and HOK usage reports to ensure that the data provided to relevant parties is accurate and not fictitious.
- g. The availability of a network infrastructure developed with a centralized information system so that data and information can be accessed by relevant parties..

Besides the system requirements, this information system also defines the objects and roles of these objects towards the system so that the desired goals of system users are achieved. The system has six categories of users:

- a. Admin is the system user who controls and manages all administrative activities in this system.
- b. Assistant Treasury Disburser (BPP) is the system user who creates travel order requests and performs transactions for the acceptance of payment of travel orders submitted by the Treasury Disburser.
- c. Treasury Disburser (BP) is the system user who verifies travel order requests and processes payment transactions for travel orders submitted by BPP.

- d. Head of PBB & BPHTB Division is the system user who verifies the creation of travel order requests by BPP and the issuance of documents by BP.
 - e. Head of Financial Subdivision is the system user who verifies the issuance of documents by BP.
 - f. Official Travelers: System users who only fill out travel reports.
- The following image presents the architecture design of the information system that will be developed.

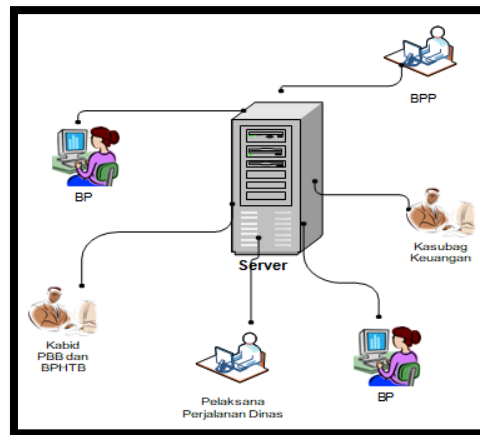


Figure 2. Design of information system architecture & network topology

2. Functional Requirements

Functional requirements for users are differentiated based on their roles in the system. Users can log into the system using registered usernames and passwords (access rights).

Table 1. Functional Requirements

User	Activity
Administrator	System administration and maintenance
BPP	<ol style="list-style-type: none"> a. More practical management of Payment Request Letters (SPP) / official notes b. Efficient and effective management of reports/accountability letters (SPJ) c. Remaining HOK can be directly known d. Faster, easier, and more practical SPJ data search e. More accurate budget realization f. Quick in generating Payment Orders
BP	<ol style="list-style-type: none"> a. Can directly read the Payment Request Letter (SPP) b. submitted by BPP which has been approved by the Head of PBB and BPHTB. c. Making minutes from the submission of SPP more practical. d. Can directly read the assignment letter for the executor who will carry out official travel. e. Can directly verify official travel data and print travel receipts from the department. f. Can monitor budget realization in the department. g. BKU can be accessed at any time.
Head of the PBB and BPHTB Division.	<ol style="list-style-type: none"> a. Can immediately read the Request for Payment Letter (Surat perintah pembayaran, SPP) to be submitted and can immediately accept/reject the proposal. b. Can immediately read the travel assignment letter for the implementer who will carry out official trips. c. Can directly read the minutes of the meeting prepared by the Treasurer. d. Can monitor budget realization in the field. e. BKU can be accessed at any time.
Head of Finance (Kasubag Keuangan)	<ol style="list-style-type: none"> a. Can directly read the Request for Payment (SPP) b. submitted by the department and can

	immediately approve/reject the request.
	c. Can directly read the travel assignment letter for the executor of official trips.
	d. Can directly read the minutes prepared by the BP to be submitted to the department.
	e. Can monitor budget realization in the department.
	f. BKU (Payment Order Letter) can be accessed at any time.
Official Business Trip Executor	a. Able to directly read the official travel assignment.
	b. Able to directly report the results of the completed official trip.

3. Non-functional requirements:

- Ease of use: In using the information system, a BPP can easily plan and manage travel expenses and other expenditures because the system is designed with a simple and attractive input form. It is simple in displaying information on budget usage, both remaining and used. It is attractive because managing travel data is directly integrated into one form per date and destination. The system is designed to make it easy for users to manage expense report (SPJ) for budget usage.
- Ease of implementation: The system is developed with a client-server architecture. The database is managed on the server, while input-output data is displayed on the client side. Visual Basic .Net programming language is used with SQL Server database, enabling data connectivity even with multiple users.

Table 2. Software Requirements

Client server strategy	Produk	Reason
Programming language	VB.Net	The application is built on a client-server basis.
Database	SQL Server	Due to support for client-server based applications and to facilitate easy connectivity with the built application.
Report	Crystal Report	Because of its uncomplicated features and easy integration with other languages and simpler connectivity..

B. System Design

The results of the system requirements analysis (functional requirements analysis) are then used for system design using UML (Unified Modeling Language). The design created in this writing is:

1. Use case diagram

The result of the analysis is the creation of a system modeling from the user's perspective using a use case diagram. A use case diagram is a diagram created from the user's perspective. It depicts the system's scenarios as if the user is involved in the analysis and design stages based on what the user does with the system. The use case diagram illustrates the functionality of the client-server based BPP accountability report management information system..

The use case diagram shows three aspects of the system: actors, use cases, and the system/subsystem scope. It illustrates the relationship between actors and the functions they can perform within the system scope. Figure 3 represents the use case diagram that has been constructed.

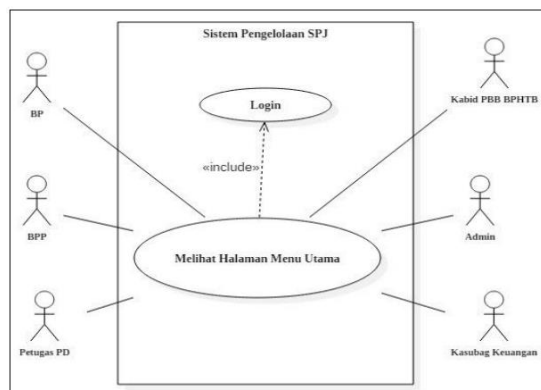


Figure 3. User Login Use Case Diagram

Picture 3 explains that users (BP, BPP, PD Officer, Head of PBB BPHTB, Finance Subsection Head, and Admin) can use the BPP accountability report management information system after successful login. The admin user is not

displayed at the sea level use case because the admin's access rights encompass the access rights of other users. Users can utilize various system functionalities, as shown in Functional Use Case Diagram in Picture 4.

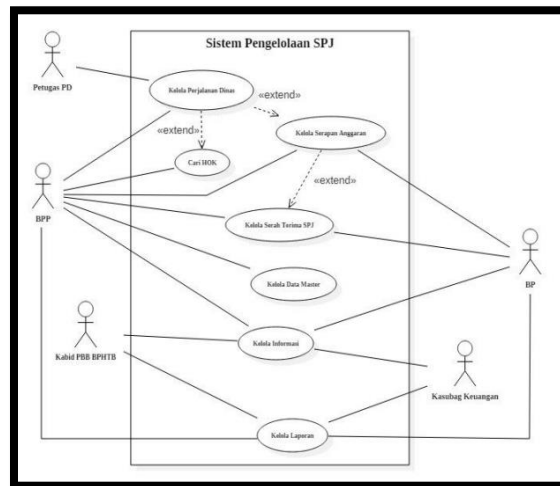


Figure 4. Use Case Sea Level Management of SPJ.

2. Activity diagram

Activity Diagram depicts scenario-based modeling in the form of a workflow or activities of the system or business process. It's important to note that the activity diagram illustrates system activities, not what actors do; hence, it represents system activities. In this application, the activity diagram consists of: Login activity diagram, manage master data, manage travel data, manage notes of service, manage minutes of meetings, manage budget expenditure, manage handover of SPJ, view reports, search for HOK. Here's an example of the activity diagram.

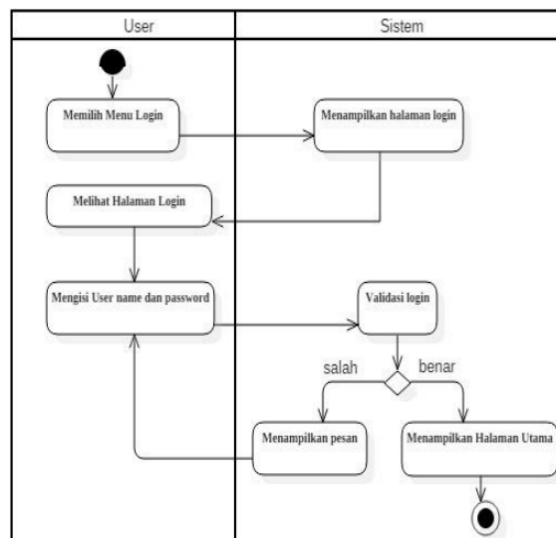


Figure 5. Activity diagram login

Activity Diagram is a depiction of activities in the login use case, which is the process for logging in. Figure 5 shows the activities that occur when a user logs in.

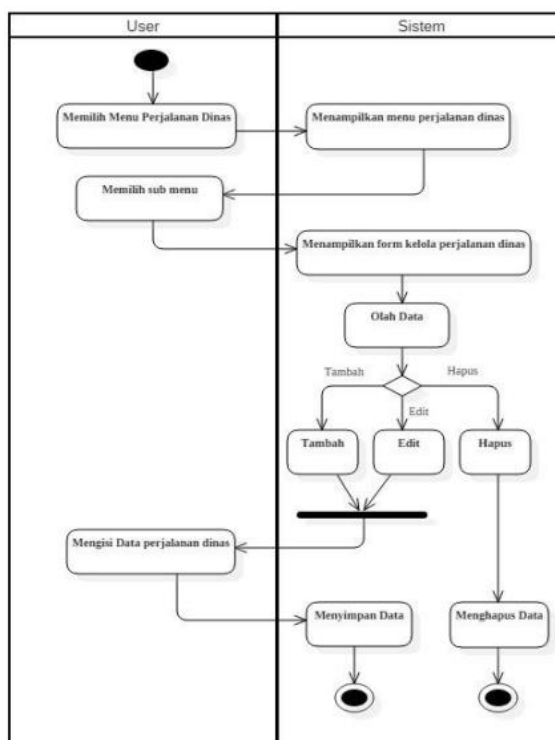


Figure 6. Activity diagram for a business trip.

The Activity Diagram above depicts the activities of the manage business trip use case, which is the process for managing business trip data. Figure 6 shows the activities that occur when a user manages business trip data.

3. Sequence diagram

Sequence diagram depicts the behavior of objects in a use case by describing the lifetimes of objects, messages sent and received between objects. Therefore, to draw a sequence diagram, one must know the objects involved in a use case along with the methods owned by the classes instantiated into those objects. Here is the sequence diagram for the application being built: Sequence diagram for login, manage assignment letters, manage travel visas for business trips, manage business trip reports, manage budget expenditures, manage official notes, and manage minutes of meetings. Here is the sequence diagram for business trips.

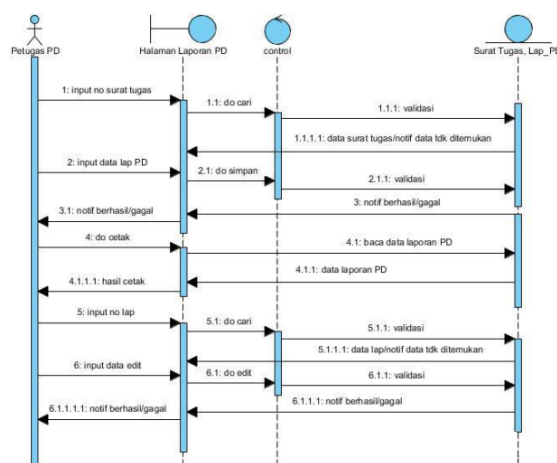


Figure 7. Sequence diagram for a business trip

Figure 7 is the sequence diagram for managing business trip reports. For each business trip conducted, the travel officer must create a business trip report as evidence that the business trip has been completed.

4. Database

Data design concerns the tables within the database. These tables are structured for storing data within the system. Database design aims to create a data input system to form a database system that connects and relates tables to each other. Additionally, database design determines the length of each field and its data type. Database design is explained in two subtopics: table relationships and database structure design. Below are the normalized tables found in the database:

Login table, Employee table, Budget table, Pjbt_Visum table, Visum_PD table, Tax Settings table, HOK Region table, HOK table, Used HOK table, Business Trip Report table, Individual Assessment Report table, SPPT45 Submission Report table, PBB Development Report table, Data Collection and Assessment Report table, Budget Expenditure table, Official Note table, Meeting Minutes table, Assignment Letter table, SPJ Handover Receipt table. Here is the Lap_PD table (Business Trip Report table).

Table 3. Lap_PD

Field name	Type data	Size	Description
No_Lap	Varchar	5	Primary key
NoSrtTugas	Varchar	50	Foreign key
Tgl_Lap	Datetime	-	
Id_Pembuat_Lap	Varchar	-	

5. Design Interface

Interface design illustrates the pages of the application being developed. Here is the interface design for the client-server-based BPP accountability report processing information system. The interface design includes: login interface design, main menu, employee form, budget management, HOK management, SPPD region, official visum officer management, tax settings, assignment letter, travel visa, travel report, travel details, fuel receipt form printing, receipt printing, travel receipt, assignment letter, travel visa, travel report, travel details, fuel receipt form, official note, receipt printing result, meeting minutes, meeting minutes printing result, budget expenditure management, SPJ handover, budget absorption information, HOK usage, travel information, budget absorption information, HOK usage information, travel information menu. Here is an example of the interface design.

Figure 8. Design of the assignment letter form interface.

Figure 8 depicts the interface for the business trip assignment letter..

Figure 9. Design of the business trip report interface.

Figure 9 displays the interface for viewing the business trip report conducted by employees.

Figure 10. Design of the business trip details interface.

Figure 10 explains the details of business trips conducted within specific periods.

Figure 11. Design of the assignment letter interface.

Figure 11 depicts the draft design of the assignment letter for employees undertaking business trips.

Figure 12. Design of the handover receipt interface for SPJ.

Figure 12 is the design for the SPJ handover receipt interface.

C. Implementation and System Testing

This section covers the implementation and testing of the system that has been developed.

1. System Implementation

This stage involves the direct application of system requirements, where the hardware and software have been prepared. Activities in system implementation include software and hardware requirements, human resources, database

setup, and interface implementation.

a. Hardware Implementation

This stage defines the minimum hardware requirements needed for the system. The hardware implementation includes:

- Dual-core processor or higher.
- Windows 7 Ultimate operating system.
- RAM memory requirement of at least 2 GB.
- Minimum 500 GB empty hard disk space.
- Mouse, keyboard, and monitor as interface devices.
- Printer as an output device.

b. Software implementation

Software implementation used includes StarUML v2.8.1, Microsoft Visio 2007, SQL Server 2008, VB.Net, and Crystal Reports 8.5. VB.Net is the primary application chosen for programming. SQL Server 2008 serves as the database software, Crystal Reports is used for designing system reports, Microsoft Visio 2007 is used for interface design, and StarUML is utilized for creating diagram designs..

c. Human implementation

Human resources refer to individuals who work with computer systems. These individuals are directly involved with computers and may include system analysts, system designers, users, and others.

d. Interface implementation

This section describes the interface of the client-server-based BPP accountability report processing information system, consisting of: login interface, main menu, master data submenu, employee master data, budget master data, HOK (Place of Duty) master data, SPPD region master data, official visum officer master data, tax setting master data, business trip, assignment letter, assignment letter printing result, travel visa, travel visa printing result, business trip, business trip report, business trip details, fuel receipt form, fuel receipt form printing, travel receipt, travel receipt printing, budget absorption, official note, official note approval, official note printing, meeting minutes, meeting minutes printing, budget expenditure receipt printing, SPJ handover, SPJ handover receipt printing, information menu, budget absorption information, HOK usage information, business trip information, reports, report printing, budget usage report results, HOK usage report, business trip data. Here is an example of the interface.

Figure 13. Detailed results of the business trip.

In Figure 13, it shows the display of the implemented business trip details.

RINCIAN BIAYA PERJALANAN DINAS

Lampiran SPDP Nomor : ST/1509/005/BPPD01/2018
Tanggal : 17-September-2018

NO	RINCIAN BIAYA	JUMLAH (Rp.)	KETERANGAN
Uang Harian	Tingkat : E : 1 org x 2 hr x 395,000	790,000	Pejabat Dinas Daerah Ke Wilayah Kac : Sindangharang
Uang Harian	Tingkat : I : 2 org x 2 hr x 200,000	800,000	Tgl : 17-September-2018
Uang Transport		600,000	Tujuan : Pendataan dan Penilaian PBB P2
Jumlah		2,190,000	

Telah dibayar sejumlah Rp. 2,190,000
Bendahara Pengeluaran

Cianjur,
Telah Menerima Uang Sejumlah Rp. Yang Menerima,

(Irma Rachmawati, S
NIP. 19790509 200901 2 0

(Ardian Athoilah, SE)
NIP. 19770508 200501 1001

PERHITUNGAN SPDP RAMPUNG

Ditetapkan S jumlah	Rp.	2,190,000	Pengguna Anggaran
Yang Telah Dibayar S jumlah	Rp.	2,190,000	Badan Pengelolaan Pendapatan Daerah
Sisa Kurang Lebih	Rp.	0	Kabupaten Cianjur

(Drs. Cahyo Supriyo
NIP. 19620629 198903 1 0

Figure 14 Interface for business trip details.

Figure 14 depicts the interface for the business trip conducted by employees (ASN).

Cetak Kwitansi

BADAN PENGELOLAAN PENDAPATAN DAERAH
Jl. Pramuka Di. Bojeng Kac. Karanggeuk
Telp. (0263) 261650-273180 Faks. (0263) 261650-273180

Tanggal: 01/09/2018 s.d. 10/09/2018

Nomor	Bulan	Kecamatan	Tgl Berangkat	Tujuan
ST/0309/001/B	September	Warungkondang	03/09/2018	Pendataan dan Penilaian PBB P2
ST/0309/002/B	September	Cikau	01/09/2018	Pendataan dan Penilaian PBB P2

CETAK KUBUAR

Figure 15. Receipt printing interface

Figure 15 describes the interface for printing receipts for business trip expenses incurred by employees (ASN).

BADAN PENGELOLAAN PENDAPATAN DAERAH
KABUPATEN CIANJUR
Jl. Pramuka Di. Bojeng Kac. Karanggeuk
Telp. (0263) 261650-273180 Faks. (0263) 261650-273180

Kasita Kedis Kedis
(Tanggal
KAS POS
(Nomor
(asal No Rekening 4010566015221501

KWITANSI TANDA PEMBAYARAN

TELAH TERIMA DARI BENDAHARAWAN BADAN PENGELOLAAN PENDAPATAN DAERAH KABUPATEN CIANJUR
BANYAKNYA : Rp150,000 = Seratus Lima Puluh Ribu =

Yaitu untuk pembayaran : Program Peningkatan Pendapatan Daerah Kegiatan Pendataan dan Penilaian PBB P2
Pendataan dan Penilaian PBB P2 Wilayah Kecamatan Warungkondang
Tanggal: 03-Sep-2018 s.d. 03-Sep-2018

1. Uang Harian	1 (satu) x	Rp100,000	=	Rp100,000
2. Uang Transport (BBM)		Rp50,000	=	Rp50,000
				Rp150,000

Cianjur, 03-Sep-2018

Mengetahui/Menyetujui Kepala Badan	Pejabat Pelaksana Teknis Kegiatan	Bendaharawan	Yang Menerima, Nama : Dewi Herlanti, SE Pangkat/Jabatan : IHC-Pemata Satuan Kerja : BPPD
---------------------------------------	--------------------------------------	--------------	---

Drs. Cahyo Supriyo NIP. 19701130 199803 1 007 Ardian Athoilah, SE NIP. 19770508 200501 1 006 Irma Rachmawati, SH NIP. 19790509 200901 2 00

Figure 16. Business trip receipt printing interface.

Figure 16 is the output of the travel receipt printout, which is issued to the business trip executor.

Figure 17. Submenu interface for business trip information.

This interface serves as information about the business trips that have been conducted.

Figure 18. Interface for Periodical Report Printing.

This display allows setting up and printing reports based on specific periods.

PEMERINTAH KABUPATEN CIANJUR				
BADAN PENGELOLAAN PENDAPATAN DAERAH				
Jl. Pramuka Di. Bejeng Kecamatan Karangtengah - Cianjur Telp. (0265) 261650 - 273180 Fax. (0265) 269970 Kode Pos 43281 e-mail : kadispenda@ciantarab.go.id				
LAPORAN PENGGUNAAN ANGGARAN				
Periode : 01 Agustus 2018 sd 31 September 2018				
Tgl Print : 15/09/2018				
Pendaftaran dan Verifikasi PBB dan BPHTB				
No Rekening	Belanja	Mula	Perubahan	Sisa
40105660110302	Uang Lembur Nae PNS	200,000,000	0 350,000	99,650,000
Pendaftaran dan Penilaian PBB P2				
No Rekening	Belanja	Mula	Perubahan	Sisa
40105660120104	Perangko, Materiil Dan Benda Pos Lainnya	50,000,000	0 9,120,000	90,880,000
40105660120314	Belanja Jasa PBB	50,000,000	0 7,100,000	42,900,000
40105660121102	Makanan Dan Minuman	10,000,000	0 5,200,000	34,800,000
Pengolahan Data Pencetakan SPPT dan DHKP PBB P2				
No Rekening	Belanja	Mula	Perubahan	Sisa
40105660220306	internet	25,000,000	0 9,500,000	40,500,000

Figure 19. Interface for Budget Usage Report Results.

Figure 19 shows the results or report on budget usage implemented within a specific period of time.

The screenshot shows a report from the 'PEMERINTAH KABUPATEN CIANJUR' (Cianjur Regency Government) under the 'BADAN PENGELOLAAN PENDAPATAN DAERAH' (Regional Revenue Management Agency). The report is titled 'LAPORAN PENGGUNAAN ANGGARAN' (Budget Usage Report) for the period from August 01, 2018, to September 30, 2018. The report is dated September 15, 2018. The table below lists the budget usage for various activities and personnel.

Nama	Tujuan	Indikator/Bidang/Unit	Tgl/Pdang	Honor	BBLM	Total Honor	Saldo
Kegiatan Pendataan dan Penilaian PBB P2							
Tanggal 1-Sep-2018							
Hilman Zamri Hay, SE	Cibatu	1	01-Sep-2018	140,000	0	140,000	Pendataan dan Penilaian PBB P2
Lusky Darmasari, S.T	Cibatu	1	01-Sep-2018	180,000	200,000	380,000	Pendataan dan Penilaian PBB P2
M Nurul Tardik S	Cibatu	1	01-Sep-2018	100,000	0	100,000	Pendataan dan Penilaian PBB P2
Tanggal 3-Sep-2018							
Dewi Herjanto, SE	Warungjendang	1	03-Sep-2018	180,000	50,000	230,000	Pendataan dan Penilaian PBB P2
Hilman Zamri Hay, SE	Warungjendang	1	03-Sep-2018	140,000	0	140,000	Pendataan dan Penilaian PBB P2
Tanggal 17-Sep-2018							
Andika Ariefah, SE	Sindingharung	2	17-Sep-2018	740,000	400,000	1,340,000	Pendataan dan Penilaian PBB P2
Dewi Soudarna	Sindingharung	2	17-Sep-2018	400,000	0	400,000	Pendataan dan Penilaian PBB P2
Dhuha Agus Salim, SE	Sindingharung	2	17-Sep-2018	400,000	0	400,000	Pendataan dan Penilaian PBB P2

Figure 20. Interface for Business Trip Data Report Results

The display in Figure 20 shows the report results of business trips conducted by employees (ASN) within a specific period in the office environment.

D. Implementation of TCP/IP Settings

1. Implementation of TCP/IP settings for the server computer.
2. Implementation of TCP/IP settings for the client computer (Assistant Treasurer/BPP).
3. Implementation of TCP/IP settings for the client computer (Head of PBB and BPHTB).
4. Implementation of TCP/IP settings for the client computer (Treasurer/Pengeluaran Bendahara).
5. Implementation of TCP/IP settings for the client computer (Head of Financial Subdivision).
6. Testing Network Connection from Clients to Server.

```

C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7600]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Yani>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Yani>

```

Figure 21. Testing network connection from client to server

Figure 21 displays the results or status during testing the connection from the client to the server network.

D. System Testing

One of the most important parts of the software development lifecycle is testing. Testing is conducted to ensure the quality of a reliable system. System testing also helps identify weaknesses in the software. This software testing uses the black box testing method.

Table 4. Testing with Black Box Method.

User interface	Hope	Result
Log in	If a user enters or types in the correct username or password, then that user can access the application.	Success
Main menu	The main menu form functions according to the user's access rights, and displays a welcome message personalized for the user who is logged in.	Success
Data master	If the user selects the master data menu, they will be presented with the master data submenu: employees, budget, HOK (Place of Duty), SPPD region, visa officer, and tax settings. When one of these	Success

	master data submenus is chosen, a corresponding form will appear based on the selection.	
Business trip	If the user selects the business trip menu, they will be presented with the business trip submenu: assignment letter, visa, business trip report, business trip details, fuel receipt form, and receipt printing. When one of these business trip submenus is chosen, a corresponding form will appear based on the selection.	Success
Budget absorption.	If the user selects the budget absorption menu, they will be presented with the budget absorption submenu: official note, meeting minutes, budget expenditure management, and SPJ handover. When one of these budget absorption submenus is chosen, a corresponding form will appear based on the selection.	Success
Information	If the user selects the information menu, they will be presented with the information submenu: budget absorption, HOK usage, and business trip. When one of these information submenus is chosen, a corresponding form will appear based on the selection.	Success
Report	If the user selects the reports menu, they will be presented with the reports submenu: budget absorption, HOK usage, and business trip. When one of these report submenus is chosen, a corresponding form will appear based on the selection.	Success
Search	If the user selects the search button and fills in the search criteria, then the entered data will be searched.	Success
Delete	If the user selects the delete button, the system will display a dialog box asking whether the data should be permanently deleted.	Success
Save	If the user selects the save button, the entered data will be saved.	Success
Edit	If the user selects the edit button, the selected data will be edited.	Success
Server conect	If the user runs the application on the client computer, the application on the client computer can connect to the database on the server computer.	Success

4. DISCUSSION

This research, based on observations, has never been conducted in Cianjur Regency. However, similar research has been done in other regions, titled: “Designing an Accountability Report Information System for the Expenditure Treasurer at the South Oba District Office”. However, the differences are significant, especially in the scope of the research, which is much narrower as it only covers the district level [17].

5. CONCLUSION

The result of this research is a client-server based information system for managing assistant treasurer accountability reports. This system is designed with a client-server architecture using an integrated database, allowing report results from the system to be accessed by 6 different system users (Assistant Treasurer, Head of PBB & BPHTB Division, Treasurer, Head of Financial Subdivision, Business Trip Officer, and Admin).

REFERENCES

- [1] Koç, Hatice. "The Role of Organizational Information Systems in the Digital Transformation Process of Public Services: Atatürk, Culture Language, and History – Supreme Council Case." *Ubiquitous Technologies for Human Development and Knowledge Management*, edited by Hakikur Rahman, IGI Global, 2021, pp. 288-314. <https://doi.org/10.4018/978-1-7998-7844-5.ch014>.
- [2] Johnson JL, Adkins D, Chauvin S. A Review of the Quality Indicators of Rigor in Qualitative Research. *Am J Pharm Educ*. 2020 Jan;84(1):7120. doi: 10.5688/ajpe7120. PMID: 32292186; PMCID: PMC7055404.
- [3] Annual Report." A New Paradigm of State Asset Management". Laporan tahunan 2012.
- [4] Bank DKI. "Annual Report 2019. By IM Insights Bank DKI Syariah.
- [5] Isman Hadijaya, Rinny Dwi Anggraeni. "Model Analysis of Civil Servant Requirement in the Human Resources Development Agency (BKPSDM) of Balikpapan City". *Jurnal MSDA (Manajemen Sumber Daya Aparatur)* Vol 11, No. 2, 2023, pp. 225-252 Webiste : <http://ejournal.ipdn.ac.id/JMSDA/> DOI 10.33701/jmsda.v11i2.3816
- [6] Dadang Suwanda. "Government and financial managemen paper". Cet 1. CV. Bimedia pustaka utama, Bandung ISBN 978 623 88135 9 9.
- [7] Muhammad Ruslihardi, Adinda Ramadhani, Siska Wirawati, Tuty Ardian Rahmah, Fajarwaty Kusumawardhani, Sri Roserdevi Nasution, Harcini Harcini. "Neutrality of The State Civil Apparatus (ASN) in Indonesian Elections". Submission to *Journal of Election and Leadership (JOELS)* ISSN 2477-8060 (print), ISSN 2503-4456 (online).
- [8] Yogi Suprayogi Sugandi. "Varieties of Civil Ser arieties of Civil Servants Remuner ants Remuneration P ation Policy Reform: A olicy Reform: A Scenario Planning Analysis". *Bisnis & Birokrasi*. Vol 24. No. 1, Januari 2017.
- [9] Sururiyah, L.(2023), "Neutrality Of The State Civil Apparatus (Asn) At The General Election", *IJRS: Internasional Journal Reglement Society* Vol 4(3), Pages 261-269.
- [10] Kraus, S., Jones, P., Kailer, N., Weinmann, A., Chaparro-Banegas, N., & Roig-Tierno, N. (2021). *Digital Transformation: An Overview of the Current State of the Art of Research*. Sage Open, 11(3). <https://doi.org/10.1177/21582440211047576>
- [11] Dendy Suseno Adhiarso, Prahastiwi Utari, Sri Hastjarjo. "The Impact of Digital Technology to Change People's Behavior in Using the Media". *Proceeding of ASIC 2018. UGM Digital Press Social Sciences and Humanities* (2018) 2: 35-40. *American Studies International Conference (ASIC) 2018*.
- [12] Cascio, Wayne F.; Montealegre, Ramiro "Annual review of organizational psychology and organizational behavior" *Annual Review* 21 Mar 2016, Vol. 3, Issue 1, pages 349 – 375 ISSN: 23270608 DOI: 10.1146/annurev-orgpsych-041015-062352 **URL:** <https://www.annualreviews.org/toc/orgpsych/3/1>
- [13] Nurfitri Khoirunnisa, Haryati, Eulis Jubaedah, Tia Rostiawati. "Designing Website-Based Administration Management Information System". *CorelID Journal*. Vol. 1 No. 1, March 2023 (21-32) ISSN: 2987-6990 DOI: 10.60005/coreid.v1i1.6.
- [14] Budi Mukhamad Mulyo. "Implementation of management information system website-based letter archives". *Journal of Electrical Engineering and Computer Sciences* Vol. 6, Issue 1, June 2021. P-ISSN: 2528-0260 E-ISSN: 2579-5392. p.963-968. DOI: <https://doi.org/10.54732/jeeecs.v6i1.184>
- [15] I Gusti Ayu Agung Omika DEWI. "Understanding Data Collection Methods In Qualitative Research: The Perspective Of Interpretive Accounting Research". *Journal of Tourism Economics and Policy*. Vol: 1 No: 1 Page: 23 – 34. <https://journalkeberlanjutan.com/index.php/jtep>.
- [16] Thomas T. Barker, *Documentation for Software and IS Development*, Editor(s): Hossein Bidgoli, *Encyclopedia of Information Systems*, Elsevier, 2003, Pages 683-693, ISBN 9780122272400, <https://doi.org/10.1016/B0-12-227240-4/00047-2>. (<https://www.sciencedirect.com/science/article/pii/B0122272404000472>)
- [17] D. Umagapi, S. Hasan. "Perancangan Sistem Informasi Laporan Pertanggungjawaban Bendahara Pengeluaran pada Kantor Kecamatan Oba Selatan". *ILKOMINFO*. Vol. 2, No. 2 Juli 2019. pp 48-59. <https://core.ac.uk/download/pdf/229107996.pdf>.