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Land and Building Tax Calculation Application (E-PBB) (Case Study in One of The Villages in West Java)

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ABSTRACT

Introducing an efficient land and building tax computation system can have favorable outcomes for the rural community and its inhabitants. The management and authenticity of data about the distribution of Property Tax Notification Letters (SPPT) have historically posed issues within the tax management process.

The e-PBB program for calculating land and building taxes in the Tribaktimulya Village case study is implemented as a web-based platform. The application utilizes quantitative data collection methods, including observation, interviews, and literature reading. The system is developed with the Object-Oriented Analysis and Design (OOAD) methodology, which encompasses the stages of analysis, design, and system implementation centered around objects.

The design of this system is anticipated to enhance the ability of village authorities to input and compute land and building taxes that are either outstanding or paid. Automating the calculation process will enhance efficiency while simplifying tax report generation will contribute to a more effective and streamlined operational workflow.

Keywords: Application, Processing, Calculation, Design, PBB, Report, Recapitulation

INTRODUCTION

The Land and Building Tax is a form of direct taxation imposed by the central government, with collection taking place every year. Managing the central tax lies with the Directorate General of Taxes, which operates through the Land and Building Tax Office. The generated

money is allocated, with 10% allocated to the central government and the remaining 90% distributed among local governments.

The Land and Building Tax collecting mechanism is commonly called the Official Assessment mechanism. According to the current regulations, taxpayers are exempt from the duty to pay Land and Building Tax until they have received a tax assessment from the treasury. The assessment above was issued in the year 1994. Given the lofty objectives of this country, it is imperative to direct attention toward factors that can bolster the government's efficacy in safeguarding the well-being of the Indonesian populace. One such factor is the Land and Building Tax (PBB), which is explicitly about land situated inside the confines of Indonesia's territorial jurisdiction.

This statement highlights the importance of thoroughly assessing and appraising the efficiency of Land and Building Tax collection to attain favorable outcomes, ultimately benefiting the populace of Indonesia using streamlined tax-collecting processes. (Schaffer, & Turley, 2019; Yusup, Hardiyana & Sidharta, 2015). One of the strategies the government employs to accomplish this objective is the collection of taxes, as taxes serve as a crucial income source that plays a substantial role in procuring funds for government spending. (Newman, Mwandambira, Charity & Ongayi, 2018; Sidharta, 2017; Sidharta & Wati, 2015).

One example of an income source is the Land and Building Tax (PBB). The Land and Building Tax has the potential to be employed for a multitude of policy considerations about land and buildings. Determining the Land and Building Tax relies on the Taxable Selling Value, established within a range of 20% to 100% of the Taxable Object Selling Value (NJOP). The Land and Building Tax is a significant potential revenue generator for regions, serving as a direct tax. The tax in question can be classified as a central tax due to its focus on items within specific regions, hence enabling these regions to obtain a more significant portion of the tax revenue. (Pomeranz & Vila-Belda, 2019; Mascagni, 2018; Sidharta, 2017).

One of the intricate matters in Indonesia, precisely in Villages in West Java, pertains to the annual escalating population growth. The rise in population substantially influences the augmentation of Land and Building Tax revenue, as viewed through a tax lens. Taxation is a process through which funds are gathered from community members, commonly referred to as taxpayers. The tax collected is determined by assessing the income or wages these

individuals obtain in exchange for their services. The money generated from Land and Building Tax can be observed through the annual escalation in land and building prices, with the growing demand for land and buildings attributed to population expansion. Hence, the revenue generated from Land and Building Tax also demonstrates an upward trend due to the progress in diverse amenities and infrastructure, particularly in residential areas that cater to the populace's needs. (Jensen, 2022; Batrancea et al., 2019; Taking & Chang, 2021)

The advantages associated with paying Land and Building Tax (PBB) for development and societal well-being are substantial, with numerous conveniences available for facilitating the payment process. (Allers & De Greef, 2018; Jensen, 2022) Despite the convenience of payment and its tangible rewards, there remains a noticeable need for more community engagement in fulfilling their responsibilities as taxpayers of the PBB. The general perception among the community is that taxes are perceived as an onerous financial obligation, ultimately leading to a decrease in individual well-being.

Hence, by implementing a system update in tax collection and providing convenient payment options for PBB, the inhabitants of Villages in West Java will actively engage in meeting this responsibility. The study is developed by the prevailing conditions and through interviews conducted with the village personnel. There is an expectation that the acceptance of this application will yield benefits in facilitating payment processes. In order to achieve effective adoption by the initial objectives, it will be imperative to provide adequate guidance on the functionality and operation of the application during its implementation phase.

METHOD

Descriptive research is an investigation that aims to ascertain the magnitude or characteristics of independent variables, either alone or in combination, without establishing comparisons or associations with other variables. The interview process involves gathering information through a structured conversation with an individual or group to gain insights or obtain data.

In order to gather comprehensive information for this Final Project, the author employed a question-and-answer methodology to explore various aspects of the Village. This encompassed examining the Village profile, reviewing Village reports, assessing the

presence of non-computerized systems, and considering the systems the author intends to develop.

The act of observing.

To identify potential solutions, the researcher conducted firsthand observations of the local environment in the Village that pertained to the topic or issue under investigation. Engaging in many performance activities organized by a village in West Java presents an avenue for acquiring additional knowledge. In conjunction with conducting interviews and making observations, the author also undertook a comprehensive literature review by consulting references available in libraries and online sources. This approach was employed to augment understanding of the subject matter, various classifications, and methodologies of tax calculations.

System Development Methods

Object Oriented Programming (OOP) is the approach employed for creating systems. Object Oriented Programming (OOP) is a software development methodology that arranges software components as a cohesive ensemble of objects, each encompassing data and the corresponding actions that may be performed on that data. Object-oriented programming (OOP) is a programming paradigm that emphasizes objects and their interactions.

Based on the current body of knowledge, Object Oriented Programming (OOP) is a contemporary methodology or paradigm for software development or system design that considers the concept of objects. Object-oriented methodologies are frequently preferred due to the inherent issues associated with older methodologies. These issues include seamlessly transitioning outcomes from one development stage to the subsequent stage. For instance, in the structured approach method, the nature of applications developed in contemporary times diverges from those developed in the past.

RESULT AND DISCUSSION

SYSTEM IMPLEMENTATION

The etymological derivation of the term "implementation" pertains to executing, putting into effect, and carrying out a specific action or plan. In the realm of terminology,

implementation refers to the process of executing activities and actions in order to accomplish a predetermined goal. Implementation refers to applying a system to be executed after thorough study and strategic planning.

Implementation Needs

Once the system's thorough analysis and detailed design have been completed, it will progress to the subsequent implementation stage. The implementation phase involves deploying the system ensuring its readiness for operational use. The primary objective of implementation is to validate the design modules, thereby enabling users to contribute their insights to the system's creators. The suggested scope of implementation encompasses both software and hardware environments. The prerequisites for application design serve as the primary foundation to ensure that the design aligns with pre-established objectives. The recommended breadth of implementation encompasses both software and hardware environments.

Hardware

The hardware needed to support the implementation of a computerized system. Hardware applications that can support the system applications that will be created include:

1. Minimum dual core 94 processor
2. RAM 2048 MB
3. Space hard disk 10 GB
4. Monitor, keyboard. dan mouse

Software

The software used to run the system created. In this case, the software used by the author to apply this system:

1. Windows 10
2. Programming language PHP
3. Database My SQL
4. XAMPP
5. Web server

Selection of Programming Language

PHP is an open-source programming language. The availability of PHP open-source code at no cost facilitates continuous improvement, development, and problem identification among the developer community. The concept of open source entails the absence of reliance on a specific corporate entity, such as Windows or Microsoft, to release subsequent versions in case of unforeseen complications. Additionally, there is no requirement to incur expenses for purchase and upgrade costs, typically of a considerable magnitude. The concepts of

stability and compatibility are paramount in various academic disciplines. Currently, PHP demonstrates stable performance across multiple operating systems, encompassing various iterations of UNIX (including Linux), Windows, and MacOS. PHP is compatible with various web servers, notably the widely utilized IIS and Apache servers. PHP is additionally furnished with diverse supplementary functionalities, including direct support for multiple prominent databases, an adaptable architecture, and a processor that consumes minimum resources on the host system compared to its counterparts and exhibits rapid rendering of web pages.

Program Testing

System testing is a testing process to find out where the deficiencies in the system are and whether they are in accordance with what was described in the previous design. Testing of this system is carried out carefully so that the results obtained can provide benefits to users.

Maintenace

During the execution of application programs, modifications to the application frequently transpire and, in some instances, result in detrimental effects. This occurrence may arise due to a programming malfunction or a user-initiated request. Maintenance activities are essential to ensure the program's stability and equilibrium, tailored to the specific environment in which it is utilized. These maintenance efforts aim to sustain the program's ability to generate the necessary information for the user.

Implementation Activities

Programming is a highly beneficial endeavor that significantly facilitates the successful implementation of novel systems. This is primarily because a well-designed and organized program can generate information by specific requirements and demands. Before implementing the program, it is imperative to do thorough testing to ensure its error-free functionality.

The testing process can be conducted individually for each program module, followed by comprehensive testing of all modules to verify the proper and accurate integration of all modules. This part describes the visual interface of the application software, which has been developed based on the design specifications established during the system design phase. The author has categorized the present system design into multiple display forms.

Database

The database table structure display is part of the implementation of the tables in the database that will be accessed by the user.

1. Admin_Database

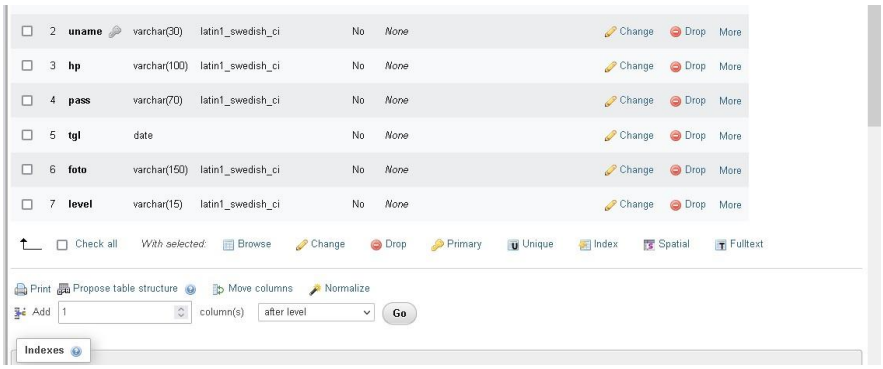


Figure 1. Admin Database

2. Pay Data_Database

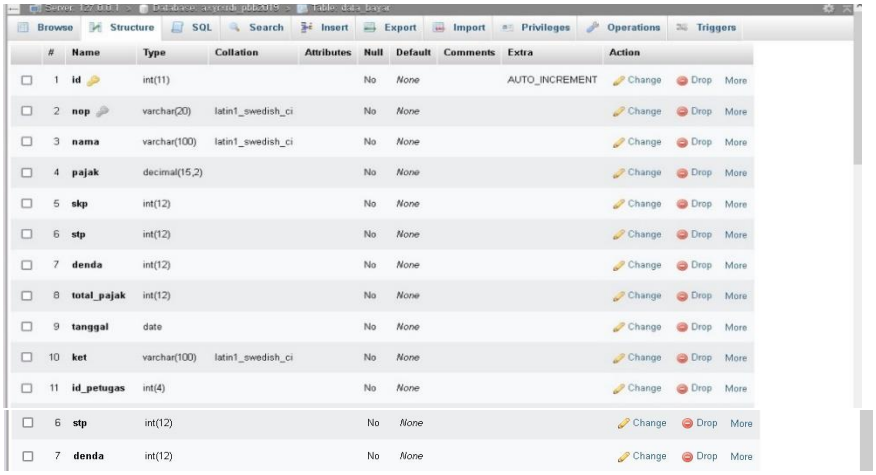


Figure 2. Payment data database

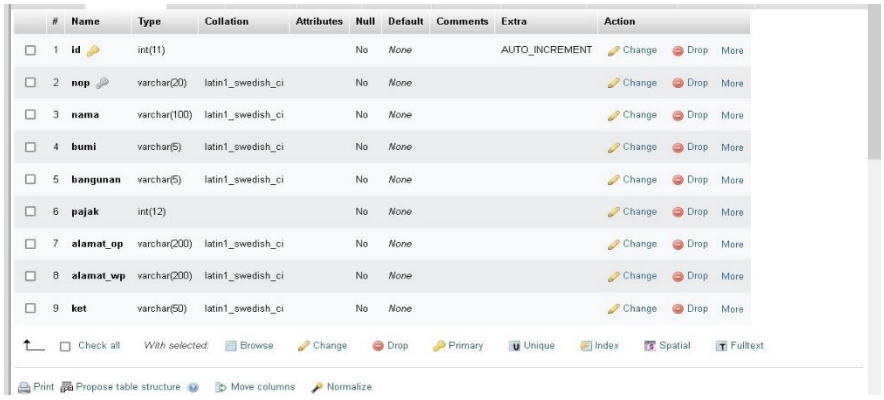
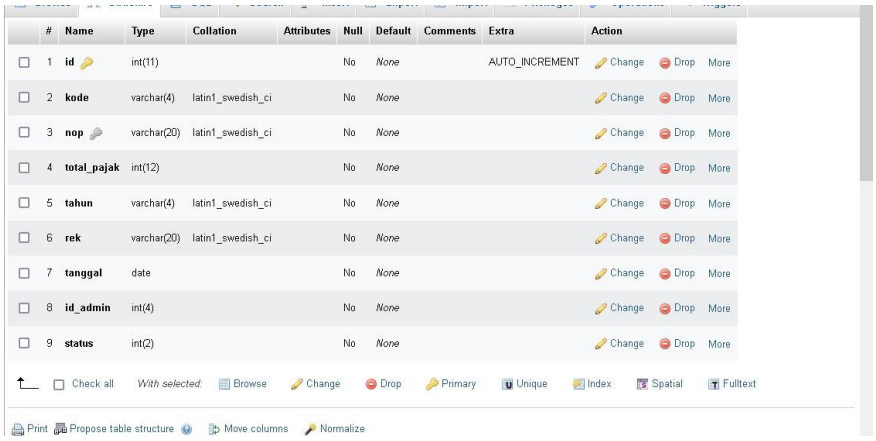


Figure 3. Payment data database

3. Data_setor database



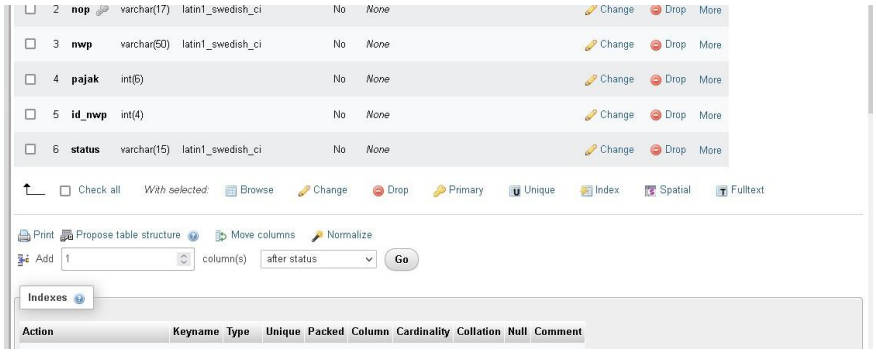
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	kode	varchar(4)	latin1_swedish_ci		No	None			Change Drop More
3	nop	varchar(20)	latin1_swedish_ci		No	None			Change Drop More
4	total_pajak	int(12)			No	None			Change Drop More
5	tahun	varchar(4)	latin1_swedish_ci		No	None			Change Drop More
6	rek	varchar(20)	latin1_swedish_ci		No	None			Change Drop More
7	tanggal	date			No	None			Change Drop More
8	id_admin	int(4)			No	None			Change Drop More
9	status	int(2)			No	None			Change Drop More

Check all *With selected:* Browse Change Drop Primary Unique Index Spatial Fulltext

Print Propose table structure Move columns Normalize

Figure 4. Data_setor database

4. Database Data_cart



2	nop	varchar(17)	latin1_swedish_ci	No	None			Change Drop More
3	nwp	varchar(50)	latin1_swedish_ci	No	None			Change Drop More
4	pajak	int(6)		No	None			Change Drop More
5	id_nwp	int(4)		No	None			Change Drop More
6	status	varchar(15)	latin1_swedish_ci	No	None			Change Drop More

Check all *With selected:* Browse Change Drop Primary Unique Index Spatial Fulltext

Print Propose table structure Move columns Normalize

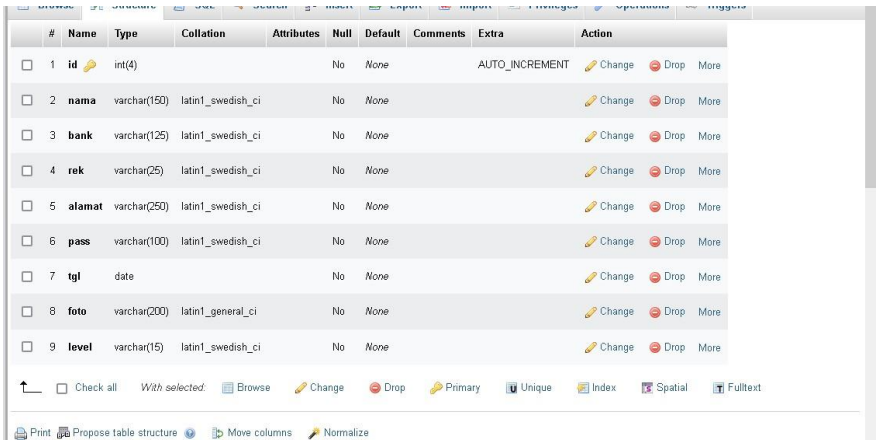
Add 1 column(s) after status Go

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment

Figure 5. Database Data_cart

5. Database Data_nwp



#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(4)			No	None		AUTO_INCREMENT	Change Drop More
2	nama	varchar(150)	latin1_swedish_ci		No	None			Change Drop More
3	bank	varchar(125)	latin1_swedish_ci		No	None			Change Drop More
4	rek	varchar(25)	latin1_swedish_ci		No	None			Change Drop More
5	alamat	varchar(250)	latin1_swedish_ci		No	None			Change Drop More
6	pass	varchar(100)	latin1_swedish_ci		No	None			Change Drop More
7	tgl	date			No	None			Change Drop More
8	foto	varchar(200)	latin1_general_ci		No	None			Change Drop More
9	level	varchar(15)	latin1_swedish_ci		No	None			Change Drop More

Check all *With selected:* Browse Change Drop Primary Unique Index Spatial Fulltext

Print Propose table structure Move columns Normalize

Figure 6. Data_nwp database

6. Database online_pay

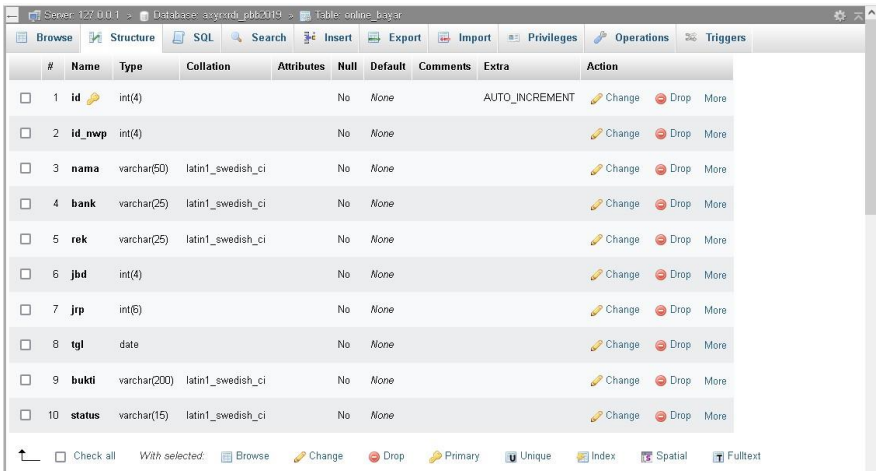


Figure 2. Online_paid database

7. Profile Database

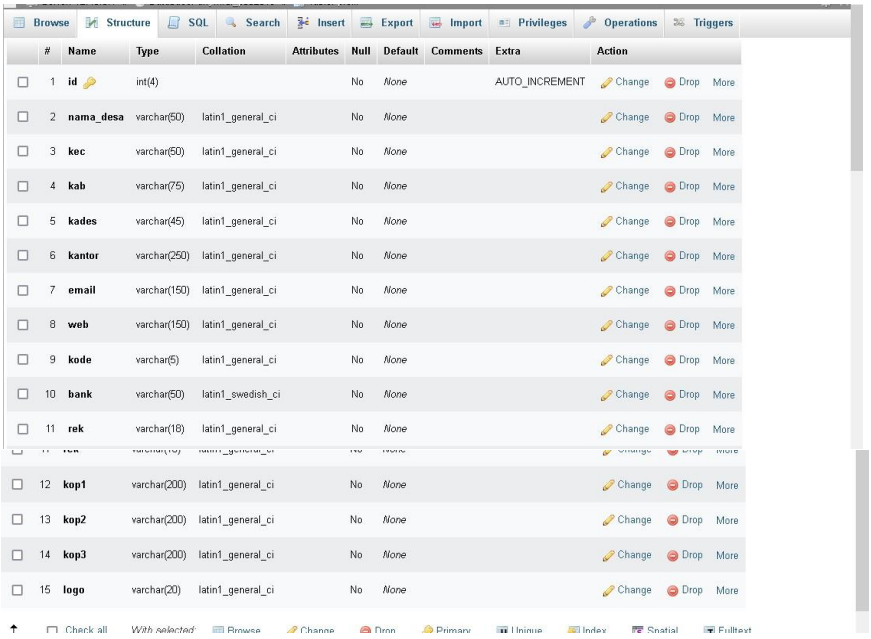


Figure 8. Profile database

Homepage

Upon initiating the software, the user will be presented with the initial menu display, encompassing the following options: Home, input, process, report, and exit. The initial presentation will exhibit the system's title, the company's name, and the emblem. The subsequent output is the visual representation generated by the application program.

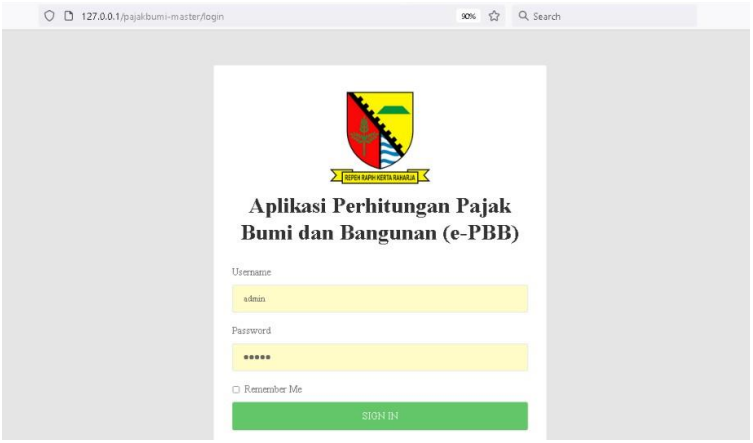


Figure 9. Login Display

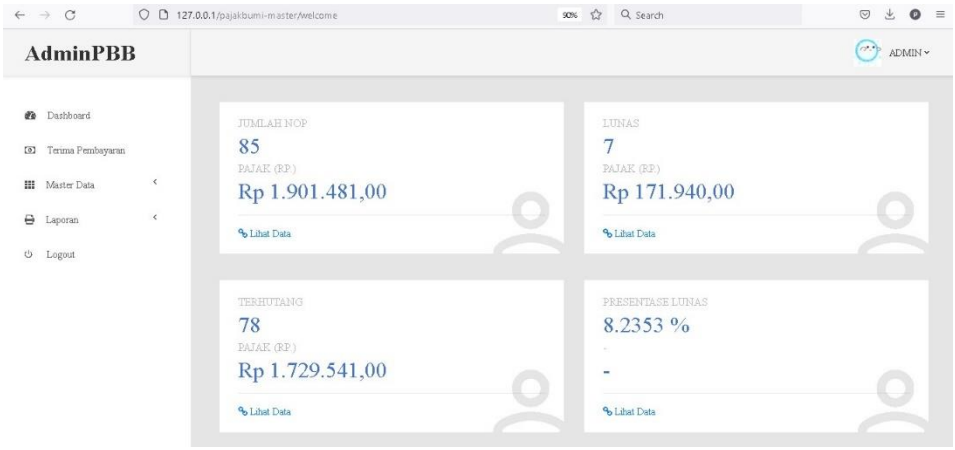


Figure 10. Dashboard display

Input Page

The concept of input design refers to creating a structured format, typically in the form of a form, that facilitates data entry. The design and implementation of input/output systems serve as a valuable resource for developers in creating and constructing applications. Input design refers to designing the mechanism by which users provide information to a system, which is subsequently saved in a database.

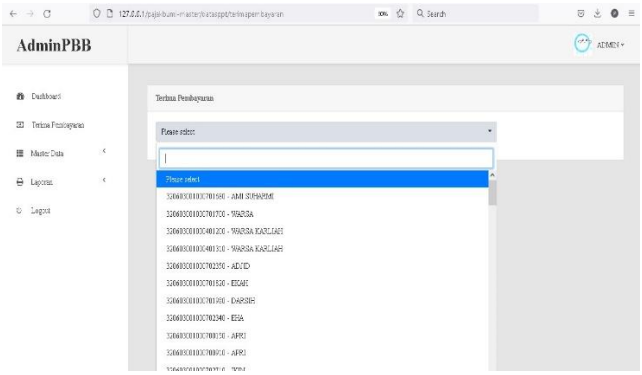


Figure 11. Receive Payment display

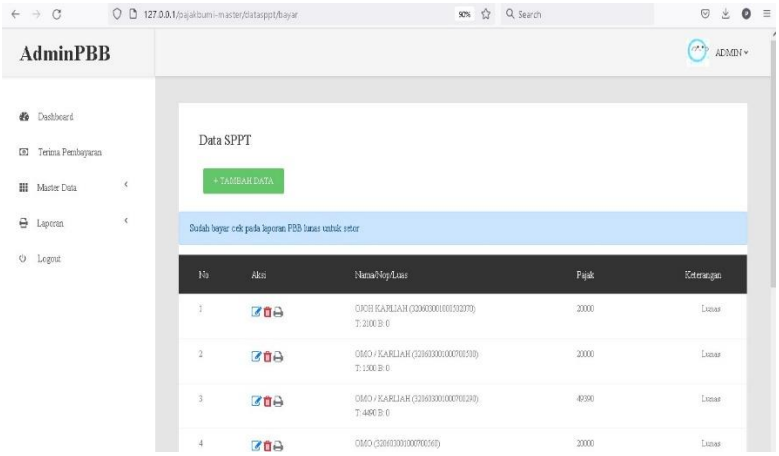


Figure 12. Successful Data Input Display

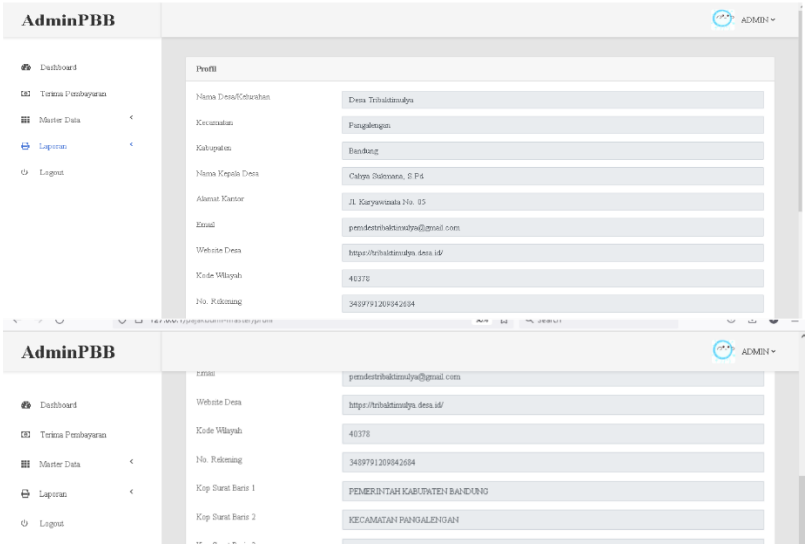


Figure 13. Village Profile View

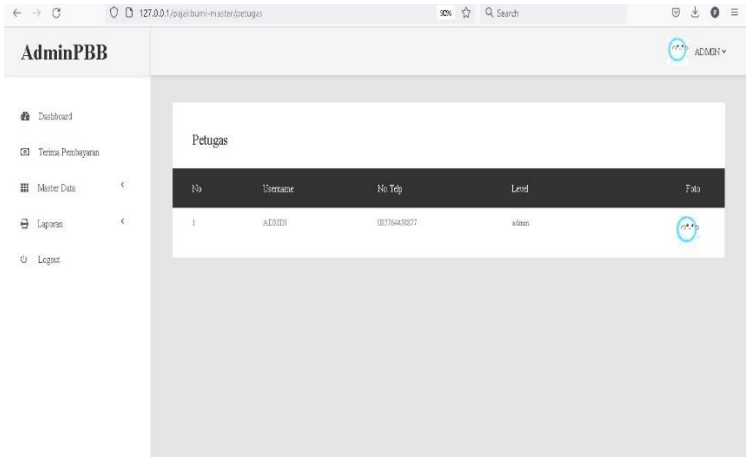


Figure 14. Officer Data Display

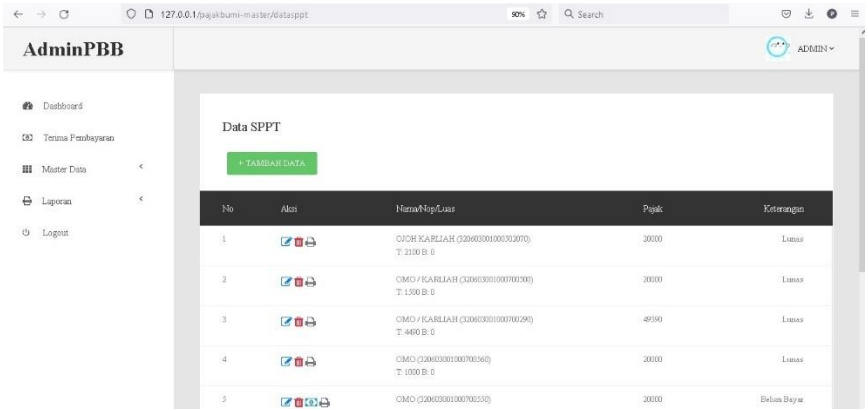


Figure 15. Display of SPPT Data List

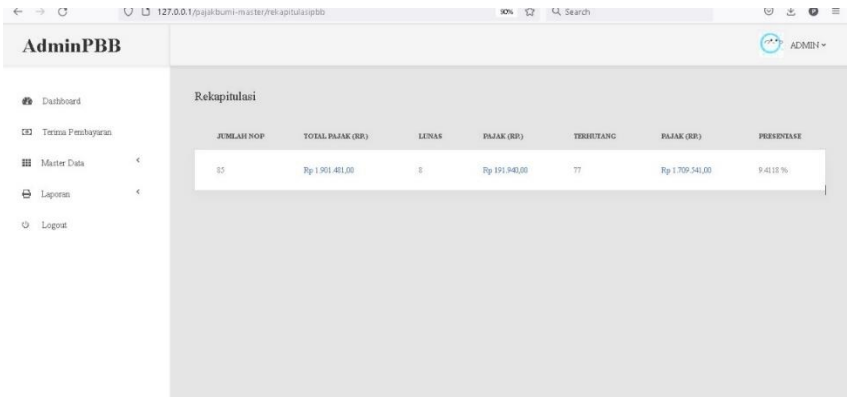


Figure 16. UN Recapitulation Display

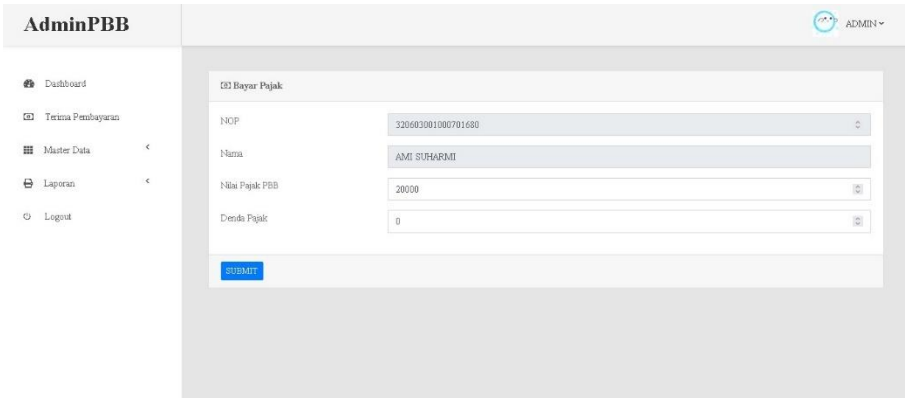


Figure 17. Tax Payment Input Display

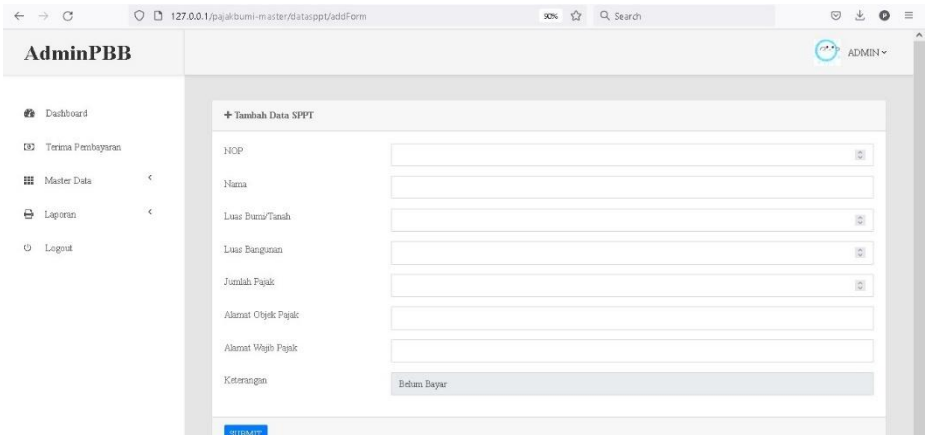


Figure 18. SPPT Data Input Display

Output Page

Output design is an output design in the form of a report as information resulting from data processing. Input/output design is also a reference for application makers in designing and building systems. Output design is the design of reports from the system to users taken from the database. The Report Page is the output of the system that we build and is used to analyze and serve as documents such as:

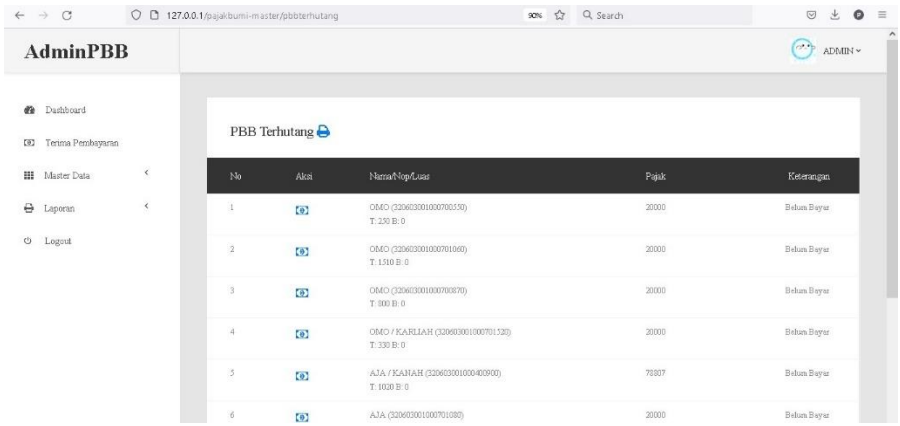


Figure 19. View of the PBB Outstanding Report

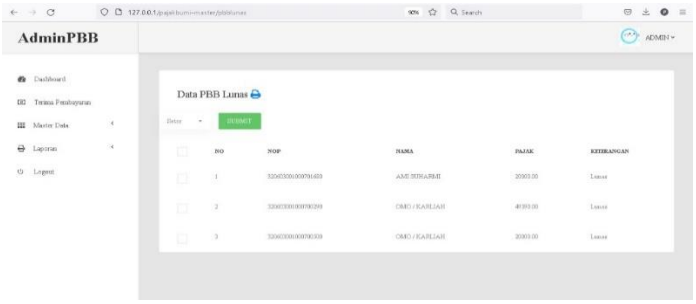
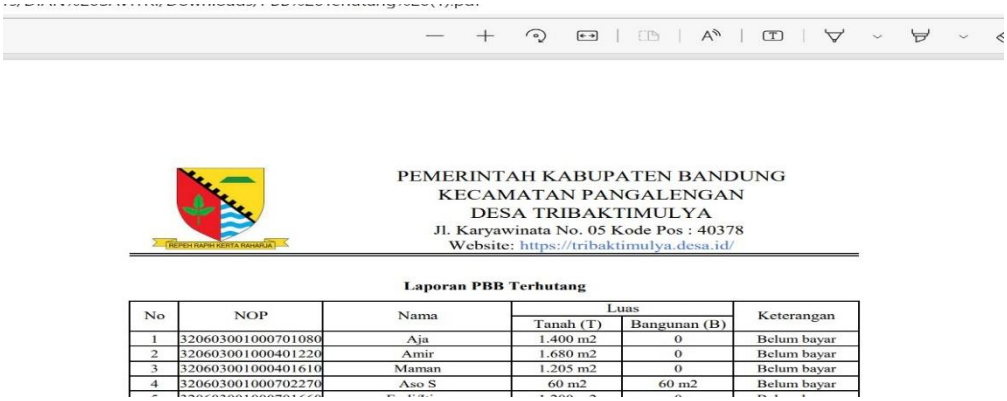


Figure 20. View of the UN Paid Off Report



PEMERINTAH KABUPATEN BANDUNG
KECAMATAN PANGALENGAN
DESA TRIBAKTIMULYA
Jl. Karyawinata No. 05 Kode Pos : 40378
Website: https://tribaktimulya.desa.id/

Laporan PBB Terhutang

No	NOP	Nama	Luas		Keterangan
			Tanah (T)	Bangunan (B)	
1	3206030010007010 80	Aja	1.400 m2	0	Belum bayar
2	3206030010004012 20	Amir	1.680 m2	0	Belum bayar
3	3206030010004016 10	Maman	1.205 m2	0	Belum bayar
4	3206030010007022 70	Aso S	60 m2	60 m2	Belum bayar

Figure 21. Display of Payable PBB Print Out

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Website: https://tribaktimulya.desa.id/

Laporan PBB Lunas

No	NOP	Nama	Pajak	Keterangan
1	3206030010007005 60	Omo	20000	Lunas
2	3206030010007024 60	Idun	20000	Lunas
3	3206030010007007 10	Icin	20000	Lunas
4	3206030010007024 40	Mara	20000	Lunas
5	3206030010004012 40	Yayat	20000	Lunas

Figure 22. View of the Lunas PBB Print Out

CONCLUSION

Conclusion

Following an extensive examination of the prevailing system inside a village in West Java, coupled with interviews conducted with pertinent stakeholders, the present program was

designed according to the specific requirements of the village. The e-PBB is a software application designed to calculate the Land and Building Tax. Implementing this system promises to enhance the organization and efficiency of land and building tax computation, management, and allocation.

The distribution of SPPT remains unchanged; however, it has now been reorganized in terms of its allocation. The systematic storage of data input and archiving of DHKP files and SPPT from every taxpayer is undertaken. Accessing information about the track record of both building and land area is a straightforward process that may be conducted during regular inspections. Regular maintenance of both software and hardware is essential to ensure seamless operation. In order to ensure accuracy and reliability, it is imperative to conduct surveys to validate data about the precise land or building area actively. This practice is essential as it prevents overreliance on preexisting information alone.

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