# Levy PAYMENT INFORMATION SYSTEMS ARE NOT DIRTY WATER CUSTOMERS PDAM KOTA BANDUNG

By:
Nur Ahmad (10104111)
University Computer Indonesia
Bandung
Ahmadnur86@yahoo.co.id

## INTRODUCTION

### 1.1 Background Issues

Regional Water Company (PDAM) Kota Bandung is the Regional Owned Enterprises (enterprises), as one form of extension of the Regional Government in the field of public services including water treatment and wastewater treatment. PDAM Kota Bandung to deliver clean water to customers, for it charged for each use of water per m3. These costs billed to customers every month and paid to the various places that serve the payment of water bills, one of which taps the central office in Bandung Jalan Badak Singa No. 10 Bandung.

Water treatment is a service provided PDAM Kota Bandung to the public as a means to improve the standard of living. Source of clean water is obtained from 3 (three) of water resources: surface water, springs and groundwater. We have new taps to serve ± 65% of the population of the city of Bandung, which is as many as 2,296,848 people, while the national target of clean water service for large-scale city is 80%, this is due to the increasing need for clean water from year to year due to population growth, technological progress and economic improvement of society, while the raw water flow is processed PDAM Kota Bandung is only for 2555 l / s is relatively fixed amount even the raw water sourced from groundwater and springs is decreasing.

Water treatment will generate waste called dirty water. Dirty water is the water of wastes, such as exhaust bathroom, toilet, kitchen and the laundry that comes from households, offices, hotels, restaurants, hospitals, etc., not including industrial waste water and rainwater. Wastewater treatment is a new program of the Government of Bandung City to realize its mission of K3 (Cleanliness, Order and Beauty), which is to improve people's lives through the creation of public health and sanitation improvements neighborhoods clean, healthy and sustainable. Wastewater treatment for the payment does not yet effective due to the data reported are not dirty water payments data attached payment details. Furthermore the PDAM Kota Bandung have difficulty in seeing the truth of the dirty water payments data by the surveyor team.

Interests to do data processing for the payment of the dirty water caused by the data processing done today is still using MS.Excell manual. Therefore, the authors are interested in conducting research to resolve the water billing system is not computerized dirty, in a thesis entitled "Payment Levy Information System That Dirty Water Customers Not PDAM Kota Bandung".

### 1.2 Problem Identification

In this thesis menyeselesaikan to identify the problem as follows:

a. How to make a payment levy system is not a dirty water customers PDAM Kota Bandung to be no manual.
b. How to process the payment data dirty water more computerized.
c. How to generate reports of dirty water payments automatically.

### 1.3 Objectives

Based on the problems studied, the purpose of making this system is to design a system of payment of levy is not a dirty water customers PDAM Kota Bandung. Objectives to be achieved from the making of this system are:

1. Payment data to know in detail the dirty water more precisely and accurately.
2. Facilitate the making of reports of dirty water payments every month.
3. Making more efficient data storage.

### 1.4 Research Methodology

Research methods used in this thesis consists of:

a. Data Collection Method

Data collection methods used in this thesis consists of:

1. Observation, direct observation at PDAM Kota Bandung which is the object of research in this thesis.
2. Interviews, collect data by conducting interviews with the head of the dirty water PDAM Kota Bandung.
3. Literature study, conduct a comprehensive study by reading and studying books that became a reference in the research and writing of this thesis report.

b. Stage of software

Data analysis techniques in the manufacture of

software using the paradigm of the waterfall software, which includes several processes including:
a. System / Information Engineering
Is part of the largest system in progress of a project, start by setting the various needs of all the elements necessary to allocate into the system and software creation.
b. Analysis
Stage is to analyze the things needed in the implementation of the software manufacturing projects.
c. Design
Translation stage of the analyzed data into a form that is easily understood by the user.
d. Coding
Translation stage data or solving problems that have been designed keadalam particular programming language.
e. Testing
It is a testing phase of software that was built.
f. Maintenance
The final stage in which a software may have already completed the changes or additions as requested by the user.

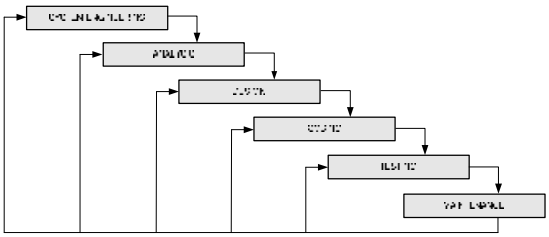


Figure I.1 Waterfall Method
[Source: Jogianto, HMAnalisis and Design Structured Information System Approach, Yogyakarta: Andi]

1.5 Limitation Problem
In accordance with the identification of problems, objectives and results of interviews conducted, limitations issue in this research are:
1. Users who use this system is the Staff Relations subscriptions.
2. The data can be processed as follows:
a. District Data
b. Data Sub-District
c. RW Data
d. RT Data
e. Levy Data
f. Staff Data
g. Pelanggan_AK
3. Applications are built stand alone.

1.6 Systematics of Writing
Systematics of writing is divided into five chapters and their subject material, as a general overview of systematic compilation of theses to be written is as follows:
CHAPTER I INTRODUCTION
This chapter outlines the background of the problem, identify problems, limitations problems, the purpose and objective and systematic writing of basic materials that will be poured in the thesis.

CHAPTER II THEORY FOUNDATION
This chapter describes the general theories and material support in the preparation of theses, such as an explanation of the contents of the subject matter of the research topic.
CHAPTER III ANALYSIS AND DESIGN
This chapter will discuss the results of the analysis of the subject matter set forth in the thesis and design stages such as specification of requirements for the application to be built.
CHAPTER IV IMPLEMENTATION AND TESTING
This chapter will describe the implementation and testing of applications that will be built.
CHAPTER V CONCLUSIONS AND RECOMMENDATIONS
This chapter contains the conclusions derived from the thesis topic will be discussed as a whole and suggestions about the possibility of developing content that will be written thesis and application programs that will be built.

3.1 System Analysis
3.1.1 Problem Analysis
In the system of dirty water levy payments are not customers PDAM Kota Bandung to a new system that provides functions and tools that can perform data storage and processing wastewater levy payments are not customers PDAM Kota Bandung is computerized and the system is expected to optimize the performance of staff, dirty water in giving his report to the Section Head Dirty Water subscriptions and Finance Section PDAM Kota Bandung.
3.1.2 Analysis procedure was Walking
a. Dirty Water Levy Procedure Is Not Customer PDAM Kota Bandung
Surveyor PDAM Kota Bandung to give information to the landlord charges a customer not PDAM Kota Bandung. If the homeowner to pay levies to the surveyor taps, then taps filling surveyors control card, control card consists of two copies of one given to the owner of the house while the other was taken by the surveyor and submitted to the staff of dirty water and archived. Conversely, if the owner does not pay the levy on the staff of the dirty water will issue a warning letter in arrears and then given to the owner of the house and archived. Procedures for payment of levy is not a dirty water customers PDAM Kota Bandung is described in the flow of documents (flowmap) on the picture 3.1.

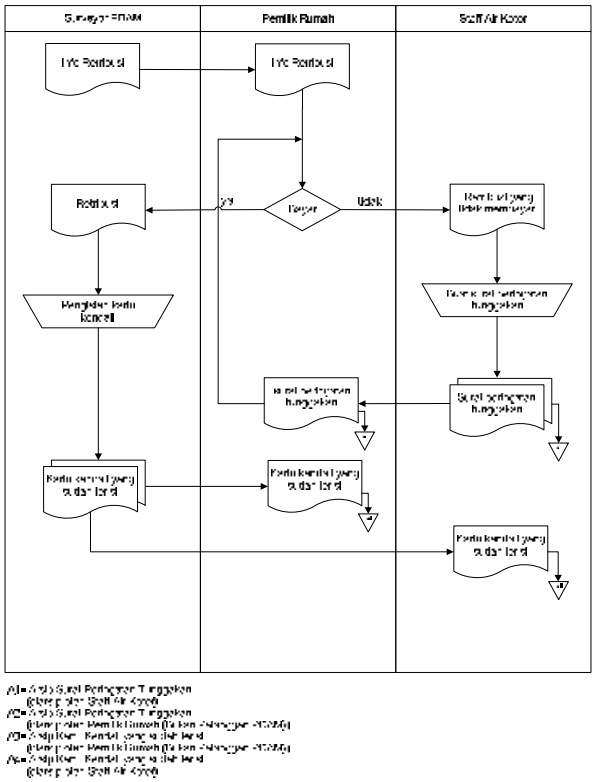



Figure 3.1 Flowmap Dirty Water Levy Procedure Is Not Customer PDAM Kota Bandung

b. Levy reports that the procedure Customers Not PDAM Kota Bandung

Staff receives wastewater control card was completed by the surveyor and then make the report manually and archived. The report submitted to the Section Head Dirty Water subscriptions. Section Head Dirty Water subscriptions then check the report to check the payment status of retribution. If the status of these payments has been paid, Section Chief Subscription Dirty Water will submit a report to the Finance Section for archived. Conversely, if the status of unpaid payments, Section Chief Subscription Dirty Water will restore the document to the staff report dirty water to a report made outstanding payments and fees will be submitted to escort the team to re-checking process to the field. The results of these re-checking a document which the payment of arrears of retribution then be returned to the staff of dirty water. Staff dirty water and then make a report and payment of arrears charges handed back to the Section Head Dirty Water subscriptions to be reported to the Finance Section PDAM Kota Bandung and archived. Procedures for payment of levy report dirty water that is not customer PDAM Kota Bandung. Can be described in the flow of documents (flowmap) as shown 3.2.

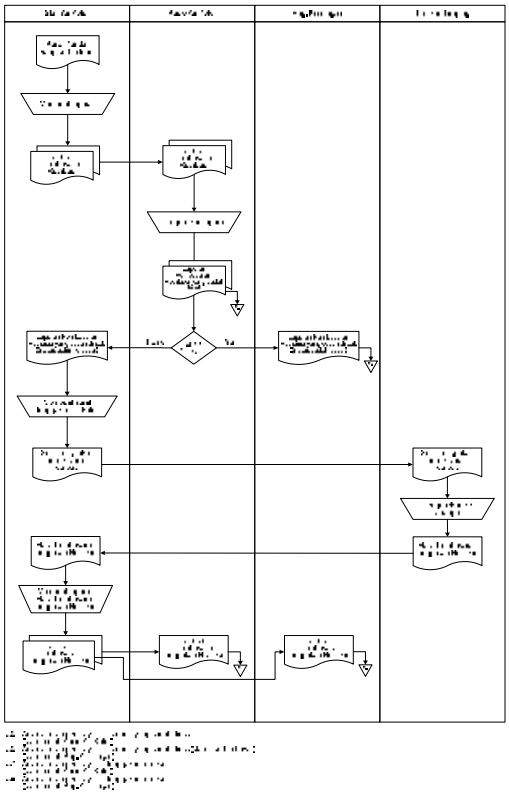


Figure 3.2 Procedure Flowmap Levy reports that are not customers PDAM Kota Bandung

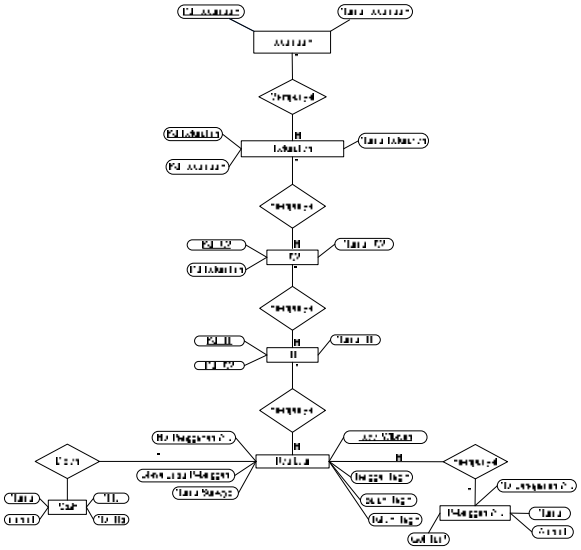
Analysis 3.1.3 Encoding

District coding used to distinguish the name of each district. Currently the author takes the example for coding the Bojongloa Kidul District has a code BK. Village coding used to distinguish the name of each village area by using the three characters, where the code is BK Bojongloa code Kidul district and next digit is a kelurahan code. Table 3.1 describes the village code on the payment levy system is not the dirty water customers PDAM Kota Bandung.

Table 3.1 Sub-District Code

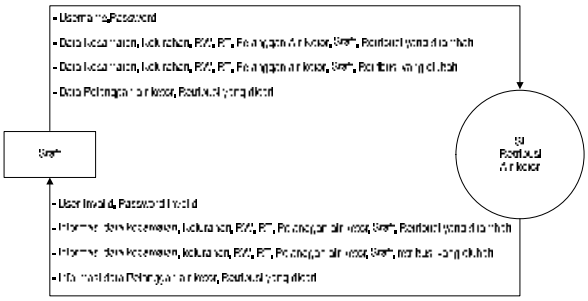
| KODE | NAMA KELURAHAN |
|---|---|
| **BK1** | Situ Saeur |
| **BK2** | Kebon Lega |
| **BK3** | Mekar Wangi |
| **BK4** | Cibaduyut |
| **BK5** | Cibaduyut Kidul |
| **BK6** | Cibaduyut Wetan |

3.1.4 Database Analysis

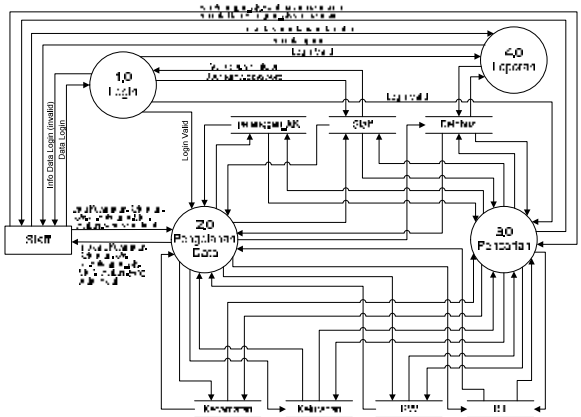


3.1.5 Functional Requirements Analysis

3.1.5.1 Context Diagram (Diagram Context)



3.1.5.2 Data Flow Diagram (DFD)



***3.1.1.1.1 DFD Levelled***

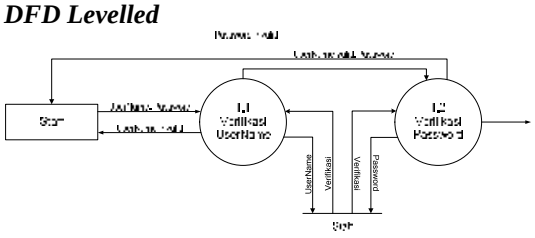


Figure 3.6 DFD level 1 process 1.0

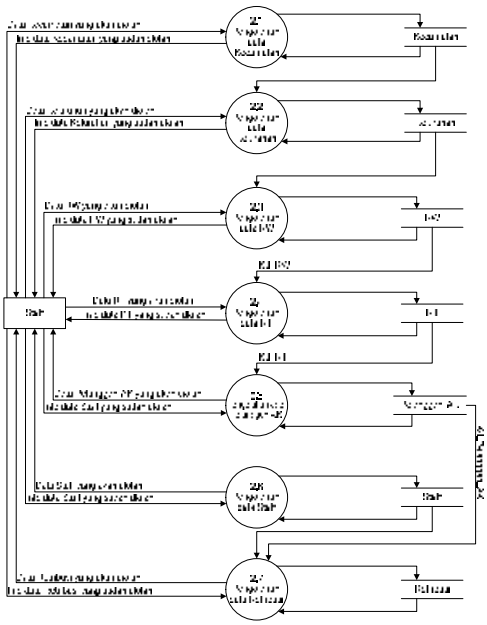


Figure 3.7 DFD level 1 process 2.0

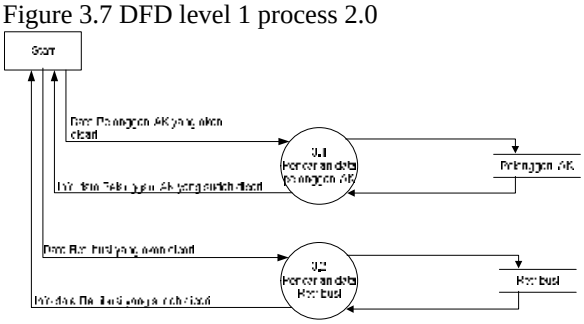


Figure 3.8 DFD level 1 process 3.0

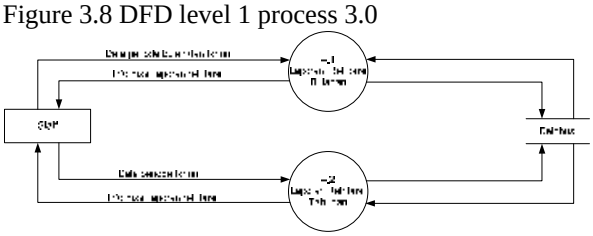
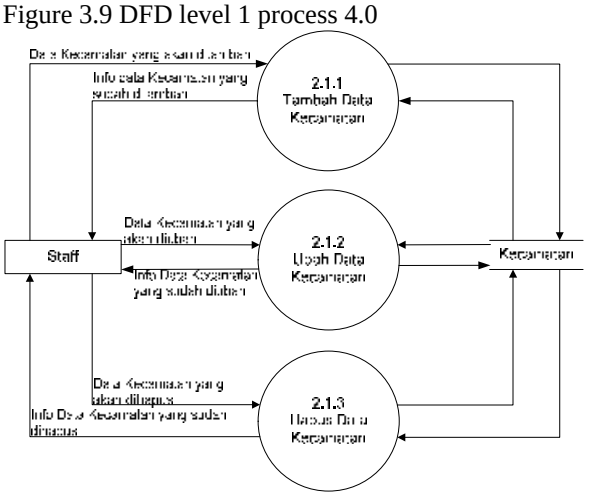
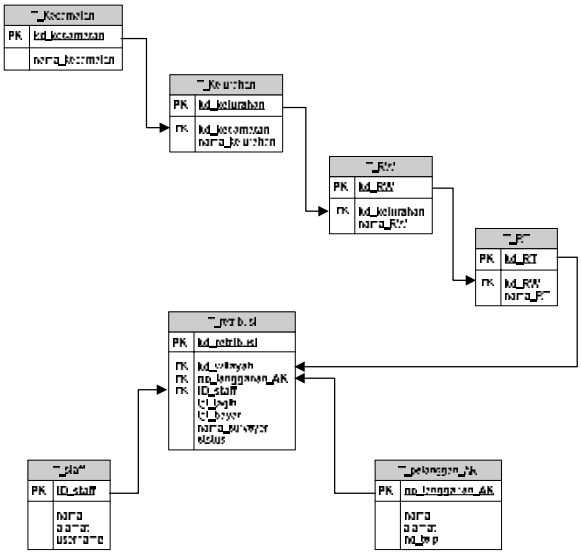


Figure 3.9 DFD level 1 process 4.0



Scheme 3.2.1.1 Relations


PK
id_kecamatan
nama_kecamatan
PK
id_kelurahan
FK
id_kecamatan
nama_kelurahan
PK
id_RW
FK
id_kelurahan
nama_RW
PK
id_RT
FK
id_RW
nama_RT
PK
id_petribusi
FK
id_wilayah
FK
no_langganan_AK
FK
ID_staff
id_bayar
nama_surveyor
status
PK
ID_staff
nama
alamat
username
PK
no_langganan_AK
nama
alamat
id_wp