



# Development of Information System Classification of Community Complaints Based on Keyword Case Study: District Pangandaran

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**Abstract**— The growing technology of the public complaint system requires the development to solve the problems that exist in Pangandaran Regency. One of the problems is not applying the classification of complaints based on keywords. So that people still have difficulty understanding the functions of government agencies correctly because there are several government agencies that have similar functions. The development of the complaints system can minimize these errors. System development used is the Extreme Programming method which has four frameworks including planning, design, coding and testing, using UML modeling (Unified Modeling Language). Extreme Programming is the development of the previous method, the Agile method. For testing applications using Black Box Testing is done only to observe the results of execution through test data and check the functional of the software. So that the results obtained are classifiers of public complaints that are directly conveyed to the relevant agencies running well.

**Keywords**— Community Complaints; Community Complaints Information System Development; Extreme Programming

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## I. INTRODUCTION

Information is very important for every individual and government agency in making decisions. With the development of information technology, every government agency is now expected to be able to convey any information they have quickly and precisely as well as solutions to problems that occur in the midst of society. Public complaints are a form of community participation to take part in developing their environment and as a form of supervision of the performance of government agencies. Complaints and aspirations of the community can be used as input to evaluate policies and regulations that have been made or regulations that have been implemented to find out the problems that exist in society effectively and can provide solutions and solutions.

As a government agency, it must provide comfort to its citizens and provide solutions to various problems that occur in the community in its working area effectively. SKPD is the executor of the executive function that must coordinate so that government administration runs well. The legal basis applicable since 2004 for the formation of SKPD is Article 120 of Law no. 32 of 2004 concerning Regional Government[1], [2], [3].

Pangandaran Regency website is a website that serves as an intermediary for the community with government agencies. On the pangandaran website there are features in the form of news whose validity is guaranteed because those who upload the news are the government agencies themselves, there is also a sharing of events that will be held by government agencies. In addition, there is also a feature for the public to be able to submit complaints or complaints about the performance of a government agency. Complaints from the public will be channeled by Diskominfo to the responsible agencies.

The observation shows that the public still has difficulty understanding the functions of government agencies correctly because there are several government agencies that have similar functions. This will have an impact on the complaint feature of the Pangandaran Regency Communication and Information Office website, where the feature requires the public to fill in the agency purpose of the complaint to be written. To prevent errors in the destination of the agency from writing the complaint, the website directs the complaint to the Diskominfo admin first, so that the admin will check whether it is true that the intended agency already has a match with the keywords of the agency.

## II. MATERIALS AND METHOD

Extreme Programming (XP) is a software development approach or model that tries to simplify the various stages in the development process so that it becomes more adaptive and flexible [3]. Figure 4.1 below is the Extreme Programming framework.

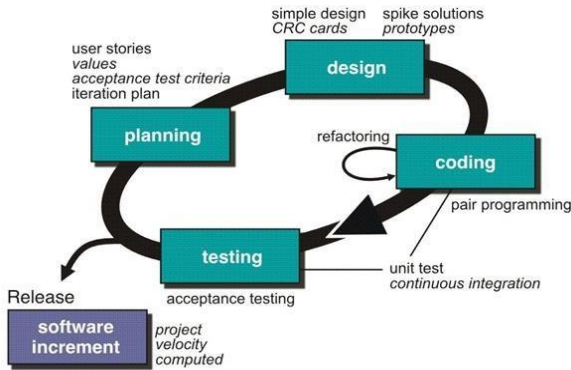


Fig. 1 Extreme Programming Framework [4], [5], [6], [7]

The following below is the framework of the Extreme Programming method:

### 1. Planning

This stage begins by collecting the activity needs of a system that allows users to understand the process for the system and get a clear picture of the main features, functionality and desired output. In the development of the public complaint application program at this stage, it starts from identifying problems that arise in the current system, then analyzing user needs for the system to be built [8], [9], [10].

### 2. Data Collection

#### a. Observation

The data collection method is carried out by means of observation in Pangandaran Regency in the information section it is done with the intention of obtaining information about the research title. The following in Table 1 is a table of problems and solutions [11], [12], [13].

TABLE 1  
PROBLEMS AND SOLUTIONS

PROBLEMS	SOLUTIONS
From the results of observations that have been made, the problem that occurs in Pangandaran Regency is that the problem of public complaints is online-based but has not implemented classification based on the content of complaints using keywords.	Create a public complaint development with the implementation of classification based on the content of the complaint.

#### b. Interview

The method of collecting data or information is done by asking the information section. The results of interviews conducted with district employees [11], [12], [13].

#### c. Literature Study

The data collection method is carried out by studying various journals regarding public complaint information systems or reading sources and books related or related to the research topic [11], [12], [13].

### 3. Problem Identification

There are two things that are done in identifying problems, namely the complaint system does not apply keywords in the content of complaints and complaints are not submitted directly to the relevant [14].

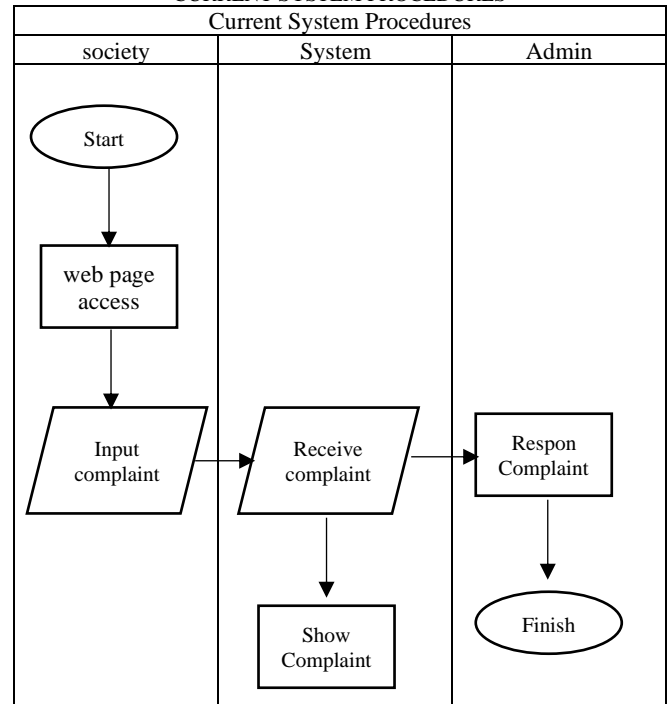
### 4. Decision Point Identification

There is a need to develop a complaint system that can classify complaints based on keywords in making complaints and facilitate staff in managing community complaint data in Pangandaran Regency so that the data processing process is faster and more effective [15], [16], [17], [18], [19], [20].

#### a. Current System Procedures

The current system procedure in Pangandaran Regency will be described in the flowchart below.

TABLE II  
CURRENT SYSTEM PROCEDURES



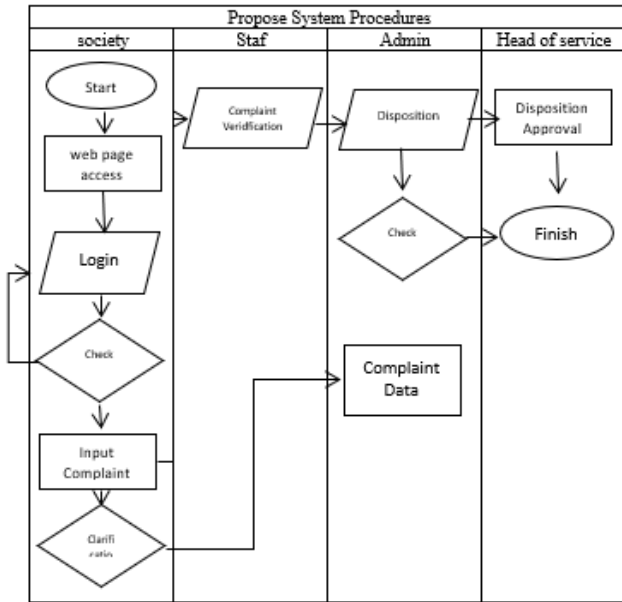
#### b. Proposed System Procedures

The system development that will be proposed in the Pangandaran Regency complaint information system can be seen in the figure below.

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In figure III, will show about of Proposed System Procedures. This propose system will make the data very good.

TABLE III  
PROPOSED SYSTEM PROCEDURES



### III. RESULT AND DISCUSSION

#### A. System Implementation

System implementation is the stage of implementing the system that will be carried out if the system is approved including the program that has been made at the system design stage so that it is ready to operate.

#### B. Application Interface

The following below are some of the displays in the system created :

##### 1. Home Page

The main page also chooses an important role in a web where the page presents various features starting from news, the latest complaints, and crawling data based on Pangandaran keywords. The following below is a view of the user's main page.



Fig. 2 Home Page

##### 2. Account Registration Failed

The application program is only intended for the people of Pangandaran Regency, so if there are people who want to make complaints but the data is not in the database, they will not be able to register an account because the system has used name and NIK filters. The failure display will be as shown below.

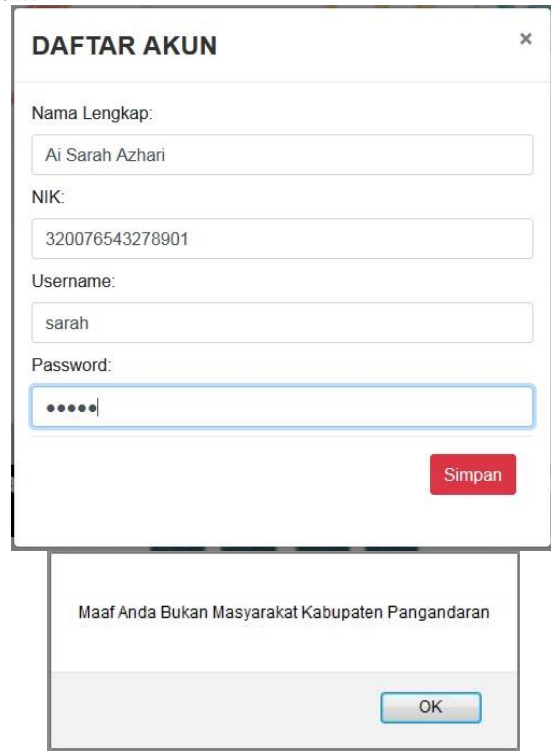


Fig. 3 Account Registration Failed

##### 3. User Login

If the community already has access or an account, they will be able to log in to make complaints against the relevant agencies. For the display can be seen below.

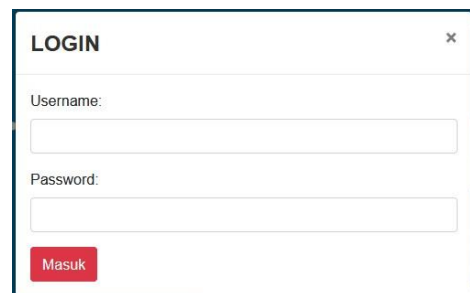


Fig. 4 User Login

##### 4. Complaint Word Filter

The use of word filters in complaints aims to minimize complaints that are inappropriate to submit. So that the implementation of this system can reduce complaints that are not suitable to be submitted. The following is a display of complaints that contain harsh or inappropriate words.

**FORM PENGADUAN**

Isi Pengaduan

Dasar bupati bodoh

Lokasi

Dusun Sindang RT 42 RW 06

Kecamatan

Mangunjaya

Desa

Mangunjaya

Browse... berita.jpg

**KIRIM PENGADUAN**



Fig. 5 Complaint Word Filter

**5. Complaint Sent**

Displays all complaints that have been submitted to the relevant agencies. The following below is a display of sent complaints.

DAFTAR PENGADUAN ANDA YANG TELAH TERKIRIM

Tanggal: 04 Oktober 2018 | Dinas Kesehatan | Sarana dan Prasarana

Status Terkini: Dianalisa  
Untuk perlengkapan dipuskesmas agar diperbanyak!

Tindak Lanjut:

Fig. 6 Complaint Sent

**6. Login**

The display below is access for admin, staff and head of service to enter the application program.

**SISTEM INFORMASI PENGADUAN MASYARAKAT**

Username

Password

**Masuk**

Fig. 7 Login

**7. Dashboard**

The dashboard functions to display a graph of complaint data in the system. The data chosen to be displayed on the dashboard of this system is the complaint data of the service category and the most complaints data by service category.

**8. User Data**

To monitor users who have made complaints against related agencies. And there are the number of complaints that the user or user has made. The following user data display can be seen in the picture below.

SISTEM LAYANAN PENGADUAN MASYARAKAT

Dashboard / Data Pengguna

No.	Nama Penduduk	Username	Aktifitas
1	Nisa Nurani	nisa	2 Pengaduan
2	Iyza Wahyananti		0 Pengaduan
3	Datta Luthania		0 Pengaduan
4	Siska Agustin		0 Pengaduan

Fig. 8 User Data

**9. Complaint Data**

List of complaints that have been submitted by the community. The following below is a list of complaints contained in the Admin system.

SISTEM LAYANAN PENGADUAN MASYARAKAT

Dashboard / Data Pengaduan

No	ID	Pengirim	Isi Pengaduan	Kategori	Waktu	Lokasi
1	053018-001	Nisa Nurani	Tolong <a href="#">Baca Selengkapnya</a>	Dinas Kesehatan	04 Oktober 2018 20:40:28 WIB	Dusun Sindang RT 042 RW 006 Dusun Mangunjaya Kecamatan Mangunjaya

Fig. 9 Complaint Data

**10. Staff Complaint Verification**

To analyze complaints or find out the truth of complaint data submitted by the community. The following display can be seen below.

SISTEM LAYANAN PENGADUAN MASYARAKAT

Dashboard / Verifikasi Pengaduan / Lihat Pengaduan

Data Verifikasi Pengaduan - Dinas Kesehatan

ID: 19

Pengirim: Nisa Nurani

Isi Pengaduan: sdsdsd

Waktu: 04 Oktober 2018 00:00:00 WIB

Lokasi: sdasdd Desa Bunasari Kecamatan Cigugur

Tanggal Survei: mm / dd / yyyy

Lampiran Lokasi:  No file selected.

Lampiran Berkas:  No file selected.

**Verifikasi**

Fig. 10 Staff Complaint Verification

**11. Admin Complaint Verification**

Verification of admin complaints aims to see and check the correctness of validation from staff. The verification will be a reference for making a disposition submission to the head of service.



Fig. 11 Admin Complaint Verification

## 12. Disposition of Complaint Admin

To approve or reject a public complaint. The following below is a view of the complaint disposition.

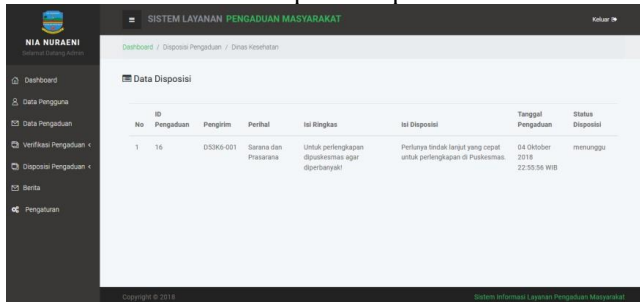


Fig. 12 Disposition of Complaint Admin

## 13. Head of Service Complaint Disposition

The disposition of the complaint must be approved so that the complaint is followed up immediately. The following is a view of the disposition of the head of service below.

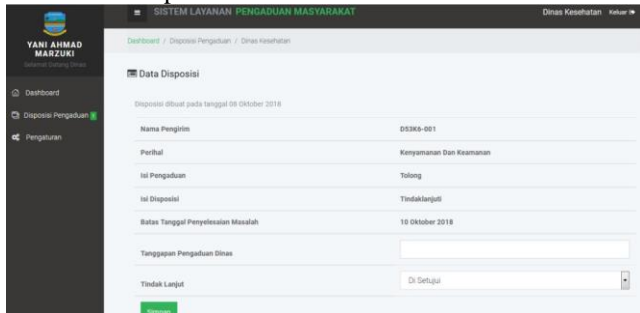


Fig. 13 Head of Service Complaint Disposition

## IV. CONCLUSION

Based on the results of the research that has been conducted, the following conclusions can be drawn:

1. The application applies classification based on the content of complaints using keywords, including bpjs, pollution, extortion, and puskesmas. So that 30 complaint data submitted by the community are obtained. So from these results it can be concluded that the applied keywords obtained a total success percentage of 80%.
2. The test performed on this application program is Black Box. Black Box testing itself is a test that is carried out only observing the results of execution through test data and checking the functionality of the software. Some data that can be tested include account lists, user logins, admin logins, staff and service heads, and complaint submission forms. So that the results of testing the overall functionality of the software are successfully executed.

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