

## Web-Based Information Systems for Political Parties and Community Organizations Using Extreme-Programming Methods

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### Abstrak

Badan Kesatuan Bangsa dan Politik diharapkan dapat melaksanakan tugas dan fungsi sebagai pendukung urusan pemerintah di bidang kesatuan dan politik nasional. Namun, masih sering terjadi proses verifikasi file registrasi organisasi asosiasi dan partai politik terganggu sehingga proses registrasi menjadi terhalang. Tidak ada data yang tersedia tentang keberadaan dan manajemen, baik organisasi sosial maupun partai politik. Pengiriman laporan akuntabilitas dana partai politik juga selalu terlambat sehingga proses administrasi keuangan terganggu, menyebabkan penyerapan anggaran rendah. Pengiriman papan data pemilihan kepala daerah / pemilihan umum masih manual, sehingga laporan yang datang terlambat menyebabkan informasi kepada pimpinan tidak diperbarui. Penelitian ini bertujuan untuk membangun sistem informasi berbasis web yang menyediakan fitur pendaftaran, verifikasi dan pengajuan untuk partai politik dan organisasi asosiasi. Metode yang digunakan adalah *Extreme Programming* dengan fase perencanaan, desain, pengkodean, dan pengujian. Hasil dari penelitian ini menghasilkan sistem informasi yang dapat diandalkan dan mudah digunakan serta menunjukkan akurasi 100% dari hasil tes *black box*.

**Kata kunci:** sistem informasi, extreme-programming, politik.

### Abstract

*Badan Kesatuan Bangsa dan Politik is expected to be able to carry out its tasks and functions as a promoter of government affairs in the area of national unity and politics. However, there is still a frequent process of verification of registration files of association organizations and political parties, which is interrupted so that the registration process becomes obstructed. There are no available data on the existence and management of both social organizations and political parties. Delivery of accountability reports for political party funds is always late so the financial administration process is hampered, causing low budget absorption. Delivery of data desks of elections of heads of district or general elections is still manual, so late incoming reports cause information to the leadership to be unupdated. The research is aimed at building a web-based information system that provides registration, verification and filing features for political parties and association organizations. The method used is Extreme Programming with phases of planning, design, encoding, and testing. The results of this study resulted in a reliable and easy-to-use information system and showed 100% accuracy of the black box test results.*

**Keywords:** information system, extreme-programming, politics

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## Introduction

One of the major challenges facing the nation and the country of Indonesia in the future is how to maintain unity and national resilience, while at the same time realizing a democratic political culture. This challenge is the basis for determining the direction of future domestic political development, namely strengthening the unity of the nation (Ahmad & Nurdin, 2019) (Ham et al., 2022). As the Regional Organization (OPD), which has the duties and functions of promoting government affairs in the field of national unity and politics, Badan Kesatuan Bangsa dan Politik (KESBANGPOL) of Gowa district needs to carry out revision and reorientation of the implementation of tasks efficiently, in accordance with the changing dynamic and difficult to predict strategic environment. Such repositioning and reorientation will be effectively carried out. The entire array of KESBANGPOL of Gowa District is claimed to be able to implement its tasks and functions professionally, accountably, and participatively based on the strategic plan instruments. KESBANGPOL of Gowa District is expected to be able to carry out its tasks and functions to undertake the function of promoting government affairs in the field of national unity and politics. Successful implementation of these tasks and functions is necessary to realize the achievement of regional development objectives and the reconstruction of regional devices.

In carrying out the duties and functions of the organization as an institution, the regional government agencies that carry out the construction of government affairs in the area of national unity and domestic politics have been able to do well. Nevertheless, there is still a frequent process of verification of the organs registration files, which is so complicated that the process of registration of organs becomes obstructed, the existence and management data of both organs and political parties are not available, the submission of accountability reports of the political party grant funds is always late, so that the financial administration process is hampered, resulting in low budget absorption, as well as the delivery of the data report of the electoral desk that is still manual, so that late incoming reports cause the information to the leadership to not be updated. It can hinder the organization's performance to support the achievement of the leadership's vision and mission. These problems often occur because the information system is not integrated into the administrative service (Shafira & Kurniasiw, 2021).

The government as a servant of the community continues to strive to provide the best service. In this era of the 4.0 industrial revolution, the entire sector is being forced to shift towards digital organizations, including the government sector. The current problem is that the provision of services performed by the government is still considered confusing and impressed for a long time by having to move and move places to obtain

one service (Panagiotopoulos et al., 2019). Given the problems faced by the current conditions are expected that KESBANGPOL can provide a service that is easy, fast, cheap, accountable, and accessible from anywhere and anytime. In connection with this, a problem-solving measure that is expected to provide a solution is use of information technology. This information system is expected to be able to present a variety of service menus on the network (Muhammad Yassir, 2023).

The need for fast and accurate information is increasing with the Industrial Revolution 4.0. An organization can meet this need by prioritizing information technology. Organizations can do it with the aim of improving performance and productivity (Wahyuni et al., 2022). Therefore, it is necessary to build and implement information systems to collect and verify data on social organizations and political parties. This information system has a user-friendly display, so it makes it easy for the government to use it (M Yassir, 2023)(Muhammad Yassir et al., 2023)

## Method

In this study, extreme programming (XP) methods are used to build information systems. XP is a software engineering development aimed at building teams on a small to medium scale. This method can also be used for system development with unclear requirements and very rapid changes (Nurkholis et al., 2021). The purpose of using the XP method is to speed up and facilitate data access for the parties involved (Borman et al., 2020). Previous research applied only to android (Wahyuni et al., 2022), and it's just about social organizations (Rizal Yusni et al., 2022). As to the stages of the development of the information system of political parties and social organizations with the XP method, can be seen in Figure 1.



FIGURE 1. Work Flow

## Planning

This is an early stage, where the general utility that will be made in the framework is defined. The preparation stage begins with an understanding of the business framework, which includes the characterization of the outcome, the elements that stand out in the application, the capacity that the application develops, and the sequence of application progress.

## Design

At this stage, the focus is on the design activity, or system modeling. This study uses diagrams to show the design of the information system.

## Coding

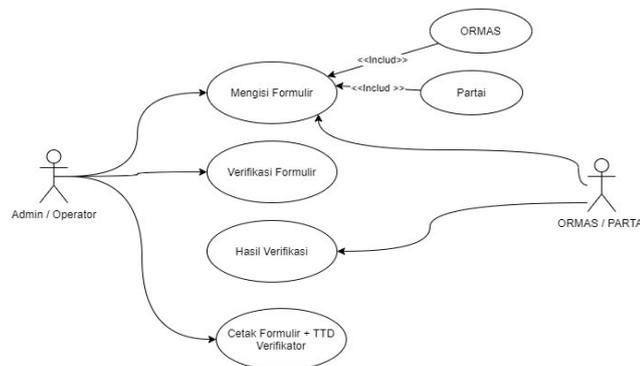
Previously created models are translated into programming languages. This information system is built with the CodeIgniter framework and MySQL DBMS (Ardhana et al., 2021).

## Testing

The system testing phase is carried out to determine whether the system is successful or failed. Functionality testing using black box testing is used in this stage to find out how successful the system functions are (Dashti & Basin, 2020).

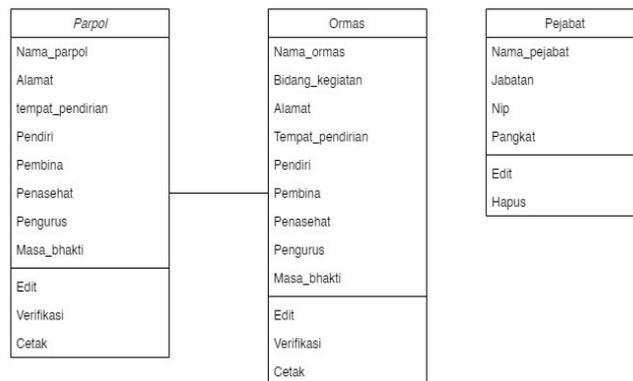
## Results and Discussion

This information system produces three main menus: registration forms for social organizations and political parties; verification forms for data purposes for social organizations and political parties; and registration of data organizations of social society and the political parties. Figure 2 shows the use case. This image shows the relationship between the user and the built-in system.



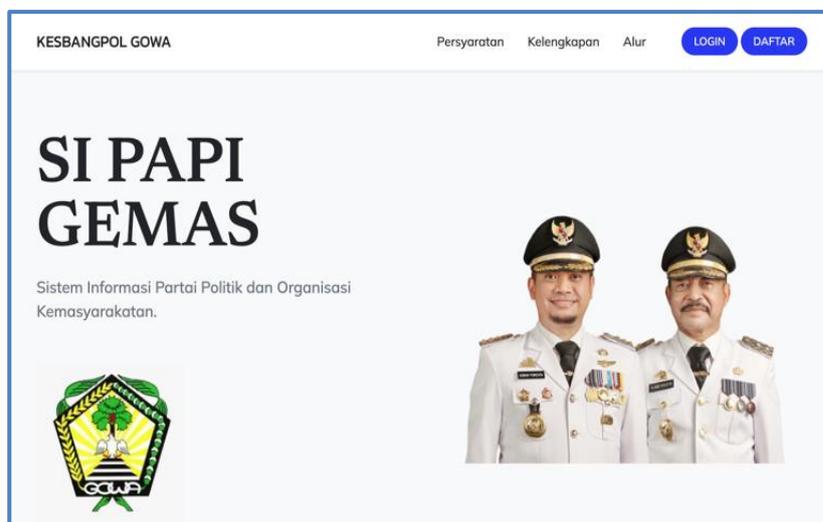
**FIGURE 2.** Use Case

Next is the Class Diagram. In addition to showing their relationship to each other, this diagram can show how classes relate to data structures such as interfaces, abstract classes, and so on. Having a lot of utility in software development, these diagrams are important to understand how the software will work (Di Felice et al., 2022).



**FIGURE 3.** Class Diagram

After the design, the next step is to implement the model into the source code in the programming language. The CodeIgniter framework and MySQL database are used to implement source code. Figure 4 shows the front page as an identity. Further on Figure 5 is displayed the registration page. Users who want to fill in data are then directed to do account registration first. The administrator will then review whether to allow login. If the account has been verified, the user can go directly to the login page. Figure 6: login. There are three login accesses: an administrator, a social organization, and a political party.



**FIGURE 4.** Front Page

The image shows a web form titled "Register". It contains four input fields: "Name" with the text "Forum Pembela Kaum Lemah", "Email Address" with "myassir669@gmail.com", "Password" with seven dots, and "Confirm Password" with seven dots. Below the fields is a blue "Register" button.

**FIGURE 5.** Account Registration Form

The image shows a web form titled "Login". It contains two input fields: "Email Address" and "Password". Below these is a checkbox labeled "Remember Me". At the bottom, there is a blue "Login" button and a blue text link that says "Forgot Your Password?".

**FIGURE 6.** Login Page

Figure 7 shows the data input menu of social organizations and political parties. Some of the mandatory data included attaching the organization's logo. Next on Figure 8, the administrator (Kesbangpol) will perform a verification of the target data. The options that can be given are acceptance, pending, and rejection. The ended data indicates that there is no purposeful data that needs to be corrected, and the rejected data shows that the data is not eligible for processing (Figure 8). Once the verification is done, the data will be captured. It's shown in pictures 9 and 10.

Daftar Akun < Beranda

Nama Ormas

Bidang Kegiatan

Alamat Kantor

Tempat Pendirian

Azas

Tujuan

Nama Pendiri

Nama Pembina

Nama Penasehat

Nama Ketua

Nama Sekretaris

Nama Bendahara

Masa Bhakti

Keputusan Ormas

Unit Organisasi

Usaha Organisasi

Sumber Keuangan

Upload Logo  
   
Format: JPG atau PNG

Upload Bendera  
   
Format: JPG atau PNG

**FIGURE 7.** Data Fill Form

Daftar Formulir Tambah

Ketik nama organisasi untuk pencarian

NO	NAMA ORGANISASI	BIDANG KEGIATAN	STATUS	#
1	LASKAR PELANGI	Kemasyarakatan	terima	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
2	Forum Peembela Kaum Lemah	Kemasyarakatan	terima	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
3	fth	ertertert sdf	menunggu_verifikasi	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
4	Ormas Merah	Penyuluhan	terima	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
5	Ormas Raya	Pembinaan dan Pengawasan --	pending	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
6	Ormas Merdeka	Penyuluhan Masyarakat	terima	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>

**FIGURE 8.** Society Organization Data Verification Form

Daftar Formulir Tambah

Ketik nama parpol untuk pencarian

NO	NAMA PARPOL	PENDIRI	STATUS	#
1	Partai Persatuan Indonesia (PERINDO) Kab. Gowa	-	menunggu_verifikasi	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
2	PARTAI NASDEM Kab. Gowa	-	menunggu_verifikasi	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
3	Partai Amanat Nasional (PAN) Kab. Gowa	-	menunggu_verifikasi	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
4	Partai GERINDRA Kab. Gowa	-	menunggu_verifikasi	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
5	Partai Kebangkitan Bangsa (PKB) Kab. Gowa	-	menunggu_verifikasi	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
6	PARTAI DEMOKRAT Kab. Gowa	-	menunggu_verifikasi	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
7	Partai Persatuan Pembangunan (PPP) Kab. Gowa	-	menunggu_verifikasi	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
8	PARTAI GOLKAR Kab. Gowa	-	menunggu_verifikasi	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
9	PARTAI KEADILAN SEJAHTERA (PKS) Kab. Gowa	-	menunggu_verifikasi	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>
10	PDI PERJUANGAN KABUPATEN GOWA	-	menunggu_verifikasi	<a href="#">Verifikasi</a> <a href="#">Edit</a> <a href="#">Hapus</a>

**Figure 9.** Political Party Data Verification Form

REKAP DATA ORMAS Cetak

Ketik nama ORMAS untuk pencarian

NO	NAMA ORMAS	NAMA KETUA	ALAMAT	#
1	LASKAR PELANGI	ABCD	Jalan ABCD	<a href="#">Detail</a>
2	Forum Peembela Kaum Lemah	Usman	Jalan Andi Tonro NO. 38 Sungguminasa	<a href="#">Detail</a>
3	Ormas Merah			<a href="#">Detail</a>
4	Ormas Merdeka			<a href="#">Detail</a>

**FIGURE 10.** Society Organization Data Recorder

NO	NAMA PARPOL	PENDIRI	ALAMAT	#
1	Partai Persatuan Indonesia (PERINDO) Kab. Gowa	-	Jl. Tumanurung No. 49, Sungguminasa, Gowa	<a href="#">Cetak</a>
2	PARTAI NASDEM Kab. Gowa	-	BTN Gowa Mas Indah Blok B No. 1, Gowa	<a href="#">Cetak</a>
3	Partai Amanat Nasional (PAN) Kab. Gowa	-	Jl. Andi Tonro 49.a, Kabupaten Gowa	<a href="#">Cetak</a>
4	Partai GERINDRA Kab. Gowa	-	Jl. Mangka Dg. Bombong No. 26 Kelurahan Bonto-bontoa Kecamatan Somba Opu,	<a href="#">Cetak</a>
5	Partai Kebangkitan Bangsa (PKB) Kab. Gowa	-	Jl. Poros Malino No. 14, Kecamatan Somba Opu	<a href="#">Cetak</a>
6	PARTAI DEMOKRAT Kab. Gowa	-	Jl. Tumanurung Raya Ruko Ba Kelurahan Pandang pandang Kecamatan Somba Opu	<a href="#">Cetak</a>
7	Partai Persatuan Pembangunan (PPP) Kab. Gowa	-	Jl. Mesjid Raya 18 E, Sungguminasa	<a href="#">Cetak</a>
8	PARTAI GOLKAR Kab. Gowa	-	Jl. Tumanurung No. 10, Kelurahan Kalegowa, Kecamatan Somba Opu	<a href="#">Cetak</a>
9	PARTAI KEADILAN SEJAHTERA (PKS) Kab. Gowa	-	Jl. Malino Kelurahan Tompobalang Kecamatan Somba Opu	<a href="#">Cetak</a>
10	PDI PERJUANGAN KABUPATEN GOWA	-	Jl. Yusuf Baiti Ruko 3 Manggarupi, Kelurahan Paccinongan, Kecamatan Somba Opu	<a href="#">Cetak</a>

**FIGURE 11.** Political Party Data Recorder

Before the system is implemented, the first test is done. Testing applies the black box testing approach by entering data into the form and testing every feature of the system. The purpose of this test is to identify parts of the system that have not yet worked according to the program. The following table shows the results of the test.

**TABLE 1.** Black-Box Test Results

Input Data	Expected Results	Observation	Conclusion
Selecting Add Association Organization Data	Displays Forms for Filling Out Organizational Data	Show Data Fill Form	Suitable
Selecting Add Political Party Data	Showing Political Party Data Fill Form	Show Data Fill Form	Suitable
Selecting Organization Purpose Status	Displays List of Organizational Purposes	Show Purpose List	Suitable
Choosing Political Party Purpose Status	Showing List of Political Party Purposes	Show Purpose List	Suitable
Selecting the Organization Data Recorder	Displaying Association Organization Data	Show List of Association Organizations	Suitable
Choosing Political Party Data Recorder	Displaying Political Party Data	Show List of Political Parties	Suitable

## Conclusion

Using the phased method of extreme programming, this research has successfully developed information systems for social organizations and political parties. This system can help kesbangpol do registration, verification, and filing online, so they can produce better results without having to visit the office. In addition, with its easy-to-use feature display, the system can help in the creation of document authentication letters. 100% accuracy was obtained from system testing performed using the black box method.

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