



## Implementation of Web-Based Waterfall Method Case Study Information System Complaints of Violence Women and Children

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### ARTICLE INFO

### ABSTRACT

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Violence is any act of abuse of physical strength with or without the use of means against the law and causing harm to the body, life and freedom of people. Violence against women and children is a violation of human rights that can happen to anyone, across social, economic and educational status. The process of complaints of violence against women and children, which is currently mostly carried out, is still manual with victims / communities coming directly to the complaint center to make a complaint report. To support the research, the method used in making the Information System for Complaints on Violence against Women and Children is waterfall and the UML model used is the Php programming language, MySql Database, Bootstrap, Sublime Text. The results of the study resulted in the implementation of complaints of violence against women and children based on reports of victims / communities affected by violence. Data on complaints of violence against women and children. can provide complete and accurate information in accordance with the complaint desired by the victim and printed as the last step in the process of managing victim complaint data.

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## 1. Introduction

Violence against women and children is a social phenomenon that is of great concern today. This is because often the perpetrators of violence are the closest people, trusted, loved, and respected. Violence against women and children is any act based on gender differences that causes or can result in physical, sexual or psychological suffering for women, including threats from such acts, as well as arbitrary coercion or deprivation of liberty, whether it happens. in public or in private life[1]. Violence often occurs in children and women. Children are the nation's next generation as well as the successors of the ideals of the nation's struggle that need good education, guidance, protection, care and direction so that they can grow and develop in the life of the community and nation. and states[2]. As for causing victims to experience violence both women and children, namely because of the rapid technological advancement of technology that should be a medium of positive value, Lack of economy in the family, Drug use, Broken home, Lack of compassion. The impact based on the form of violence experienced by the victim, can bring the following negative impacts, namely:

- Physically this violence causes bodily damage such as: bruises, symmetrical wounds on the face (both sides), back, limbs, abrasions, cuts, burns.
- Psychologically, women and children who experience abuse generally show: withdrawal, fear or aggressive behavior, bad emotions, depression, low self-identity, anxiety, sleep disorders, fear that one day they can grow up to be bullies, become violent.[3].

## 2. Method

The Systems Development Methodology is a standard process for development teams to link all the steps required in analyzing, designing, implementing, and maintaining an Information System. The methodology that guides system development activities is the SDLC System Development Life Cycle (SDLC).[4]. The research method used in this research is the waterfall development method [5]. According to Pressman, the waterfall model is a classic model that is dynamic, sequential in doing software development. The design model for the information system on complaints of violence against women and children with the



waterfall model is clearly designed and the stages are clearly structured. Image of waterfall model can be seen below[6]:

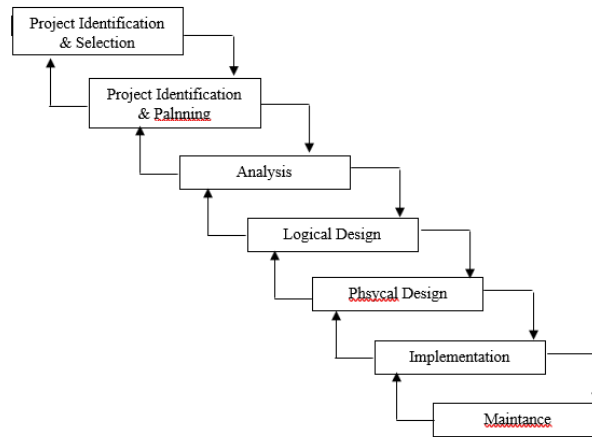


Fig 1. Waterfall Diagram Model

**a. Project Identification & Selection**

At this stage, the identification of existing problems is carried out in relation to the purpose of developing a web-based information system that aims to overcome the problems of victims of violence against women and children.

**b. Project Initiation & Planning**

The phase of preparing detailed steps or work plans for the project, specification of the research scope and requirements / system form (high level), assignments for team members and other resources, legal systems / considerations.

**c. Analysis**

At this stage a description of the existing system including problems or opportunities that exist is recommended to be improved / resolved, improved, or replaced the existing system, a description of the system of choice and the system of legislation / consideration for the selected system.

**d. Logical Design**

At this stage the logical function of the system for handling problems of victims of violence against women and children will be designed.

**e. Physical design**

At this stage, it is more of a technical nature, a detailed specification of all elements of the system (programs, files, networks, software systems, etc.), plans for new technologies.

**f. Implementation**

This stage will provide output in the form of the desired system, namely an information system for handling problems of victims of violence against women and children.

**g. Maintenance**

The result of this stage is the latest version of the software or with updated documentation, training, support and research results.

**3. Results and Discussion**

**3.1 Use Case Diagram**

Fig 2. Use Case Diagram Information System for Complaints of Violence against Women and Children, there are two actors who input or process complaints of violence. Where if the victim / community wants to report a complaint of violence, they must first register to get a username and password for the complaint account of violence. Furthermore, after the victim receives the username and password, the victim logs in and makes a report on the violence complaint and completes the complaint form completely. After the violence victim complaint form is sent, the admin logs in with the admin's Username and Password, then manages, processes, and follows up on reports of complaints of violence that have been committed by the victim by responding to the victim. admin gives a response, admin can print reports of complaints of violence and report them.

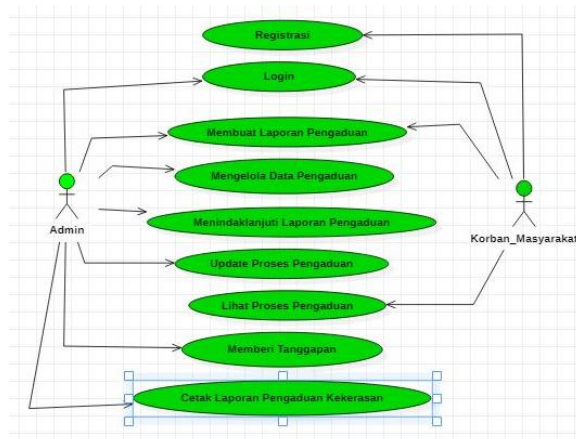


Fig 2. Use Case Diagram

3.2 Sequence Diagram

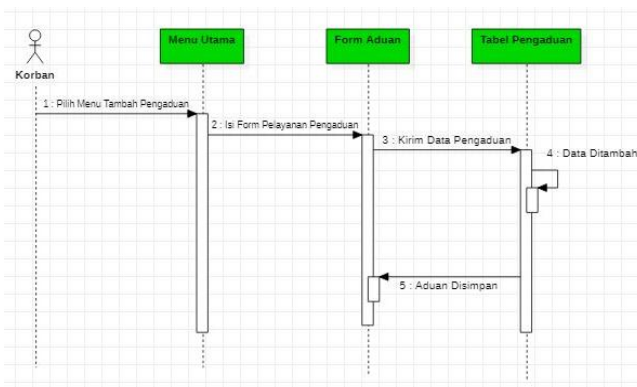


Fig 3. Sequence Diagram Complaints Violence

Fig 3. Violence Complaint Sequence Diagram, Victims choose the add complaint menu on the main menu, then the victim fills in the complaint service form on the complaint form completely and in detail starting from the victim's identity to the perpetrator's identity, then the victim sends the complaint, the victim's complaint will be included in the victim's complaint list, namely in the Complaints Table.

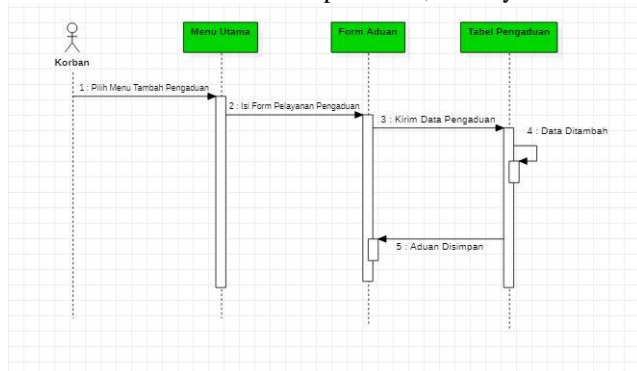


Fig 4. Sequence Diagram Violence Complaint Report Management

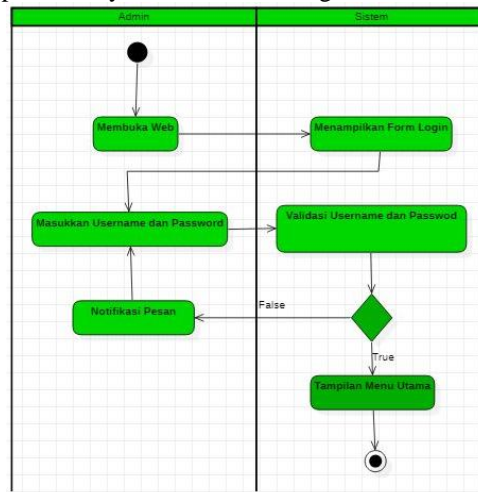
Fig 4. In the Diagram for the Management of Violence Complaints Reports, the Admin chooses the complaint menu through the main menu, then the admin selects the victim complaint data. The system will then display the type of complaint made by the victim and then the admin responds and validates and changes the status of the complaint. After changing the status of the complaint, the admin can display the results of the victim's complaint and print the report on the complaint of violence.

3.3 Activity Diagram

Fig 5. Activity login diagram as the first step to enter the violence complaint information system, where the admin opens the web first, then the system will display the login form, the admin enters the username and password into the system if the username and password are correct, the system will display the main menu on

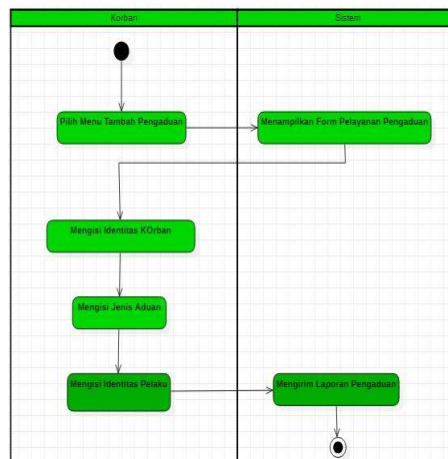


the information system To the admin, if the username and password is wrong, the system will notify you with a message that the username or password you entered is wrong.



**Fig 5.** Login Activity Diagram

Fig 6. Violence Complaint Activity Diagram, Victims choose the add complaint menu, then the system will display a complaint service form. Then the victim fills in the victim's identity, then fills in the type of complaint or type of violence the victim has experienced. After the victim fills in the victim's identity and fills in the type of complaint, then the victim fills in the identity of the perpetrator and sends a complaint report..



**Fig 6.** Violence Complaint Activity Diagram

Fig 7. Activity Diagram of Violence Complaint Management Report, Admin can see the report or complaint data entered through the complaint menu, then the system will display the complaint menu, the admin selects the complaint data to be processed. The admin can respond to the complaint report by sending a response message. After that the system will display the status of the complaint where the complaint has been completed or not.

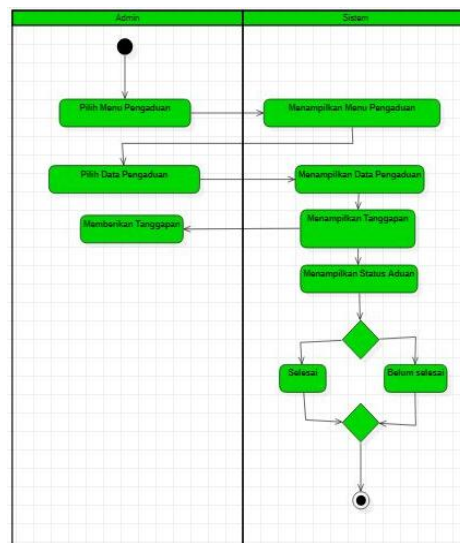


Fig 7. Diagram of Violence Complaints Management Activities

### 3.4 Form Menu Login

The first step is to be able to access the main admin menu or the victim must enter the correct username and password, if the victim does not have an account user name and password, the victim must register first to be able to enter the information system on complaints of violence against women and children in the login form. figure 8.

Fig 8. Login Form

### 3.5 Complaints Main Menu

The main menu of Violence Complaints in the admin contains complaints, responses, officers, the community and reports of complaints of violence where reports of complaints from victims can be processed through the menu shown in the picture. Can be seen in Figure 9.

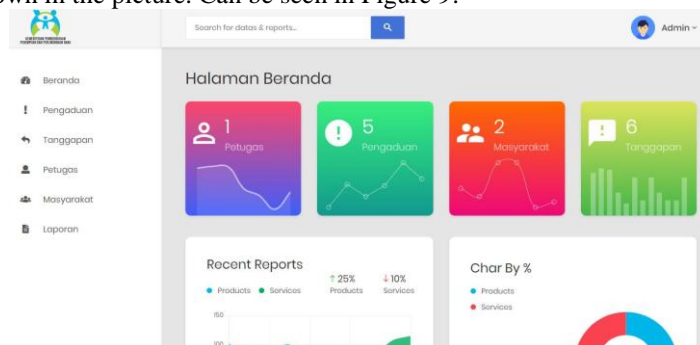


Fig 9. Main Menu of Violent Complaints in Admins

### 3.6 Victim Main Menu

The Victim Main menu displays a menu of complaints and responses. If the victim wants to make a Complaint Report, the victim can choose or add a complaint report through the add complaint menu.

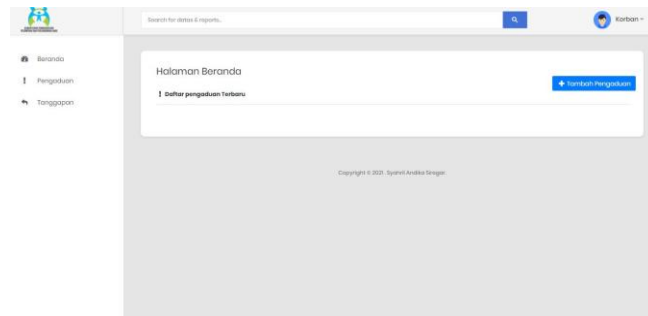


Fig 10. Victim Main Menu

### 3.7 Menu Form Registration Service For Victims of Violence

In Figure 11. The menu for registration of services for victims of violence, the first step is to fill in the identity and address of the victim completely and correctly, then fill in the case informant form, namely Type of Violence, Form of Violence, to what is desired. service offering. Then the victim fills in the same identity of the perpetrator / reported, name, address, telephone number, education, religion, occupation of the reported perpetrator of violence.

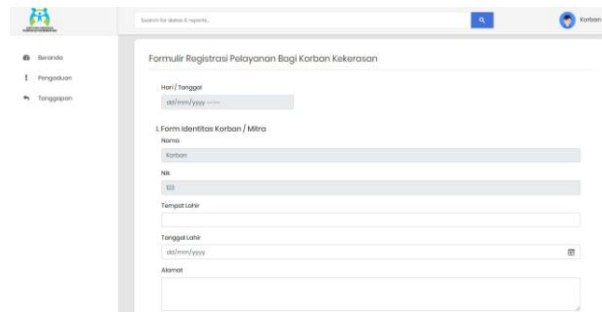


Fig 11. Menu Form Registration Service for Victims of Violence

### 3.8 Print Violence Complaint Report

In figure 12. printout of women and child abuse victims report that has been processed by admin.



Fig 12. Print Violence Complaint Report

## 4. Conclusion

This information system on complaints of violence against women and children makes it easy for victims / communities and administrators to report and process data on violence against victims / communities. This information system will make it easier to provide reports of complaints of violence compared to the old system, which was still manual, which took a long time to report complaints. With the implementation of the information system on complaints of violence against women and children, it will facilitate the processing and processing of data on complaints of new victims of violence. Complaints of violence against women and children will produce good and correct data reports.

## 5. References

- [1] A. Armelyta and F. Fatmariza, "Layanan Sistem Informasi Pengaduan Kekerasan SILARAS Terhadap Perempuan dan Anak di Kota Padang," *J. Civ. Educ.*, vol. 1, no. 3, pp. 250–260, 2018, doi: 10.24036/jce.v1i3.229.

- [2] A. Setyaningrum and R. Arifin, "Analisis Upaya Perlindungan dan Pemulihan Terhadap Korban Kekerasan dalam Rumah Tangga (KDRT) Khususnya Anak-Anak dan Perempuan," *J. MUQODDIMAH J. Ilmu Sos. Polit. dan Hummaniora*, vol. 3, no. 1, p. 9, 2019, doi: 10.31604/jim.v3i1.2019.9-19.
- [3] L. E. García Reyes, "濟無No Title No Title," *J. Chem. Inf. Model.*, vol. 53, no. 9, pp. 1689–1699, 2013.
- [4] A. Kamal, P. Anggraini, and Renita Astri, "Web Untuk Pengaduan Bagi Korban Kekerasan Terhadap Perempuan dan Anak," *J. Sains dan Inform.*, vol. 4, no. 1, pp. 63–69, 2018.
- [5] Mukrodin and Sugianto, "Implementasi Metode Waterfall dalam Membangun Tracer Study dan Penerimaan Peserta Didik Baru dengan Pengujian Black Box Testing," *J. Din.*, vol. 25, no. 1, pp. 39–50, 2020.
- [6] I. R. Munthe, "Penerapan Model Waterfall Pada Perancangan Sistem Informasi Pendaftaran Siswa Baru Smk Swasta Teladan Rantaprapat Berbasis Web," *J. Inform.*, vol. 5, no. 3, pp. 15–21, 2019, doi: 10.36987/informatika.v5i3.731.

