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Web-based application as a communication modeling for street children

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Abstract. Effective communication is one of the keys success factor in implementing an activity, a common problem that often occurs in social communities problem of street children is the ineffective communication process each community stands alone without any mutual coordination. The purpose of this study is to model the process of communication between social communities utilizing a web-based application, using the waterfall approach for application design. The expected results of this study are as a forum to facilitate communication between existing social communities. The existence of communication applications between street children communities can help to optimize the communication function so that the implementation of various activities that can help target the implementation of activities can run better and on target.

1. Introduction

Communication is delivered of messages from one party to another party. When conducting effective communication with the community of street children, there are often several obstacles that may occur. The development of information and communication technology helps various parties in facilitating the communication process through various existing electronic media. The communication process is effective and efficient by using information and communication technology as an electronic media. Utilization of information and communication technology also speeds up data and information delivery times, there is some problem in social communities of street children because these communities stand alone without any process of coordination and communication. Some institutions and individuals that care about the presence of street children sometimes have difficulty in the monitoring of social activities that have been held by the community.

According to Wursanto (In Fenny Octavia 2016), communication is the process of carrying out / delivering news /news /information that means one party (a person or place) to another party (person or place) to gain mutual understanding. The Big Indonesian Dictionary states that communication is the sending or receiving of messages or news between two or more people in an appropriate manner so that the intended message can be understood; relationship; contact [1].

The Waterfall model is one of the software development models in the SDLC (Sequential Development Life Cycle) model. According to Sukamto and Shalahuddin (in Y. Firmansyah, Udi 2016) stated that "SDLC or Software Development Life Cycle or often also called System Development Life Cycle is the process of developing or changing a software system using models and methodologies used by people to develop software systems before, based on best practice or ways that have been tested well. "It was also explained that the waterfall model is



often also called a linear sequential model or a classic life path. The system development is done in order starting from the analysis, design, coding, testing and supporting stages [2].

According to Sutanta in (A. Prasetyo, R. Sutanti, 2016) Interconnected Network or better known as the internet is a gigantic computer network with worldwide coverage of the World Wide Web (commonly abbreviated as WWW) or the web is one of the most internet applications popular. The web is a system where information in the form of text, images, sounds and others stored in an internet web server is displayed in HTML (Hypertext Markup language) [3].

Social communities that are engaged in handling the emphasis on activities of street children get a problem that often occurs where the activities of each community are still scattered, standing alone without any communication and coordination so that the implementation of activities against street children is not monitored and not run optimally [4].

Based on the existing problems, namely how to help facilitate an effective communication process for existing communities, then a problem-solving plan is made through an integrated design approach to communication applications between street children communities by utilizing a web-based application that can be accessed easily.

The purpose of this research is:

1. The existing community can communicate with each other about various activities that have been, will and are being carried out by each community.
2. Communities can exchange knowledge gained from the training that has been held by institutions and individuals.
3. Help facilitate the process of communication between existing communities.

2. Method and materials

To help facilitate research activities, a method is needed as a reference in the implementation step-by-step design of activities, by utilizing the waterfall method in system design.

The data used is obtained from the results of the implementation of community service programs that have been carried out by researchers.

The research stages used are reflected in Figure 1 below:

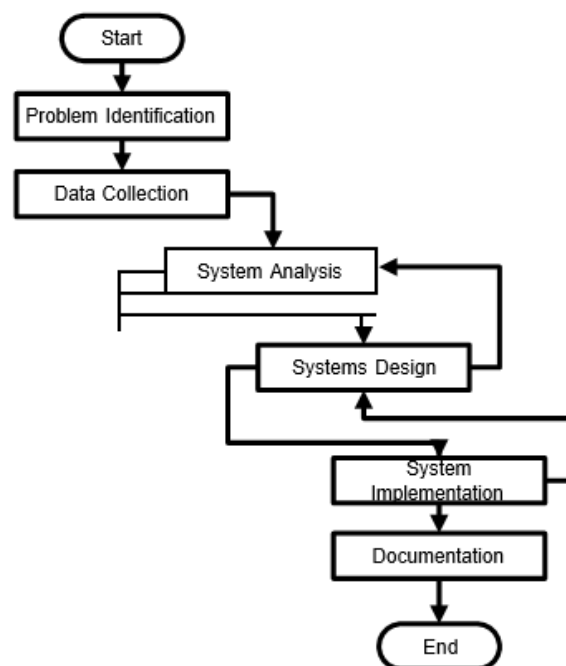


Figure 1. Research Stages

In the initial stages of the study, problem identification was carried out to find common problems that often occur in the community of street children.

Problem identification is done by visiting several existing street children communities. After the problem can be identified, data collection is done to support the research activities carried out using the interview and observation approach.

The data obtained is then analyzed as the main requirement for entry into the next stage, namely system design.

The system design method used in this study uses a waterfall approach, where this method is used to help facilitate the implementation of research activities.

After the stages of system design activities carried out, the applications that have been made can be implemented into a web-based system application environment.

3. Results and discussion

This existence of street children community is spread in several points in the area of Depok and surrounding areas. Their existence is spread without the process of communication and integration of activities. Each community carries out independence-based activities and also the benefits of each street child they care for. Not synergy between the implementation of inter-community activities becomes not optimal can cause the results of the implementation of activities that are partial and uneven. Therefore it is necessary to build and design an application that facilitates between communities to exchange information and communication about the implementation of the activities they hold.

Data collection was carried out on three (3) communities around the Depok-West Java location. the three social communities are communities that focus on the problem of empowering street children. Data collection is done through interviews and observations.

Analysis of information needs that have been identified after interviews and observations, the need for information on the implementation of activities, communication needs for the implementation of activities and the need to share knowledge.

System users of the application to be designed include the community of street children, donor organizations, and also street children. The system models that will be built include:

1. The process of identifying foster children
This process model is formed with the function to input data from foster children under the auspices of each street children community so that identification of foster children can be more easily done.
2. The process of identifying activities
This process model was formed with the function as a module to identify various activities carried out by each community to facilitate the search for knowledge and skills that have been carried out by each community.
3. The communication process
This process model is formed with the function as a means for communication between communities.

After the process model has been successfully formed, a process modeling is done using a process modeling notation that is useful to help facilitate the application design stage. The process model created is formed using Unified Modeling Language (UML) modeling [5] using the use case diagram tool.

The following is a use case diagram model that has been formed from a predetermined process model design, reflected in Figure 1 as follows:

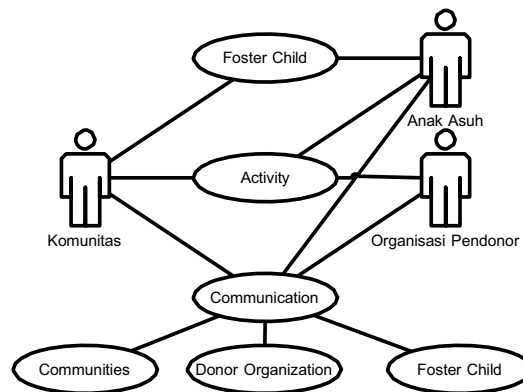


Figure 2. Use Case Diagram

After the use case diagram model formed, the next step is to design a system application by using the waterfall model. The design of system applications built by using web-based applications utilizing the use of PHP and MySQL languages for database design.

Determination of the selection of the use of web-based application design with the consideration that this application can help facilitate data and information access better, the availability of applications for 24/7 will assist in the process of implementing the activities of these communities.

The most important activity in this research is to build a communication modul-system. In this communication module-system, each user such as communities, donor organizations, and also foster children can be able to communicate with each other and share knowledge. The following is an image of the communication process module between street children communities, which is reflected in Figure 3 as follows:

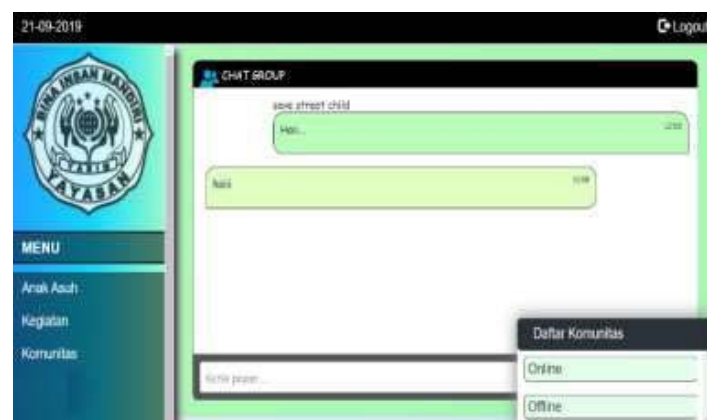


Figure 3. Model of Communication Process

The communication process plays an important role because in the communication process is the most difficult process to do between communities, time limitations, distance and effort become the biggest gap from communication barriers. With the communication process facilitated by the application, it is expected that the implementation of activities carried out by each community can be carried out better, the process of sharing data, knowledge and skills of foster children can run well and in accordance with the targets set by each community.

The information sharing process for donor organizations and foster children can be done better and easier with a more effective and easier communication process approach.

4. Conclusion

Based on the implementation of the research activities that have been carried out, it can be concluded that this research can assist the social community in:

1. communicating about various activities that have been, will and are being carried out by each community.
2. Exchanging knowledge gained from training that has been held by institutions and individuals.
3. Facilitate the process of communication between existing communities

Research development can be done by making an android-based application to identify street children they care for to facilitate the identification process with high mobility.

5. References

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