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Article

Online Crowd Funding Platform Information System

Amesanggeng Pataropura¹

¹Software Engineering, Buddhi Dharma university,Banten, Indonesia

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A B S T R A C T

In the modern world, especially in the field of crowd funding, technology is getting more advanced to facilitate fundraising activities. By utilizing computer technology in the field of crowd funding, it will facilitate fundraising activities carried out by creators and providing funds by donor. Such as can be done online fundraising. Currently there are still many people who carry out manual fundraising activities which require a lot of time because they have to make documents to support fundraising and they have to approach potential donor. The possibility of losing data on donors who have provided funds is very likely because funder data is only written in a book which causes the data to become irregular. To solve the existing problem is to create a system that can store data on fundraisers and donors electronically. Computerized systems can help fundraisers (creators) and donors. This system is made with the waterfall method and uses a web base where users need an internet connection to access this system.

INTRODUCTION

"Information technology is a technology used to process data, including processing, obtaining, compiling, storing and manipulating data in various ways to produce quality information, namely information that is relevant, accurate and timely, which is used for personal purposes, business, and government. In addition, information

technology is strategic information for decision making." [1]. Therefore, along with the advancement of technology, the public's need for fast, precise and accurate information is very important. There are also many computer systems that have replaced conventional systems one of which is in the field of fundraising (*Crowd funding*). "Crowd funding is where a large number of

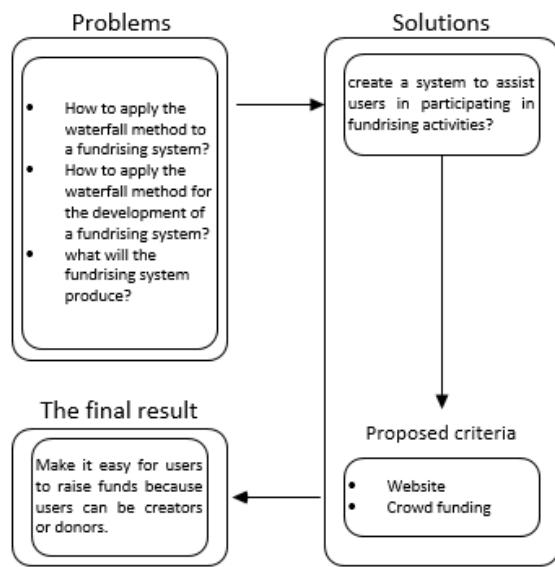
people (a crowd) financially support a project by providing a relatively small amount of money as a donation or potentially in return for equity. The use of a small amount of capital from a large number of individuals to finance new business ventures. *Crowdfunding* takes advantage of easy access through a network of relatives, family, friends and through social media sites like *Facebook*, *Twitter* and *LinkedIn* to attract *Investors*. Crowdfunding has the potential to improve entrepreneurship by expanding the investor network. People who want to raise funds for a project, product development, or almost any other form can register on a crowdfunding site and create a promotion [2]. Therefore, to simplify the fundraising process, the need for a fundraising system is needed where the main actors in the system are donors and creators of the system, which are expected to help both actors carry out their respective activities and increase the attractiveness of activities, raise funds.

I. METHODS

Research in the field of donations conducted with entitled "*Design and Build an Orphanage Funds Collection Information System using the Crowdfunding Method with the Donation Site Model*" [3]. This study aims to create a fundraising system named SD (one donation) which is shown to facilitate the collection of funds for the orphanage. The research methodology used is waterfall and PIECES as data collection. The system built is divided into two subsystems consisting of a web page as a front-end to display donation data, display and fill in the donation form and display the status of donations and the donation admin

web page that contains data on donations, confirmation of donations and fields for donation status.

Research in the field of donations with entitled "*Development of an Information System for Raising Donations at the Foster Parents Movement Foundation (GN-OTA) Lumajang Regency*" [4]. This study aims to facilitate donation activities at the Foster Parents' Conscience Movement Foundation (GN-OTA) in Lumajang district. The methodology used in this study is a waterfall with an object orientation approach. The system built consists of two sub-systems consisting of a web page as a front end to display donation data, display and fill out the donation form and the admin web page that is used to manage the donation site such as creating news, publishing, validating donations and displaying a list of donations. Research in the field of donations with entitled "*Hybrid Mobile-Based Donation Information System Using Web Service at Perduli Solo Foundation*" [5]. This study aims to build a mobile hybrid-based fundraising application for the Solo Care Foundation with the aim of facilitating the provision of Perduli Solo services for donors to make it easier to get program information. Confirm donations that have been made and communicate via message. The research methodology used is Service Oriented Architecture (SOA). The system built is divided into two subsystems, namely mobile android as a front-end to display fundraising data, choose fundraising, confirm donations, display payment receipts, and display news and message notifications and a single-page web admin to manage and print reports from mobile hybrid application.

**Figure 1. Framework model**

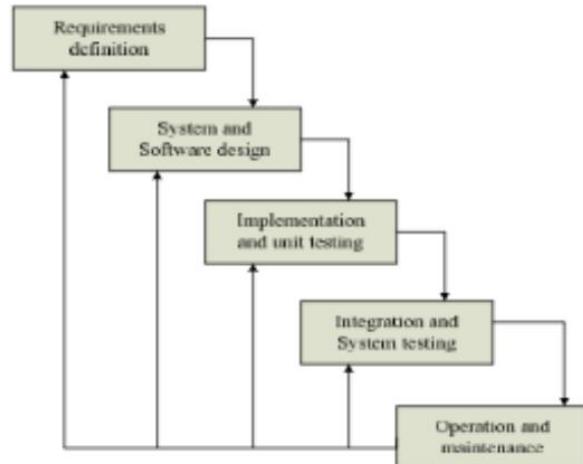
The picture above shows the problems that occur in the fundraising activity system that will be made and also the problem solving of existing problems, some of the criteria proposed to meet the problem solving are also expected to meet the expectations conveyed in the final result.

II. RESULTS

"Crowdfunding is the process of asking the general public for donations that provide startup capital for ventures. Using the technique, entrepreneurs and small business owners can bypass venture capitalists and angel investors entirely and instead pitch ideas straight to everyday internet users, who provide financial backing" [6].

System analysis is "An activity carried out to study the system, both manual systems and computerized systems as a whole, starting from analyzing the system, analyzing problems, designing logic, and making decisions from the analysis." [7].

Waterfall model is "Waterfall model takes the basic process activities of specification, development, validation, and evolution and represents these activities as separate phases such as requirements specification, software design, implementation, testing and so on" [8]. The following are the stages in this waterfall method as follows:



Sources: Kusumaningtyas, 2016

Figure 2. Stages Waterfall model

System design is "Designing is the development of a system from an existing system or a new system, where problems that have existed in the old system are expected to be fixed in the new system" [9].

Black box Testing is a test to see the results of execution through test data and check the functionality of the software. [10].

III. DISCUSSION

After observing the fundraising system manually, several weaknesses were found, such as:

1. Fundraisers must visit specific locations so the process is slow.
2. The search for donor data takes a lot of time because donor data is recorded one by one.

3. The risk of data loss and inaccuracy because it is only recorded.

After knowing the problems that exist at this time, it is necessary to change the system to identify the existing system requirements, among others:

1. Fundraising is online so that fundraisers do not have to visit specific locations to raise funds, which saves time.
2. Donor data is stored in a database so that the data is more organized and easy to trace.
3. Electronic data can provide data that is more accurate and faster.

After identifying the system requirements to make changes by creating an online crowd funding system, the following is a problem solving framework:

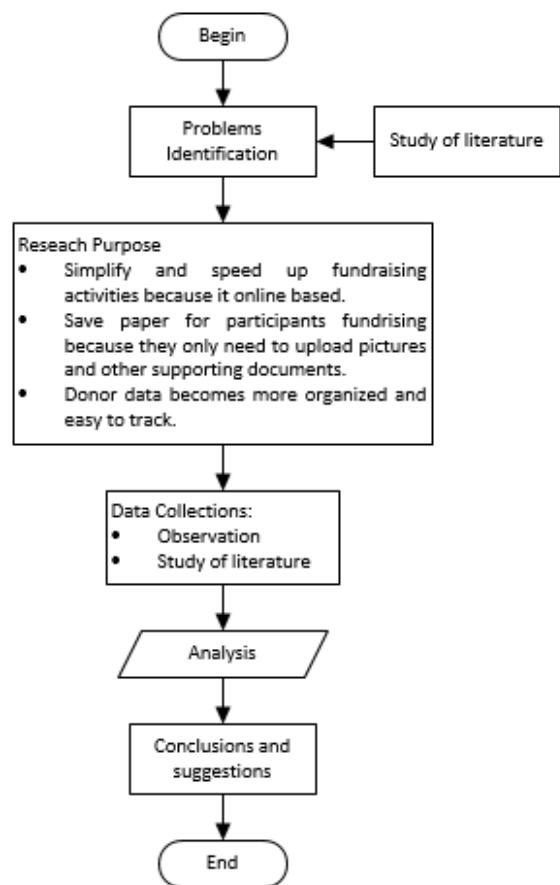


Figure 3. Framework for Problem Solving

After identifying the system requirements then entering the system design stage, design is carried out using the waterfall model method which consists of.

1. *Requirement*

Analyze the needs that will be applied to the program to be built. At this stage the writer determines the classification of the program to be made.

The author collects data such as the types of categories in the implementation of fundraising, actors who are in raising funds and then analyzes the data to suit what is needed in making the system.

2. Design

System design is the design stage of a system before the system can be implemented to meet the program classifications that have been determined in the identification of system requirements.

The author makes a system design. The following is the use case design and class diagram made by the author:

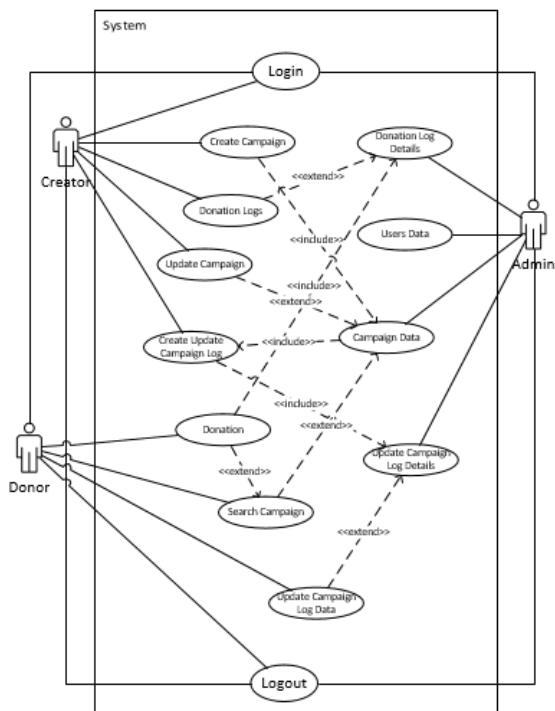


Figure 4. Use Case Diagram

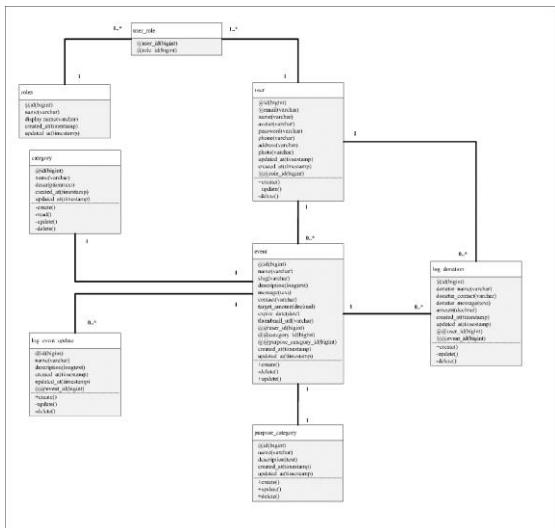
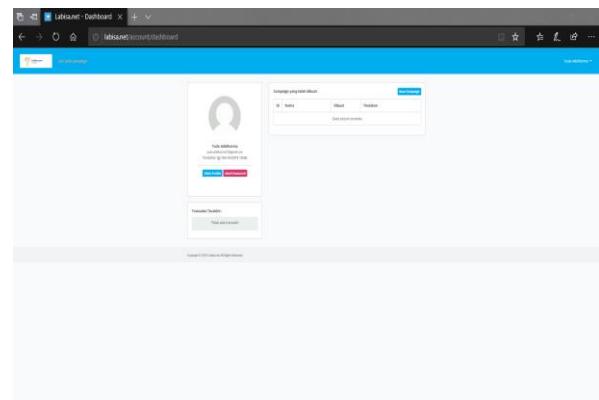


Figure 5. Class Diagram

3. Implementation

Implementation is the stage to change the design that has been made into a system that can run according to the needs that have been classified and is also the coding stage of designing a system design that has been designed before.

The author implements coding using a programming language, namely PHP which is created in the laravel framework and implements the program using the ".net" domain so that the system can run online. The reason the author uses the ".net" domain is because the ".com" domain is no longer available in the system. This can be accessed on the labisa.net domain. The following is a screenshot of the user dashboard obtained from labisa.net.



**Figure 6, Image Display of User Dashboard
labisa.net**

4. Testing

Program testing is carried out by the blackbox testing method, which is a program testing carried out where the program is tested only seen from the output data obtained from the input.

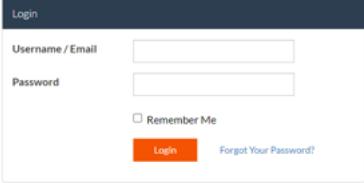
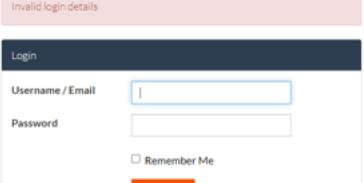
Test Scenario	Test Case
The user entered the wrong password or email.	
The system refuses login and displays "Invalid Login Details".	

Figure 7. Blackbox Testing Login

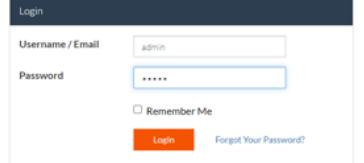
Test Scenario	Test Case
The user login with role admin.	
The system displays "Admin Dashboard Page".	

Figure 8. Blackbox Testing Admin Dashboard

5. Maintenance

Maintenance is the stage of system maintenance where the program that has been created will be updated or developed; media maintenance that is related to the computer is also part of maintenance.

Because the use of servers and domains uses a hosting service leased from DomaiNesia, the authors leave server maintenance to DomaiNesia.

IV. CONCLUSION

Based on the results of writing and analysis of the online crowd funding information system that has been submitted and discussed previously, the following conclusions can be drawn:

1. Fundraising is paperless so that fundraisers (creators) can save costs in raising funds.
2. Data storage of users, both creators and donors, can be done electronically so that data retrieval becomes easier and faster.
3. Facilitate fundraising activities because it is online, fundraising can be done by anyone, anywhere.

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BIOGRAPHY

Amesanggeng Pataropura S.Kom., M.Kom, Saat ini bekerja sebagai dosen Tetap Program Studi Teknik Perangkat Lunak di Universitas Buddhi Dharma.