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Development Application Cash Management In Tunas Mulia Bantar Gebang Foundation With The Extreme Programming Method

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ABSTRACT

The use of information technology that is implemented through an information system provides convenience for its users. The convenience obtained in using this information system is to facilitate data management and data retrieval based on predetermined categories. This phenomenon also applies to the Tunas Mulia Bantar Gebang Foundation. This foundation is an organization that serves out-of-school children from waste scavenger families around the Bantar Gebang TPA. Tunas Mulia Bangsa Foundation activities have several humanitarian programs, one of which is opening schools for scavengers from early childhood to high school. The problems faced by Tunas Mulia Foundation are (1) it is still difficult to record donors who provide assistance, (2) difficulty in identifying the types of receipts received by the Foundation, (3) difficulty in providing information on cash receipts and disbursements to donors because data management is still conventional, (4) difficulties in calculating or recapitulating activities that have been carried out, and (5) the absence of a system that displays complete data and information regarding student sponsorship activities carried out by Tunas Mulia Foundation. This research uses Extreme Programming development model in using Extreme Programming with four stages. It is hoped that the application that will be developed can be a solution to the problems faced by the Foundation regarding the management of incoming and outgoing cash. The target output of this research can be published in accredited national journals indexed by Sinta, HKI, and application prototypes.

1. Introduction

When you hear the name Bantargebang, your mind immediately goes to a landfill, which is famous for having an integrated waste disposal site (TPST) at that location. Administratively, the Bantargebang TPST area is located in Bekasi City, West Java Province. Even though it is a garbage disposal area, the area has a school, namely Alam Tunas Mulia which is managed by the Tunas Mulia Foundation.

Tunas Mulia Bantar Gebang Foundation is an infaq portal foundation as a liaison between muzzaki and mustahiq. Alam Tunas Mulia currently has 250 students, the majority of whom are scavengers who work every day to earn a living in mountains of garbage in landfills. The current education administration is not computer-based, making it difficult for administrators to manage educational activities. The administration section carries out routine activities such as writing, managing data at educational institutions. The existence of a computer-based information system will facilitate educational institutions in terms of data management so that the information needed can be quickly, accurately and precisely in presenting a report[1]. At the Tunas Mulia Bantar Gebang Foundation, all administrative activities are carried out manually or conventionally and

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are managed by the administration. To help with administrative work, an integrated information system is needed[2]. From the results of processing on the system, information is obtained that is more useful and meaningful for its users[3].

Based on the problems above, the author tries to design a website-based information system that can be accessed anytime and anywhere. "Web is an information presentation that uses the concept of hyperlinks or links that make it easier for surfers or computer users to browse or search for information through the internet[4]. The technology used in designing educational administration applications uses the Codeigniter framework. CodeIgniter is a form of framework for the web that is formed in PHP format. The format that is formed can then be used as a maker of complex web application systems"[5].

CodeIgniter is an open source application in the form of a framework with the MVC model stands for Model, View, Controller to create dynamic websites using the PHP programming language. MVC is a programming concept where logic and layout are separated so that programmers and designers can work on their own focused work[6]. PHP programming language, Sublime text, and MYSQL for databases.

In building an application cash management using the Extreme Programming method, there are 4 stages in using Extreme Programming, namely planning, design, code, and testing.

In writing this journal, the author uses several references, such as Musyafa making school administration applications at Putra Pertiwi Junior High School. The methodology used is the waterfall, data collection with observation and interview techniques, research conducted by analyzing school problems and the results are intended for suggestions for improvement for the principal of SMP Putra Pertiwi in improving the performance of administrative staff. In application development using the PHP programming language and MYSQL database[7].

2. Research Methodology

The research method is a description of the way or strategy taken to solve a problem[8]. The ways to do this are: 1). Observation, Observation is a process of direct observation of the object under study by recording logically, systematically, rationally and objectively in actual conditions[9]. In this case, the observations were made at the Tunas Mulia Bantar Gebang Foundation having its address at JL. Pangkalan 2 Rt. 02/04 Sumurbatu Village, Bantargebang District, Bekasi City 17153 West Java, Indonesia, 2). Interview, This interview is a collection of data by means of direct question and answer[10]with the management of the Foundation in order to obtain accurate information. The interviewees were Mr. Juwarto as the administrator of the Foundation who coordinates daily with all staff in carrying out school activities and Mr. Yusuf Suprapto as the Supervisor. 3). Literature Study, Literature Study, namely research conducted by searching and studying literature with a view to obtaining theories regarding the main problem being discussed[11]. In this study the development model chosen by the research team is the object-oriented Extreme Programming Method which is the basis for the ease of the research team in analyzing problems and providing solutions according to user needs. The stages in the Extrame Programming model[12] are as follows:

a. Planning (Planning) In the planning process, a data collection of system activity requirements is carried out that allows users to understand the business processes for the system and get a clear picture of the main features, functionality and desired outputs. Planning technique by conducting user analysis, analysis of old business processes and new business processes.
b. Design In the design stage, the system modeling is made based on the results of the analysis of the obtained requirements. The engineering system used uses UML (Unified Modeling Language) and besides that, database modeling is made to describe the relationship between data.
c. Implementation or Coding At the coding stage, the program code is written, using several programming languages.
d. Testing (Testing) The method of testing the application that has been built, at this stage is determined by the user of the system and focuses on the functionality features of the entire system and after that it is reviewed by the user.

   Based on the development model that has been selected, the following is a framework of thought that forms the basis for the stages for researchers in carrying out research activities, namely:

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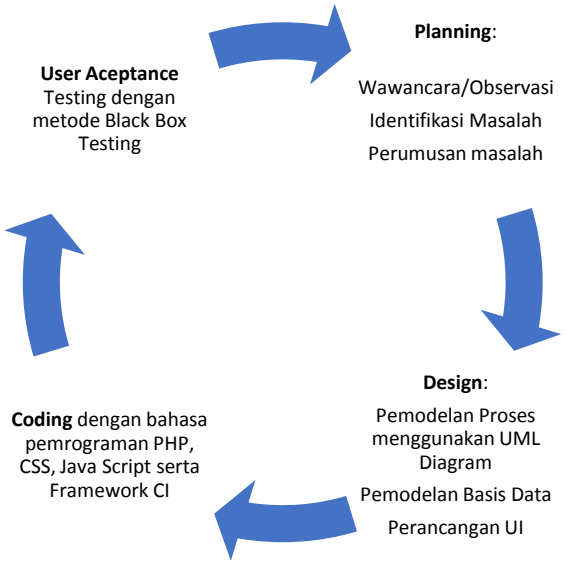

Fig 1. framework of research based on extreme programming method

3. Result and Discussion

a. Planning In the planning process, observations and interviews were carried out at the location of the Tunas Mulia Foundation and then identified, analyzed and formulated the problem.

b. Design
In the system design stage, the technique used using UML consists of designing usecase diagrams, activity diagram, scenario activity diagram and class diagram, as shown in the image below.

- Use case diagrams
  In the use case diagram there are 4 actors, namely admin, sales department, donation section, and expenditure section, each actor has different access rights in interacting with the system.

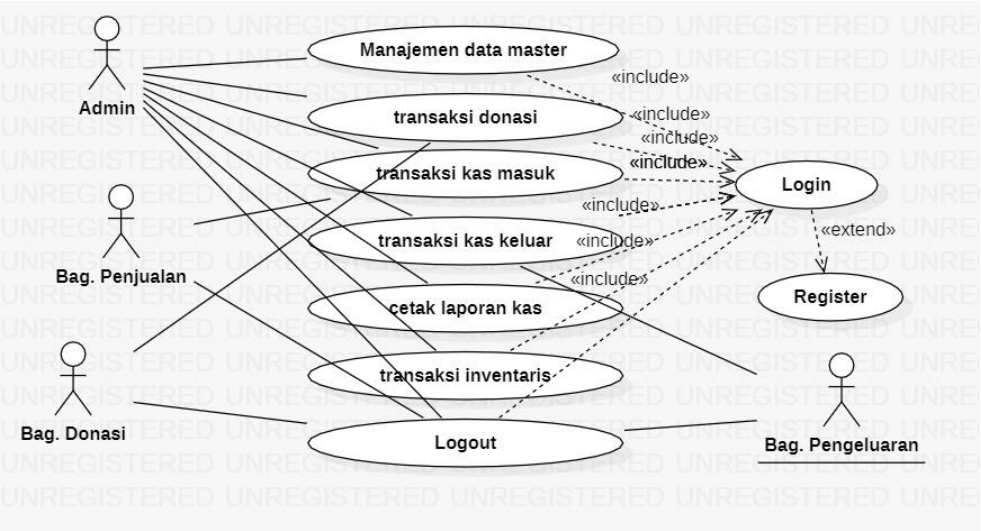

Fig 2. usecase diagram of Application Administration Of Education

- User Interface Design
  In the application design using figma tools to design a login menu, dashboard page display that

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contains a menu of donor data, cash types, inventory types, donations, cash in, cash out, inventory donations, and cash reports, the features added on this page are graphs and descriptions of the amount of funds donations that have entered the system as shown in the image below.

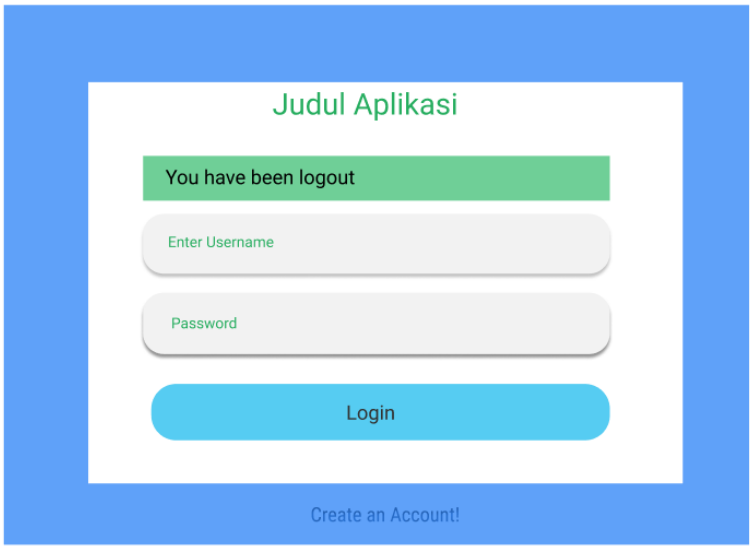

Fig 3. Interface Design of login menu page

Fig 5. Interface Design of the Admin Dashboard Page

c. Implementation

At this stage the program that has been made must be implemented in order to have the desired impact and goals, the purpose of implementing this program is to see whether the system is in accordance with the system that has been designed and proposed previously and ensures the system runs as expected and in accordance with the system designed and implemented. previously prepared, the following is the implementation of the program.

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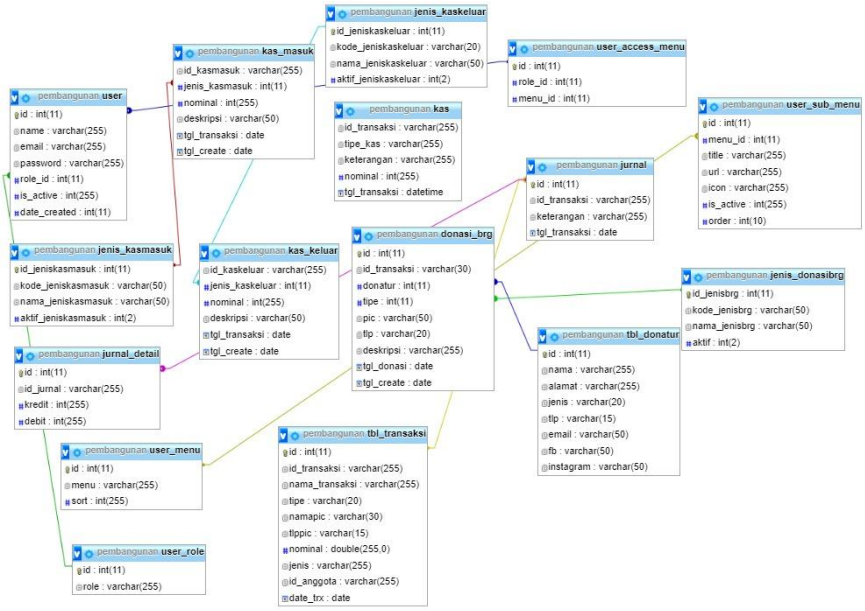

Fig 6. Database architecture

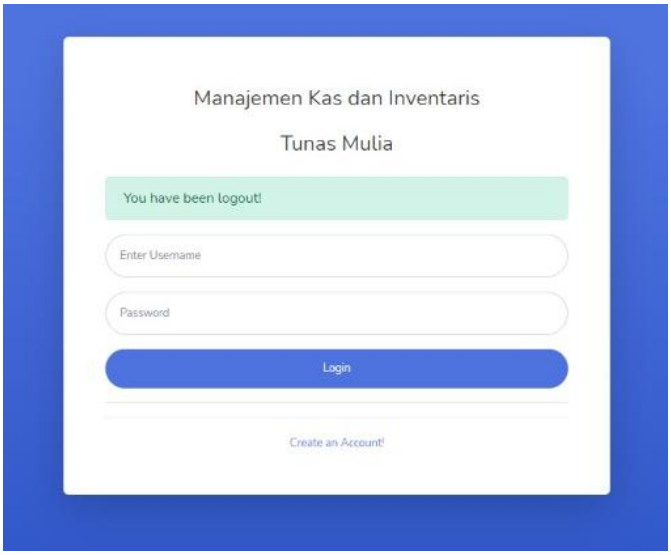

Fig 7. Implementation login page

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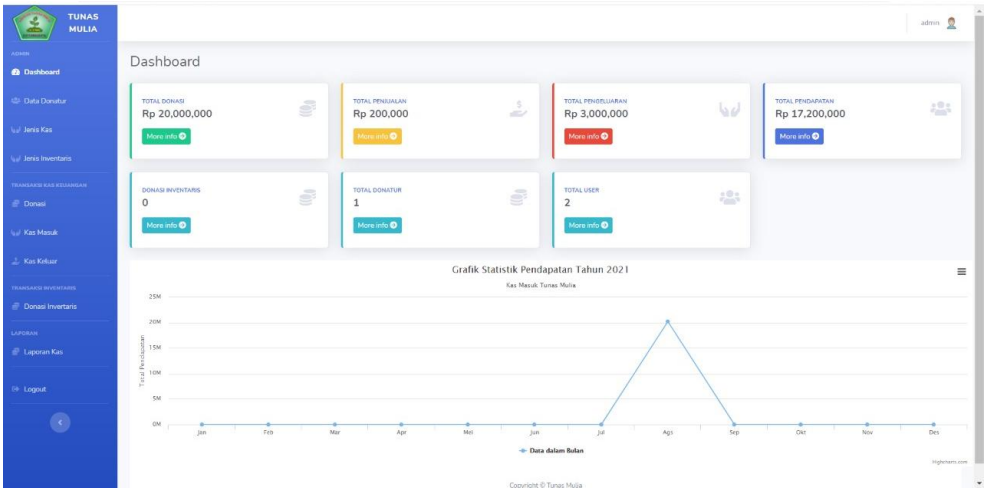

Fig 8. Implementation dashboard page

4. Conclusion

Based on the research and discussion that has been carried out on the development of the Tunas Mulia Bantar Gebang Foundation Cash Management application with the Extreme Programming method, it can be concluded as follows:

a. With a website-based cash management information system it becomes easy to record donors who provide assistance,
b. types of receipts received by the Foundation are easy to identify because the cash management information system has a menu to input cash in the form of money or goods,
c. With the information system on cash receipts and disbursements to donors, it becomes easy because information can be accessed anytime and anywhere,
d. The web-based Cash Management information system makes it easy to recapitulate the activities that have been carried out at the Tunas Mulia Bantar Gebang Foundation, and
e. With the web-based Cash Management Information system, it is possible to display a complete, accurate and valid report on donation activities to students and submitted to donors. si Stematic and easy.

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