THE DEVELOPMENT OF APPLICATION GPS AND GEOVENCING TO SMARTPHONE ON USING SECONDHAND

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ABSTRACT

The foundation who has a care on the poorest family the daily activities dedicate a social charity, the informal education of farmer and the farmer of village child. The accompaniment healthy life and the economical farmer. The focus of activities in North Bandung area (KBU) which the life of marginal citizen and some of activities survey another area. The function of technology and information do need mainly Odesa. The problem who are faced which the using of them is not maximum, it is be the problem until now and have not handled and fulfill necessary Odesa. Involving the benefactor still lack of hope, the trouble of benefactor who is picked of society, because ignorance or lack of information Odesa center. The purpose of research to maximize the function of technology and information for handling the problem who is faced. So the development application GPS and Geovencing to smartphone on using secondhand in the foundation of Odesa Indonesia. Base on BlackBox and Beta test who has examined then it can be taken a conclusion that functionallu all of process on Odesa.ID application can solve the problem of Odesa.

Keywords: Donation of thing, technology of social life, GPS, Geofencing, the humanity volunteer service, the function of secondhand.

1. INTRODUCTION

1.1 Background of Knowladge

Nowdays. The development of technology which who is looked significantly which the development of communication can put on social change in socety. Odesa Indonesia is one of the social institutions engaged in mentoring, research, study and action-social citizenship, the purpose of which is to create change in the community with the aim being taken of civil society groups at the lowest (pre-prosperous) level. The foundation which is located in Bandung regency was established in 2016 and legalized in 2017,

The research resource persons were directly with Mr. Faiz Manshur as executive board and chairman of the Odesa Indonesia Foundation. The fact is that Odesa has a website that is already running containing information about the program of activities and donations, she also explained that the role of a technology, especially smartphone technology, would be very helpful for the Foundation, especially to improve programs that are more maximal, the Foundation explained some problems that occur in the Foundation and hope can be overcome by the use of information technology, namely the android application. Problems that occur at the foundation. He said, one of the supporters in the running of the program in the foundation was donation, so the problems that occur at this time according to Odesa explained, (1) that so far the donation process was still conventional, where the Odesa party received used goods from surrounding communities come directly to the office or through an officer who is known, the expectations of Odesa can attract donors not from the surrounding community but can capture more broadly. Because according to Odesa, the used goods received so far are not comparable to the needs in the field, there are still many people who are entitled to receive donations but have not received them.

Odesa also has a routine activity program which one of the objectives is to support and provide facilities to children from disadvantaged communities so that they can get education as a mentoring program and study. (2) The problem that occurs is that Odesa is still short of experts and requires volunteers from the general public who want to learn about the activities that Odesa is doing. (3) In addition, the Odesa party explains many complaints from the community. Whereas when they will donate goods directly or indirectly, people who need medicine, want to take part in an activity program. They said there was a lack of information on the locations of Odesa because of the lack of information that ultimately canceled her intention.

Based on the results of previous interviews, the authors plan to make an application that hopes to be able to overcome the problems that arise. The author will also make it in an Android mobile device, because these problems are more supportive to overcome using mobile devices.

1.2 The Aims of Research

The aims of research will be done to build the application who can be easier the process of donation, share location of the official Odesa and easier Odesa recruit volunter and the expert of society.

The aims of research will be done, such as:
1. Give ease the information and the process of donation in the foundation of Odesa Indonesia to society.
2. Fase to recruit the volunter of expert of general society.
3. Give ease the information of Odesa location.

2. RESEARCH CONTENT

2.1 The Method of Research

The using of methods research is descriptive. The descriptive method is one of method to research and human cluster status, object, condition, the thinking of system, or phenomenon class. The aim of descriptive research to make description, sistematical ilustration, factual, and accurate facts, characteristics, realtion between phenomenon who is investigated [2].

2.2 The Development Software

The method of software who is used waterfall method.
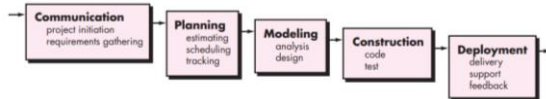
**Picture 1 Waterfall Method** [2]

2.3 The analyze of Problem

Based on observation the system of analyze who is done by using evolution to the application who will be built. Some of problem is the result of analyzing the problems who have analyzed involving.
1. To donation is conventional, where Odesa receive secondhand of around society.
2. The less of expert and need volunteer of society who want to study about the activity of Odesa.
3. Many gripes of socety that when they will donate direct or undirectly, the society who need medicine untul the Odesa's program. They say if the information is lessy mainly share location so that they cancel donate it.

2.4 The Analyze System will be built.

The system analyze who will be built is the full description. Base in the system analyze system will be built, such as:
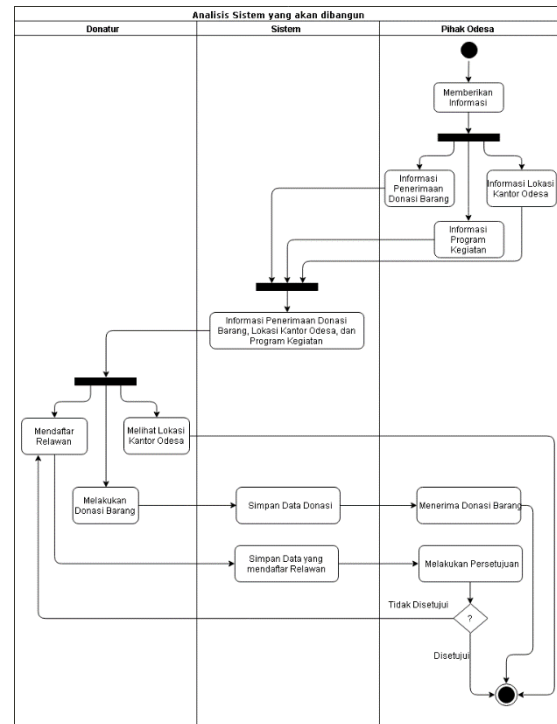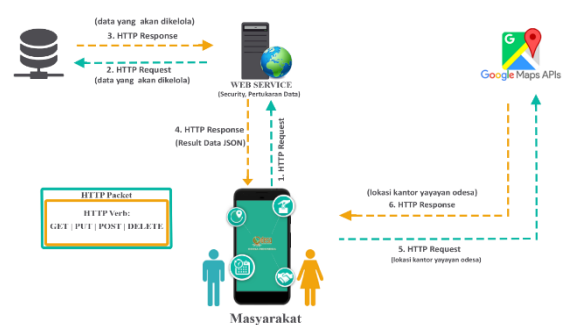

Picture 2 The Analyze System will be Built

2.5 The Analyze of Architectural System

The analyze of architectural system has aim to identity architecture who will be bult and consist of two neither the analyze of architectureal mobile and web.
Look at picture!

Picture 3 The Archtectural Mobile System

The description of the architectural mobile system:
1. The application who is installed to device have included GPS and Internet.
2. User as society re-quest the data to web service the response and send data available of database.
3. User as society re-quest the data's location Odesa the the application show map of Odesa's location through Google Map-API.
4. Data has received output is JSON.

Picture 4 The Analyze of architectural web system

The description of architectural web system:
1. Client is user web request switable necessary
2. Server will process the request.
3. The resut of process will be back to client.

2.6 Analyze User

Analyze User consist of two involving Donatur as user mobile and Administrator of Odesa as user web.

Table 1 Analyze User Web

Actor	Descriptioni
Admin	Someone who work and heve acess to do management operation of data user, management donatur, management program's activity, management volunter, management kinds of things, management adress.

Table 2 Analyze User Mobile

Actor	Description
Donatur	Doantur can be able to login, register, donation's secondhand, login to volunteer, look at location and available member of Odesa, look at history of donation and look at history of volunteer.

2.7 Need's software of specification Mobile

Need's software of specifitaion to system who is built to be two involving need's mobile software of specification and need's web software of specification can be seen on below.

Table 3 Need's mobile software of specification.

SKPL Code	Need's software of specification
SKPL-F-M-001	Mobile system prepare facility for donatur to login.
SKPL-F-M-002	Mobile system prepare facility for donatur to register.
SKPL-F-M-003	Mobile system prepare facility for donatur look location.
SKPL-F-M-004	Mobile system prepare facility for donatur to take donation's second hand.
SKPL-F-M-005	Mobile system prepare facility for donatur to look history.
SKPL-F-M-006	Mobile system prepare facility for donatur to look program.
SKPL-F-M-007	Mobile system prepare for donatur to register as volunteer appropriate program.
SKPL-F-M-008	Mobile system prepare for donatur to look volunteer's history.
SKPL-F-M-009	Mobile system prepare facility for donatur to look profile.
SKPL-F-M-010	Mobile system prepare facility for donatur to edit profile.

Tabel 4 Need's software of specification Web

SKPL Code	Need's software of specification
SKPL-F-W-001	Web system prepare facility for admin to login
SKPL-F-W-002	Web system prepare facility for admin to manage the data's donatur.
SKPL-F-W-003	Web system prepare facility for admin to manage the data's donation thing.
SKPL-F-W-004	Web system prepare facility for admin to manage the data's second hand.
SKPL-F-W-005	Web system prepare facility for admin to the kind of things.
SKPL-F-W-006	Web system prepare facility for admin to manage the ddata's for goods.
SKPL-F-W-007	Web system prepare facility for admin to manage program.
SKPL-F-W-008	Web system prepare facility for admin to manage the data adress.

2.8 Analyze of functional need

Analyze of functional need consist of two involving functional mobile need and web, the steps of analyze to movile use UML such as use case of diagram, use case of scenario, activity diagram, class diagram.

Analyze functional need in platform mobile android will be explain, such as:
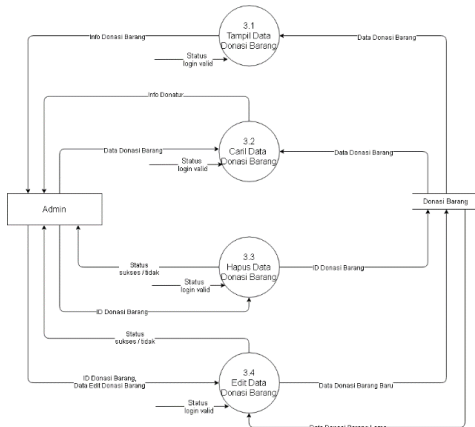
2.8.1 Use Case Diagram

Use Case is description of a system user. Use case picture.
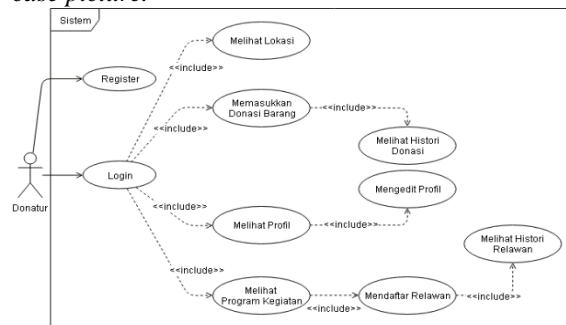
Picture 5 Use Case Diagram

2.8.2   Use Case of Scenario

Use case of scenario is description of use case diagram to define what should the system do when subject activate use case.

Table 5 Use Case of Scenario – the donation'sthing

Use Case	Put the donation's thing
Brief Description	SKPL-F-M-004
Actor	Donatur
Precondition	Input form which the donation's things will be shhow
Main Flow	1. Donatur choose menu the donation's things. 2. System show input form of the donation's things. 3. Donatur put the data's donation thing 4. System check validity field 5. System save th data donation to database.
Alternatif Flow	Empty field is show message 'empty field' and back to process 3, but if field fill can continue process 5.
Postcondition	Donatur succed to do the donation's things.

2.8.3   Class Diagram

Picture 6 Class Diagram

2.8.4   Sequence Diagram

Sequence Diagram to describe the activity of scenario. The sequence diagram to the donation's things.

Picture 7 Sequence Diagram – Donation's thing.

Analyze of functional web need will be explain, such as:

2.8.5   The Context Diagram

Picture 8 The Context Diagram

2.8.6   DFD level 1

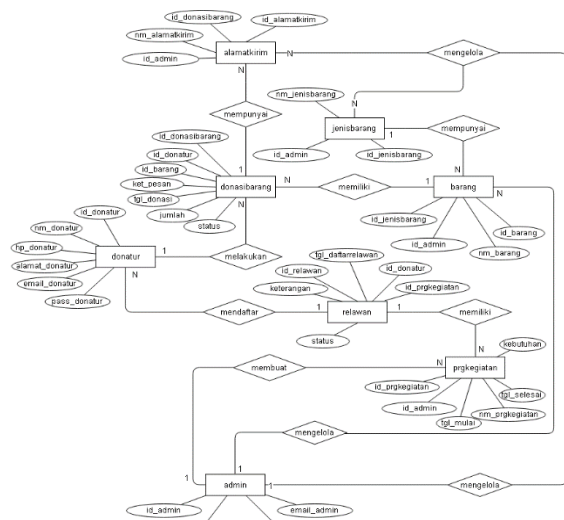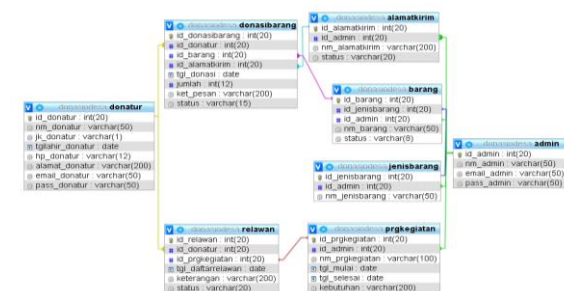**Picture 9 DFD Level 1**

2.8.7 DFD level 2

Picture 10 DFD Level 2

2.9 The Planning System

The planning system consist of two involving ER diagram and relation scheme. The example picture of ER Diagram and relation scheme:

Picture 11 ER Diagram

Picture 12 Relation Scheme.

2.10 Test Scenario

Test scenario software will be built consist of system testing use functional examination method Blackbox and examination user acceptence testing use method interview ti Idesa staff and quetioner to society.

Table 6 Examination's Odesa Staff

No	Question	Answer		
		Yes	No	Reason
1	*Does the Odesa.ID application can reqruit largely Donatur of socety?*	√		*Be able, because most of socety is find. Easily through some network with platform website Odesa and social media which the relation between some platform is added implementation of the application Odesa.ID. the staff of Odesa commit to develop and implement the program who was made.*
2	*Can the application recruit volunteer of society?*	√		*Odesa staff commit if it can be able the contribution SDM because the platform of the Odesa application is more famous.*
3	*Can the application take the gripes of socety and add the society to come the Odesa office?*	√		*No. There are difficulties with the available picture in the Odesa application is enough good model in supporting activity in the foundation Odesa Indonesia.*

Below is a list of test results for Odesa.ID Application users, namely Society.

Tabel 7 Pengujian Pihak Masyarakat

No	Pertanyaan	Skor				
		5	4	3	2	1
		SS	S	CS	TS	TST
1	*Apakah dengan*	27	28	5	0	0

	Aplikasi Odesa.ID memudahkan anda dalam mendonasikan barang-barang bekas layak pakai yang sudah tidak digunakan lagi?					
2	*Apakah dengan Aplikasi Odesa.ID, anda bisa bergabung sebagai Relawan dalam program kegiatan yang diadakan oleh pihak Odesa?*	16	39	3	2	0
3	*Apakah dengan Aplikasi Odesa.ID. Anda bisa dengan mudah mengetahui informasi tentang Lokasi Kantor seluruh Yayasan Odesa Indonesia?*	22	32	6	0	0

3. CLOSING

3.1 Conclusion

Based on the results of testing the Odesa.ID software on the android platform, the conclusions are as follows:

1. With the Odesa.ID Application you can capture more donors.
2. With the Odesa.ID Application the general public can join the Odesa party as Volunteers according to the program of activities held by the Odesa party.
3. Interest in the general public to come to the location of Odesa to find out what activities there are in Odesa are increasing.

3.2 suggestion

The Odesa.ID application is a software product used by the Odesa Indonesia Foundation to help implement the process of donating used goods and recruiting volunteers from the general public, therefore there are some suggestions that can be used as a guide to developing software towards a better . Here are suggestions from the author:

1. Improve the quality of User Interfaces in Odesa.ID and Website applications so that users are more comfortable using them.
2. Conduct research on User Experience for users to be applied to the next application version.
3. Carry out Technology Development according to the needs of the Odesa Foundation which can be applied to the next application version.

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