

# Donation Assistance Management System for people who need help.docx

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**Submission date:** 11-Sep-2019 12:06PM (UTC+0100)

**Submission ID:** 110653812

**File name:**

64181\_Saruniya\_Manivannan\_Donation\_\_Assistance\_Management\_System\_for\_people\_who\_need\_help\_540009\_915956465.docx  
(6.26M)

**Word count:** 12958

**Character count:** 66721

## CHAPTER 1: INTRODUCTION

8 A priority for us is the creation of more jobs that will minimize poverty and provide for prosperity for all Sri Lankans. Towards this, we need to enhance our capacity to successfully compete in global markets while creating the necessary space for investments to come in.

1 In 2017 poverty headcount index was 4.1 percent and it was failed from 6.7 percent in 2012/13 and still in 2017, 843,913 people were in poverty. (Lanka., 2017)

1 Sri Lanka a Perl of Indian Ocean is one of the small country in Asian Continent in which there are about 21 Million living. Still in Sri Lanka there are about “6.7%”, population who are living under poverty line in which it is estimated as minimum level of income needed to secure necessities of life. Poverty refers to the share of individuals whose house hold per capital consumption will drop drastically below official poverty line .(Population, 2018)

Between 2008 and 2015 the absolute international poverty line was set at \$1.25/day in 2005 dollars. However, in 2015 the World Bank updated this from \$1.25 to \$1.90 per day, in 2011 dollars to reflect the changes in the estimated purchasing power of the dollar in poor countries between 2011 and 2005. In both cases, the line was set based on the national poverty lines of 15 very low-income countries, converted to US\$ using purchasing power parity exchange rates. Sri Lanka has among the lowest extreme poverty rates among countries in the region, as 1.8 percent of the population were estimated to be extremely poor in 2013. However, living standards remain low, as nearly 45 percent of the population lived on less than \$5 per day in 2013. (Haque, 2017)

A non-governmental organization (NGO) is any non-profit, voluntary citizen group which is organized on a local, national or international level. Task-oriented and driven by people with a common interest, NGOs perform a variety of service and humanitarian functions, bring citizen concerns to Governments, advocate and monitor policies and encourage political participation through provision of information. All over the world, NGO plays an important role in the socioeconomic process of the countries in which they operate. NGOs in Sri Lanka are no exception.

Currently in Sri Lanka there are about 200 NGO's who are functioning as an Organization as well as an individual trying to provide services to those people who are requesting. Since these people

are mostly functioning on Village areas as Southern, Northern, Eastern, North Central 1 Central

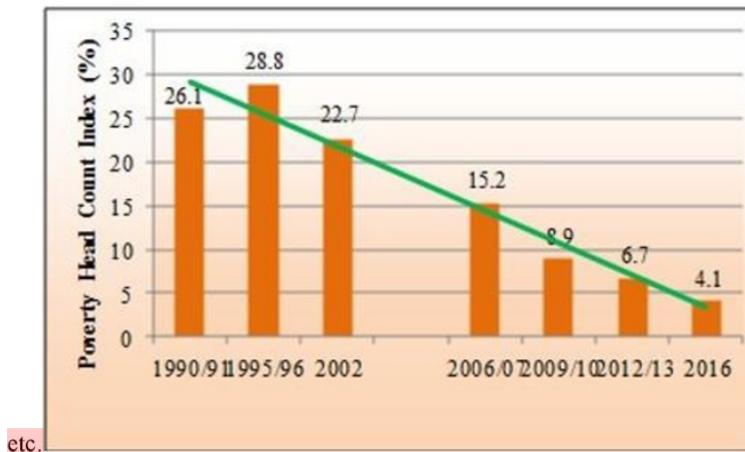


Figure 1 Poverty Count

## PROBLEM STATEMENT

As non-profit organizations, NGOs depend on a Variety of Facilities for funding projects, operations, salaries and other overhead costs. Since the Annual Budget of an NGO can be in the hundreds of millions (or even billions) of dollars, fundraising efforts are important for the NGO's existence and success. But even though there are still more funds which they have to receive from other countries or interior countries. Here are some issues faced by the NGO's in Sri Lanka in developing the Nation in which their role is must for developing countries.

1. Time delay on receiving money from donor

Since there is a delay on receiving money from donor in which each donor will say that they will give money but getting delay on sending money to those NGO's.

2. Un skilled employees to train those people who are in trouble

There are NGO's who are willing to offer help but not Skilled or educated in offering those services to these people.

3. Organizations are searching for volunteers to do projects

There are individuals/ organizations who are searching for volunteers to do their project but don't know how to search for volunteers and how to get help from those volunteers.

**4. Lack of education offering to people who are living under poverty line.**

There are people who are living under poverty line who doesn't go to Schools or withdraw from schools or higher education due to insufficient living slandered and going to work. This problem comes due to insufficient facilities in their schools.

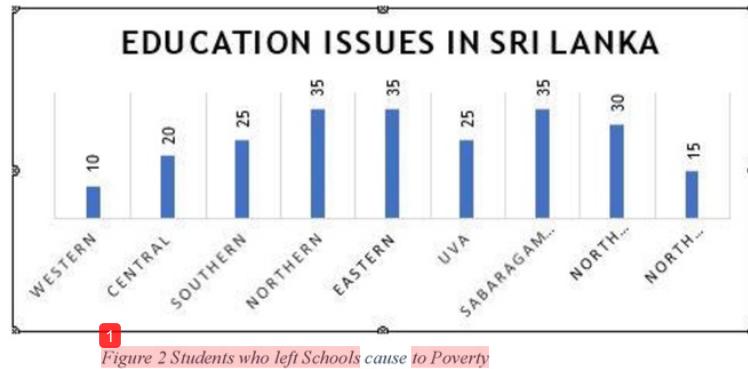


Figure 2 Students who left Schools cause to Poverty

Refer Appendix A1 ([Evidence Regarding Problem Domain](#)). For more Information,

Refer ([Challenges](#)) for more information.

### Fish Bone Diagram for Problem Domain

Refer Appendix A2 ([Fish Bone Diagram](#)). For More Information

## LITERATURE REVIEW

Poverty is known to be a person or a group of people who is living under extreme poor status. Here he or she is not reached the sufficient money for his or her living wellbeing in other words the person is not able to satisfy his or her daily needs.

In 2016 poverty headcount index was 4.1 percent and it was declined from 6.7 percent in 2012/13 and still in 2016, 843,913 people were in poverty (Department of Census and Statistics, 2016). Since this was a Household Income and Expenditure Survey (HIES) which is known to be a main source of data which is used to calculate the Poverty in Sri Lanka and this was conducted by Department of Census and Statistics once in three years and the latest survey was conducted in 2016.

Stake Holders are the main parties who will concern on the development of a business. Even to reduce the poverty there are many people who are willing to offer help since they are also a Stake holder for the business or projects.

“The work undertaken by NGOs is wide-ranging but NGO roles can be usefully analyzed as having three main components: Implementer, Catalyst, and Partner (Lewis, 2007).”

The relevant literature review was successfully conducted and critically evaluated according to the main areas of the Project. Most importantly factors, which are affecting the NGO's in Sri Lanka including a small contribution to solve the Poverty in Sri Lanka. Further this research will help those individual people who are searching to offer help in regard to volunteers at the same time those NGO's who are seeking for Candidates and offering of Education service will also impact on this System and explained clearly. Here I am also going to generate the Online Report which can be checked by the Users and the System Admin the Transaction made by them (Donation Fund).

“Educated men and women are more likely to hold jobs that are secure, with good working conditions and decent pay. Therefore, it is important to take a closer look at the education offered to poor children in Sri Lanka.” Children have to go work to solve the poverty of their family after completing O/L's. No proper schools for Children who are living under village area. Family members are not educated so children are not allowed to continue doing education.

“Children 5-14 years of age not attending school: Although Sri Lanka has almost achieved universal primary education, a significant proportion of poor children in the compulsory age for schooling is still not attending school. Out of a total of 3.5 million children in the age group 5-14 years, 391,461 (or 11.3 per cent) are poor. Of them 24,276 (or 6.2 per cent) are not attending school. Although the percentage is small, according to above calculations, poor children are nearly 8 times more likely to not attend school, in comparison to the non-poor children in the same age group. Out of the 3.08 million non-poor children (5 to 14 years), 0.8 per cent (or 25,728) are not attending school or any other educational institute, which is also concerning.” ([Poverty and Access to Education, 2017](#))

### **Stakeholder Involvement towards Poverty**

“Poverty Reduction Strategies (PRS) have become the most important policy instrument in more than 60 developing countries around the world. One of the core principles of the approach is country ownership, built on broad-based participation of stakeholders inside and outside the governments, including parliaments, civil society organizations, private sector representatives and other stakeholders at national as well as local levels. How this theoretical approach has been realized in practice – especially beyond the strategy development – is a matter of debate since its introduction in 1999.” ([Institute of Development and Peace, 2006](#)).

Stakeholders are the main parties who will concern on the development of a business. Even to reduce the poverty there are many people who are willing to offer help since they are also a Stake holder for the business or projects.

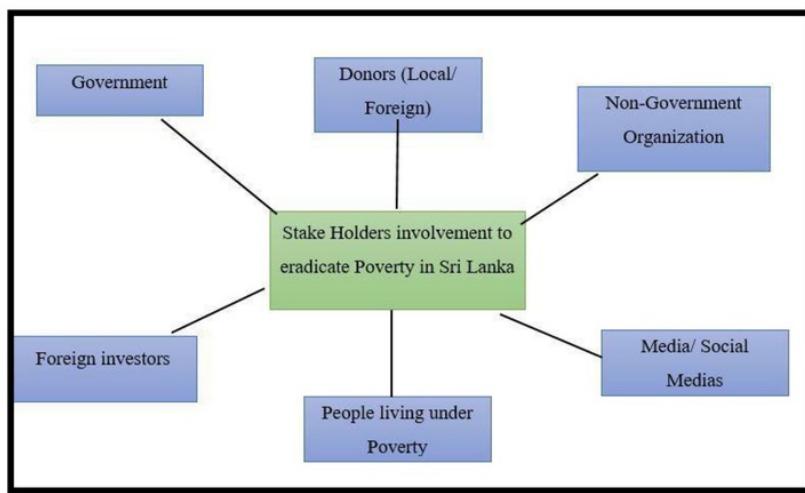


Figure 3 Stakeholder Involvement on Poverty Eradication

## **Challenges faced by the Organizations**

### **1 Time Delay on receiving Donations from Donors**

“Foreign donor agencies have a responsibility to ensure that funds donated by them are not abused; and to ensure that these donations are used for the purpose given, and that the receiving organizations adopt proper accountability principles. Part of this responsibility is to ensure that decisions are taken by the correct people in the correct way and there are mechanisms that exist to achieve this. Since funds for donations are raised in the name of the poor, the donors too, have a responsibility of being answerable to the poor. These funds belong to the poor of the poor countries.

Since many of the problems can only be solved in collaboration with each other, the implementers of programs have a responsibility towards collaboration, as the donors have responsibility of collaboration with each other. If this collaboration does not exist it results in a divisive influence”<sup>19</sup> (Role of foreign donor agencies), (Sri Lanka’s Development Debate and the Role of NGOs). As per to the above-mentioned magazine information the role of Donor is to give their donations on time and must ensure that the Donor has received the money. Since there are some Donors who will give assurance that they will donate money for those people who are in search for any help but doesn’t donate on time or may miss to donate money for those people. So as a result, the person or NGO who has requested for help will get cheated.

### **Government Intervention on Organization**

Government is another institution which will get involved in almost all the organization including Non-Government organization as a Part of Registration and Tax collector for the development of the country.

“The development processes adopted by early post-independence governments gave priority to social welfare. The political process in the country where the left parties educated and informed people about their rights influenced these.” ( Sri Lanka’s Development Debate and the Role of NGOs, Island.lk magazine ).

According to the above statement Political Party is also another reason which is getting involved on the development of Rural in which these people are contributing through these NGO’s. Since some political parties own NGO’s on their hands. But there are people who are getting involved on NGO activities to disrupt the development of the NGO and the Helping hands of the people.

## **PROJECT OBJECTIVES**

- To develop the knowledge on understanding the problem territory and leading the background study on poverty in srilanka and the government involvement to eradicate poverty in srilanka with the available statistics and literature review gaps.
- To identify and reduce the problem face by donors on giving donations.
- To provide best solution for people who are living under poverty to gain a competitive advantage on receiving their basic needs.
- To solve problem for both organizations and donors on connecting them easily and proving an overall solution for them especially NGO around village level.
- To improve the quality of the prototype and add necessary features and come up with the solution with a web solution.
- To improve knowledge on project management techniques and system development approaches and methodologies.

## **PROJECT SCOPE**

<sup>1</sup> The research attempts to identify the causes and the consequences of the communication gaps with help requestor and the donor in which an Individual and Organizations who are requesting for help and the people who are willing to offer help or give donations. Here user can apply for jobs at the same time can apply as Volunteers for any projects. There is another way in which a user can simply message with another user requesting for help.

### **Scope Diagram of the Project**

Refer Appendix A3 ([Feature Model Diagram](#)). For more Information.

## DESIGN OVERVIEW

### Design Approach

<sup>1</sup> Here author has selected Object Oriented Approach as the best Design Approach for “JoinHands”, project compare to other approaches. Since it will support modelling through classes and objects. The well-known modelling language called Unified Modelling Language (UML) is used for the System design and Development process where Use case and Activity Diagrams are used to design the Prototype functionality. To model the Design of “JoinHands”, I have used some classes as Donors, Requestors, NGO’s and Admin and showed the Relationship between them. Further OOA is very easy for a Software Engineer to understand the concept and come up with a Proper solution without any interruption.

Refer Appendix A4 ([About OOA](#)) for more information.

<sup>1</sup> Refer Appendix A5 ([Reason for Selecting OOA with Comparison](#)) for more information.

<sup>1</sup> In order to finish the Project, Author has to select desired methodologies, tools and techniques. As a best research approach. Author has selected “Deductive Approach”, for Design Approach author has selected Object Oriented Design approach, for Development Approach author has selected Agile Approach which is iterative and incremental was selected as the Project Management Approach.

Further author has used Fact Finding Techniques for identifying the required techniques and implemented necessary tools for the completion of the project successfully.

## WORK BREAKDOWN STRUCTURE

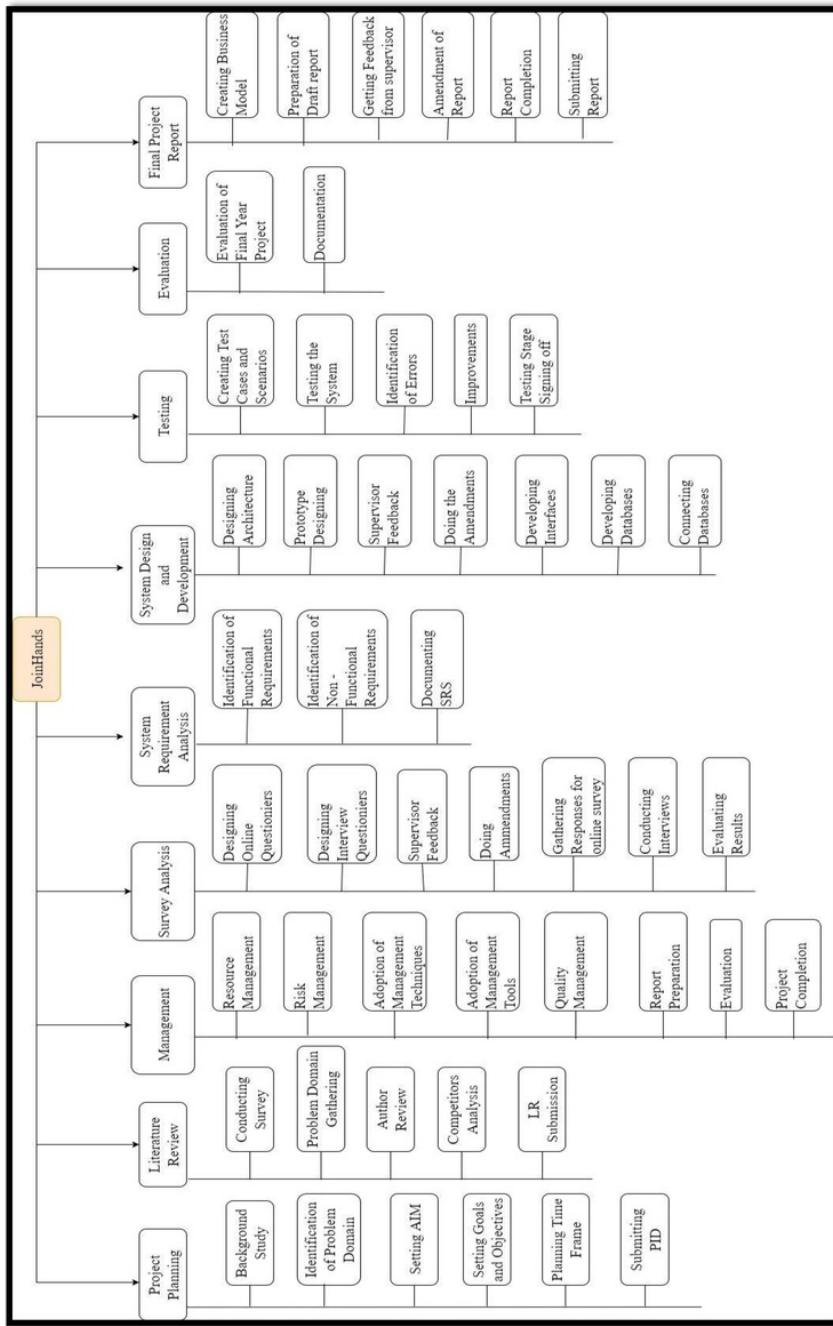


Figure 4 WBS chart

Milestone Description	Start	End	No. Days
<b>Initiation Stage of the Project</b>			<b>20</b>
Requirement Gathering	5/12/2019	5/22/2019	10
Planning the Project	5/23/2019	6/2/2019	10
<b>System Designing</b>			<b>25</b>
Design the Diagrams	6/3/2019	6/13/2019	10
User Interfaces	6/14/2019	6/29/2019	15
<b>Development</b>			<b>58</b>
Create Database	6/30/2019	7/2/2019	2
Register / Login	7/3/2019	7/7/2019	4
Job Portal, Education Services	7/8/2019	7/17/2019	9
Event Pages and validations	7/18/2019	7/23/2019	5
Donation (Online Fund Transferring)	7/24/2019	8/2/2019	9
Other Pages	8/3/2019	9/1/2019	29
<b>Testing</b>			<b>6</b>
Unit Testing	9/1/2019	9/3/2019	2
Integration Testing	9/4/2019	9/6/2019	2
System Testing (Black box, White box)	9/7/2019	9/9/2019	2
<b>Implementation</b>			<b>2</b>
Implementing the system	9/9/2019	9/10/2019	1
System Performance monitor	9/10/2019	9/11/2019	1

Figure 5 WBS

## **RESOURCE ALLOCATION**

### **Requirement Gathering Tools**

- Google Form

It is an online tool which is available for sending questioners and receiving the user feedback via online. Google is known to be one of the best tool for website and mobile apps. It will help to analyze the generated survey via graphs and charts. It is easy to analyze the collected data.

### **System Design Tools**

- Microsoft Visio
- Plant UML
- Mind Map

1 Using this Visio for designing the use case diagram, and ERD Diagram. Plant UML used to design Activity Diagram. And Mind Map used to design WBS.

### **System Development Tools**

- Visual Studio Code
- Notepad++
- Adobe Dreamweaver

Here visual studio code used to develop the website and view the design output which generated. Using this tools, it's easy to view the designed website using HTML coding. To design the UI, I used Adobe Dreamweaver and Notepad++.

### **Database Tool**

- XAMPP / WAMP
- SQL Server

1 I have selected WAMP as a database tool. Since it is an open source and it can access very easily without any interruption.

## MILESTONE PLAN

	Task Name	Duration	Start	Finish	Predece
1	Research on tools and technologies needed	2 days	Sun 5/12/19	Mon 5/13/19	
2	Research on journal articles and government report studies	16 days	Wed 5/15/19	Wed 6/5/19	1
3	Reading of journal Articles and fining the necessary information	20 days	Mon 5/20/19	<u>Fri 6/14/19</u>	1,2
4					
5	Project Proposal Document progress				
6	PID draft document UML usecase, ER Dogram	3 days	Thu 6/6/19	Mon 6/10/19	
7	PID draft document Mockup diagrams	3 days	Tue 6/11/19	Thu 6/13/19	6
8	PID draft document carring out	6 days	Mon 6/17/19	Sat 6/22/19	6,7
9	PID draft document showing to supervisor and getting confirm	1 day	Sun 6/23/19	Sun 6/23/19	
10	PID draft document error correction mention by supervisor	5 days	Mon 6/24/19	Fri 6/28/19	
11					
12	Estimate Prototype Designing and Developing				
13	Designing of user interface	15 days	Sun 6/30/19	Thu 7/18/19	
14	Developing and coding	30 days	Mon 6/24/19	Fri 8/2/19	
15	Teting the developed prototype	3 days	Sat 8/3/19	Tue 8/6/19	
16	Rectifing the arrived issues	5 days	Sat 8/3/19	Thu 8/8/19	
17	Finalysing the system	1 day	Fri 8/9/19	Fri 8/9/19	
18					
19	Estimate Document writing				
20	Finalizing the report	5 days	Mon 8/12/19	Fri 8/16/19	
21	Submission	1 day	Sun 8/18/19	Sun 8/18/19	

Figure 6 Milestone plan

## COST PLAN

The venture of building up a framework will make gaining after execution. Benefits can be an improved generation. Be that as it may, it conveys dangers, because of the wrong speculation with wrong framework data. Making arrangements for cost examination will lessen organization overhead since it more often than not includes looking at interchange ventures.

*Table 1 Cost Plan*

Details	Price
Requirement Gathering	2000.00
Designing and Developing	25000.00
Hosting	1600.13
Domain	2342.92
Email Hosting	901.13
Testing	1500.00
<b>Total</b>	<b>33344.18</b>

## CHAPTER 2: BACKGROUND OF THE STUDY

### WHAT IS DONATION AND ASSISTANCE MANAGEMENT SYSTEM

Donation and Assistance Management system <sup>7</sup> is a means of organizing, analyzing, and strategically implementing communication strategies with nonprofit supporters to maintain and grow those relationships. All around <sup>7</sup> 30% of funding for nonprofits organizations comes from donations. To expend the gifts from the donors, charities or organizations <sup>7</sup> need to assemble and continue relationships with them to allow continue giving and influence individual connections with the system.

<sup>7</sup> The simplest, best approach to do this is through an automated online system designed and planned solely for those inside the nonprofit space. A well-figured framework will help to remove ton of the guesswork when it comes to our efforts.

### IMPORTANT OF THE SYSTEM

JoinHands Project will help these people who are requesting for help by giving a financial or educational solution and also through this project a requestor can gain his or her investment to get day today needs. Project which is going to give s solution for a Non – Government Organization where these people can gain their donation from donors and give support for people living under poverty while organizing events, searching for volunteers etc. Donors can simply give donations using this website. This is a website in which a donor can believe and give online donation funding as well as can offer educational/technical skill services for Young Learning Students who are living under poverty line. And this Project will help candidates who can apply for Jobs which is offered by NGO's. Become a Volunteer for the project which is organized by NGO's and offer help or Skills for those people living under poverty.

## LIST OF ALL USER REQUIREMENTS

Before developing any system, at least the initial requirements based on the problem should be known by the developing team and thus the system can be developed according to the needs and wants. For this system the requirements were gathered using many techniques and the requirements are given below.

### Functional Requirements

#### Donor

- Donor should be able to register into the system by providing the necessary personal information as Email, User Name and the password.
- User should be able to Login to the System by given necessary credentials as User name and Password.
- User should be able to view the features available on the website as soon as he or she enters in to the landing page.
- User shall be able to edit the Profile by adding the personal description and profile images.
- User shall be able to view the ongoing projects published by individual and NGO's.
- User shall be able to view the notifications relevant to the projects, events, offers etc.
- User shall be able to do messaging in which he or she can message with another user, create new message and reply for the messages.
- User shall be able to view education services requested by NGO's and apply for the services.
- User shall be able to view the events posted by the NGO's or individuals regarding projects and can add to calendar.
- User shall be able to view Event Calendar. Since the calendar will get updated to the user's requirements.
- User shall be able to view the descriptions of the event organized by NGO's or Individuals.
- User shall be able to view the vacancy page in which he or she can apply for vacancy offered by NGO's and can apply for it.
- User shall be able to view the Contact us page in which it will include the contact information of the JoinHands website.

- User shall be able to send feedback as improvements and issues regarding the website to JoinHands website.
- User shall be able to view about the features of the website as Frequently asked question.
- User shall be able to view about the available organizations and their projects
- User shall be able to view another user as widows or donors and ask or give help

1

### **Requestor**

- Requestor shall be able to ask for help from an organization.
- Requestor shall be able to view and apply for courses post by Donors.
- Requestor shall be able to clear their questions using Chatterbot.

### **Organizations**

- Organization shall be able to add new donation for the purpose of fund collection.
- Organization shall be able to add Donation information.
- Organization shall be able to post courses as education offering.
- Organization shall be able to post vacancies for giving job opportunities.
- Organization shall be able to post events since these people has opportunities to post events.

### **Administration**

14

- Admin shall be able to view user Dashboard.
- Admin shall be able to view the organizational dashboard.
- Admin shall be able to view the Contact Dashboard.

## **CURRENT SYSTEM OF DONATION MANAGEMENT SYSTEM**

In the current system, of the donations and fund transferring happen through the websites. Now a day, donor management system software is totally web integrating. Therefore, the donors can make donations and gifts and make their very own records or profiles on the official site. The next most significant element is the flexibility of the product module with the current book keeping and costing programming framework. When both systems are compatible with one another, we don't have to put our hands to juggle with keeping record for the gifts and donations.

## **DRAWBACK OF THE CURRENT SYSTEM**

There is no any system is perfect and there can be few drawbacks in any system prevailing that have to be solved with the usage of the system over time. From the survey analysis there are few drawbacks in the current system. such as

- Time delay on receiving money from donor.
- Un-skilled employees to train those people who are in trouble.
- Organizations are searching for volunteers to do projects.

The next point is, there are no any system with the connections between of non-profit organizations. So the involvement of donors projects is very low. Most of the donations are going into some specific organizations and specific area peoples. The reason is lack of education offering to people who are living under poverty line.

## **EXPLANATION OF THE PROPOSED SYSTEM**

To overcome the above declared problems, a Donation and Assistance Management system will be used. This means that, it is a website attempted to provide a detailed solution for those people who are in seeking for donations and people who are willing to offer donations for the betterment of requestors lives, job seekers and who need education. For a person to use the system, he or she have to register themselves with the system by providing their details. And also they are able to select their event status. A requestor can simply become a member and request for help from registered organization. An organization can simply check the availability of the requestor and

give approval to post the project (Real time Requestor Availability). Donor can simply give donation for the posted project (Cash Payment or Online Donation using Payment integration). Organization can simply search for Volunteers for the project that these people holding. Organization can search for people who are willing to offer Educational Skills as well as technical skills for people as drop off etc. Organization can post events in which these people are willing to organize. Organization can simply search for employees for their organization

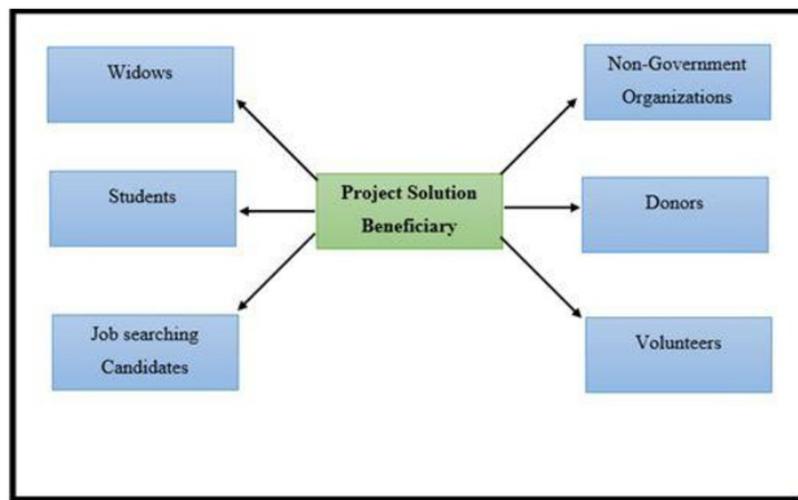


Figure 7 Project Contribution

## CHAPTER 3: FEASIBILITY STUDY AND REQUIREMENTS GATJERING

### FEASIBILITY STUDY

The reason for a feasibility study is to determine the probability that at least one answers for the necessities of the business started requirement and the board confronting issues. Feasibility studies are primer investigations concerning the potential advantages relates with undertaking a particular action or task. The fundamental motivation behind the attainability study is to consider all components related with the venture, and decide whether the speculation of time and different assets will yield an attractive outcome. While thought about a fundamental report, it is not unusual for a feasibility study to be highly detailed.

In current situation many non-profit organizations have facing donation system in order to resolve the issues without interrupts users.

### Cost Feasibility

Developing a Donation & Assistance Management system is an investment. After developing the application, its make available with earnings. To produce this website needs a high speed connection to the internet. Other cost is that relevant to the cost of the payment system. when donor is using online payment from their account, or an alternative third-party like PayPal.

Details	Price
Requirement Gathering	2000.00
Designing and Developing	25000.00
Hosting(per month)	1600.00
Testing	1500.00
<b>Total</b>	<b>30100.00</b>

## **Time Feasibility**

Time is imperative to finish the undertaking project in the given time period with implementation. Time feasibility implies it tends to check the total project within the timeframe is sufficient or not. The objective of the task is considered under the scheduled possibility. On the off chance that you complete the project on schedule, at that point the project will be possible. In my project I have taken two months' timeframe to finish the project. Here I break the tasks into small tasks. After that I effectively do the project. So I utilized a few methods to break the project. Here I monitor the WBS then I utilized the gantt graph strategy to discover the length to finish the task. First I completed the designing part then I completed the database part at last I build the framework. When I build the framework then I had done the testing part.

2

## **Scope Feasibility**

Scope feasibility is characterizing the scope of the project. The scope needs to be conclusive to the point. Beginning a project without a well-characterized scope can undoubtedly lead to wandering outside plan budget and time. In my project, the primary scope is online fund transferring and is easy to understand. In here, the project is available through the database.

2

## **Technical Feasibility**

This is the requirements of the system. It's specific kit and software and hardware that drive successfully satisfy the user requirement. The technical needs off the system may show a discrepancy considerably. In this system, I have used some software and hardware of the requirements. The developed system must have an undefined requirement, as only insignificant or null changes for implementing this system.

And also this project is based on artificial intelligence. Here in this system, I have chosen AI techniques like natural language processing and neural network. Feasibility of handling those techniques would play a major role in completing this project. In this system, I used the Agile model development life cycle. It's easy to develop the system. And this project is a huge project so that's why I choose the Agile model. Here I used the compiled file. IDE. Technical feasibility is important to process in the project.

## **REQUIREMENTS GATHERING**

This chapter will evaluate the facts which are found and evaluates the requirements through qualitative and quantitative methods. This chapter is basically done in order to identify the problem domain and the expected solutions from user perspective. This chapter begins with identifying the solutions and the issues faced by both donors and NGO's and their perspective thinking about the problem domain. Here author has carried out both Online Survey and Interviews to gather data's.

### **Selecting the suitable fact gathering techniques**

Since this project based on system, I conduct individual references by donors, and organizations by below techniques.

- Questionnaires
- Record views
- Observations

#### **Questionnaires**

Questionnaires are a strategy of finding information through makes some of the kind of frame, which contains a couple of requests where the business master needs to response the stresses. The investigations are the most standard procedure gathering information from donors and organizations where the requestor is freed to response the stresses.

#### **Record View**

Record view is a method that where we can refer notes from reports, researches, audio records, journal articles, newspapers, etc.

#### **Observations**

Observation analysis will be able to collect data and information from set of people, by conducting observations. For the observation technique people whom are related to this project or the system are selected for the observation. Observe and understand the current working system and problem domains and analyzing the existing data flow and etc.

## Fact Gathering using selected techniques

### Online survey from Donor's Perspective

Author has done the research for Donor's via online research. Here author has collected about **60 Data's** through conducting the research. Based on the collected 60 data's author was able to identify no of problems and the opinions these people preferring in order to give solution for the poverty and also their preference about the education services, volunteering services, job opportunities on the Organizations and the System solution.

1

#### Rate your Opinion about poverty in Sri Lanka

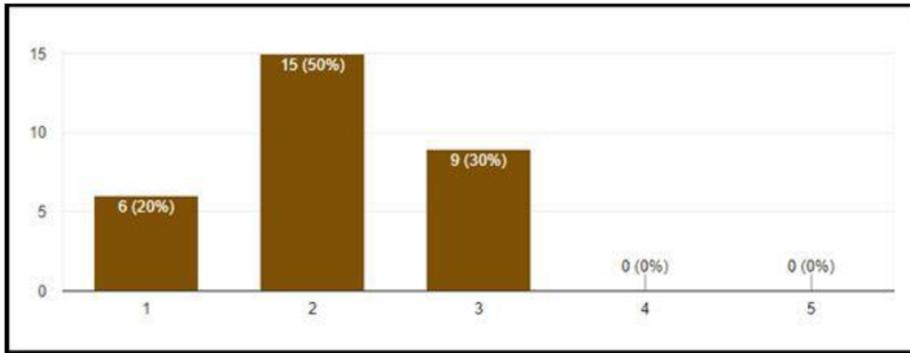


Figure 8 Results retrieved for Poverty in Sri Lanka

Accordingly, the rating was given from 1 to 5 in which 1 is "Sri Lanka needs to work more on Improving Poverty in Sri Lanka". And 5 is that "Sri Lanka is working perfectly to eradicate poverty". Here the Author has received more responses from Donors mentioning under level of 2 in which Sri Lanka needs to work more to eradicate poverty. Even Author also has got Reponses "20%" responses from Donors by saying Sri Lanka need to work a lot to eradicate poverty in Sri Lanka.

#### Give your Opinion about Poverty in Sri Lanka

Author has received some Comments or Feedbacks from Donors in which the opinion about reducing poverty in Sri Lanka.

Refer Appendix C1 ([Comments received regarding poverty in Sri Lanka](#)). For More Information

## **1 Non Profit Organizations and their Involvement**

As per to the Chapter 1 (Literature Review) “Non-Government Organization is a service-oriented groups of people working nationally, internationally and local to reduce poverty.”<sup>1</sup> Here author has collected some data’s in which the involvement of NGO to eradicate poverty in Sri Lanka (60 Data’s). The question is mainly to identify the Organization involvement to eradicate the poverty in Sri Lanka at the same time how these people are receiving Donations from those people.

The following diagram will predict the Organization involvement to eradicate poverty in Sri Lanka.

**Give Your Rating about Non-Government organization in relation to receiving donations?**

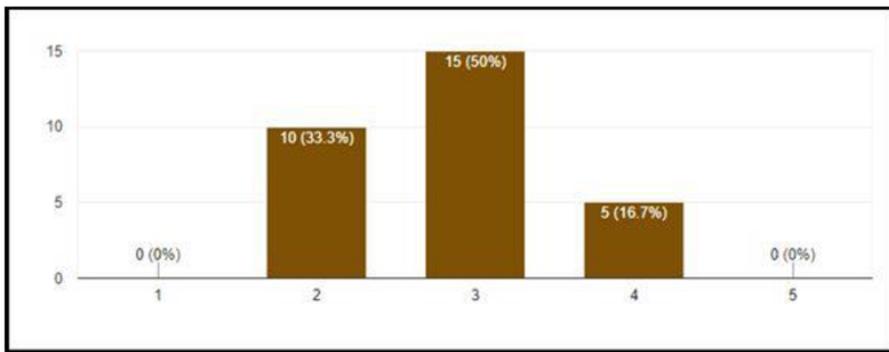
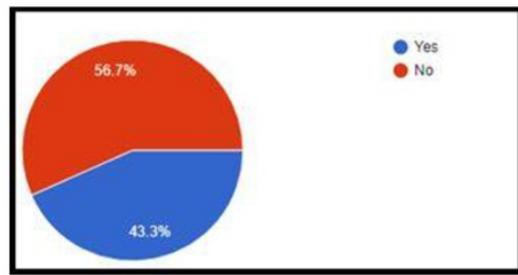


Figure 9 Opinion about NGO and Donation Received by them

As per to the data received. The Organization involvement is a mandatory to eradicate poverty. Since the Donors have mentioned that Organization involvement is somehow very useful for them. Here around 0 % of Donors have mentioned that organization involvement is medium so these people are having either satisfied or not. Around 16% of Donors have mentioned that the Organization involvement is good enough for them to eradicate poverty.

<sup>1</sup> After receiving some opinions from these Donor’s author asked another simple question from these donor’s in which the author wants to know the issues that he or she is facing with relevant to organization when offering services. Here it is mentioned by a pie chart mentioning the user reviews.

**Have you ever faced any problem on doing donation to NGO's (For Eg: In searching for NGO's, Problem of cheating etc.)?**

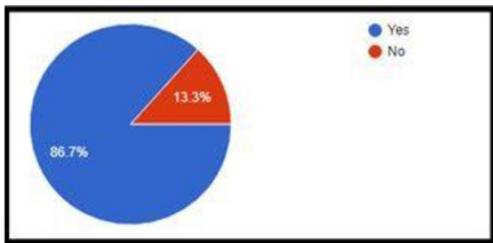


*Figure 10 Statistics Whether problem faced by Donors in giving Donation*

Here these people have given their opinion about Organization. Since about 56.7% donors are not facing any issues relevant giving donations and problem of cheating etc. But still there are about 43.3% of people who are still not satisfied about Organization and its services.

When author was doing his Literature survey he has found another common issue that there are problems on offering jobs to those people to NGO's. Since some people are not willing to join on the NGO or not willing to work etc. (Ref Chapter 1 Literature Review). So in order to know the Donor's opinion author has asked a questioner from these donors' in which he has received a positive result predicted on a diagram. Here this question was asked from Donor's since these people are the one who needs to know about the organization before giving donations.

**Do you prefer if there is a Job opportunity offered by NGO's in Sri Lanka?**



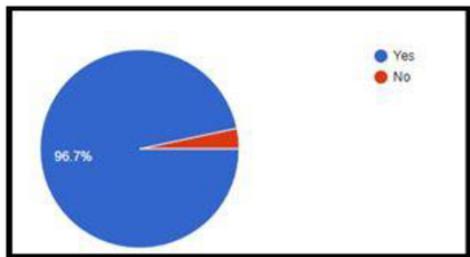
*Figure 11 Preference about Job Opportunities offered by NGO's*

Here Author has received a Positive result of 86.7% as "Yes" in which donors are preferred to have a solution to offer job opportunities to those people who are vacant. But still there are about 13.3% of Donor's has to be considered before giving a solution since these people doesn't need a solution to offer job opportunity.

### **Education and Students Details**

Education is a key feature which needs to be learnt by each and every student. As per to the reference of "Poverty and Access to Education, 2017" on Chapter 1 Literature review. Author has identified some issues why students are not attending school after 14 years. In order to get further solution author has asked a question from Donor's regarding the education offering done by organization for dropouts and people living under poverty for their betterment life. Here Author has received a positive result which is predicted below.

**Education is one of the Key feature for a Human being. Do you prefer to give education if there is an opportunity provided by NGO's?**



*Figure 12 Donors Preference to offer Education*

After asking the question from Donor's about 96.7% of Donors are willing to give chance for people living under poverty and dropouts to get their education as a free service. But still 3.3% of people who are still not interested about education to be offered since these negative responders are already satisfied with the education system of the country. Since there is a highest rating for the Education opportunity and the Solution is also will be giving opportunity for giving education.

Here comments also received from those People regarding the Education Solution for them. Refer Appendix C2 ([Comments Received Regarding Education offering](#)) for more information

Here Author also have received some information regarding what the types of Education are can be provided to those people who are living under poverty and dropouts. Here Author has given some opinions and the results are generated from the given opinion

### **“What type of Education Services can be offered to those People living under poverty?**

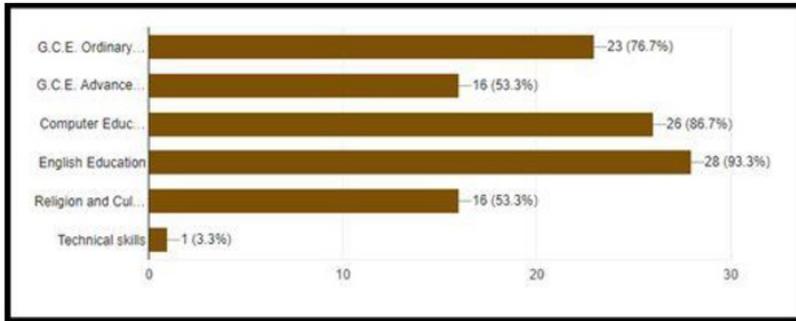


Figure 13 Types of Educations can be offered

Here most of the Donors have preferred to get English Education as a main part for the Life betterment. Around 93.3% of people have mentioned about English Education. Event some donors have preferred Computer Education for the people necessary, around 86.7% people have mentioned to learn Computer education as a mandatory. There is also 1% of people who has mentioned Technical Skill education needed to be learn. When it comes to GCE Ordinary Level and GCE Advance level about 50% to 78% of donor's have mentioned that they prefer to offer.

### **What is your opinion about Volunteer services offered by NGO's?**

Refer **Appendix C3** ([Opinions received from Donors regarding Volunteer Services](#)) for more information.

### **Any opinion about the Web Solution?**

Refer **Appendix C4** ([Opinion to Have Web Solution](#)) for more information

Refer **Appendix C5** ([Online Survey Questions](#)) for more information

## **Interview about Organization**

In order to gather data's Author has conducted some interviews within organizations around village level. Author has selected about 5 interviews in which the author was able to gather information relevant to the questions that he or she has asked. Here the Interview questions are divided into 4 types, under each sector there about 3 to 4 questions and the data were gathered from these questions. The sectors are as follows

1. Regarding Poverty and Organization involvement
2. About Organization
3. Regarding Problem Domain
4. About System Solution

Refer Appendix C6 ([Interview Questions](#)) for more information regarding questions"

## **REQUIREMENT DETERMINATION**

### **Core Requirements**

In the core requirement the user requested to web site should be mobile responsive and it should work as a catalog contact form is a must and online reservation also payment gateways should be there like (credit card and PayPal). Once Donor make a donation a confirmation mail should go to administrator and administrator has to confirm it once he confirmed a receipt should go to Donor. Events Availability Calendar is a must both web systems should link through a SQL server the data should store in the SQL server. In the system admin should be able to view all reports, and manage Dashboards.

### **Secondary Requirements**

It needs technological based system. Email and feedback service, whenever user donate donations will get notification by email server with name and details. The online donation system should accurately work.

## RESOURCE IDENTIFICATION

### Hardware

To develop this website, have to identify some risk factors and hardware requirements. Secure transaction is based on the software and hardware combination. So the Online Donation service integrated with SQL, Email Service.

*Table 2 Hardware Requirement*

Specifications	Used for Developing the system
<b>RAM</b>	8GB
<b>Hard Drive Capacity</b>	1TB
<b>Processor</b>	Core i5
<b>Debit or Credit Card</b>	N/A

### Software

3

To develop the system, the initial main resource is operation system which the developing system should able to run. Because the operating system such as the Linux and some other operation system have some problem to run the software developing tool applications to them. I have used the Window 10 as the platform to develop the system. Describe about the software developing language and the server, which is going to hold the system data input and retrieval processes, and also the tools/application which I have used to develop the system. for develop the system I used HTML and SQL.

## **SOFTWARE PROCESS MODEL**

1

### **Development Approach**

After doing the best analysis JoinHands Project Came up with the “Agile Development Approach” as a best approach for the Project. There are more and more approaches for the Development as Agile Model, Waterfall Model and Spiral Model. When considering the proposed project size, problem domain, scope and domain, Agile Methodology is best solution for the Developed Prototype.

Here the main stakeholder of the Project is Donors and NGO's. Here these people will come up with various improvements and various feedback. So “Waterfall” Model is not suitable for the proposed System. When coming to the Agile Methodology here any Stakeholder can give their Improvements and Feedbacks and the given opinions can be developed and can come up with the Proposed Solution/ Prototype. And also, the proposed solution will also have a standard and best quality since the testing is done on the development stage itself.

So while considering the above mentioned issues I have selected Agile Methodology as a best Methodology for the project “JoinHands”

Refer Appendix C7 ([About Agile Development Approach](#)) for more information

## CHAPTER 4: PROJECT INFRASTRUCTURE

Table 3 Project Infrastructure

Infrastructure	Tools Used	Purpose
Requirement Gathering	Google Form	As an online survey tool it is known to be one of the best tool for getting feedback via online by sending questionnaires.
System Designing	Plant UML MS Visio	To design the WBS, Use case, ER, Class diagrams author used MS Visio. And for the activity diagram I used plantUML.
System Development	VS Code Notepad++ Adobe Dreamweaver	Author used these tools to develop the system by code it here and view the output. Notepad++ and adobe Dreamweaver use to design the UI part. And from VS Code author view the output.
Project Management	Microsoft Project	Author used Project 2013 to schedule the duration of the work which are going to be finalized.
Documenting	MS Word	In order to complete the project author need to come up with the necessary documentation. So here author used word 2016 tool for her documentation.
Database	WAMP MySQL	Here, for necessary entered data will be stored on the database. So author select WAMP as a database tool to open php file. And author used PhpMyAdmin MySQL to save data.
IDE	VS Code	It is a source code editor that used to develop or edit the code. It is an open source code. It includes debugging support and code refactoring.
QA Automation	Selenium	it is a portable framework for test the we based applications. It provides a playback tool for functional tests. So author select this tool for her automation testing.
Google API	PayPal API	Here author used PayPal API version 1 for the secure online fund transferring service.

## CHAPTER 5: DESIGN

24

### DESIGN OF THE SYSTEM

#### Use Case Diagram

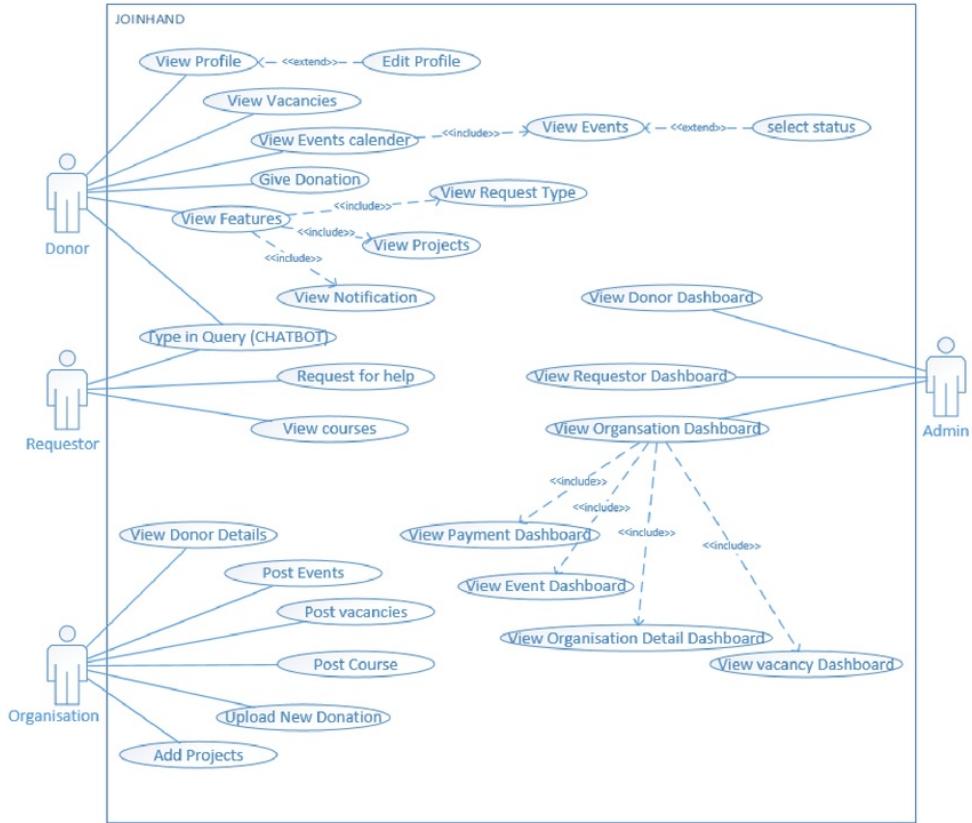


Figure 14 Use Case Diagram

**1**  
Table 4 *Use Case Diagram Description I*

<b>Use Case Name</b>	View User/Organization Dashboard									
<b>Brief Description</b>	<p>It is a Back – End functionality in which an Admin can view the Statistics of Users/Organizations who are logged in and using JoinHands website. Here user information with the place where they are from can be viewed</p>									
<b>Actors</b>	Admin									
<b>Purpose</b>	To receive User/Organization Statistics who are using the Website									
<b>Pre – Condition</b>	<ul style="list-style-type: none"> <li>✓ User/Organization has to Sign Up to receive the statistics</li> <li>✓ Admin must be able to receive the information after registration is success</li> </ul>									
<b>Main Flow</b>	<table border="1"> <thead> <tr> <th>Actor Action</th> <th>System Response</th> </tr> </thead> <tbody> <tr> <td>1. User Complete the Registration</td> <td>2. Display the User to on the Dashboard</td> </tr> <tr> <td>3. View user/organization information</td> <td>4. Display User/Organization information</td> </tr> <tr> <td>5. Post Project</td> <td>6. View the statistics of Project information</td> </tr> </tbody> </table>	Actor Action	System Response	1. User Complete the Registration	2. Display the User to on the Dashboard	3. View user/organization information	4. Display User/Organization information	5. Post Project	6. View the statistics of Project information	
Actor Action	System Response									
1. User Complete the Registration	2. Display the User to on the Dashboard									
3. View user/organization information	4. Display User/Organization information									
5. Post Project	6. View the statistics of Project information									
<b>Alternative Cause</b>	<p>In Step 3, if the User/Organization has to Complete the Registration to become a member</p> <p>In Step 5, User has to enter all the necessary information about the Project</p>									
<b>Post Condition</b>	User has the ability to check the FAQ if there are any related issues on posting the Project									

<b>Use Case Name</b>	Request for Help												
<b>Brief Description</b>	It is the place where Donor and the Requestor can simply log in and can request for any help from organizations. Here a requestor will be validated first by the Organization before posting the project and if the user is validated the project will be posted.												
<b>Actors</b>	Donor and Help Requestor												
<b>Purpose</b>	Here a Requestor can ask for the Help from Organizations and Donors												
<b>Pre – Condition</b>	<ul style="list-style-type: none"> <li>✓ Requestor has to Login or Sign up to ask request for the Help</li> <li>✓ Organization must be able to receive the information from the requestor</li> <li>✓ If the User is validated Organization must be able to post the project on the site</li> <li>✓ Donors must be able to give donation for the project</li> </ul>												
<b>Main Flow</b>	<table border="1"> <thead> <tr> <th>Actor Action</th> <th>System Response</th> </tr> </thead> <tbody> <tr> <td>1. Requestor login to the system</td> <td>2. Navigate requestor to the home page</td> </tr> <tr> <td>3. Requestor must be able to request for the help from organization</td> <td>4. Organization must be able to receive the request</td> </tr> <tr> <td>5. Organization must be able to approve the request</td> <td>6. Display the request on the Website</td> </tr> <tr> <td>7. Donors can give donation</td> <td>8. Allow donors to give donation</td> </tr> </tbody> </table>	Actor Action	System Response	1. Requestor login to the system	2. Navigate requestor to the home page	3. Requestor must be able to request for the help from organization	4. Organization must be able to receive the request	5. Organization must be able to approve the request	6. Display the request on the Website	7. Donors can give donation	8. Allow donors to give donation		
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5. Organization must be able to approve the request	6. Display the request on the Website												
7. Donors can give donation	8. Allow donors to give donation												

<b>Alternative Cause</b>	On Step 5, if the requestor is not Real the Organization must be able to reject the Request made by the Requestor  On Step 8, Donor must be able to view and give donation at the same time must be able to Share the post
<b>Post Condition</b>	-

## ENTITY RELATIONSHIP DIAGRAM

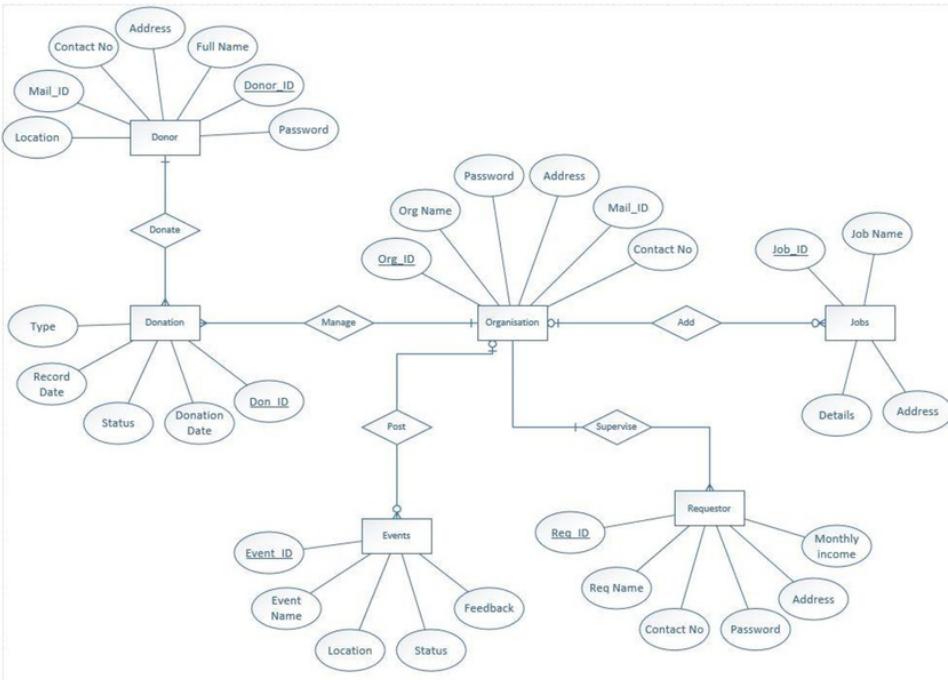
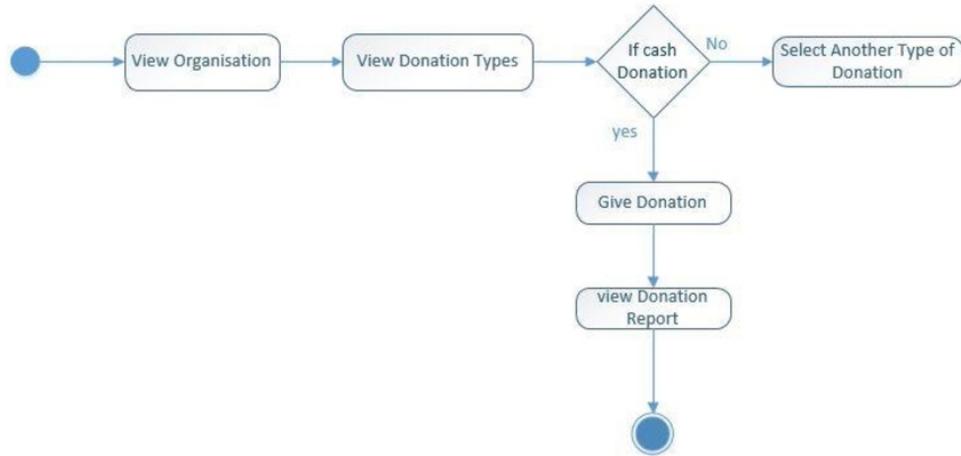


Figure 15 ERD

## Activity Diagram

### Give Donation



21

Figure 16 Activity Diagram 1

### Request for Help

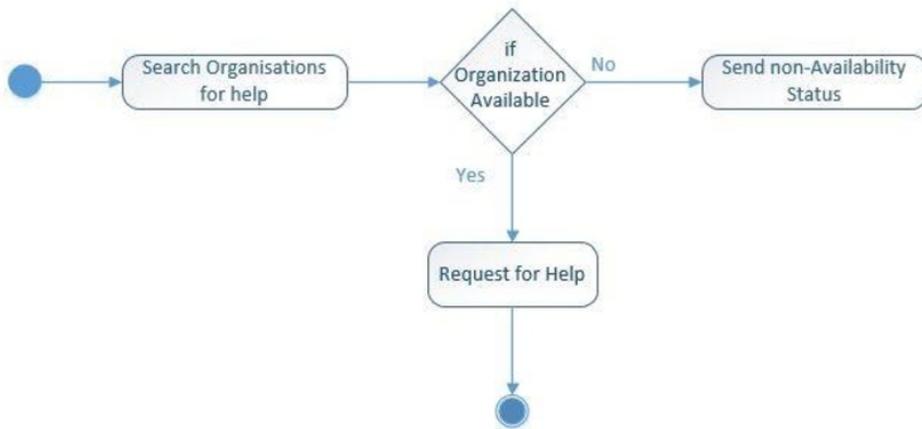


Figure 17 Activity Diagram 2

### Donation Divided by Organization

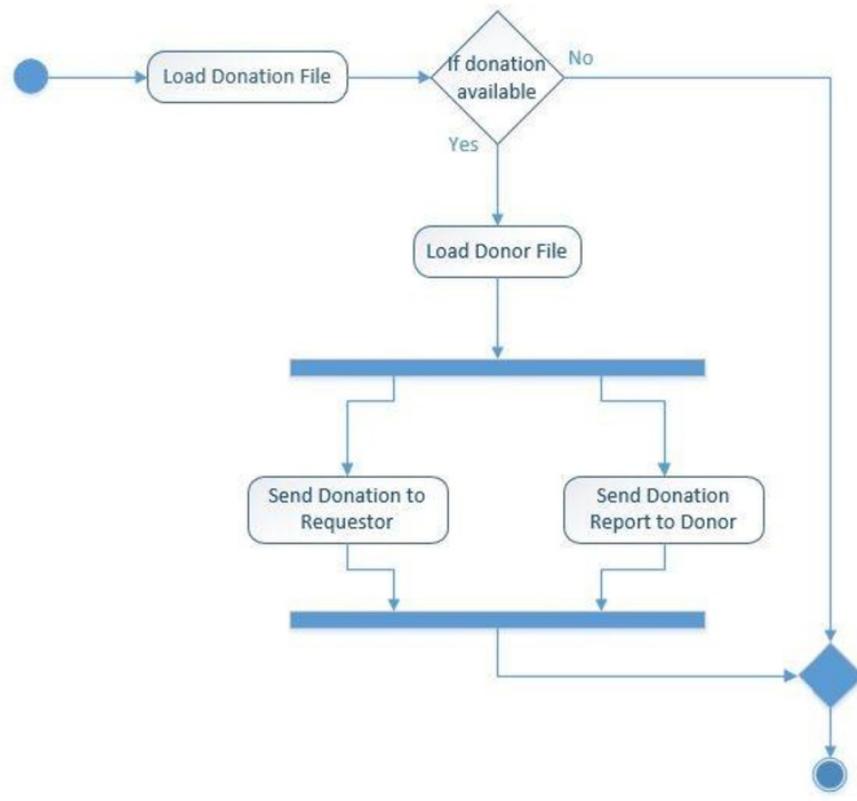


Figure 18 Activity Diagram 3

## Job Vacancies

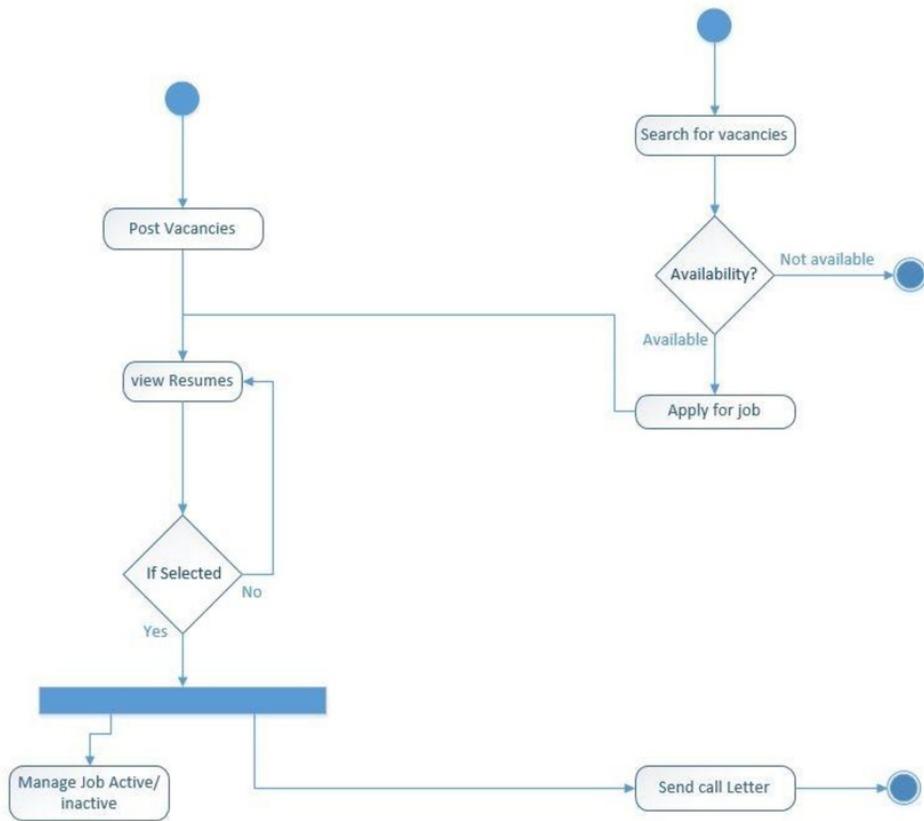


Figure 19 Activity Diagram 4

## Dashboard Management

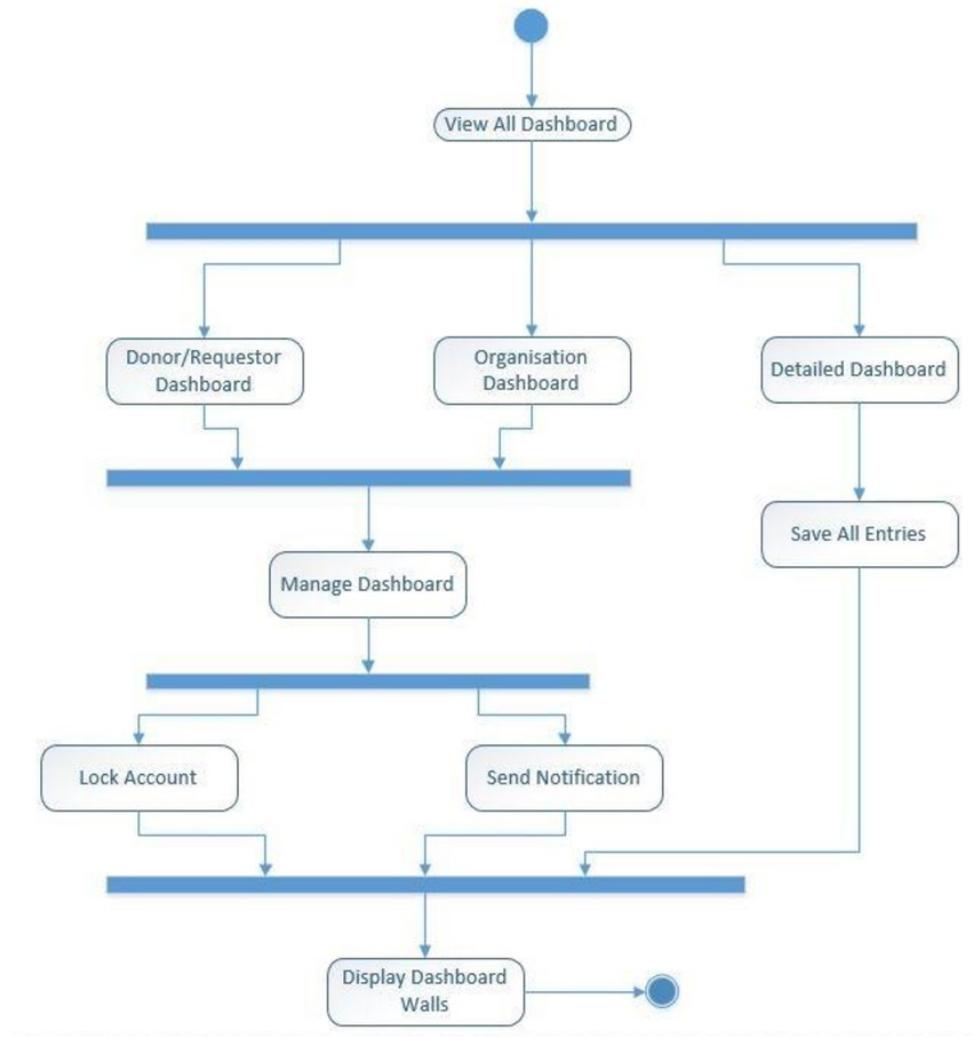


Figure 20 Activity Diagram 5

## Database Design

Table	Action	Rows	Type	Collation	Size	Overhead
donation-info		28	InnoDB	latin1_swedish_ci	16 Kib	-
donor		3	InnoDB	latin1_swedish_ci	16 Kib	-
education		4	InnoDB	latin1_swedish_ci	16 Kib	-
educationproject		7	InnoDB	latin1_swedish_ci	16 Kib	-
educationprojects		2	MyISAM	latin1_swedish_ci	1.8 Kib	-
educationrequest		8	InnoDB	latin1_swedish_ci	16 Kib	-
jobs		2	InnoDB	latin1_swedish_ci	16 Kib	-
organization		9	InnoDB	latin1_swedish_ci	16 Kib	-
organizationinfo		4	InnoDB	latin1_swedish_ci	16 Kib	-
project		8	MyISAM	latin1_swedish_ci	1 Kib	-
register		5	MyISAM	latin1_swedish_ci	2.3 Kib	60 B
request		7	InnoDB	latin1_swedish_ci	16 Kib	-
requester		5	InnoDB	latin1_swedish_ci	16 Kib	-
13 tables	Sum	76	MyISAM	latin1_swedish_ci	165.1 Kib	60 B

Figure 21 Database Design

## CHAPTER 6: USER INTERFACES

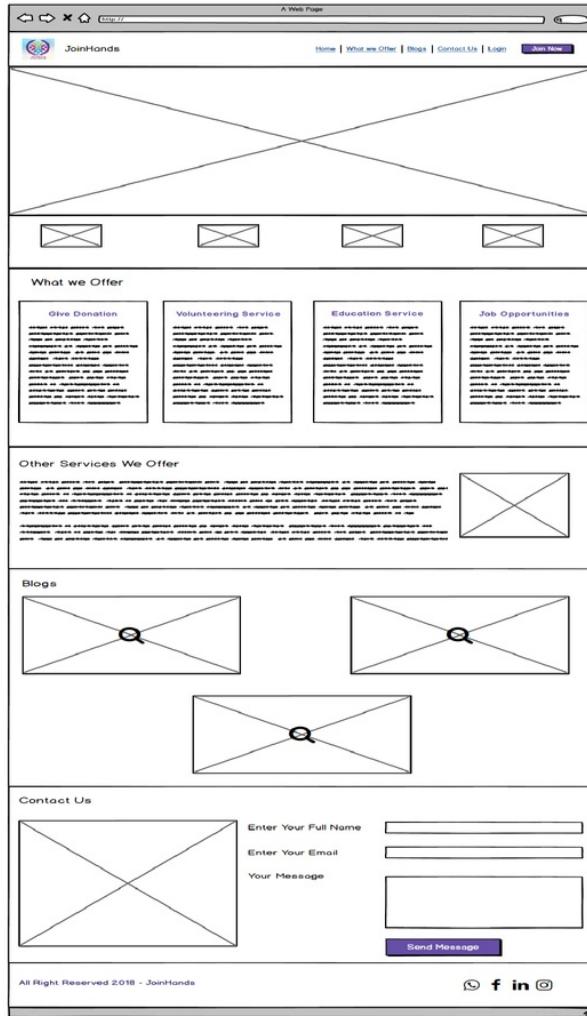
### WIREFRAME

In order to design the system, Balsmiq tool come up with the necessary mockup designs. The designing tool is simply a sketch and the implementation is explained on the Chapter 7.

#### Landing Page

Landing Page is the Place in which a Donor, Organization and Help Requestor will view as common as soon as entering into the Website. On this Page a user can view the functionalities and the features of the Website including images and icons.

Through this if the user clicks on with the “Join Now” he or she will be direct to the Sign up page. Through this page a user can select his or her preference and can become as a member of JoinHands website.

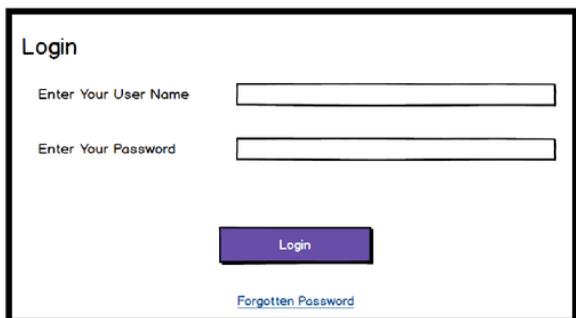


## Login & Sign up Page

After viewing the Landing Page User can simply click on with the Join Now Button in which he or she will be asked with 3 options as Donor, NGO and Requestor. Here he or she can simply click on with one option and Sign up as a member.



The form is titled "SignUp". It contains four input fields: "Enter Your Full Name", "Enter Your E - Mail", "Enter Your Password", and "Enter Your Confirm Password". Below the fields is a purple "Register" button. At the bottom of the form is the text "Please Click Login if you are an Existing Member".



The form is titled "Login". It contains two input fields: "Enter Your User Name" and "Enter Your Password". Below the fields is a purple "Login" button. At the bottom of the form is a blue "Forgotten Password" link.

1 After Sign up is completed he or she can login to the System. If the user forgotten password, he or she can "Click Forgotten Password" to change the password."

1. **Donors Home Page** – Under the Donors Home page any donor can view the Projects posted by NGO's and here each donor can click on with the "View" button and can view the information about project with images and requirements. Here donor can give donation via PayPal as well.
2. **NGO Home Page** – Under the NGO home Page an organization can view the requests made by Requestor with the short description. Here an NGO can view the individual request and give approval or reject the approval.
3. **Requestor Home Page** – Under the requestor home page a requestor can make the request from any organization if already made any request he or she can view the made request.

## Donation Page

The screenshot shows a donation form titled "Give Your Donation". It includes a text input field, a "Upload Slip" button, a "PayPal" logo, a "Donate via Paypal" button, and "Donate" and "Cancel" buttons at the bottom. Below the main form are two additional buttons: "Donate" and "Share".

## Request for help

The screenshot shows a "Request For Help" form. It has fields for "Your Name" (with "Zara Williams" entered) and "Select an Organization" (with a dropdown menu open). There is a large text area for "Send Your Request". At the bottom are "Send Your Request" and "Clear All" buttons.

## Post Event popup

**Post Event**

Enter Event Title

Select Event Category

Event Date  /  /  

Event Time   
12:20<sup>AM</sup>  
CANCEL OK

Enter Event Description

Post Images

Event Page is also another set of page in which a Donor/ Organizations and Requestor can view the upcoming event and simply share it with Friends and mates via social media. It is a page where a calendar will display with the necessary upcoming events. If the Donor click on with View More information he or she will be directed to the Project Page to view more information about the project.

Skills Seminar for Woman Development - Woman Development Program

Submit Your Response	Share
----------------------	-------

## Post Projects popup

Post Your Project

Enter Project Title

Select Project Category

Enter Project Description

Post Images    


## Project Approval sheet

Here a help requestor can simply make any request from an organization in which an organization will receive the request and here the organization must validate the user availability after that they can give approval by editing and adding images.

Project Approval sheet

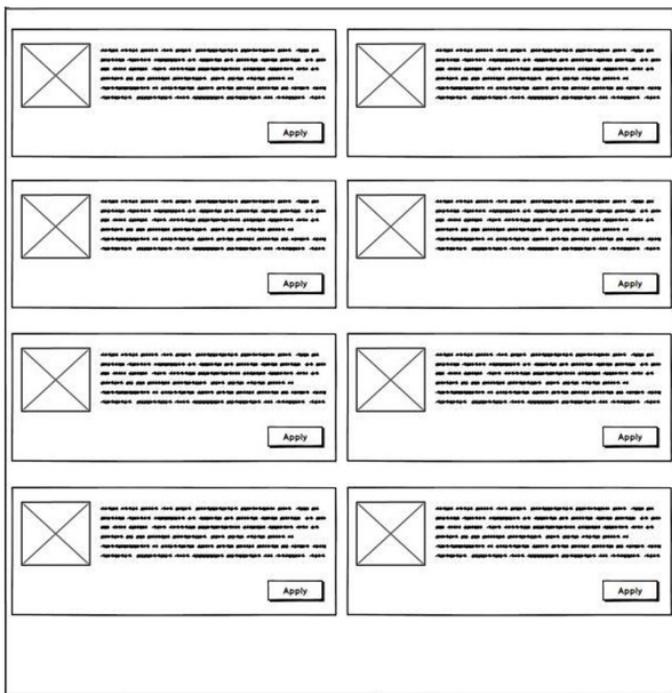
Change

Change

Change

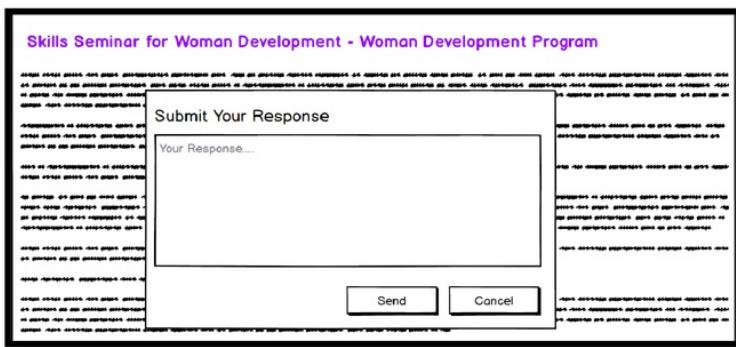
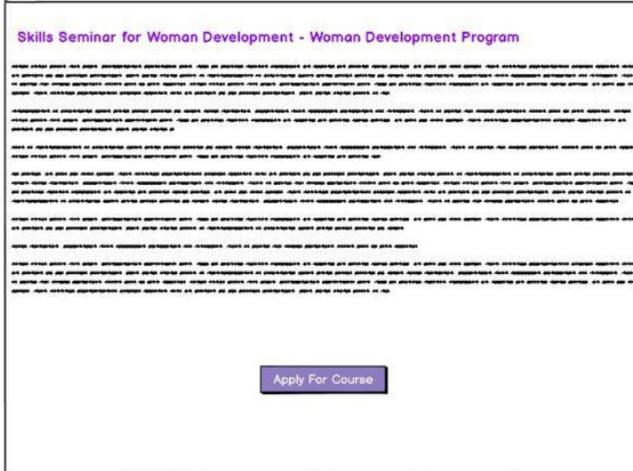
Change

## Job Vacancies site



## Apply for Course

Education and Volunteer page will be exactly same as Home Page. Here a User can simply click on with the related buttons and can view the Pages. When comes to the “Education Page” a user can simply click on with the Apply Now to send a response to offer education or skill services and when coming to “Volunteer Page a Donor can simply click on with Support to view and get support.”



## SYSTEM UI

### 1. Organization

#### Project Page

The screenshot shows the JOINHANDS Project Page. At the top, there is a navigation bar with links for PROJECT, VACANCIES, EDUCATION, VOLUNTEER, EVENTS, FAQ, MY ACCOUNT (which is highlighted in blue), and LOGOUT. Below the navigation bar is a dark banner with a quote: "Once poverty is gone, we'll need to build museums to display its horrors to future generations. They'll wonder why poverty continued so long in human society – how a few people could live in luxury while billions dwelt in misery, deprivation and despair." Below the banner, there is a section titled "Projects" with a button labeled "Add Project Information". A project card is displayed, featuring a photo of a child, the title "FEED FOR HUNGRY CHILD", a short description, and a "VIEW INFO" button.

Figure 22 Project page(ORG)

It is an Organizations Landing page. When an Organization Login to the system it will show this page. From here organization can add their new project by clicking the button called Add Project Information which is under Project title. By entering the project information, and when it saved it will automatically generate a table in this project page with picture and title of the project and description and contact services which is shown in that screenshot. Refer [Appendix F1 \(Add Project page\)](#). For more Information

From this projects Donors can donate money for the people who need helps. (described in Donor's Page)

## Education Page



The screenshot shows a header with navigation links: PROJECT, VACANCIES, EDUCATION, VOLUNTEER, EVENTS, FAQ, MY ACCOUNT, and LOGOUT. Below the header is a banner featuring a woman writing on a chalkboard with the text: "One of the best ways countries can combat poverty is to use development assistance to promote a growing private sector, in which the poor can fully participate." The main content area is titled "Education Services" and displays a table of three rows of education services.

ID	Organization	Creator	Email	Project Title	Education Description	Requirement1	Requirement2	Requirement3	Requirement4	Requirements	DELETE
5	Unicef	unicef	unicef@example.com	Web Development	Throughout the course students are introduced to planning and designing effective web pages; implementing web pages by writing HTML and CSS code; enhancing web pages with the use of page layout techniques, text formatting, graphics, images, and multimedia; and producing a functional, multi-page website.	Computer Knowledge	GCE O/L	creative skills	Creativity Ideas	Knowledge in English	<span style="background-color: red; color: white;">DELETE</span>
7	NGO	unicef	NGO@example.com	Graphic Designing	Graphic design is the process of visual communication and problem-solving through the use of typography, photography, and illustration. ... Graphic designers create and combine symbols, images and text to form visual representations of ideas and messages.	Computer Knowledge	GCE O/L	Art Skills	Creativity Ideas	Knowledge in English	<span style="background-color: red; color: white;">DELETE</span>
9	NGO	saru	NGO@example.com	Maths Class	We're a nonprofit with the mission to provide a free, world-class education for anyone, anywhere. For Grade 9-11 and Advanced Level Maths Field Students can	Math understanding	Math understanding	English or tamil	concentration	Math understanding	<span style="background-color: red; color: white;">DELETE</span>

Figure 23 Education Page(ORG)

1

The next main function of the system is Education Services. Here organization can Add Education Services for people who are under poverty line. From that they can learn something new. When an organization upload new education service, it will automatically generate normal table report for organization and designed form will display for Requesters. (Described in Requester's page). Refer **Appendix F2 (Education Form Page)**. For more Information

From clicking Add New Education Services button, organization can add new Education services. And they can delete that services whenever they want. Once they delete that it will delete on requester's education page and this page. For that I connect each pages by creating a dashboard in admin page and I connect that panel to organization and requesters page by linking the database.

## Vacancies Page

The screenshot shows the 'Vacancies' page of the JOINHANDS website. At the top, there's a navigation bar with links for PROJECT, VACANCIES, EDUCATION, VOLUNTEERING, MY EVENTS, FAQ, MY ACCOUNT (which is highlighted in red), and LOGOUT. Below the navigation is a banner with the text 'Create New Job' and a small image of a child. The main content area is titled 'Add Job Vacancies' and contains a table with two rows of data.

Name of the Job	Add Images for the Job	Add Job Description	Select Category	DELETE
6 Blood Donation		Blood donation camp at jaffna	medical	<button>DELETE</button>
7 Software Developer Internship		It's your opportunity to learn from the best. The Internship brings you hands-on working experience to explore and understand world class business practices. It is an ideal opening to apply your academic learning skills in a project based environment. The Internship will sharpen your professional skills to bring out the best in you by being part of a dynamic team led by the finest leadership that spearhead the MAS thinking. It is the next big step to enrich your professional growth.	funding	<button>DELETE</button>

Figure 24 Vacancies Page

Another function of the system in organization page is Add Vacancies. Here organization can add career services as vacancies in their organization. From that Donors can view vacancies and they are able to apply for the job. When an organization create new job, it will automatically generate normal table report for organization and designed form will display for Donors. (Described in Donor's page). Refer **Appendix F2** ([Donor Form Page](#)). For more Information

Same like education page they can delete that job once they select the person. Once they delete that it will delete on Donor's vacancies page and this page. For that I connect each pages by creating a dashboard in admin page and I connect that panel to organization and donor page by linking the database.

## FAQ Page

The screenshot shows the FAQ page for the JoinHands website. At the top, there is a navigation bar with links for PROJECT, VACANCIES, EDUCATION, VOLUNTEER, EVENTS, FAQ, MY ACCOUNT (in a red box), and LOGOUT. Below the navigation bar, the title "Frequently Asked Questions (FAQ)" is displayed. A prominent button labeled "Ask Me Anything" is centered below the title. A yellow callout box contains the text: "This section contains a wealth of information, related to JoinHands and if you cannot find any information please be free to ask by clicking Ask Me Anything". The page is divided into sections for "General questions" and "Donors". Under "General questions", there are three collapsed sections: "Why JoinHands", "Do I need any account to use this website?", and "What is Poverty?". Under "Donors", there are three collapsed sections: "Who is a Donor", "How donation is given for Projects", and "How a Donor can give Education Support".

Figure 25 FAQ page

This section contains a wealth of information, related to JoinHands and if user cannot find any information, user can ask and clarify their doubt by clicking Ask Me Anything.

Refer Appendix F ([System UI](#)) for more UI Screenshots.

## 2. Requester

### Requesting Page

The screenshot shows the 'Request for Help' page for a user named Saru. At the top, there's a navigation bar with links for 'REQUEST FOR HELP', 'LEARN SKILLS', 'EVENTS', 'FAQ', 'MY ACCOUNT' (which is highlighted in green), and 'LOGOUT'. Below the navigation, the page title 'Request for Help' is displayed above a form area. The form includes fields for 'User' (Saru), 'Email' (saru@example.com), and 'Requestor Contact'. There's also a large text area labeled 'Enter Your Request Message'. At the bottom of the form, there's a checkbox labeled 'Send copy to my-email' and a prominent blue button labeled 'Send Request'.

Figure 26 Requesting Page

It's a Landing page for Requester profile. When requester login to the system, it will show this page. This is a page that requesters are able to ask or request for help. As a requester they can view available educational services and the events what is happening next.

## Education Service Page

The screenshot shows a web page titled "Education Services". At the top left is the "JOINHANDS" logo with the tagline "Let Your Hands Help". At the top right are links for "REQUEST FOR HELP", "LEARN SKILLS", "EVENTS", "FAQ", "MY ACCOUNT", and "LOGOUT". The main content area has two main sections: "WEB DEVELOPMENT" and "GRAPHIC DESIGNING".  
**WEB DEVELOPMENT:** This section features a circular diagram of various programming languages (Swift, PHP, Java, Python, Perl, C++, etc.) connected to a central laptop icon. Below the diagram is a brief description of the course content and a "CONTACT" button with the phone number 0772840388.  
**GRAPHIC DESIGNING:** This section includes a brief description of graphic design and its applications, followed by a "CONTACT" button with the phone number 0766273332. To the right of these descriptions is a banner for "ICT trainings" featuring the text "graphic design" and icons for Adobe Illustrator (Ai) and Photoshop (Ps).  
The overall layout is clean and organized, designed to provide quick access to educational resources.

Figure 27 Learn Skill page

This is a page that where requester can get free educational services information. From the organization's education page, as per the description it is an auto generated page. For that I connect each pages by creating a dashboard in admin page and I connect that panel to organization and requesters page by linking the database.

### Event Page



Figure 28 Event Page

This is a page that shows the upcoming events of the organization. From this events organization can collect donations. And from this events requesters and donor can get some facilities like jobs, scholarships, help for studies.

### 3. Donor

#### Donation Page



Figure 29 Donation by Project Page

This is a landing page that when donor login to the profile, it will show this page. From here donor can able to make donation by selecting a project which is created by organization. By clicking make donation button, it will take to donation page. Refer **Appendix F4** ([Make Donation](#)) for more information about donation page.

From the donation page donor can make payment by clicking PayPal checkout button. By clicking that button it will reload the sandbox. PayPal service page. From there donor can able to transfer their funds.

Refer **Appendix F5** ([Common Pages](#)) for more Common UIs.

#### 4. Admin

##### Admin Dashboard

Admin Profile		Add Admin Profile				
ID	Username	Email	Password	UserType	EDIT	DELETE
1	saru16	saru1998@gmail.com	1234	admin	<button>EDIT</button>	<button>DELETE</button>
3	thuva16	thuva16@gmail.com	1616	admin	<button>EDIT</button>	<button>DELETE</button>
4	saruniya16	saruniya1998@gmail.com	6161	admin	<button>EDIT</button>	<button>DELETE</button>
6	saru	saru@gmail.com	1998	admin	<button>EDIT</button>	<button>DELETE</button>
7	saruh	saruh@gmail.com	9874	user	<button>EDIT</button>	<button>DELETE</button>

Figure 30 Admin Dashboard

This is a dashboard of Admin's profile. Admin can't register them self. So author create a dashboard for registered data. From this page admin can add new admin. And from this dashboard only admin can edit their registered details. And also admin can delete any profile from the dashboard. Once the data deleted from here, automatically it will delete in database also. Deleted profile can't access the dashboard. And he can't login to the system.

Refer Appendix F6 (Dashboards). For more information.

## CHAPTER 7: TESTING

### TESTING OVERVIEW

<sup>15</sup> As a tester there are few types of software testing as Functional and Non-Functional testing, Automation testing and Agile testing.

<sup>13</sup> In this project author used Functional testing types includes unit testing, integration testing, system testing, and interface testing. As a non-functional testing types author includes performance testing <sup>16</sup> and usability testing. And mainly author used automation testing to compare the actual outcome with the expected outcome. Author achieved it via writing test scripts and using a testing tool call “selenium”.

At 1<sup>st</sup> author used unit testing by selecting a tool called “VS Code” to develop the system and focus on the test that impact the behavior of the system. and author isolate the development environment from the test environment. Before fixing defects, author write test cases that exposes the defects.

As:

- Register/ Login Validation.
- Database Connection.
- Dashboard Management.
- Main Functionality testing. (Job Vacancy, Education Services, Event Management)
- Online Donation Service.
- Requesting Services.

After this, author used integration testing. For testing this part, author ensure the proper detailed design file where integration between each units are well-defined. After making sure that each units are tested, author automate integration testing.

<sup>23</sup> After integration testing author did system testing to evaluate the system's submission with the detailed requirements. The category of the software testing called <sup>6</sup> black box testing used to test the system from the user's perspective. <sup>17</sup> and white box testing used to test the internal works or code of the software.

## TEST PLAN & TEST CASES

Refer Appendix G1 (Test Plan & Test Cases) For more Information.

### 2 Test Plan

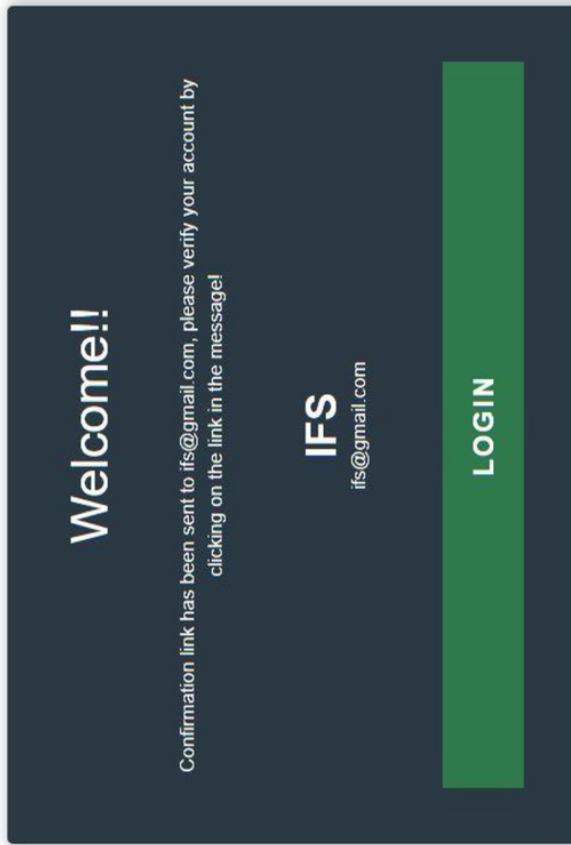
*Table 5 Test Plan*

Test Case ID	Target File	Test Case	Expected Result
01	signup.php	Check the register page is working.	It will go to profile.php and show the validation form with username, password and login button.
02	Index.php	Check the Password is Hidden.	The password entered to the password field and the characters are hidden as dot.
03	Index.php	Check with correct login.	It will go to main page of the selected user.
04	Index.php	Check with wrong Login details.	It will show the Error the error message as “username or password incorrect”
05	Admin.php	Check the DB Connection with correct database name.	It will show the database connected message.
06	Admin.php	Check the DB Connection with wrong database name.	It will show the error message.
07	addedu.php	Check the mandatory field of a form are not filled.	It will display a validate message on pressing add button.
08	Education.php	Check the Data entered in form is save in dashboard.	The selected form's dashboard will update the information automatically and it will show in a table form.
09	donate.php	Check the donation details shows or not.	It will shows the services types by clicking the donation rates.
10	donate.php	Check the PayPal checkout connection.	It will go to Sandbox PayPal connected page.

<b>11</b>	donate.php	Check the in-secure PayPal Browser.	It will show the message with correct PayPal connection browser's link.
<b>12</b>	Logout.php	Check the logout button validation.	It will show the logout successful validate message.
<b>13</b>	donate.php	Check the Donation is successfully added.	It will show the Successful message.

#### 4 Test Cases

Table 6 Test Case 1

Test Case ID	01
Target File	signup.php
Test Case Name	Check the register page is working.
Expected Result	It will go to profile.php and show the validation form with username, password and login button.
Actual Result	As Expected it shows the validation form with username, password and login button.
Outcome	 <p>Welcome!!</p> <p>Confirmation link has been sent to ifs@gmail.com, please verify your account by clicking on the link in the message!</p> <p>IFS ifs@gmail.com</p> <p>LOGIN</p>

4 Table 7 TestCase 2

Test Case ID	02
Target File	Index.php
Test Case Name	Check the Password is Hidden
Expected Result	The password entered to the password field and the characters are hidden as dot.
Actual Result	As Expected characters are hidden as dot.
Outcome	

4 *Table 8 Test Case 3*

<b>Test Case ID</b>	<b>03</b>
<b>Target File</b>	Index.php
<b>Test Case Name</b>	Check with correct login.
<b>Expected Result</b>	It will go to main page of the selected user.
<b>Actual Result</b>	As Expected main page of the selected user.
<b>Outcome</b>	   saru1998@gmail.com

**4**  
*Table 9 TestCase 4*

<b>Test Case ID</b>	<b>04</b>
<b>Target File</b>	Index.php
<b>Test Case Name</b>	Check with wrong Login details.
<b>Expected Result</b>	It will show the Error the message as “username or password incorrect”
<b>Actual Result</b>	As Expected error message Displayed
<b>Outcome</b>	 <p>The screenshot shows a dark-themed error page. At the top, the word "Error" is displayed in large white letters. Below it, a message reads "Username or Password is Incorrect!!". At the bottom right, there is a green rectangular button with the word "BACK" in white capital letters.</p>

**6**  
Table 10 Test Case 5

Test Case ID	05
Target File	Admin.php
Test Case Name	Check the DB Connection with correct database name.
Expected Result	It will show the database connected message.
Actual Result	As expected message showed.
Outcome	 Database Connected  JOINHANDS
	<input type="text" value="Search for..."/> 

**6**  
*Table 11 Test Case 6*

Test Case ID	06
Target File	Admin.php
Test Case Name	Check the DB Connection with wrong database name.
Expected Result	It will show the error message.
Actual Result	As Expected It shows the error message.
Outcome	e

## Database Connection Failed

### Database Failure

Please Check Your Database Connection



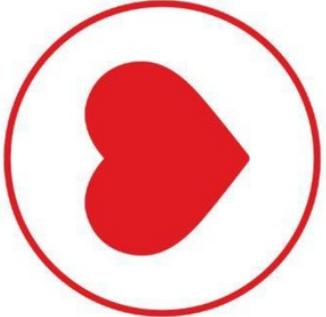
Table 12 Test Case 7

<b>Test Case ID</b>	<b>07</b>
<b>Target File</b>	addedu.php
<b>Test Case Name</b>	Check the mandatory field of a form are not filled.
<b>Expected Result</b>	It will display a validate message on pressing add button.
<b>Actual Result</b>	As Expected it display a validate message on pressing add button.
<b>Outcome</b>	<p>Organization Name *</p> <input type="text" value="NGO"/> <p>Email *</p> <input type="text" value="NGO@example.com"/> <p>Education Description</p> <input type="text" value="Grade 6-11 students can join here, classes will be starts on 12th September 2019 on Venus College, Vavuniya."/> <p>Add Requirements</p> <p>lev1</p> <p>lev2</p> <p>Understanding_level</p> <p>concentration</p> <p>lev3</p> <p><b>Add Education</b></p>

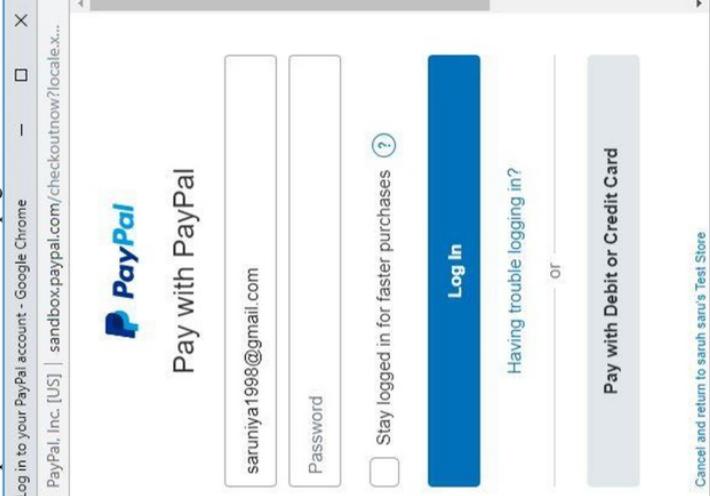
**6** *Table 13 Test Case 8*

Test Case ID	08																																				
Target File	Education.php																																				
Test Case Name	Check the Data entered in form is save in dashboard.																																				
Expected Result	The selected form's dashboard will update the information automatically and it will show in a table form.																																				
Actual Result	As Expected Data Entered Correctly.																																				
Outcome	<h2>Education Services</h2> <table border="1"> <thead> <tr> <th colspan="6">List Education Services</th> </tr> <tr> <th>ID</th> <th>Organization</th> <th>Creater</th> <th>Email</th> <th>Project Title</th> <th>Education Description</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>Unicef</td> <td>unicef</td> <td>unicef@example.com</td> <td>Web Development</td> <td>Throughout the course students are introduced to planning and designing effective web pages; implementing web pages by writing HTML and CSS code; enhancing web pages with the use of page layout techniques, text formatting, graphics, images, and multimedia; and producing a functional, multi-page website.</td> </tr> <tr> <td>7</td> <td>NGO</td> <td>unicef</td> <td>NGO@example.com</td> <td>Graphic Designing</td> <td>Graphic design is the process of visual communication and problem-solving through the use of typography, photography, and illustration ... Graphic designers create and combine symbols, images and text to form visual representations of ideas and messages.</td> </tr> <tr> <td>9</td> <td>NGO</td> <td>saru</td> <td>NGO@example.com</td> <td>Maths Class</td> <td>We're a nonprofit with the mission to provide a free, world-class education for anyone, anywhere. For Grade 9-11 and Advanced Level Maths Field Students can join here.</td> </tr> <tr> <td>12</td> <td>unicef</td> <td>unicef</td> <td>unicef@example.com</td> <td>Math</td> <td>understanding</td> </tr> </tbody> </table>	List Education Services						ID	Organization	Creater	Email	Project Title	Education Description	5	Unicef	unicef	unicef@example.com	Web Development	Throughout the course students are introduced to planning and designing effective web pages; implementing web pages by writing HTML and CSS code; enhancing web pages with the use of page layout techniques, text formatting, graphics, images, and multimedia; and producing a functional, multi-page website.	7	NGO	unicef	NGO@example.com	Graphic Designing	Graphic design is the process of visual communication and problem-solving through the use of typography, photography, and illustration ... Graphic designers create and combine symbols, images and text to form visual representations of ideas and messages.	9	NGO	saru	NGO@example.com	Maths Class	We're a nonprofit with the mission to provide a free, world-class education for anyone, anywhere. For Grade 9-11 and Advanced Level Maths Field Students can join here.	12	unicef	unicef	unicef@example.com	Math	understanding
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12	unicef	unicef	unicef@example.com	Math	understanding																																

4 Table 14 Test Case 9

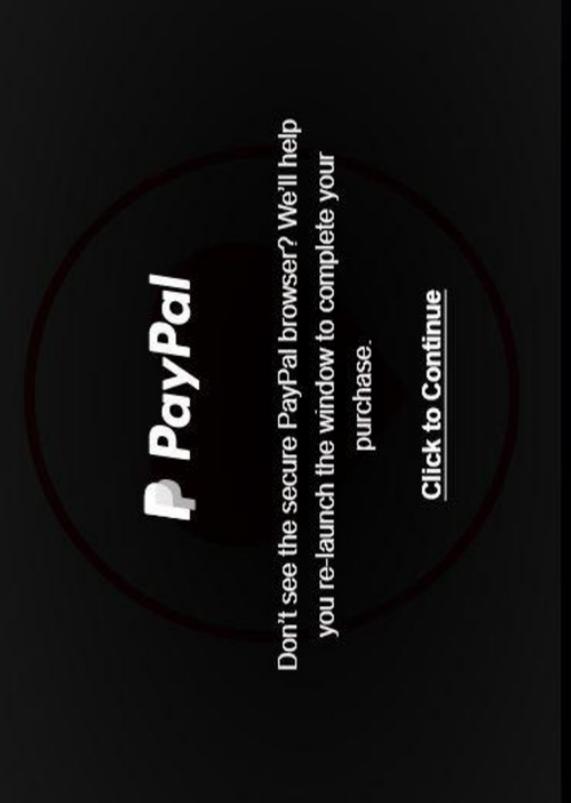
Test Case ID	09
Target File	donate.php
Test Case Name	Check the donation details shows or not.
Expected Result	It will shows the services types by clicking the donation rates.
Actual Result	As Expected it shows the details under the donation rates.
Outcome	<p><b>GIVE WHERE NEEDED MOST</b></p> <p>\$25    \$50    \$100    \$500    OTHER</p> <p>Covers housing or counseling services for two people</p> 

**4**  
Table 15 Test Case 10

Test Case ID	10
Target File	donate.php
Test Case Name	Check the PayPal checkout connection.
Expected Result	It will go to Sandbox PayPal connected page.
Actual Result	As Expected it shows sandbox page.
Outcome	 <p>Pay with PayPal</p>



**6** *Table 16 Test Case 11*

Test Case ID	11
Target File	donate.php
Test Case Name	Check the in-secure Pay Pal Browser.
Expected Result	It will show the message with correct Pay Pal connection browser's link.
Actual Result	As Expected show validate message
Outcome	

**6** *Table 17 Test Case 12*

Test Case ID	12
Target File	Logout.php
Test Case Name	Check the logout button validation.
Expected Result	It will show the logout successful validate message.
Actual Result	As Expected it shows validate message
Outcome	

# Thank You!!

You Have Successfully Logout!

**BACK**

**6** *Table 18 Test Case 13*

Test Case ID	13
Target File	Donate.
Test Case Name	Check the Donation is Successfully added
Expected Result	It will show the successful message.
Actual Result	As Expected it shows Successful message
Outcome	Ie... localhost says  THANKYOU FOR SUPPORTING

2

## CHAPTER 8: IMPLEMENTATION OVERVIEW

### Software & Hardware requirement for implementation

To implement this website, have to identify software and hardware requirements. Secure transaction is based on the software and hardware combination. So the Online Donation service integrated with SQL, Email Service.

2

To develop the system, the initial main resource is operation system which the developing system should able to run. Because the operating system such as the Linux and some other operation system have some problem to run the software developing tool applications to them. User can use the Window 7,8,10 as the platform to implement the system. Describe about the software developing language and the server, which is going to hold the system data input and retrieval processes, and also the tools/application which author have used to implement the system. using some php IDEs user can edit the code. And design as per their wish.

3

### Core system components and their implementation

5

In this Project author used Agile model to implement the system. It is a conceptual framework for undertaking software engineering projects. Its pros are: Adaptive approach that responds to changes favorably; Allows for direct communication to maintain transparency; Improved quality by finding and fixing defects quickly and identifying mismatches early. While its cons are: Focuses on working with software and lacks documentation efficiency; Changes of getting off-track as an outcome are not clear.

2

Author developed the web based system using animations, graphics, and also interactive web pages used to develop the system. here author mention some of the codes in this project.

2

```

2  <?php
3
4  $server_name = "localhost";
5  $db_username = "root";
6  $db_password ="toor";
7  $db_name = "joinhand";
8
9  $connection = mysqli_connect("$server_name","$db_username","$db_password","$db_name");
10 $dbconfig = mysqli_select_db($connection,$db_name);
11
12 if($dbconfig)
13 {
14     echo "Database Connected";
15 }
16 else
17 {
18     echo '
19         <div class="container">
20             <div class="row">
21                 <div class="col-md-8 mr-auto ml-auto text-center py-5 mt-5">
22                     <div class="card">
23                         <div class="card-body">
24                             <h1 class="card-title bg-danger text-white">Database Connection Failed </h1>
25                             <h2 class="card-title"> Database Failure</h2>
26                             <p class="card-text"> Please Check Your Database Connection</p>
27                             <a href="#" class="btn btn-primary"> :( </a>
28                         </div>
29                     </div>
30                 </div>
31             </div>
32         </div>
33     ';
34 }
35
36 ?>
```

Figure 31 Code of Database

Here, author used dollar sign to refer the variables. “`mysqli_connect`” is a function that <sup>18</sup> ~~use to~~  
<sup>25</sup> opens a new connection to the MySQL Server. “`$server_name`” specifies the host name.  
“`$db_username`” specifies the MySQL username and “`$db_password`” specifies the MQL  
<sup>20</sup> password. And author specifies default database name as “`$db_name`”. and “`mysqli_select_db`”  
used to change the default database for the connection. And “`echo`” statement used to print the  
statement.

```

1  <?php
2  /* User login process, checks if user exists and password is correct */
3
4  // Escape email to protect against SQL injections
5  $email = $mysqli->escape_string($_POST['email']);
6  $result = $mysqli->query("SELECT * FROM donor WHERE email='$email'");
7
8  if ( $result->num_rows == 0 ){ // User doesn't exist
9      $_SESSION['message'] = "Username or Password is Incorrect!!";
10     header("location: error.php");
11 }
12 else { // User exists
13     $user = $result->fetch_assoc();
14
15     if ( password_verify($_POST['password'], $user['password']) ) {
16
17         $_SESSION['email'] = $user['email'];
18         $_SESSION['first_name'] = $user['first_name'];
19         $_SESSION['country_name'] = $user['country_name'];
20         $_SESSION['active'] = '1';
21
22         // This is how we'll know the user is logged in
23         $_SESSION['logged_in'] = true;
24
25         header("location: ../HomeDonor/index.php");
26     }
27     else {
28         $_SESSION['message'] = "Username or Password is Incorrect!!";
29         header("location: error.php");
30     }
31 }

```

Figure 32 Code of Login

12

Here “escape\_string” used to protect email against SQL injections. And \$\_SESSION creates a session or resumes the current one based on a session identifier passed via a GET or POST request, or passed by a cookie. “header” used to redirect the page.

```
chatbot_body.php
1   <button class="open-button" onclick="openForm()">Chat</button>
2
3   <div class="chat-popup" id="myForm">
4     <form class="form-container">
5       <h2 style="color: #000;">Chat</h2>
6
7
8       <iframe src="../chatbot.html" width="500px" height="500px" frameBorder="0"></iframe>
9
10      <button type="button" class="btn cancel" onclick="closeForm()">Close</button>
11    </form>
12  </div>
13
14  <script>
15    function openForm() {
16      document.getElementById("myForm").style.display = "block";
17    }
18
19    Loading... <!-- closeForm() {
20      document.getElementById("myForm").style.display = "none";
21    }
22  </script>
23  <script src="./script.js"></script>
24
```

Figure 33 Code of Chatbot Body

Above SC shows the code of chatterbot's body. Here, class explains the blueprint of an objects. And <div> tag explains the division or a selection of that selected page. Iframe tag used to define an inline frame with a rectangular region. To design that region author used height, width and frameBorder.

## API Design and Explanation

```
7 $money = $_GET["amount"];
8
9
10 require __DIR__ . '/../vendor/autoload.php';
11
12
13 $apiContext = new \PayPal\Rest\ApiContext(
14     new \PayPal\Auth\OAuthTokenCredential(
15         'AfZB00AE7JEB5HH2cICbtawLHfxz7bsnX7BWw8AJNciHh_4hxYyCpu5T_qtyc3BghNy54-vgFYwL-',
16         'ENlTIV_oC5sWsvkSGGzGQCY14mI4suer8-wDri8UAD4c9yU0mBDwToIu3FZzrWTyreRJB6BdXuB3EE5'
17     )
18 );
19
20
21 $payer = new \PayPal\Api\Payer();
22 $payer->setPaymentMethod('paypal');
23 $amount = new \PayPal\Api\Amount();
24 $amount->setTotal($money);
25 $amount->setCurrency('USD');
26 $transaction = new \PayPal\Api\Transaction();
27 $transaction->setAmount($amount);
28 $redirectUrls = new \PayPal\Api\RedirectUrls();
29 $redirectUrls->setReturnUrl("http://localhost/JoinHands/HomeDonor/message.php")
30     ->setCancelUrl("http://localhost/JoinHands/HomeDonor/message.php?m='canceled'");
31 $payment = new \PayPal\Api\Payment();
32 $payment->setIntent('sale')
33     ->setPayer($payer)
34     ->setTransactions(array($transaction))
35     ->setRedirectUrls($redirectUrls);
36
37 try {
38     $payment->create($apiContext);
39     echo $payment;
40     echo "\n\nRedirect user to approval_url: " . $payment->getApprovalLink() . "\n";
41 }
42 catch (\PayPal\Exception\PayPalConnectionException $ex) {
43
44
45     echo $ex->getData();
46 }
```

Figure 34 Code of PayPal API

At 1<sup>st</sup> author used require code to auto load the SDK package. \$apiContext provides a secrete key. And replace the given one with the webpage client ID and Password. Line 21 – 35 describes how to create a payment. And try method used to create a call and print the value. Chat method use to print the detailed information on the exception.

## **Deployment Instruction & System Installation Guide**

<sup>2</sup> Deployment is a process of the system development life cycle. It includes planning, designing, structure, testing and organizing new software and hardware components in the project environment. It is important part of the project.

If the system finally handover the clients. In my project client is a Donation & Assistance management. So I plan install some software of the computers. Such as. Visual Studio Code, jdk, GitHub, Wamp, Xampp. Once author install this software then author can use the Donation and Assistance Management system. If author wants to <sup>2</sup> do any modification of the system, then author can be release new version of the system. So if author released the system then author can upgrade the system.

## CHAPTER 9: RISK MANAGEMENT

It is, for the most part, caused because of the absence of data, control or time. A possibility of experiencing misfortune in the software development procedure is known as a product chance. Risk can be anything, an expansion production cost, the advancement of low-quality programming, not having the option to finish the project on schedule. Programming risk exists in light of the fact that what's to come is questionable and there are many known and obscure things that can't be joined in the project plan.

Here, the main process is Risk Management Plan. The procedure of the plan for managing risks through the project is a process of deciding how to approach and plan for risks in the project. There are two types of risks are positive and negative impact risks.

### Risk Identification

There are two types of methods are used to identifying risks. 1<sup>st</sup> brainstorming methods, its start with the project staff's creativity. And 2<sup>nd</sup>, there are a multiplicity of risk lists including the usual project risks.

1. Insufficient time for external stakeholders to submit surveys.
2. Lack of Response
3. Insufficient QA time to validate on all browsers and OS types.
4. Low Usage of Software Support Tools
5. Requirements NOT Complete & Clear
6. Inconvenient Date
7. Large Project Size
8. Short Term Solution
9. Implementation Difficulty
10. Lack of Project Management Experience
11. Late Identification of Defects
12. Problem with Physical Facilities
13. Dependency on a Few Key People
14. High Extent of Changes in The Project

## Risk Analysis

The risks ordered & established on qualitative norms with the help of a risk matrix. With this way, the probability of the risk happening occur and the degree of impact are rated as "low", "medium" or "high". Giving the risks in the form of a matrix chart make available for a good overview of the priorities which are important for risk resolution.



Figure 35 Risk Matrix

## **CHAPTER 10: PROJECT SUMMARY**

### **Solution Evaluation**

The chatterbot technology can be a challenge by upgrading it to the donation and assistance management system. the bot system for the donation project is built using artificial algorithms that analyses user's queries and understand user's message. The system provides answers to the user inquiry. When a user enters a message to the query with any information regarding donor or requesters or organizations or donation or registration process or services and events, system will process the string set through natural language processing and take the essential set of words to understand what the user expects. The next intelligence process happens when the system tries to predict the accurate answers to the inquiry. And easy to keeping all data in proper way can be maintained without any error data. The data will store into the database. And admin can view all database as some dashboards from his profile.

### **Limitations of the System**

Developing a Donation and Assistance Management System with chatterbot and online fund transferring using artificial intelligence and PayPal API is the first attempt to automate the entire managing workflow inside the company as well as to eliminate a series of reduces work time for Administration group. While the system has so many advantages for donors and requesters. This section describes those services that are not provided by the system and those include the following. It does not inquiry all languages for user's questions.

2

### **Future Enhancements**

Future enhancement of any system is inevitable over the period of years. As the project is user friendly, ant sort of enhancement which results in quick response to the user, provides more details, reduce manual efforts would be given through for future enhancements.

From the functional point of view, currently there are no any Donation and Assistance management systems with bot services. In future enhancement, adding some features like contacting services and on time fund transferring, and in bot system displaying donor, requester, organization details. And donation details, feedback sheets.

**2**

From the technical point of view, this project has been developed using WAMP as backend technology. When a new version of database with more functionality is suitable for this project, current version can be upgraded. Similarly, with the newer version of front end technology Visual Studio Code is available with the new techniques can be used to develop the front end of the system.

**2**

## **Lessons Learned Report**

In this project, author decided to import the chatterbot system for Donation and Assistance Management. Author have done the system using PHP. Author used Visual Studio Code platform to develop the system. This is a web based system. after doing this system author got more knowledge about the system and the concept. The main use of the system is online fund transaction. The system's user interfaces are more user friendly.

To do the project 1<sup>st</sup> author gather the information about current systems, problem domain of the system, and the drawback of the system. after that author design the database and from that author designed user interfaces. And after that she develop the system. and after that each and every functions done by unit testing. And then author did integration testing. After finishing the testing and clearing the bugs, author did system testing with black box and white box testing. And at last author implement the system.

## **Conclusion**

The core reason of the Donation and assistance management system is to enable the connection between donor and requester with organization. And the reason for the bot system is used to clarify the doubts and inquires of donors and requesters. Therefore, the IT used to support the core objective of the system to remain relevant system to the nonprofit organizations. After browsing through all the existing methodologies and applications till date, it has been observed that there are various merits and demerits of the various techniques used in the education sector. It will give an appropriate response to user's query. This system will be helpful in reducing workload of admin. Database files accurate and quick answers will be given to user.

The proposed system aims at developing a multi-purpose application for the users which will provide all donation related help and information at their fingertips at ease. The basic idea still remains bridging the gap between the Donors and the requesters by providing an easy method of communicating and sharing information.

## Chapter 1 – Appendix A (Introduction)

### A1. Evidence Regarding Problem Domain

Table 19 Evidence Regarding Problem Domain

Interviewer Name	Organization Name and Designation	Problem Domain Opinions
Mr. Shankar	Frence Organization, Sangilipay Jaffna, Project Coordinator	<p><b>About Receiving Donation</b></p> <ul style="list-style-type: none"> <li>✓ Receiving donation on time</li> <li>✓ Political involvement is more when receiving donation</li> </ul> <p><b>Opinion about Education in Sri Lanka</b></p> <ul style="list-style-type: none"> <li>✓ No proper encouragement for students living under poverty regarding education</li> </ul> <p><b>Opinion about Volunteering Service</b></p> <ul style="list-style-type: none"> <li>✓ Encouragement on receiving Volunteers for the project is best</li> </ul>
Mrs. Rajeshwary	Foroot Organization, Jaffna Project Coordinator	<p><b>About Receiving Donation</b></p> <ul style="list-style-type: none"> <li>✓ Regular changes in the Exchange rate is a Problem</li> <li>✓ Economic policy changes as tax and interest rate is a problem</li> </ul> <p><b>Opinion about Education in Sri Lanka</b></p> <ul style="list-style-type: none"> <li>✓ Government need to impose more and more rules and regulations to overcome the school dropouts and child education</li> </ul> <p><b>Opinion about Volunteering Service</b></p> <ul style="list-style-type: none"> <li>✓ Encouragement on receiving Volunteers for the project is best</li> </ul>
NGO member	Mr. Susikaran, Jaffna, Sri Lanka Project Manager	<p><b>About Receiving Donation</b></p> <ul style="list-style-type: none"> <li>✓ No issues faced in receiving donation. Since receiving donation directly from the donors.</li> </ul> <p><b>Opinion about Education in Sri Lanka</b></p> <ul style="list-style-type: none"> <li>✓ Imposing high laws for school education especially a student must learn till 18 years.</li> </ul>

		<b>Opinion about Volunteering Service</b> <ul style="list-style-type: none"> <li>✓ Encouraging to welcome volunteers with skills since people skills is needed to offer services</li> </ul>
NGO Member	Mr. Sarwanantha. Jaffna Sri Lanka Field Worker	<p><b>About Receiving Donation</b></p> <ul style="list-style-type: none"> <li>✓ Delays in receiving donation during seasonal times</li> <li>□</li> </ul> <p><b>Opinion about Education in Sri Lanka</b></p> <ul style="list-style-type: none"> <li>✓ Giving job opportunities for house hold people for earning can reduce education problem</li> </ul> <p><b>Opinion about Volunteering Service</b></p> <ul style="list-style-type: none"> <li>✓ Better to have skill volunteers to do a Project</li> </ul>

22  
**A2. Fish Bone Diagram**

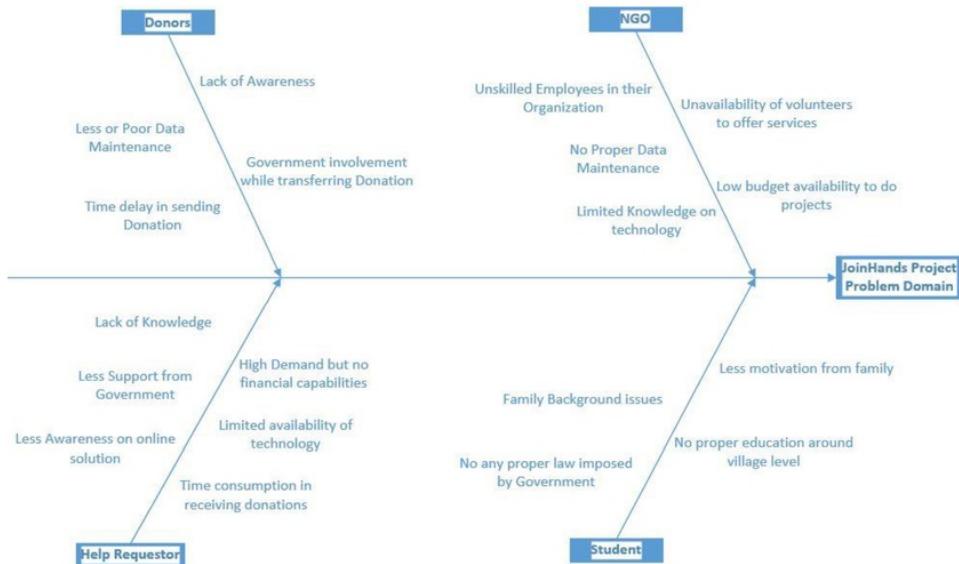


Figure Appendix 1 Fish Bone Diagram

### A3. Project Scope Diagram

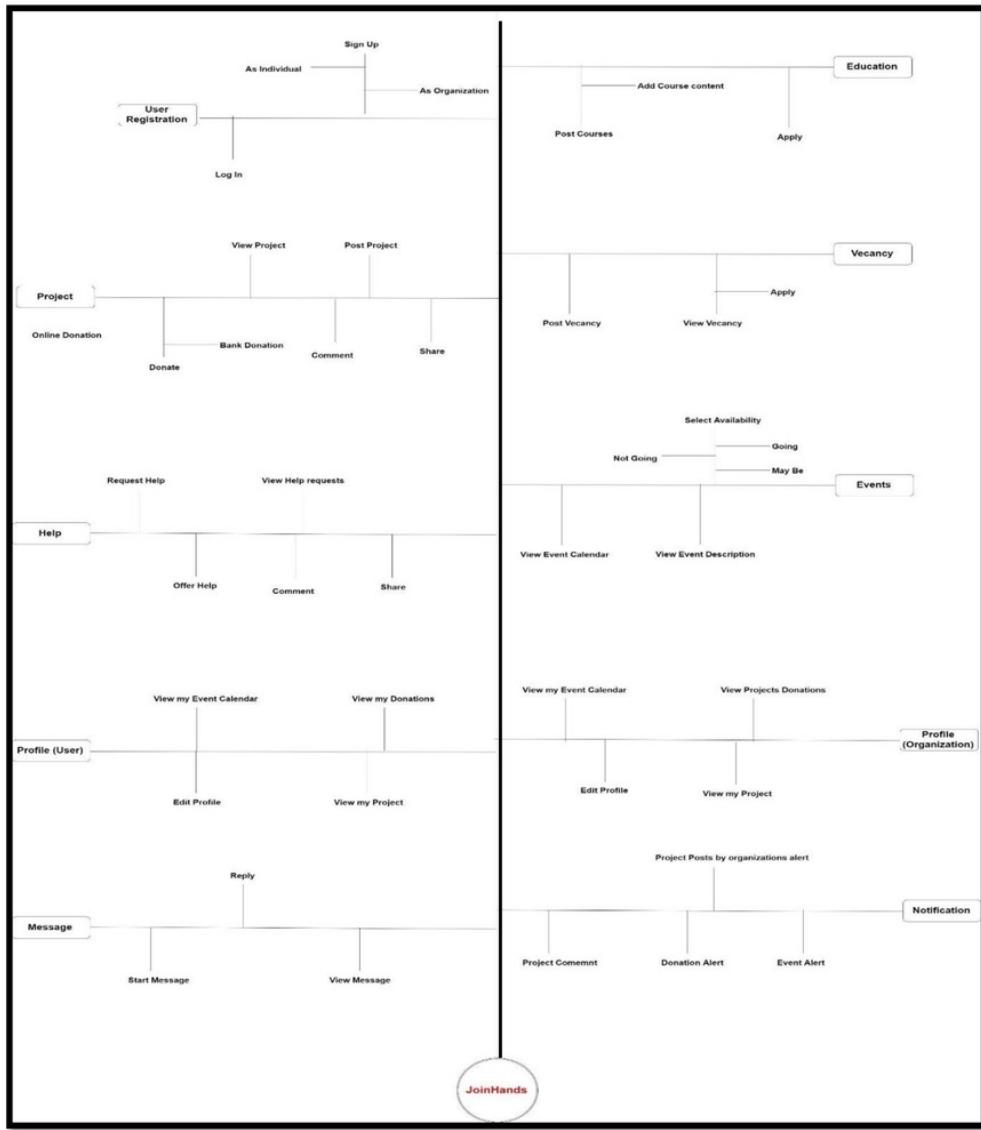


Figure Appendix 2Feature Model Diagram

#### **A4. Object Oriented Approach (OOA)**

OOA is known to be a Programming concept tool which is made to point the Programmer. These Program is more clear. OOA was designed to concentrate mainly on Data. It underpins 4 main key factors as

- Inheritance
- Encapsulations
- Abstraction
- Polymorphism

OOA are mostly divided in to small categories as Objects and more secure since it has Data Hiding functionality.

#### **A4. Reason for Selecting Design Approach with Comparison**

No	Structural Approach	Object Oriented Approach	Reason for Selecting OOA
1	Structured Programming Designed to focus on process, logical structure etc.	Object Oriented Programming designed to focus on Data	Object Oriented
2	SDLC Methodology	Iterative/ Incremental Methodology	Agile Methodology
3	Risk is very high	Risk is very Low	Low risk can be in safe zone
4	Defined for Stable User understanding.	Designed for Changing User understanding	There will be changes on the requirements from the output generated
5	Data Flow diagram	Use Case Diagram, Activity Diagram and Class Diagram	Easy for any user to Understand
6	Less Flexibility and Abstraction	More Flexibility and Abstraction	More Flexibility will be easy for understanding

Appendix Table 1 Reason for selecting OOA concept

## Chapter 2 – Appendix C

### C1. Comments Received regarding Poverty in Sri Lanka

Comment ID	Comments
<b>Comment 1</b>	Government needs to supply required facilities to poor people. Because lots of services (Samurthi) from government which is not reach to the correct people still.
<b>Comment 2</b>	Sri Lanka is basically an agriculture-based country which is also now a day stabilizing its service and tourism industries. But we can still find lots of farmers who are suffering in poverty. As per experts the world is going to suffer with food shortage soon because of high industrialization. On that day natural food products may have higher demands thus higher price. So, an economy which has its agricultural production at peak may exploit a good fortune.so I think government should provide additional subsidies and support (such as low interest loans, leases, micro loans etc.) to farmers.
<b>Comment 3</b>	<ul style="list-style-type: none"><li>• Social organization to help the poor.</li><li>• Free food every day by donations which is done in USA</li></ul>
<b>Comment 4</b>	I think If the income of an organization is genuinely divided to everyone who is involved in the process there won't be a major gap between the rich and the poor people. It's one of the way to reduce poverty
<b>Comment 5</b>	In order to reduce poverty opportunities for learning skills that would lead to better employment opportunities should be provided by the government
<b>Comment 6</b>	Sri Lanka is one of the Developing Country in which still need to improve a lot on poverty. Still there are people who are living under starving for food and waste
<b>Comment 7</b>	Reduce foreign exports and give opportunity to local vendors and suppliers
<b>Comment 8</b>	Private organization staff recruitment s for different casts
<b>Comment 9</b>	Give more job opportunity for People living under poverty
<b>Comment 10</b>	Education can eradicate the poverty...

Appendix Table 2 Comments received regarding poverty in srilanka

## C2. Comments Received regarding Education offering for Students living under Poverty

ID	Comments
Comment 1	At least an hour or 2 in a week would be rather beneficial for the kids who are in the rural or slums... Different volunteers in different areas and areas based and gathering and educating them.
Comment 2	If we provide food or facilities which will help only that day to survive. But if we educate them, will be a big help to them to survive for a long time from their own leg. It will be a big change to them to come out from their poverty
Comment 3	Mostly I would like to consider on IT education
Comment 4	Loan facility for higher education

Appendix Table 3 Comments Received regarding Education

## C3. Opinion to Have Volunteer Services offered by NGO's

Comment ID	Comments
Comment 1	It's done by the volunteers by maximum effort not forced by anyone else. Sometimes pocketing the money from their own is hard coz they might be no financially settled. So, need more financial support from the ones who are well settled. Or even small amount from helping hands would be grateful.
Comment 2	Good thing... But still people are doubt about them for trustworthy. Are they going to provide or cheating? So, better they must build a trustworthy from earlier stages
Comment 3	Motivation towards volunteer is mandatory
Comment 4	Foreign NGO's are performing better than local NGO's

Appendix Table 4 Comments Received Regarding Volunteer Services

#### C4. Opinion to Have a Web Solution

ID	Comments
Comment 1	Web can help to speed up any kind of process
Comment 2	Should be easy to understand and simple in its format
Comment 3	It must be speed and easy to access by any one at any time
Comment 4	Point to point and straight. Statics about the fund collected and expense (donation) made, need to be displayed somewhere in the website.

Appendix Table 5 opinion to have web solution

#### C5. Questions Online Survey

1. Rate Your Opinion about poverty in Sri Lanka?
2. Give your opinion about Poverty in Sri Lanka. Here you can mention some improvements
3. Give your Rating about Non-Government Organizations in relation to Donation that they receive from Donors in Sri Lanka
4. What is your opinion about NGO's in Sri Lanka in relation to donation received by them?
5. Have you ever faced any problem on doing donation to NGO's (For Eg: In searching for NGO's, Problem of cheating etc.)?
6. Do you prefer if there is a Job opportunity offered by NGO's in Sri Lanka?
7. Education is one of the Key feature for a Human being. Do you prefer to give education if there is an opportunity provided by NGO's?
8. Any opinion about education services that can be offered to poverty
9. What type of Education Services can be offered to those People living under poverty?
10. Have you worked as a volunteer on any Organization?
11. What is your opinion about Volunteer services offered by NGO's?
12. Do you prefer to have a Web solution which will overcome the above-mentioned problems?
13. Any opinion about the Web Solution
14. If you know, please mention what are the websites available for the solution including these features. Please mention (Finding the Competitors known by Donors)

## **C6. Interview Questions (NGO Survey)**

1. What is your opinion about poverty in Sri Lanka?
2. Do you have any strategy to reduce poverty in Sri Lanka?
3. Have you faced any problems regarding employees in your organization?
4. What are the problems you faced regarding employees in your Organization?
5. Do you receive donations from donors on correct time?
6. Is there are any problems that you are facing while receiving donations from donors?
7. What is your opinion about government intervention on the organization?
8. What do you think about education in Sri Lanka?
9. What are the opinions about improving education in Sri Lanka?
10. What are the opinion about volunteers in your organization?
11. Do you prefer any system solution with the features as education offering and donation services?
12. Do you think is there any web solution available. If yes, what are they?
13. Give me your opinion about improving the system?
14. Do you have any other suggestions or feedbacks?

## C7. About Agile Development Approach

Agile Model is an interconnection of both Iterative and Incremental Process Model. Here each Phases are analyzed, developed and tested as a lifecycle in an iterative way until the Project gets success. Here the model is broken into small incremental builds. Here the software quality is maintained throughout the proper testing functionality. Agile Development is used for biggest projects which are extremely built. In order to solve the problem on Waterfall Model this Model was developed. This model will simultaneously be working on with the areas as

- ✓ Planning
- ✓ Requirement Analysis
- ✓ Designing
- ✓ Coding
- ✓ Testing
- ✓ Acceptance

In order to come up with the improvements the developers have to spend only few days, hours in order to complete the improvements. Both the Client and the Developer will have time for taking a best decision before acceptance of the project.

### Advantages

- Project Quality can be maintained effectively with the Continues testing as soon as development is completed
- Helps to promote team working and training
- Environmental friendly Prototype can be developed
- Working product can be delivered frequently with the continues improvements and developments
- Direct involvement of Clients with the developer under development stage
- Very easy to manage with the less planning process
- Project failure can be reduced with the Proper development

### **Disadvantages**

- There can be a problem where project can be kicked off when the client's problem is not well defined
- Not suitable for handling complex requirements
- High individual involvement on the project will be an issue

## **Chapter 6 – Appendix F**

### **Organization**

#### **F1. Add Project**

**New Project**

Add Images for the Project  
 No file chosen

Name of the Project

Enter Name of the Job

Add Project Description

Enter Description

Contact No

Add Contact Number

#### **F2. Add Education**

Organization Name \*

Project Creator Name \*

Email \*

Project Title

Education Description

Add Requirements

\* Marked Fields Needed to be Completed

### F3. Add Job

Name of the Job

Enter Name of the Job

Add Images for the Job

Choose File No file chosen

Add Job Description

Enter Description

Select Category

Select a Category

Close

Save

**Donor**

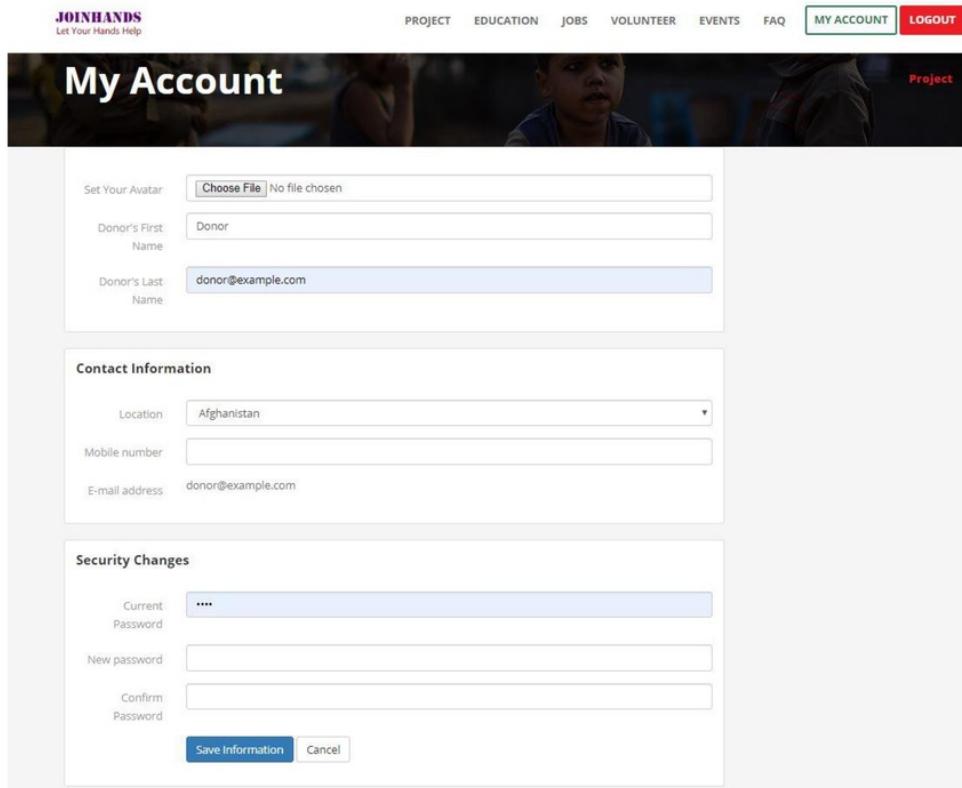
**F4. Make Donation**

GIVE WHERE NEEDED MOST | [\\$25](#) [\\$50](#) [\\$100](#) [\\$500](#) [OTHER](#) [PayPal Checkout](#)

Covers housing or counseling services for two people



## F5. Common Pages



The screenshot shows the 'My Account' page of a website. At the top, there's a navigation bar with links for PROJECT, EDUCATION, JOBS, VOLUNTEER, EVENTS, FAQ, MY ACCOUNT (which is highlighted in green), and LOGOUT. Below the navigation is a banner featuring a child's face with the word 'Project' in the bottom right corner. The main content area is titled 'My Account'. It contains three sections: 'Set Your Avatar' (with a file input field showing 'Choose File No file chosen'), 'Contact Information' (with dropdown for Location set to 'Afghanistan', and fields for Mobile number and E-mail address), and 'Security Changes' (with fields for Current Password, New password, and Confirm Password). At the bottom right of the form are 'Save Information' and 'Cancel' buttons.

# Sign In



E-mail

Password

**LOG IN**

[Forgot Username / Password?](#)

**I am a New Organization**



Organization Name

E-mail

Select Your Country

Password

**REGISTER**



JOINHANDS

ABOUT US WHAT WE OFFER CONTACT US BLOG Login Now

## ABOUT US



### Who Are We

JoinHands - Let Your Hands Help is a Service oriented website which was created to give support to those people who are living under poverty under different types categories. By joining on this website a donor can offer more and more services to those people.

Please be kind enough and become as a Helping hand and Provide your services for the betterment of their lives

### Main Services we Target

We are mostly targetting on providing services under different categories which are listed below and for more refer "What We Offer".

- \* Donation Offering Services
- \* Education Services
- \* Volunteering Services

## CONTACT US

Please be feel free to ask anything



No:32, 32nd Lane,  
Colombo 06, Sri Lanka



JoinHandssrilanka@gmail.com



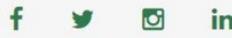
0094772840388

Send Your Inquiry

Message

**Send Message**

Follow us



**JOINHANDS**

ABOUT US   WHAT WE OFFER   CONTACT US   BLOG   [Login Now](#)

**WHAT WE OFFER**

**Donation Services**  
User Donor can support people by offering Donations

**Education Services**  
Provide free Education services for Students and Young Children

**Volunteering Services**  
Become a Volunteer for NGO's and Support them on their projects and be a Helping Hand

**Become an NGO**  
Become as an NGO and Support people by providing services

**Request for Help**  
Become as a Member and request for any help and get solved

**Post Events**  
Post Events and Support for People who as a Donor or get help as a Requester

**Give Feedback**  
Give your Feed back and opinions regarding issues that you are facing

**Quick and Safety**  
Website is created with safety features and secured.

## F6. Dashboards

Dashboard

TOTAL REGISTERED ADMIN Total Admins:5	TOTAL REGISTERED DONOR Total Donors:3	TOTAL REGISTERED REQUESTER Total Requesters:5	TOTAL REGISTERED ORGANIZATION Total Requesters:6
--	--	--	---

[Generate Report](#)

Donor Profile

ID	Name	Email	Country	Password	DELETE
1	Akshan Wimal	akshanwimal234@gmail.com	SriLanka	\$2y\$10\$g3v3v6VGe6gYTl50dH2VJyeGCBmeUCYSuTEl0dsQf1QhvP5RbXW10C	<a href="#">DELETE</a>
2	Donor	donor@example.com	Afghanistan	\$2y\$10\$gFN7wZrT3NMj/FQbv5tbVeckd4T2EtC9D7m6R9begHh2yVY4wWMmq	<a href="#">DELETE</a>
3	Donor	donor@test.com	Albania	\$2y\$10\$3HbuQ.sV58 cwdK2rqePUcOONNloaBmC4OCHl/B0xyLRdSqTuKL.D2	<a href="#">DELETE</a>

Organization Profile

ID	Name	Email	Country	Password	DELETE
1	ABC Organization	Australia	abc@gmail.com	\$2y\$10\$4d.5R/D2tb5XCdbMDyVl6ulEH8WhlwP9hrlfxYY8U3u/t3Wl2XgN.	<a href="#">DELETE</a>
2	Akshan Wimal	Andorra	akshanwimal234@gmail.com	\$2y\$10\$ijM7ZUzO9H982jY2DLuIsoYsngJMGh2NA8Nh29BQAkSqt5qe	<a href="#">DELETE</a>
3	XYZ	SriLanka	xyz@gmail.com	\$2y\$10\$ZvNQKhk84C7ePkHFZdB6ve/kV7IRVbsBY/Dswkha6Os!5lxqACSW	<a href="#">DELETE</a>
4	NGO	Afghanistan	NGO@example.com	\$2y\$10\$ambT2jRaGNK.PdDtPrUKQOvuSVj1T.F3iq0P24srUDgchLg8ieMr2	<a href="#">DELETE</a>
5	saruniya	Anguilla	saru1998@example.com	\$2y\$10\$QGZdAxPXAkI/7qW7Yu3evuDgX4W93jHlg0tnAyaobz7snJwwhu	<a href="#">DELETE</a>
6	unicef	SriLanka	unicef@example.com	\$2y\$10\$qlrR1Uj/1klBioaTqlSyuq5C9ri4MztgSvbzhXxgdsd1bBwo6	<a href="#">DELETE</a>

#### Requester Profile

ID	Name	Email	Country	Password	DELETE
1	James Kamal	Bangladesh	james@gmail.com	S2yS10\$xtic4fGW95cdl6kTSdV5FRpyeZWa0qnoK1ySo7OVwp6isa1nuYqi	<button>DELETE</button>
2	Requester	Afghanistan	requester@example.com	S2yS10\$CKFhq0mo/sldiGoTCv44.kor0gqvWxyji90X7EkgPqZrhVKAofIW	<button>DELETE</button>
3	Saru	Argentina	saru@example.com	S2yS10\$SBetNboOW4gm4E14S0QQ/uw.kbo11BDq4IJQatU6xGorQV/QBS0Ja	<button>DELETE</button>
4	Requestor	Albania	request@example.com	S2yS10\$Ty4lr5dkHWQapSYOxHeUC/UpnQbKDKZKVQhl60JT02tywe104G	<button>DELETE</button>
5	Requestor	Afghanistan	req@gmail.com	S2yS10\$1zgCLQGddDbiyDzJLLeauSkIU/Ti4X3Fg3ZEOQ55iCjWTdbZmqpa	<button>DELETE</button>

#### Vacancies

ID	Name of the Job	Add Images for the Job	Add Job Description	Select Category
26	Blood Donation		Blood donation camp at jaffna	medical
27	Software Developer Internship		It's your opportunity to learn from the best. The Internship brings you hands-on working experience to explore and understand world class business practices. It is an ideal opening to apply your academic learning skills in a project based environment. The Internship will sharpen your professional skills to bring out the best in you by being part of a dynamic team led by the finest leadership that spearhead the MAS thinking. It is the next big step to enrich your professional growth.	funding

#### Education Services

ID	Organization Name	Creator	Email	Title	Description	Requirement1	Requirement2	Requirement3	Requirement4	Requirement5
5	Unicef	unicef	unicef@example.com	Web Development	Throughout the course students are introduced to planning and designing effective web pages; implementing web pages by writing HTML and CSS code; enhancing web pages with the use of page layout techniques, text formatting, graphics, images, and multimedia; and producing a functional, multi-page website.	Computer Knowledge	GCE O/L	creative skills	Creativity Ideas	Knowledge in English
7	NGO	unicef	NGO@example.com	Graphic Designing	Graphic design is the process of visual communication and problem-solving through the use of typography, photography, and illustration. ... Graphic designers create and combine symbols, images and text to form visual representations of ideas and messages.	Computer Knowledge	GCE O/L	Art Skills	Creativity Ideas	Knowledge in English
9	NGO	saru	NGO@example.com	Maths Class	We're a nonprofit with the mission to provide a free, world-class education for anyone, anywhere. for Grade 9-11 and Advanced Level Maths Field Students can join here.	Math understanding	Math understanding	English or tamil	concentration	Math understanding
13	unicef	saru	unicef@example.com	JAVA CLASS	In this Introduction to Java	Computer	GCE O/L	Understanding	concentration	Knowledge in

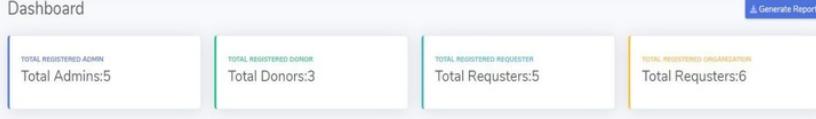
## Chapter 8 – Appendix H

### H1. Test Plan & Test Cases

<b>Test Case ID</b>	14
<b>Target File</b>	admin.php
<b>Test Case Name</b>	Check the Add Button.
<b>Expected Result</b>	It will show a successful message .
<b>Actual Result</b>	As Expected successful message showed.
<b>Outcome</b>	

<b>Test Case ID</b>	15
<b>Target File</b>	admin.php
<b>Test Case Name</b>	Check the Update/Edit Button.
<b>Expected Result</b>	It will show a successful message .
<b>Actual Result</b>	As Expected successful message showed.
<b>Outcome</b>	

<b>Test Case ID</b>	16
<b>Target File</b>	admin.php
<b>Test Case Name</b>	Check the Delete Button.
<b>Expected Result</b>	It will show a successful message .
<b>Actual Result</b>	As Expected successful message showed.
<b>Outcome</b>	

<b>Test Case ID</b>	17
<b>Target File</b>	index.php
<b>Test Case Name</b>	Check the Dashboard
<b>Expected Result</b>	It will show a summary of dashboards
<b>Actual Result</b>	As Expected summary of dashboards showed.
<b>Outcome</b>	

# Donation Assistance Management System for people who need help.docx

## ORIGINALITY REPORT



## PRIMARY SOURCES

1	Submitted to University of Westminster Student Paper	14%
2	Submitted to University of Wales Institute, Cardiff Student Paper	4%
3	Submitted to Middlesex University Student Paper	1%
4	Submitted to University of Bedfordshire Student Paper	1%
5	Submitted to Segi University College Student Paper	1%
6	Submitted to Informatics Education Limited Student Paper	1%
7	www.givegab.com Internet Source	<1%
8	www.punekarnews.in Internet Source	<1%
9	Submitted to Laureate Higher Education Group Student Paper	<1%
10	Submitted to University of Greenwich Student Paper	<1%

11	Submitted to Higher Education Commission Pakistan	<1 %
12	Submitted to University of Ulster	<1 %
13	Submitted to CTI Education Group	<1 %
14	Submitted to King Abdulaziz University	<1 %
15	Submitted to Christchurch Polytechnic Institute of Technology	<1 %
16	Submitted to Muscat College	<1 %
17	Submitted to Kingston University	<1 %
18	Submitted to Republic Polytechnic	<1 %
19	cepa.lk	<1 %
20	fossies.org	<1 %
21	Submitted to Massey University	<1 %
22	Submitted to Arizona State University	<1 %
23	www.edureka.co	<1 %

24

Submitted to Institute of Research &  
Postgraduate Studies, Universiti Kuala Lumpur

Student Paper

<1 %

25

Submitted to Sim University

Student Paper

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Exclude quotes      On

Exclude matches      Off

Exclude bibliography      On