**Designing and Implementing a Web-Based Charity Donation System**

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# **DEDICATION**

We dedicate this dissertation to our respective families who made it possible for us to be in college and supported us throughout. We also dedicate this document to the Zambia ICT College management for ensuring we had adequate access to learning resources and an excellent learning environment.



**CHARITY MANAGEMENT SYSTEM**

# **CERTIFICATE OF APPROVAL**

This dissertation by David Nsai, Chibwe Mbunda, Lawrence Chilufya, Dumisani Zulu and Isaiah Musenga entitled, ‘**Designing and Implementing a Web-Based Charity Donation System**’ has been approved as a fulfilling requirement for the award of a Bachelor’s Degree in Information Technology.

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# **ABSTRACT**

This research work generally summarizes the activities carried out in the design and implementation of the Web-based charity management system. This charity management is a non-profit organizational system in which non-governmental organisations and donors can come in and request and donate funds. The objectives attained were creating online payment that allow local donors (individual and groups) to donate funds to charity organisations. The project’s design was then constructed to visualize the attainment of these objectives using Unified Modelling Language diagrams – namely, Entity Relationship diagrams, as well as Class diagrams. In the implementation part of this project, the qualitative method for requirements elicitation was used for the development of this project. CodeIgniter was the core framework that was used to implement the development of this project. Requirements were tested with best of ability using this following format of the Institute of Electrical and Electronics Engineers (IEEE).

**Keywords:** Charity, Donation, Philanthropy, Donor, Payment Gateway

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# **LIST OF ACRONYMS**

DFD – Data Flow Diagram

ERD – Entity Relationship Diagram

UML – Unified Modelling Language

NGO – Non-Governmental Organisation

WWW – World Wide Web

PHP – Hypertext Pre-processor

CSS – Cascading Style Sheets

PACRA – Patents and Companies Registration Agency

FBO – Faith Based Organisations

RAD – Rapid Application Development

JS - JavaScript

HTML – Hypertext Markup Language

XML – Extensible Markup Language

HTTP – Hypertext Transfer Protocol

DBMS – Database Management System

WAMP – Windows Apache MySQL PHP

SQL – Structured Query Language

NRC – National Registration Card

API – Application Programming Interface

PIN – Personal Identification Number

OTP – One-time PIN

# **CHAPTER ONE: INTRODUCTION**

## **INTRODUCTION**

Charity has for a long time been part of human society. It has been largely a major component of many religions across the world; where charitable activities are viewed in religions as an investment in the future [1]. Charity as defined by [2] refers to generosity and helpfulness especially toward the needy or suffering. Charity can also refer to aid given to those in need. The term charity can also refer to an institution engaged in relief of the poor [2]. In this document, however, unless explicitly stated, charity has been defined as aid given to those in need, that is, the less privileged. Zambia being a third world country, has a good percentage of inhabitants benefiting from donations and through charity organisations and other Non-Governmental Organisations (NGO). One does not need to be richin order to donate to the needy but can do so with the appropriate channel in place. A survey carried in Ndola of Copperbelt province showed that a good number of residents of different classes believe in philanthropy. According to an article written on local philanthropy in Zambia, it was proven that many are willing to donate in various forms of donations to needy Zambians, in order to alleviate their poverty [3]. However, with this good belief, the mostly needy charity organisations are not known to many or are located in remote areas which require commuting for a good long distance to access the places of charities [4]. Lesa Waluse Community is a good example of an organisation in need of charity donations. It is located in Sakanya in the out skirts of Ndola is one of the charity organisations with desperate need to donations from any well-wishers.

The most common form of donation is fund donations, it is the easiest and can be sent to remote places easily with having to physically go there or pay for transportation for shipment like other donations such clothes, shoes, food etc. The challenge is with a platform to easily donate to any charity organisations that one wishes to donate to by just a click of a few buttons. This project is the solution to the problem that was identified. Eleos charity management system is a web-based application that allows donors to donate to registered charity organisations through secure payments gateways that provide accountability and transparency.

## **BACKGROUND**

The motivation for starting this school final year project is because of the lack of an online Charity management system in Ndola, that is locally meant for Zambians, that will reach out to those individuals that need help from donors and NGOs.

There is no gain saying that the charity management system is one of the key service industries in the world. In the early stage of industry development, Donors and NGOs were relatively small in scale, mostly small office either found in mosques or churches or occupying small space in an organisation. With the growing concern about one ‘s personal beliefs, the charity sector has grown significantly in recent years. Large charity funding chains mushroomed alongside the emergence of a wide variety of charity organisations and technology in the world [1]. The World Wide Web utilizes the Internet as a vehicle to convey data, including text, illustrations, recordings and sound to anybody, it allows for services to be provided to users and made easily accessible over a web browser [5].

## **PROBLEM STATEMENT**

There are a number of problems that surround charity organisations. One particularly outstanding problem is charity fraud. [6] defines charity fraud as type of fraud that occurs when charitable organizations that solicit funds from the public for philanthropic goals, such as seeking cures for diseases or aiding the families of slain police officers, solicit donations in a deceptive manner or use the monies that they collect for purposes not intended by the donors.

Charity fraud may also occur in situations where the charity becomes the victim of the fraud. In an ever-growing digital world, charities may need to utilise online platforms to receive donations. In some cases, fraudsters may create online platforms and promise to assist with the making of donations all in the long run delivering only a lower percentage of funds that were collected through them than was originally promised [6].

A research carried out by [3] reveal that a fair number of individuals would like to donate to charities, however, they are unable to do so due to the fact that there are no formal systems or platforms that are Zambian based through which they can make donations. This presents a problem to those who would like to give to charities but are deterred by the fact that there are no proper systems to support their noble cause.

Another problem noted by [4] is that rich charities keep getting richer and poorer charities keep getting poorer. According to [4] in times of crises, small non-profits that serve the global poor on a more effective level tend to receive less funding in comparison with their better-known counterparts.  As a result of this inequality of resource division among charities, many have lost faith in charities. [7] notes that this diminishing level of trust in charities caused by high levels of fraud, could be a major reason why people are no longer contributing as much money to charities. This lack of trust leaves potential donors with questions about which charities actually need funds and how they can reach out to them.

Problems existing in the charity sector can, therefore, be narrowed down into 3 main problems outlined below:

1. Charity fraud is rampant as fraudsters are creating unverified online charity initiatives while scamming people of their hard-earned money.
2. The lack of a formal and recognised system for the facilitation of online donations.
3. Inequality between charities. Because smaller charity organisations are unable to have their own technology-based donation systems, there exists huge inequalities as to how much funding they receive.

## **AIM**

The aim of this project was to develop a web-based charity donation that registers Charity Organisations and securely facilitates the monetary donations only made by the donor towards their desired Charity.

## **RESEARCH OBJECTIVES**

1. To create a platform to combat charity fraud in Zambia.
2. To develop a platform for charity donation in Zambia.
3. To design and implement a web-based charity management system that helps donors donated easily to charity organisations.

## **RESEARCH QUESTIONS**

1. What ways can help to combat charity fraud in Zambia?
2. What can help be done to help charity donations in Zambia?
3. How can charity management be helped to easily allow donors to donate funds?

## **SCOPE OF STUDY**

The case study of this project was carried out within the locality of Ndola. Donations are in many forms such as money, clothing, books etc. For this project only money donations are the focal point of the research and project design and implementation. The developers of the project ensure to make the money donation and secure to facilitate for a wide range of payment gateway which includes, master card payments and mobile money payments for individual without commercial bank accounts. The project documentations include:

**Chapter 2** - entails the literature Review: - Historical Overview, Current

Findings, Related work, Summary.

**Chapter 3** - Requirements, Analysis and Design: - Overview, Requirements

Specifications, Design Overview, Detailed or low-level design, Summary.

**Chapter 4** - Implementation: - Overview, Main features, Major technical

problems, overcoming technical problems, Testing and Summary.

**Chapter 5** - Evaluation, Conclusion, and Recommendation: -Overview,

Achievements, challenges, Future enhancements, Recommendations, Summary.

# **CHAPTER TWO: LITERATURE REVIEW**

## **INTRODUCTION**

This chapter examines the literature available on the various charity practices globally. The chapter starts by providing a historical overview of Charity organisations globally. It then goes on to establish the state of charity organisations globally. It then focusses on the sate of charities in Zambia. Finally, it puts the project in its proper context and establishes why this project is one worth undertaking.

## **GLOBAL HISTORY OF CHARITY ORGANISATIONS**

Charity has existed for as long as humans have existed and lived in civil environments. Various reference works point out to different times when human civilisations were first established but all point out that humans formed social groups to aid with survival by sharing resources. In its earliest form, the word philanthropy, from the Greek ***philanthropia***, simply meant love of mankind, however, the word has evolved over time [8]. This section, therefore, examines the different forms that philanthropy has taken throughout modern history and around the world, and illuminates the vast and powerful impact of giving.

According to [9], one of the earliest recorded forms of modern charity dates back to the early 1100s. In the year 1136, a grandson of William the Conqueror founded the Hospital of St Cross in Winchester, England. Throughout the ages, charity has generally been a virtue recognised and fostered by religion. For instance, in medieval Europe, the Church bore the responsibility for organising and promoting poor relief, [9]. However, in the 16th century the English state began to take over this responsibility.

Charitable activity has for many years been a religious activity led by the monastic institutions and the church [1]. According to [1], charity and giving were core to the Christian faith and in the early centuries of development, it was hard to see charity as a separate entity from the church itself.

### **Religious foundations for charitable activities**

The seven-corporal works of mercy set out in Isaiah 58 and examined by St Augustine of Hippo back in 397AD, still form the backbone of Catholic teaching [1]. These laid out the charitable activities – almsgiving and helping the poor - expected of any Christian desirous of reaching Heaven [1].

Aside from being an action encouraged in the Christian setting, charitable activity is also considered to be an investment in the future even in Islam. A passage from the 57th Chapter of the Qur’an states, “Surely the men and women who spend in charity and give a godly loan to God will have it doubled for them and will receive a generous reward.”.

A similar sentiment can be found in Judaism. In the Misneh Torah written by Maimonides in 1178, a list of charitable priorities can be read, topped by “Most blessed is helping a needy person become self sufficient by a gift or loan.”

Hindus believe that charity, or dana is important because helping others is helping Brahman, as all living things have a piece of Brahman within themselves [10]. The concept of giving in Hinduism carries with it the connotation of helping others without expecting something in return and because it is the right thing to do. Charity giving is considered to be an imperative duty in the Hindu scriptures [8].

### **State of charity between 1500 and 1750**

Developments in the 15th and 16th centauries changed the way peopled lived, prayed, and situated themselves in an expanding world [8]. Wars and diseases led to numerous social reforms in which towns and cities became the destination of a new social order. For instance, in Europe, the Reformation introduced new religious philosophies and the Catholic Church no longer possessed religious monopoly. In the Middle East, the Ottoman Empire reached its zenith, while in East Asia, powerful dynasties ruled China and Japan [8]. Globally, the Age of Discovery spurred an unprecedented exchange of people, goods, ideas, and culture. All these changes had a profound effect on the rise of modern philanthropy, centralizing need in urban centres, changing who gave and who received, shifting the locus of giving from religious orders to the state, and enabling a global exchange of philanthropic acts and ideas [8].

### **State of charity between 1750 and 1890**

War and revolution shook the world throughout this period and new demands were placed on philanthropy. Armed conflict from Napoleon’s Wars left behind refugees, widows, and orphans. [8] notes that it was during this timeframe that new nations were established and charged with the betterment of their citizens which included the poor.

During this timeframe, various forms of legislation were passed to abolish the African slave trade. The Abolition of the Slave Trade Act was entered into the statute books on 25th March, 1807 [11]. Despite this shift in dynamics, colonial empires emerged, disrupting the cultural fabric of colonies and colonisers alike [8].

The 19th century required philanthropists to respond to immediate needs, but a period of prosperity at the turn of the century, coupled with criticism of unfocused almsgiving, inspired new progressive traditions of philanthropy designed to have a lasting impact [8].  In America, Andrew Carnegie’s 1889 Gospel of Wealth called upon the millionaires of the age to distribute their wealth for public good; the ground-breaking foundations that he and his fellow titans of industry established had far reaching effects on education, culture, science, and public health worldwide [8].

### **State of charity between 1890 and 1930**

During the early 1900s a professional class of philanthropists and social welfare activists enacted change at the community level [8].  Their exchange of theories and practices had a far-reaching impact on new methods of giving.  At times, this created more integrated, inclusive, and effective types of philanthropy [8].  Yet reformers, mistakenly sure that the Western model was superior, imposed Western concepts of philanthropy on other cultures and profoundly shaped future practices [8].

### **State of charity between 1930 and 1980**

Major events occurred during the mid 1900s and these changed the dynamics of philanthropy. The growth of new nation-states, coupled with a global economic downturn, prompted increased government involvement in social welfare, resulting in the redefinition of the role of private philanthropy [8].  The crisis of World War II led to an immense outpouring of support for soldiers and civilians in the form of money, supplies, and service.  Effective administration of this support required philanthropies to work together and to professionalize [8].

Civil and human rights movements came to the forefront following the Second World War, and community-organized philanthropy organizations increasingly supported minority causes [8].  During this period, women, too, exerted more influence, exploring the ways philanthropy could support the needs of all of humankind.

## **GLOBAL STATE OF CHARITY**

Philanthropy today is more organized, professional, and global than ever before.  Philanthropists work to improve and strengthen communities, support the arts, build schools and raise educational standards, combat epidemics, and provide relief for the victims of war and natural disasters, and they do so in a variety of ways.  Individuals make donations and volunteer. Neighbourhood organizations take on local and global projects. Foundations support cutting-edge research.  Corporations give back to their communities. Technology has enabled people to make instant, global exchanges, and philanthropy has thrived in the digital environment, finding new ways to reach people in need and, moreover, empowering them to act and speak out for themselves. [12] notes that 92% of digitally focussed charities based in the United Kingdom say that they expect to increase their measurable impact due to investment in technology, while survey respondents also cited increased donations, increased productivity, and efficiency as a result. [12] notes, however, that 59% of the total charities in the United Kingdom still did not have a digital strategy in place. The large majority attributed this problem to a lack of investment in the tools and training need to implement digital systems in charity.

Despite the above challenges faced, third party websites are already in existence that allow individuals or organisations to start up a donations page. Examples of such websites are Gofundme.com and omaze.com.

## **CURRENT STATE OF CHARITY ORGANISATIONS IN ZAMBIA**

In Zambia all non-governmental organisations are to be registered with the republic of Zambia in accordance with the Non-Governmental Organisations Act of 2009. According to the Act all who want to form a non-governmental organisation ought to make application to do so to the registrar of societies and upon which making the prescribed payments, may obtain a certificate of registration. The duration of the validity of a certificate is 5 years from the date of issue, after which, the organisation may make application for an extension of the certificate [13].

A study on the state of local philanthropy was conducted in 2018. The research team asked respondents the elementary question: “Do you think there is local philanthropic activity in Lusaka and Zambia in general?”. It was found that 56.12% of the respondents did so in the affirmative while 43.88% did so in the negative [3]. From amongst the myriad of reasons why the later felt that there was no local philanthropy, 3 main reasons were narrowed down. (i) there exists a general lack of awareness or evidence of any local philanthropic activity; (ii) the inability to give due to tough economic conditions in Zambia; (ii) an absence of formal structures or platforms that make it easy for people to give [3].

## **OVERVIEW OF ONLINE DONATIONS**

Although the Internet presents non-profit organizations with remarkable possibilities for fundraising, the quantity of online donations has been miniscule. Since one reason for this will be people’s mistrust in monetary transactions on the internet, a survey was conducted to gain insights into user trust in and attitudes toward online payment systems [14]. The results indicate that people's trust in both the organization and the Internet are key factors in shaping their attitudes toward online payments, which in turn affects people's chance of using the Internet for monetary transactions which include online donations [12]. The findings propose that non-profits need to pay particular attention to donor relationships, process transparency, and transaction security to be able to induce people to donate online [6].

The internet, however, is developing rapidly, which is causing the innovation of online donations. The advantages of online donations are instant payments and small amounts for the convenience of a great volume of people to participate in social contribution. The internet has changed the traditional way of donating and greatly promotes the popularity of social assistance. Whoever has interest can donate money to help people in need when a donation request is posted online

## **CONCLUSIONS**

This section has provided a detailed overview of philanthropy. It provided the history of charity and its religious foundations.

From the reviewed literature, it is clear to see that more developed countries have a better charity system. This can be seen from the vast online charity systems that are established in other countries. In Zambia, however, there are no Zambian developed charity systems where charities can subscribe to in order for them to receive financial support online. Amongst the reasons why people do not contribute to charities is the absence of formal structures or platforms that make it easy for people to give. Furthermore, the large divide between rich and poor charities is ever growing. It is these gaps this project aims to fill and to develop an online system through which donors can make donations to charity organisations of their own choice.

# **CHAPTER THREE: RESEARCH DESIGN/METHODOLOGY**

## **INTRODUCTION**

This chapter presents the methodology that was used in the case study for this project. This includes the research design, the population and sampling techniques, the methods of data collection and how the data were analysed in order to answer the research questions of the study.

## **RESEARCH DESIGN**

The research study was basically based on the quantitative and qualitative type of research approach and data analysis. Using the descriptive research of the quantitative design, online questionnaires were used in various Charity foundations and with potential respondents outside the corporate social organizations(individuals), in order to establish the current state of Charity organizations in terms of monetary funding.

## **POPULATIONS & SAMPLING**

This study mainly focused on the charity organisations that are based in Ndola town, and it’s from this population that a general perspective of the current state of charity organisations in Zambia was drawn. A study sample of 58 was taken to measure the findings, which included community foundations in Ndola and random potential respondents.

## **DATA COLLECTION**

To carry out the study we utilised online questionnaires using google forms. The online questionnaire was distributed through emails and social media platforms and recipients were drawn from within and outside the charity organization, and from across Ndola. To get a regional perspective of local philanthropy on the Copperbelt, two Community Foundations from Ndola were purposively selected to be part of the study, based on their experience with local philanthropy work. The data was analysed and interpreted through graphs and charts which was generated on google forms.

## **METHODS USED FOR RESEARCH**

### **Primary Data**

Questionnaires were used for primary data collection. Open and closed ended questions were deemed fit to collect information that helped with achieving the objectives of the research. The types of questions used in the questionnaire are both qualitative and quantitative. Therefore, both methods of research were used to obtain the user perception of the research idea. According to article written by [15]. A questionnaire is a list of questions or items used to gather data from respondents about their attitudes, experiences, or opinions. Questionnaires can be used to collect quantitative and/or qualitative information.

Questionnaires are commonly used in market research as well as in the social and health sciences. For example, a company may ask for feedback about a recent customer service experience, or psychology researchers may investigate health risk perceptions using questionnaires.

In this scenario we used questionnaires to obtain information about the perception and behaviour of charity organisations and local individuals towards charity donations or local philanthropy acts.

### **Secondary Data**

The researchers also depended on the secondary data which collected through literature survey. The researcher reviewed literature from various sources like already existing online charity management system, books, researches preview studies, periodicals, journals, issued reports, thesis, publication, and website that other researchers have studied and researched on the same or similar subjects on charities and donations. According to [15],a literature review is a survey of scholarly sources on a specific topic. It provides an overview of current knowledge, allowing you to identify relevant theories, methods, and gaps in the existing research.

The reviews we conducted helped to uncover and unpack what others have done on the concept of charity donations and find the loop holes and gaps their case studies. This helped us to consolidate our scope to fund donations for Ndola charity organisations.

## **UML DIAGRAMS**

Unified Modelling Language Diagrams are a graphical notation used to construct and visualize object-oriented systems [15].

### **Use Case diagram**

Use case diagrams give a graphic overview of the actors involved in a system, different functions needed by those actors and how these different functions interact [16]. In this project we used UML diagrams such as Use case diagrams, Class diagram and flowcharts. The use case diagram demonstrates how events are triggered into the system as the actors (users) interact with the website. The system is comprised of three users namely; Administrator, Donor and Charity.

### **Class Diagram**

A class diagram in the Unified Modelling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's: classes, their attributes, operations (or methods), and the relationships among objects [15]. The class diagram in this documentation, helps to explain the working architecture of the website by the use of classes which comprise of the attributes and the operations behind the functionality of the system.

### **Flow Chart**

A flowchart is a picture of the separate steps of a process in sequential order. It is a generic tool that can be adapted for a wide variety of purposes, and can be used to describe various processes, such as a manufacturing process, an administrative or service process, or a project plan. It's a common process analysis tool and one of the seven basic quality tools [17]. Elements that may be included in a flowchart are a sequence of actions, materials or services entering or leaving the process (inputs and outputs), decisions that must be made, people who become involved, time involved at each step, and/or process measurements.

## **USE CASES**

### **Use Case for Administrator User**

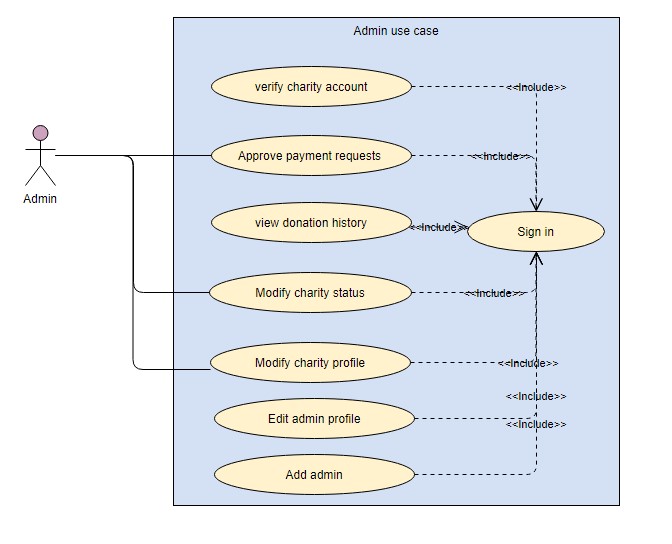


Figure 1 Administrator Usecase diagram

### **Use Case for Donor User**

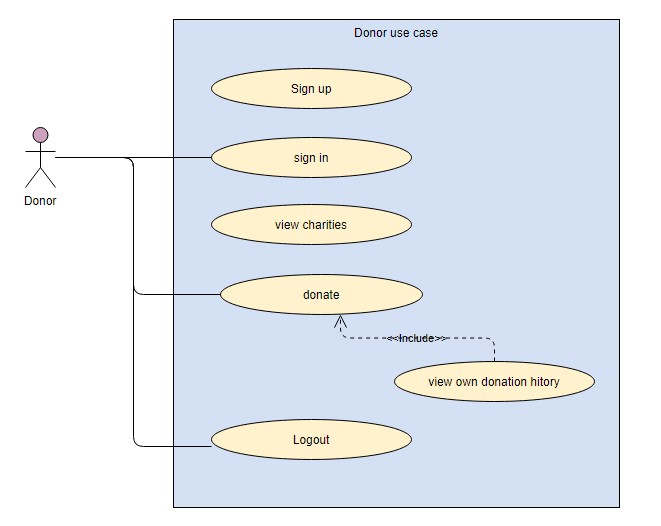


Figure 2 Donor Use Case Diagram

### **Use Case for Charity User**

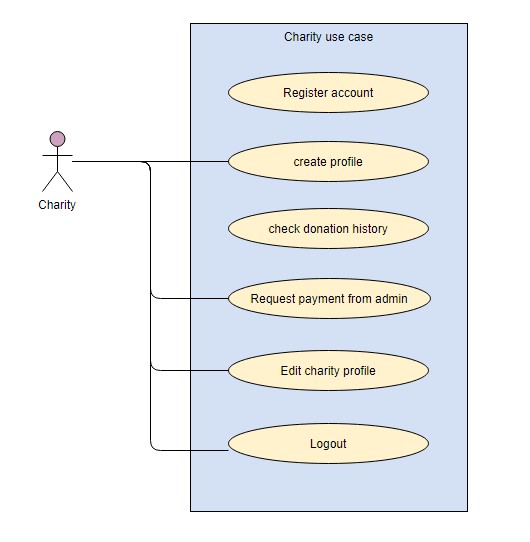
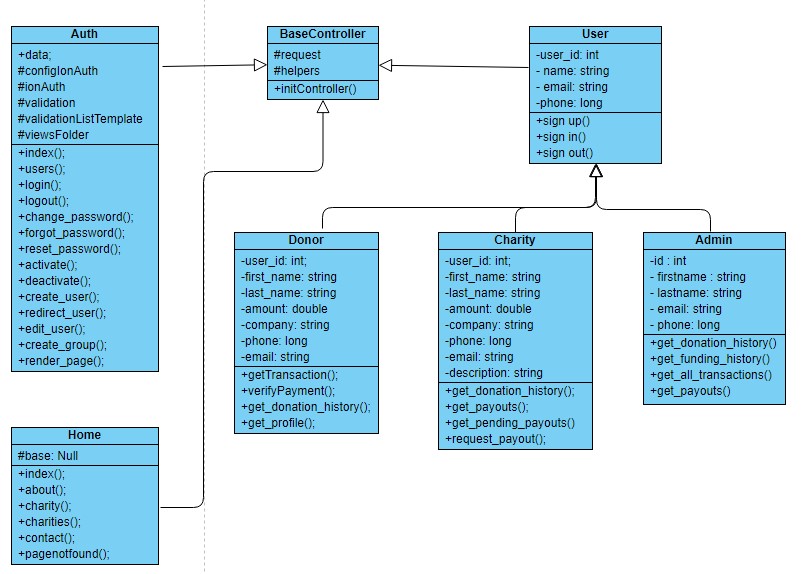


Figure 3 Charity Use Case Diagram

### **CLASS DIAGRAM**

Class diagrams are the main building block of any object-oriented solution. It shows the classes in a system, attributes, and operations of each class and the relationship between each class.

Figure 4 UML Class Diagram for the system

### **FLOWCHART DIAGRAMS**

Systems flowcharts graphically illustrate the major processes, inputs and outputs of a system and are primarily used for the physical modelling of the system.

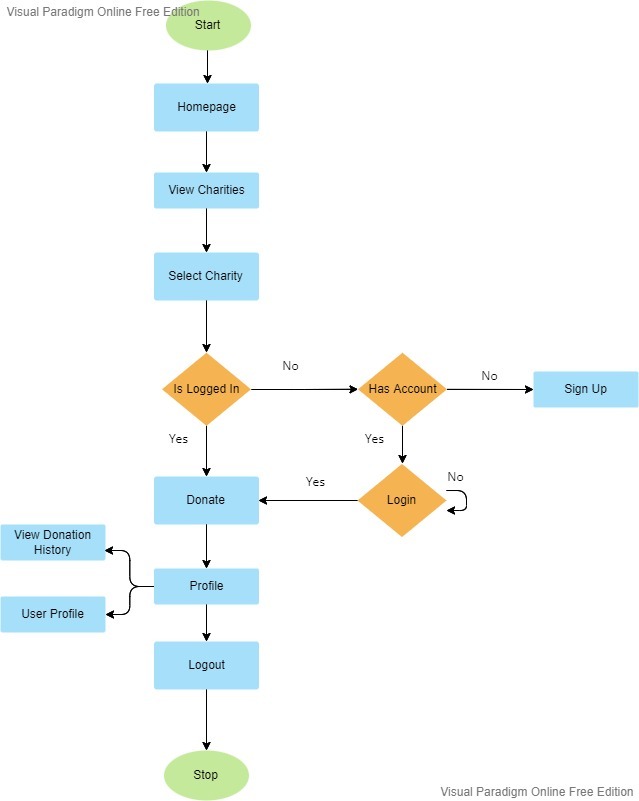


Figure 5 Donor flowchart

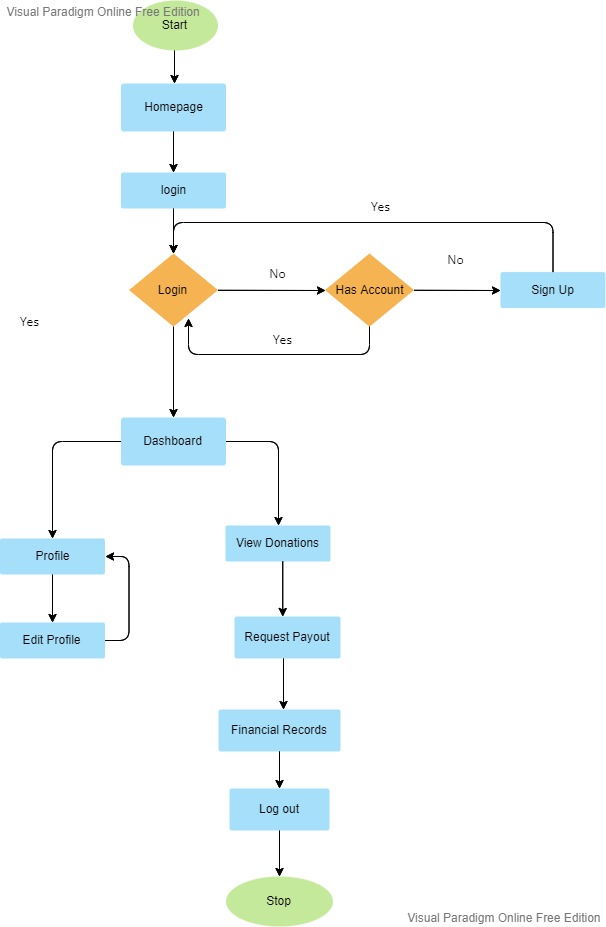


Figure 6 Charity flowchart

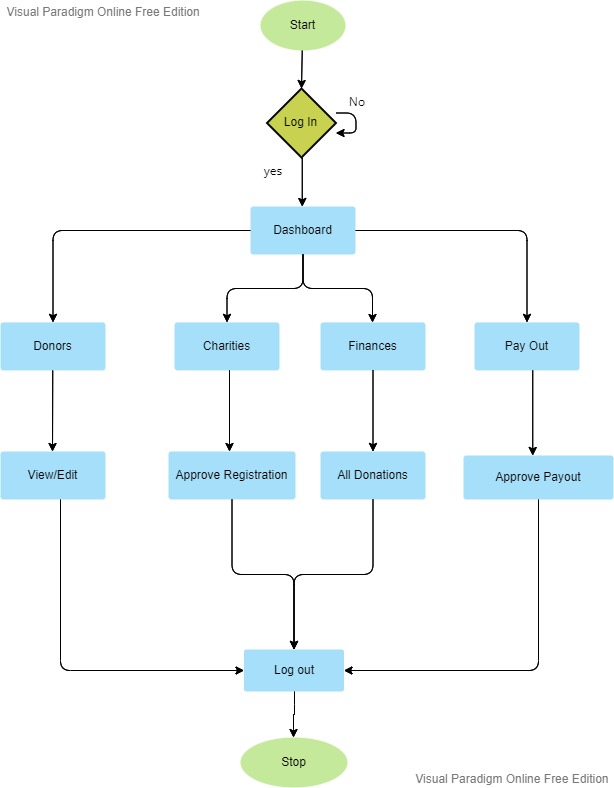
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Figure 7 Admin flowchart

# **CHAPTER FOUR: RESEARCH RESULTS AND ANALYSIS & IMPLEMENTATION**

## **INTRODUCTION**

This chapter of the report outlines the results from the research that was conducted and highlights the methodology used in the actual implementation of the project.

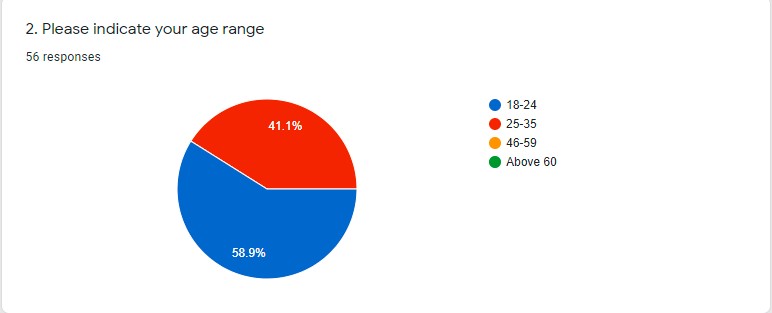
## **DATA ANALYSIS**

Statistically the research uncovered that 15% percent of the sampled population believe that there are philanthropy platforms that exists but require a donor to personally make any donation in person. Out of the 58 sampled candidates, 100% of the population want or wish to donate but there is not awareness of any platform in Ndola that can allow them to donate from there locality without having to go to a particular charity in person.

## **RESULTS OF THE STUDY**

Overall, 56 responses were received, out of which 23, representing 50%, were male and 23 representing 50% were female. In terms of age, the 18-24 years’ category had the highest number of responses (58.9%) and was closely followed, at 41.1%, by those in the 25-35 age range. The 24 and below and over 60 age ranges collectively accounted for none of the respondents, entailing that the study respondents were largely those in the age range generally believed to be the most economically productive. With regard to level of education, the vast majority of respondents were at the level of at least a school certificate, suggesting that the study was largely responded to by those expected to have basic knowledge of the subject matter.

The demographic characteristics of the respondents are depicted in Figure below.

Figure 8 Demographic Characteristics of Respondents

To begin to dissect their perception of philanthropy in Zambia, respondents were asked an elementary question as follows: “Do you think there is local philanthropic activity in Ndola and Zambia in general?” Over half (79.2%) of those who responded did so in the affirmative, while 20.8% said they did not think there was any local philanthropy activity in Ndola and Zambia in general. A further probing on the reasons for either response revealed some unique insights regarding people’s perception towards the existence of philanthropy in Zambia. Seemingly in agreeing with our background analysis regarding the rich Zambian culture of giving that has always been in existence, one respondent simply stated that “people give”, suggesting that there is an underlying willingness to give, but largely within the context of the categories referred to. It was also evident from the study that while local philanthropy is generally said to be in existence, it is not on a large enough scale for there to be widespread knowledge about it. In making this point, those who responded affirmatively to the existence of local philanthropy in Zambia were of the view that philanthropic activity was either on a small scale or too new as a concept for people to have good awareness of it. For the respondents who said there was no local philanthropy in Zambia, there were a myriad of reasons given, from which it was possible to narrow down to three broad categories: lack of awareness or evidence of any local philanthropic activity; inability to give due to economic considerations; and absence of formal structures or platforms that make it easy for people to give. In fact, out of all the respondents who stated that there was no local philanthropy in Zambia, an overwhelming majority of 20.8% gave one of these three categories as their reason for stating the non-existence of local philanthropy in Zambia. Amongst the three categories, the lack of awareness or evidence was the reason given by most respondents, and as is shown later in this report, this has implications for efforts aimed at enhancing local philanthropy.

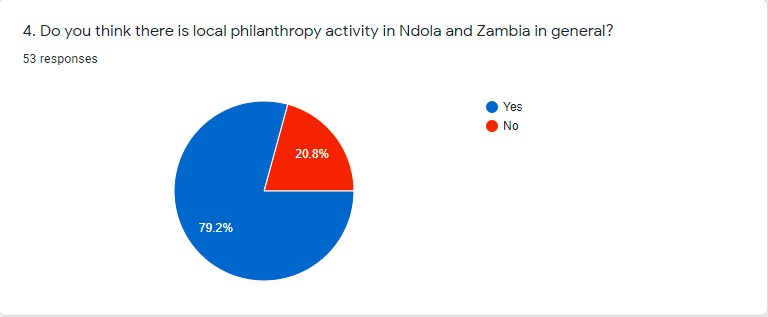


Figure 9 Responses to the question, 'Do you think there is local philanthropy activity in Ndola and Zambia in general?

## **EXPERIMENT RESULTS AND ANALYSIS**

The study aimed at gauging respondent’s donation practices and therefore asked a series of questions related to the types of organisations given to, frequency and types of donations and the means through which these donations were made.

Respondents were asked to state what type of organisations they had given to in the past, and there was a 64% response rate, with 35 out of 58 respondents answering the question. Churches or faith-based organisations ranked highest in this regard, with 60% of respondents saying they had given to such organisations. This is largely in line with the response pattern seen in the study earlier, where some people said, “I did not have enough income, I did not trust the organisation requesting funds I did not like the donation appeal I did not understand how my donation would make a difference. Email, Website/video, in person, Formal letter, and other respondents gave examples of giving to the church as their basis for stating that local philanthropy exists in Zambia. Interestingly, a relatively large number of respondents (22.9%) stated that they had given to non-governmental organisations (NGOs), while other types of organisations given to were school, community-based organisations, and Orphanage/charity groups, represented by 28.6% of respondents.

All this is depicted in Figure below.

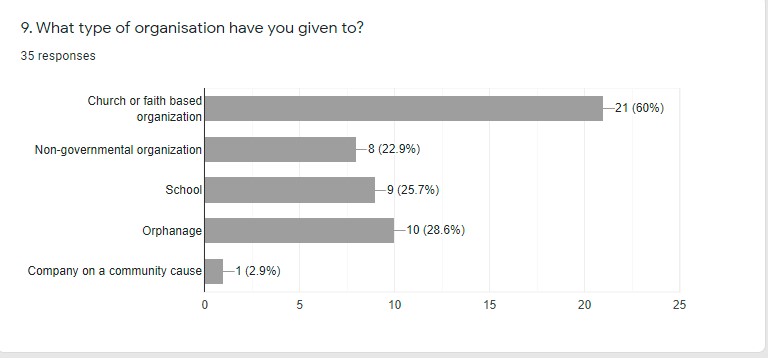


Figure 10 Respondents Giving History

In order to get a sense of their ability to give, respondents were asked questions concerning their range of monthly income. This factor – monthly income, was taken to depict respondent’s socio-economic characteristics as shown below

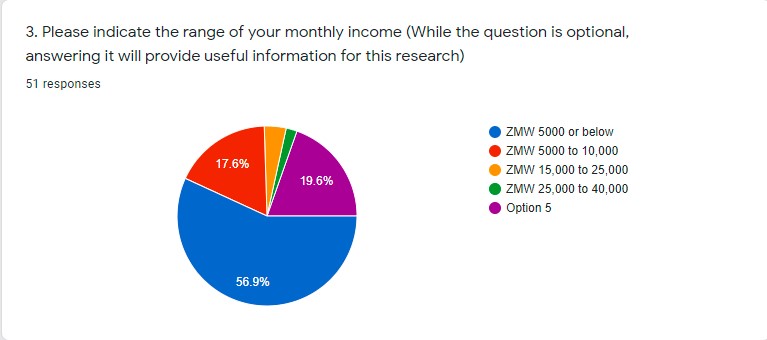


Figure 11 Respondents Income Range

**SYSTEM IMPLEMENTATION**

**Introduction**

In order to make this project a success, the ‘Rapid Application Development’ method was chosen as the preferred software development model. According to [16], Rapid Application development is suited for situations in which there is a limited time to accomplish objectives of a software project and hence the normal waterfall method of development can not be used. It with this reason that the developers of this system opted to use RAD as the preferred method of software development. This section provides a deep insight of how exactly this system was implemented. Included in this section are screenshots of the various pages on the platform.

**Charity Verification**

The developers included a charity user account verification functionality into this system. The reason for this addition was due to the fact that any fraudster can pose as a charity organisation and create an account with Eleos. Therefore, in order to fully ensure that all charity accounts created are legitimate organisations, verification of PACRA registration details by the charity must be submitted upon registration. Additionally, the charity representative must submit a copy of their NRC and must take a selfie in order for their account to be verified. When the account request has been approved by Eleos administrators only then can the account be published on the website as a donation eligible charity organisation.

**User Interface Elements**

The user interface of this system was built using web technologies, namely, Hyper Text Mark-up Language (HTML), Cascading Style Sheets (CSS) and JavaScript (JS). Due to the limited time that was assigned to the development of this project, the developers so the need to incorporate user interface frameworks in order to speed up the development of this system. Bootstrap was used in the development of this project. Apart from the stated user interface framework, the developers also made use of already existing user interface kit to speed up the process of developing this system.

**System Backend Elements**

The backend of the system was built using the popular scripting language PHP. Due to the limited time that was assigned to the development of this project, the developers incorporated the use of the lightweight PHP framework, CodeIgniter, to speed up development time and increase the security of the web application to be produced.

For processing of online payments, the Flutterwave API was used to integrate the donation system with the payment processing company.

**Technical Details**

Since the Charity Management System is a web-based application, various web-based technologies were used in the development of this system. Technologies used in the development of this system are:

**Hypertext Pre-processor (PHP) programming language** – PHP is a popular general-purpose scripting language that is especially suited to web development [17]. PHP is used in this application as the primary data processing language. It was used for securing the data by restricting access of data and was primarily responsible for the implementation of views.

**Hypertext Mark-up Language (HTML)** – HTML was first created by Tim Berners-Lee, Robert Cailliau, and others starting in 1989, [18]. HTML is a markup language, this means that computers use it to communicate with each other to control how text is processed and presented, [18]. It makes use of hyperlinks to link pages to each other. According to [19], the term hyperlink refers to a word, a phrase, or an image that one can click to jump to a new document or a new section within the current document or a new section within the current document. Because of this markup language, it is possible for navigation to be made between the various parts of this web application.

**Cascading Style Sheets (CSS)** – is a design language intended to simplify the process of making web pages presentable [20]. CSS helps in describing the presentation of web pages by including colours, layout, and fonts, [21]. According to [21], CSS allows developers to adapt the presentation of a web page to several types of devices. [21] goes on to mention that CSS is independent of HTML and can be used with and markup language based on the Extensible Markup Language (XML).

**JavaScript (JS) Programming Language** – JavaScript is a programming language commonly used in web development [22]. JavaScript is a client-side scripting language, this means that the source code is processed by the client’s web browser rather than on the web server [22]. JavaScript was used in this project to add interactivity to the webpages built in this web application. Several features in this project are implemented using JavaScript, namely, animations and user feedback.

**Web Server** – A web server is software and hardware that uses HTTP (Hypertext Transfer Protocol) and other protocols to respond to client requests made over the world wide web [5]. [5] goes on to mention that the main job of a web server is to display website content through storing, processing, and delivering webpages to users. Since the project being developed was meant to be used on the web, a webserver was used to during the development of this project to display the webpages to clients during the testing phase of this project. The developers decided to use the free and open-source Apache HTTP Server for the development of this project as it is easy to install on a computer running the windows operating system.

**Database System** - A database system is a collection of application programs that interact with the database along with the database management system and the database itself [23]. According to [23], a Database Management System is a software that manages and controls access to the database. This project makes use of the popular open-source Database Management System, MySQL.

**Payment Gateway** – A payment gateway is technology merchants use to accept debit and card payments from customers [24]. In the context of this project, a payment gateway refers to an online portal used to collection payments [24]. The payment gateway chosen for this project was provided by Flutterwave. The payment gateway was implemented using the API provided by Flutterwave. To achieve this, a PHP library for use in the CodeIgniter Framework was written by the developers of Eleos.

The library communicates with the Flutterwave API by means of sending requests to designated API endpoints. In order to make a payment, Eleos sends Flutterwave the details of the user currently trying to make a donation. In response, Flutterwave, returns a payment link to which the user is redirected. Next, the user enters their payment details. The payment details are verified by means of an OTP being sent to the user’s phone. Upon verifying the OTP, the user is charged. In the case of a mobile money payment, the user is further required to enter their Mobile Money PIN after which, their account is then charged by the payment processor.

**TESTING**

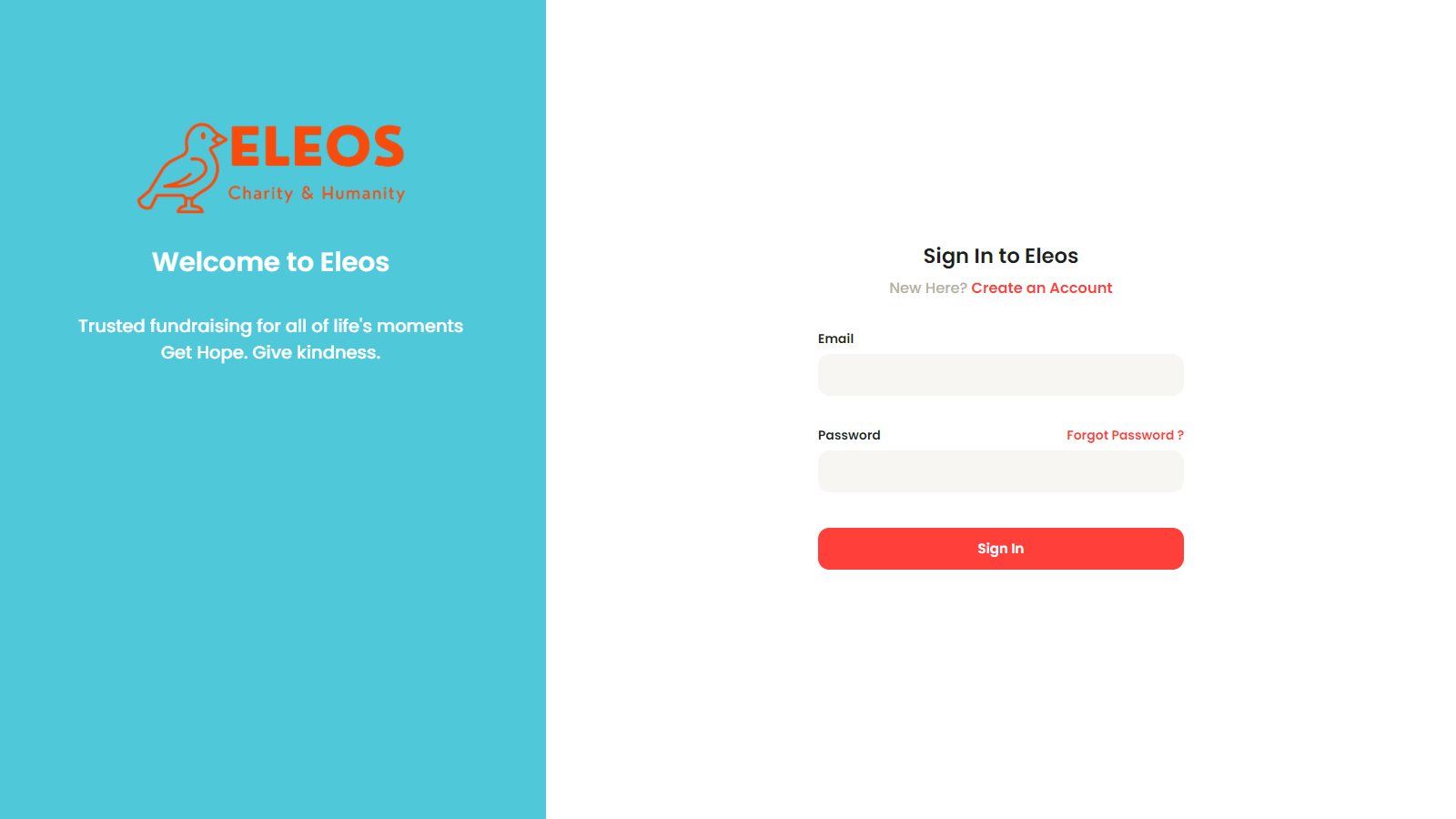
**Testing Environment**

The developers tested this application on a local server. This was accomplished using the freely provided WAMP server desktop application which simulates a webserver environment. A detailed manual on how the testing environment for this application can be set up is found in the Appendix.

**Test Data**

The test data used in the testing phase of this project was entirely fictional. All names used in the tests conducted do not represent the names of real people, but refer to fictional characters who were created for the sole purpose of running unit tests on the web application.

Included below are screenshots from the various pages that are existing on this application.

Figure 12 Sign in Page

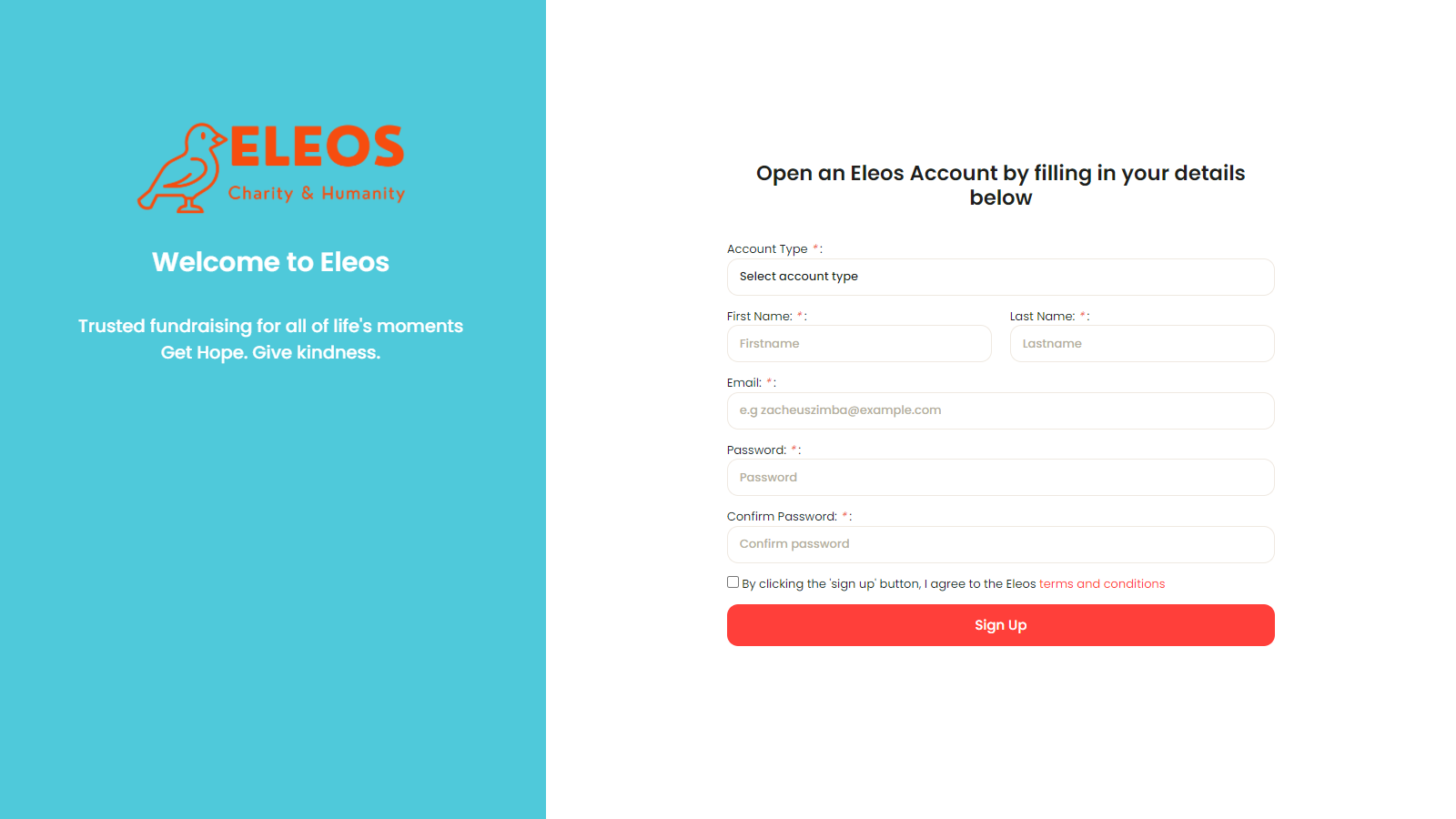
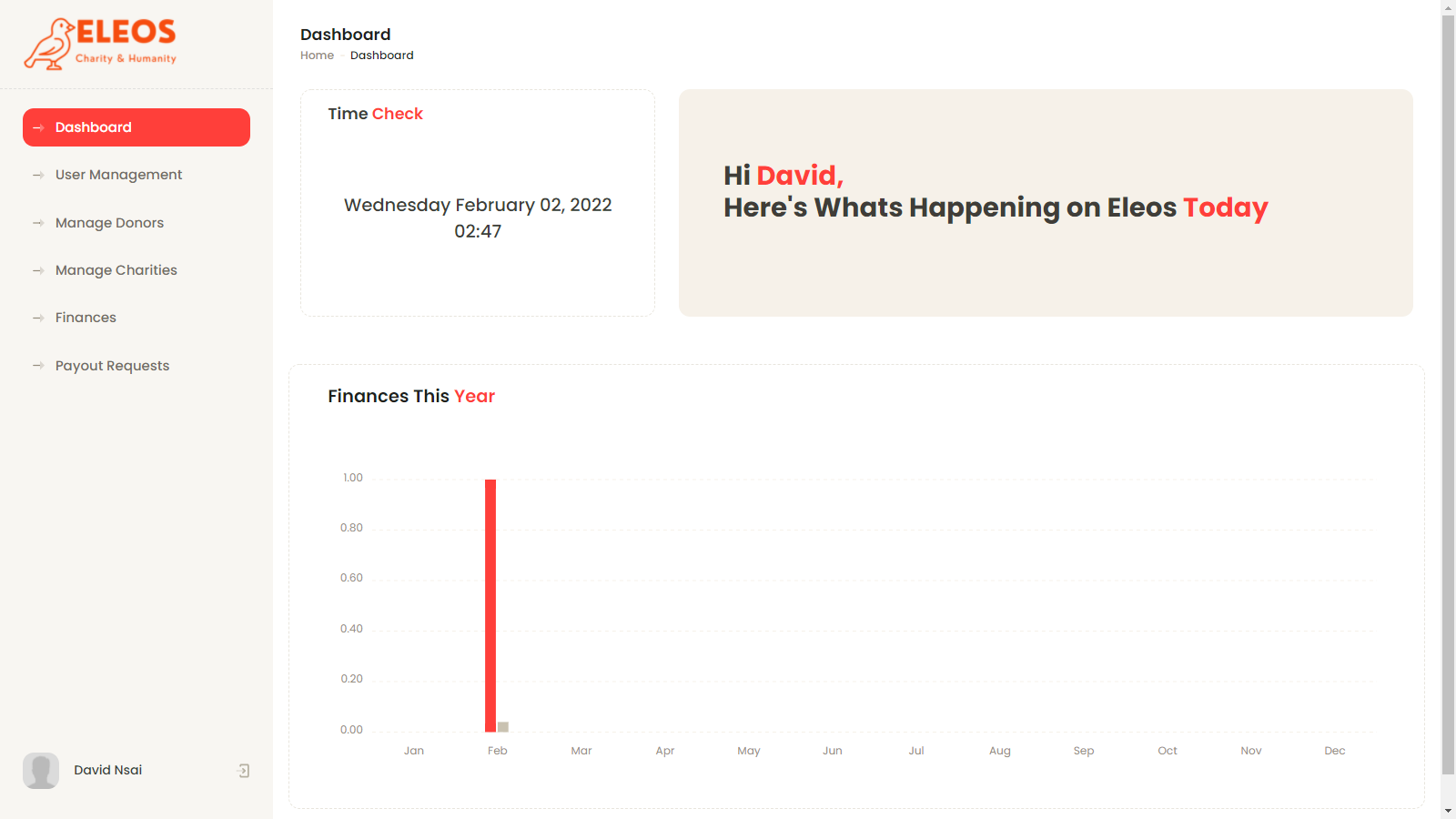


Figure 13 Sign Up Page

Figure 14 Administrator Dashboard

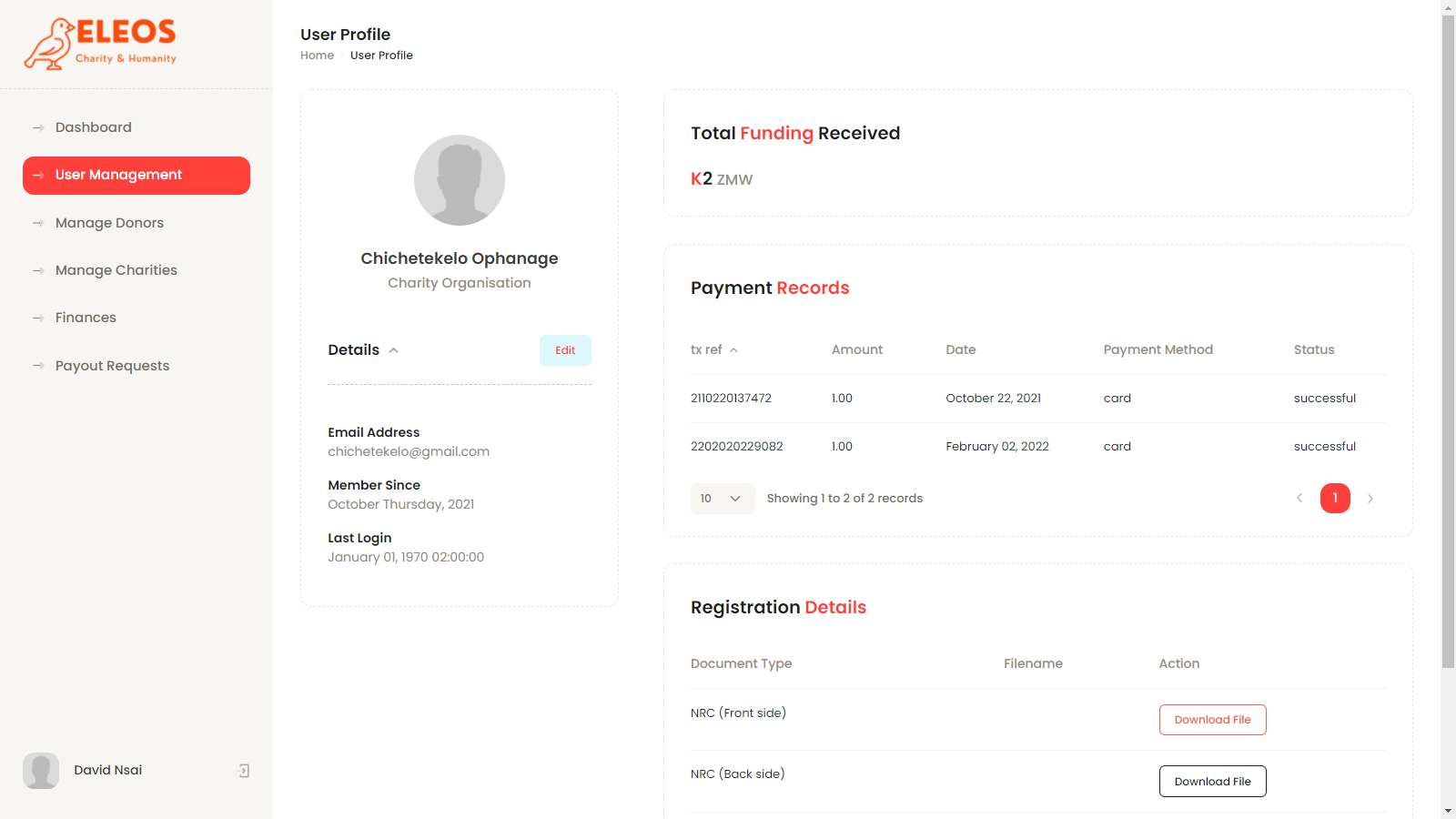
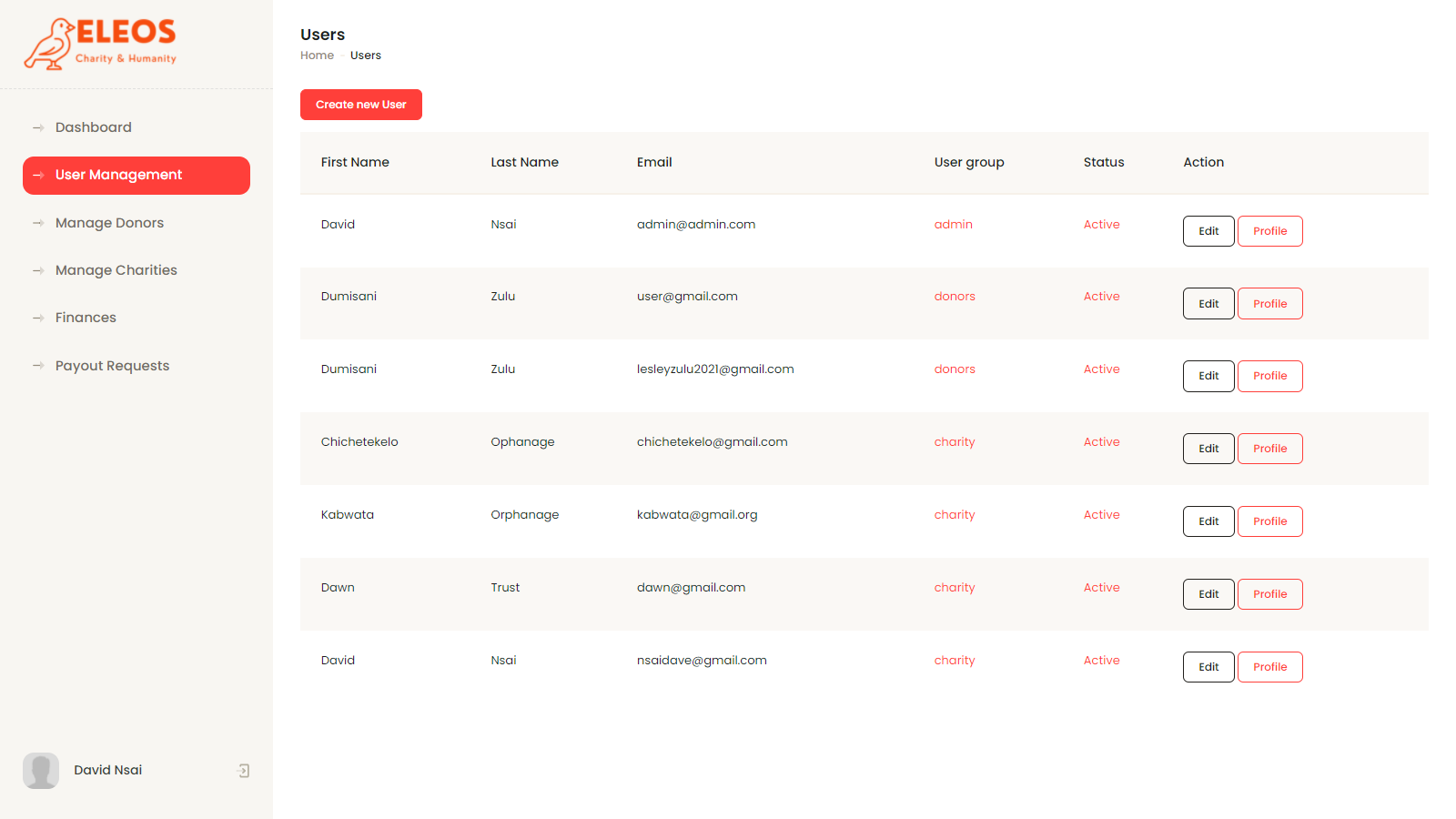


Figure 15 Administrator View of user profile

Figure 16 Administrator View - All Users

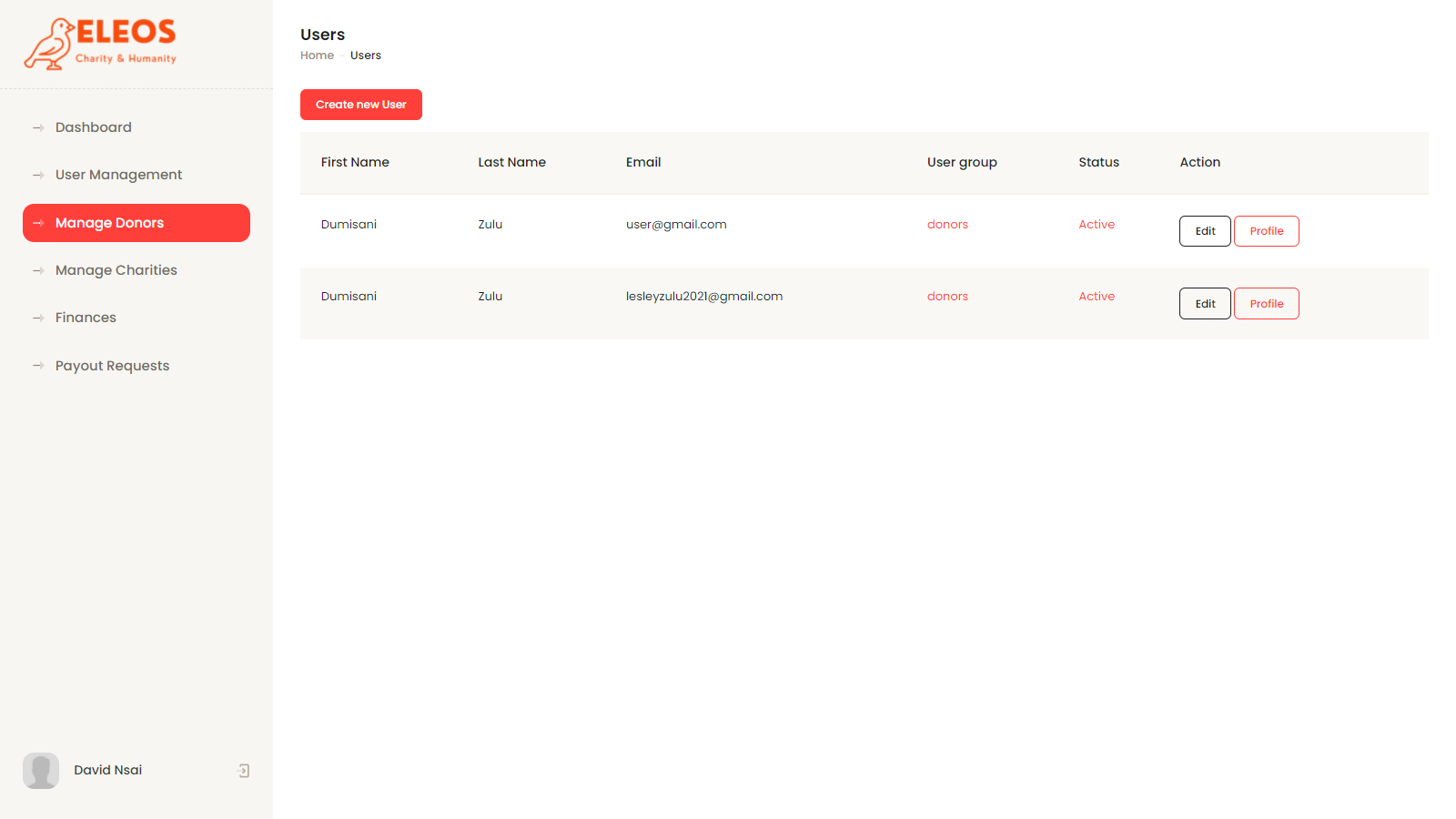


Figure 17 Donor Management

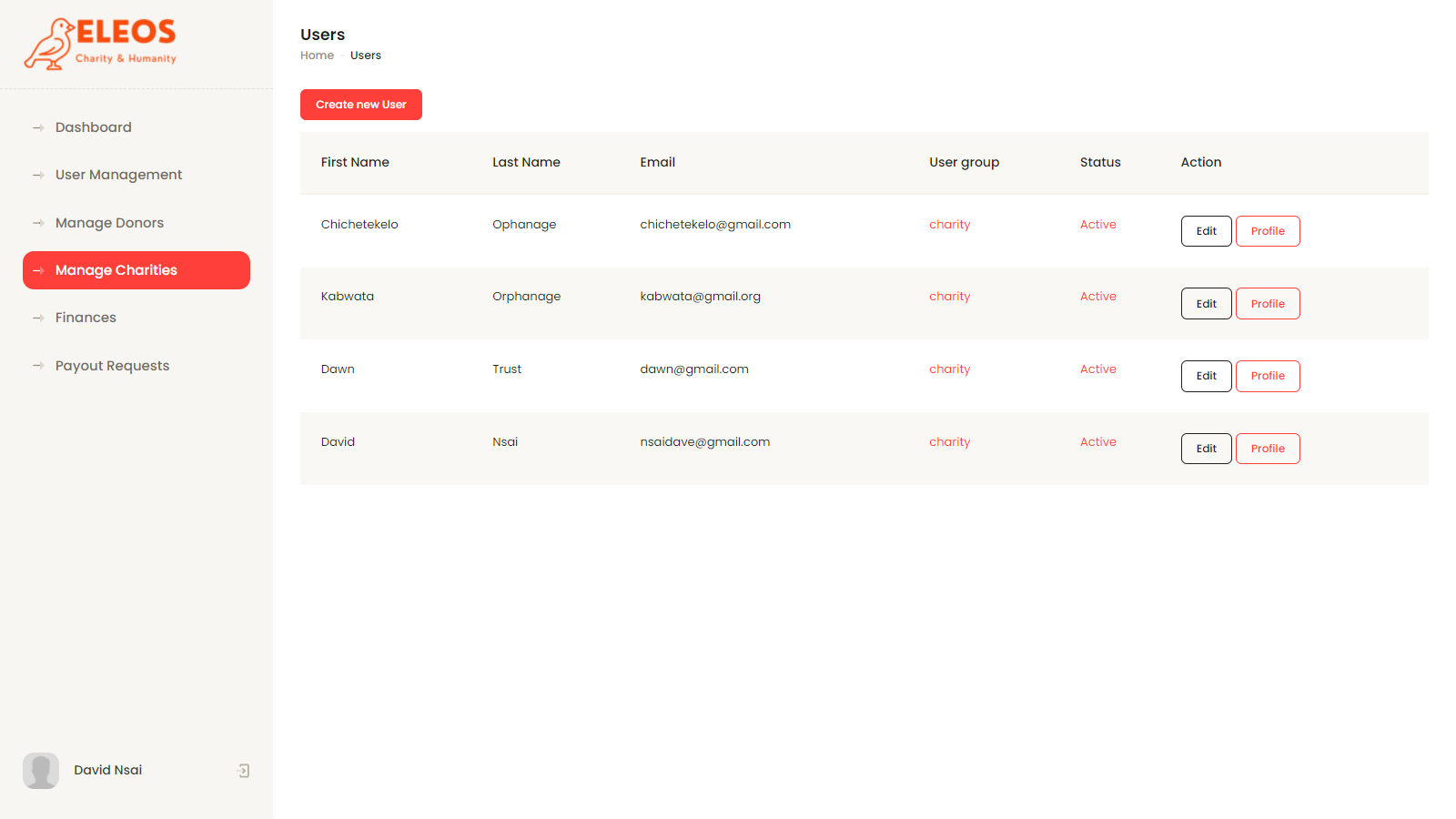
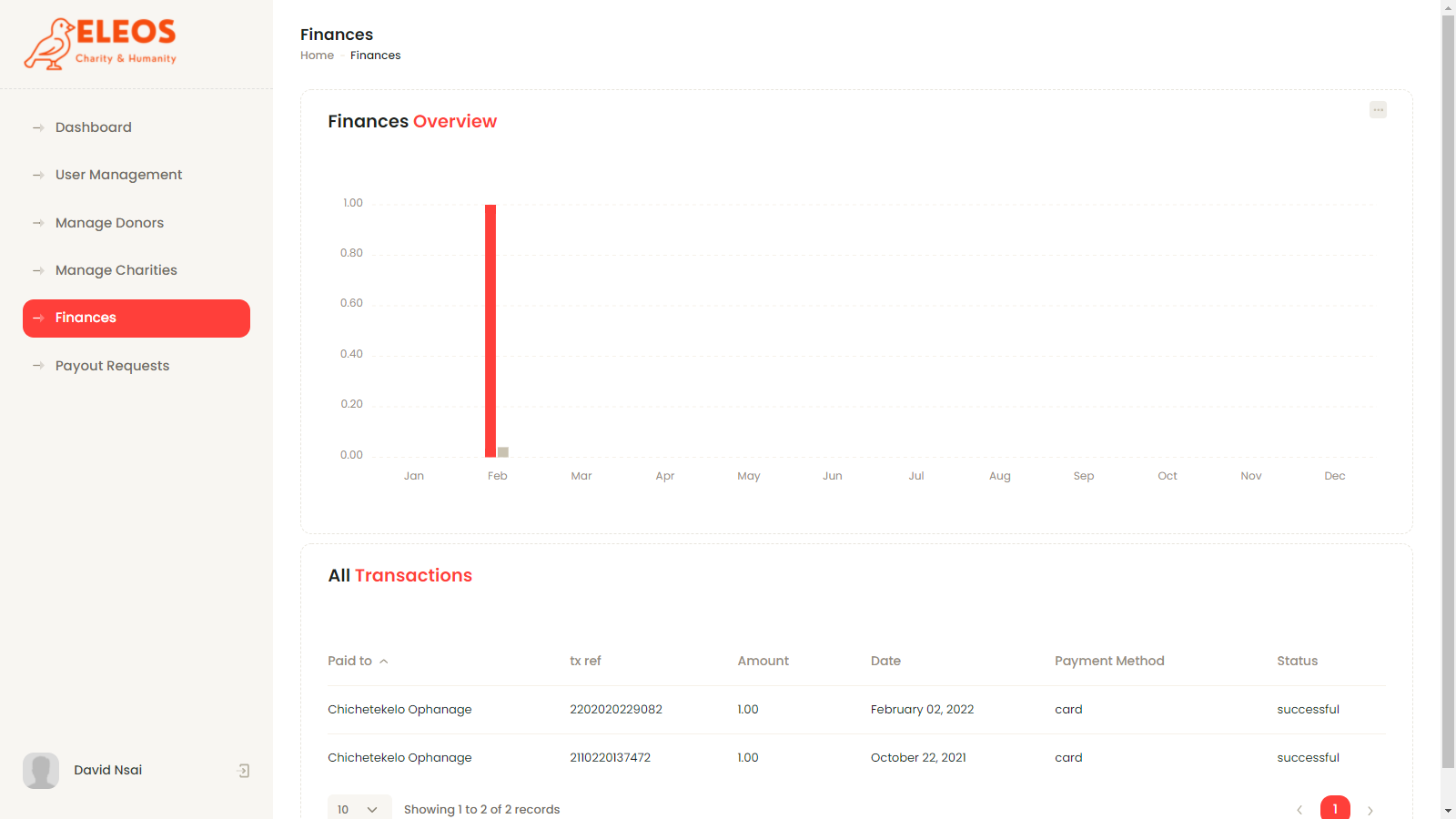


Figure 18 Charity Organisation Management

Figure 19 Management of Finances

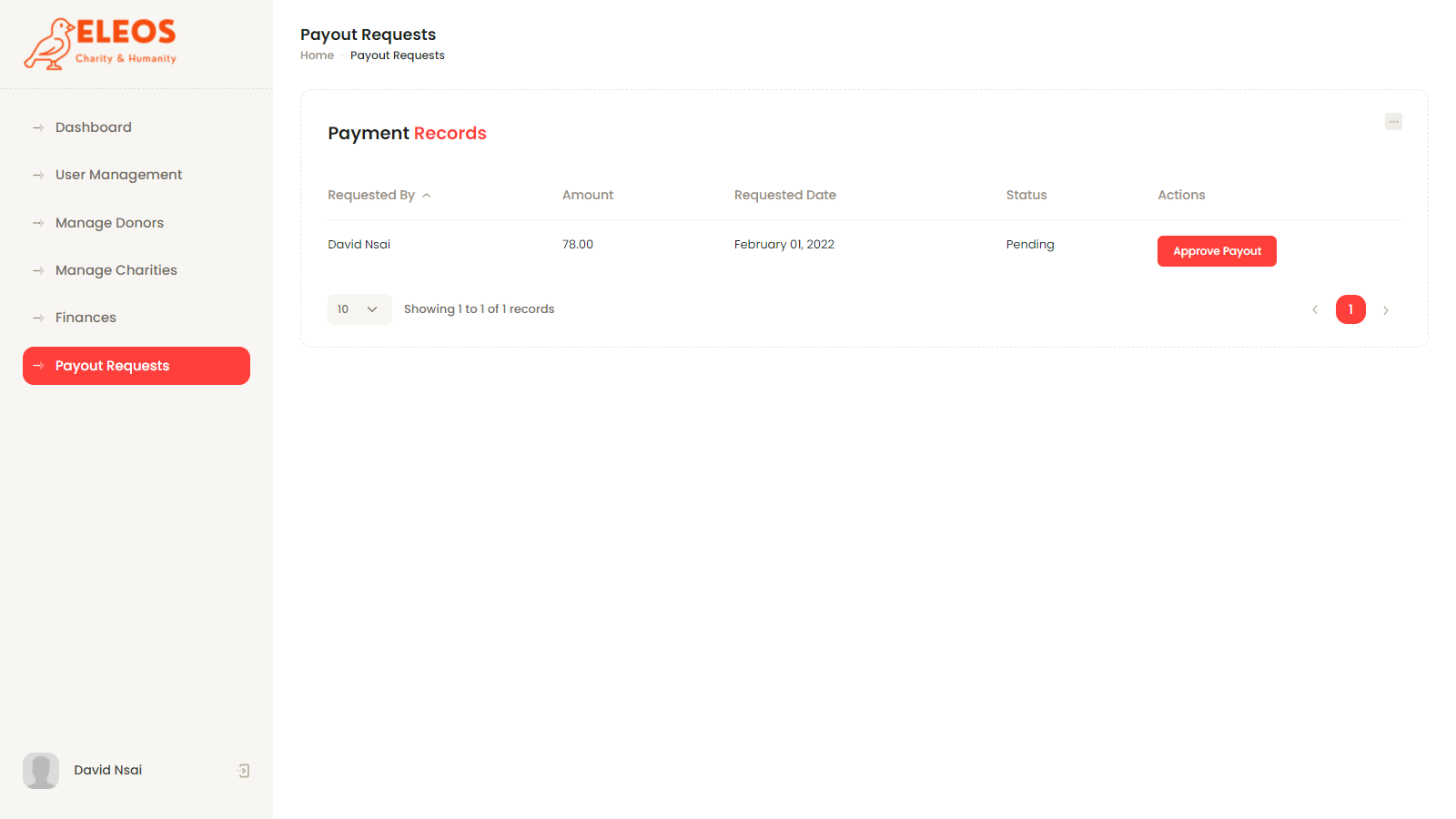
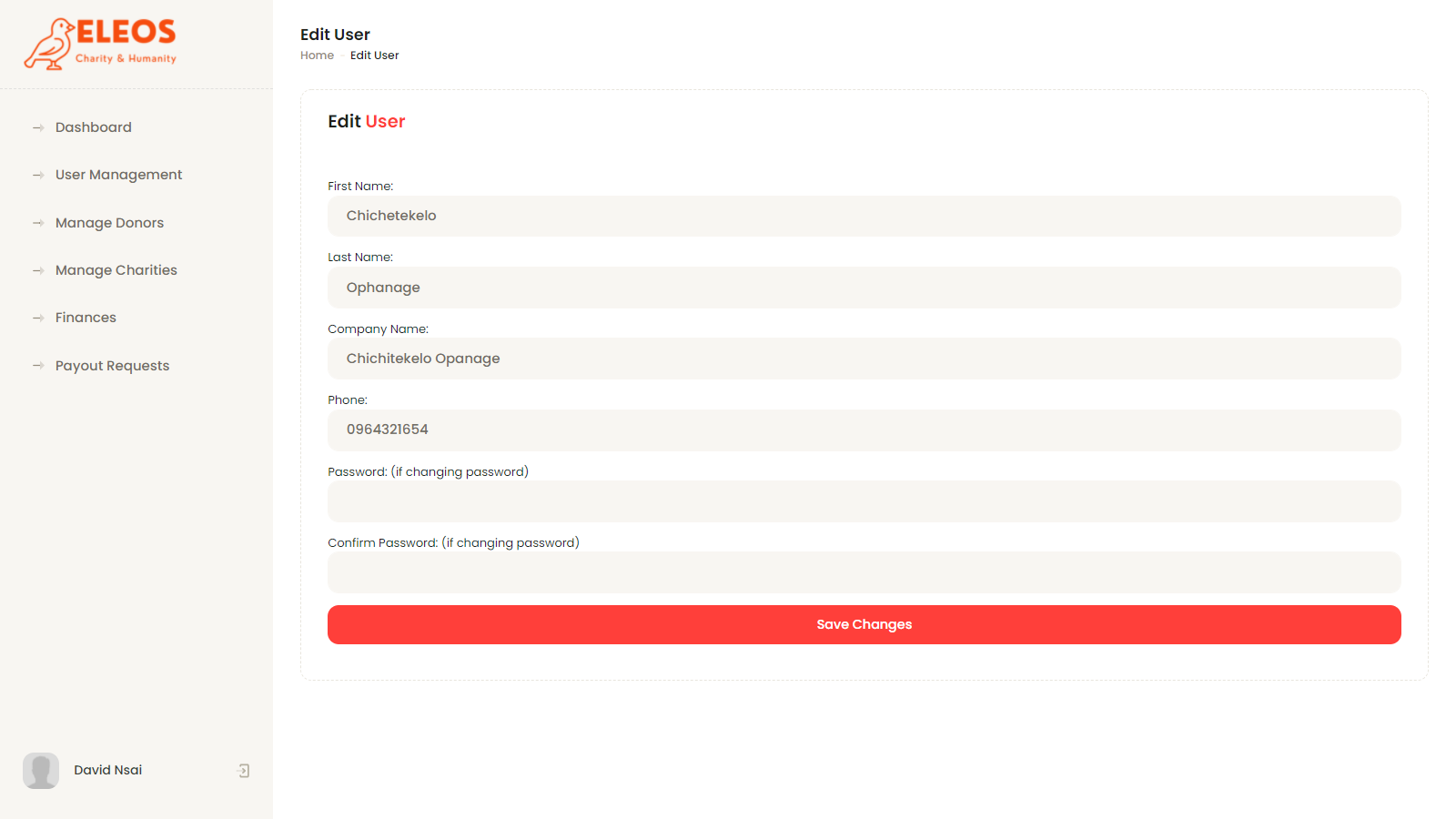
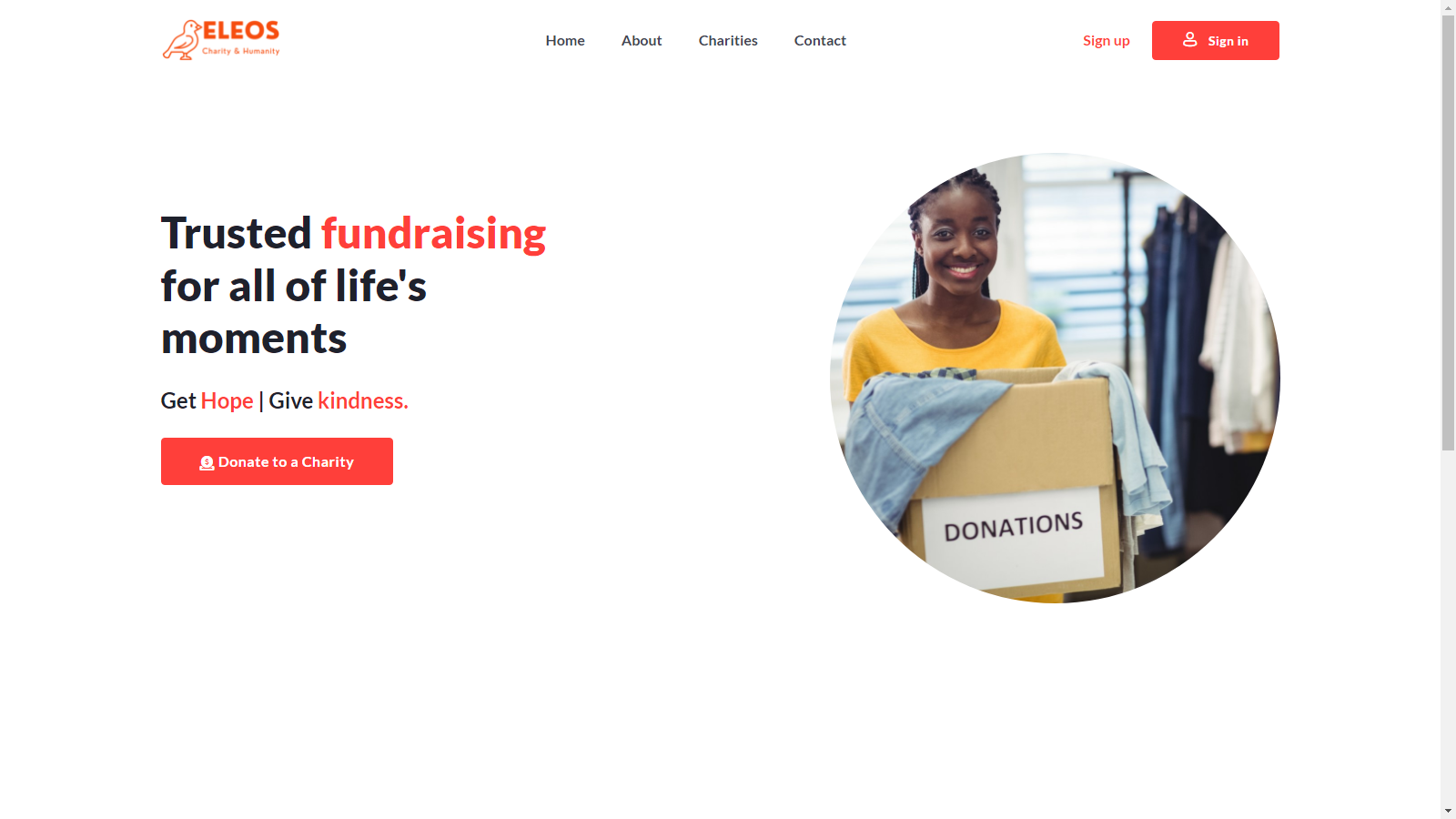
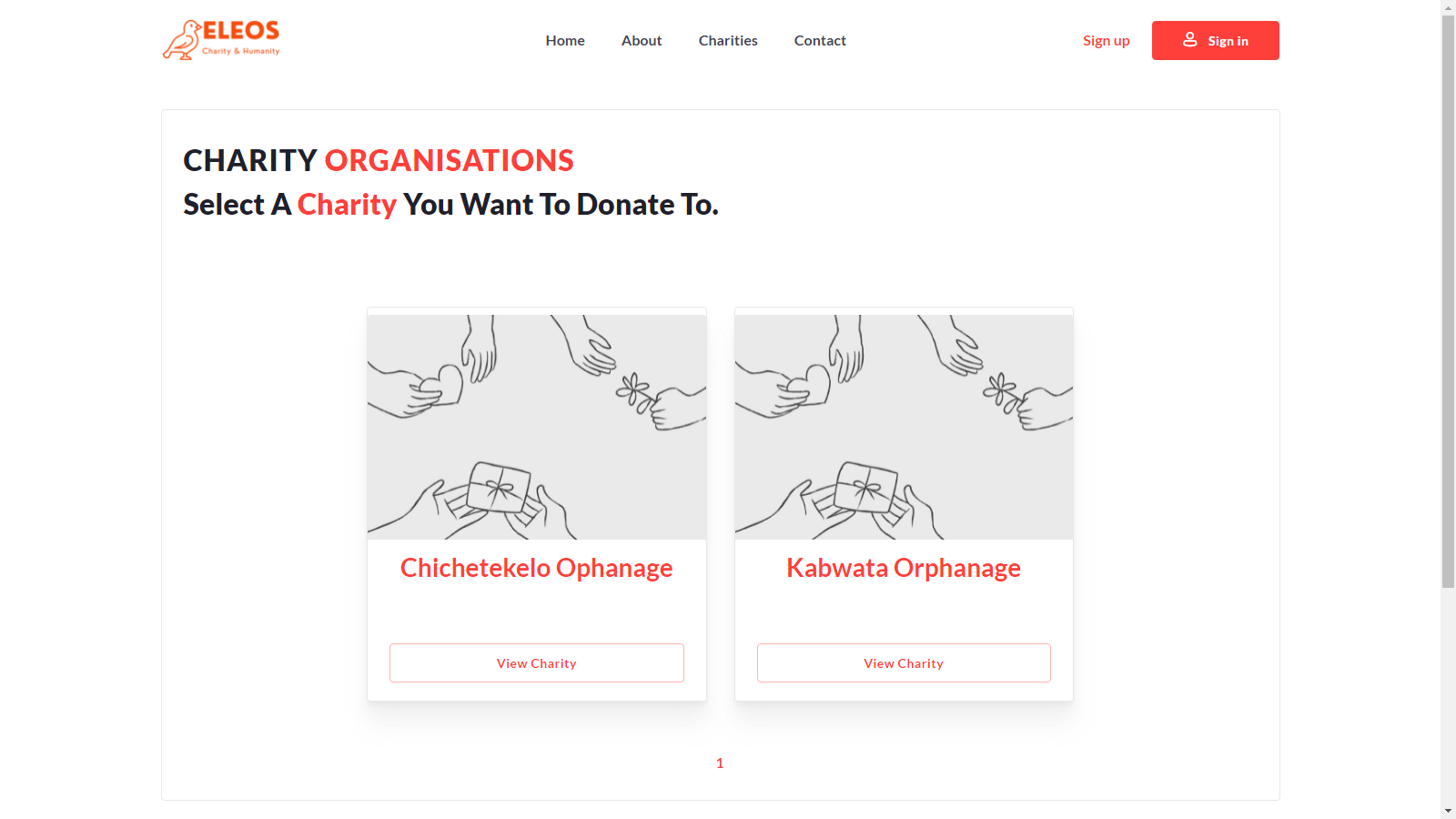
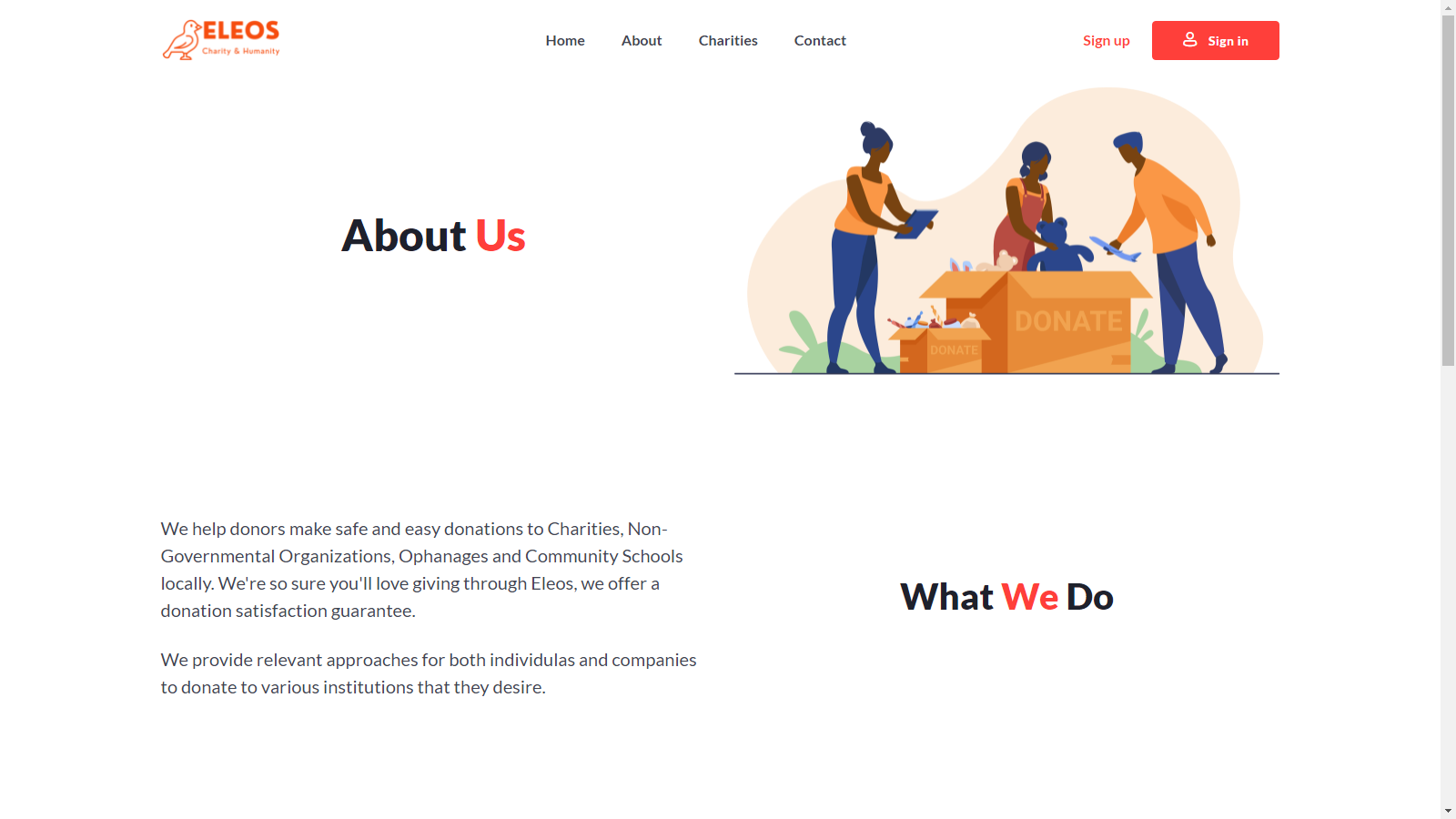


Figure 20 Administrator View - Payout requests

Figure 21 Admin View - Edit User

Figure 22 Donor Homepage

Figure 23 All Charity Organisations View

Figure 24 About Us Page

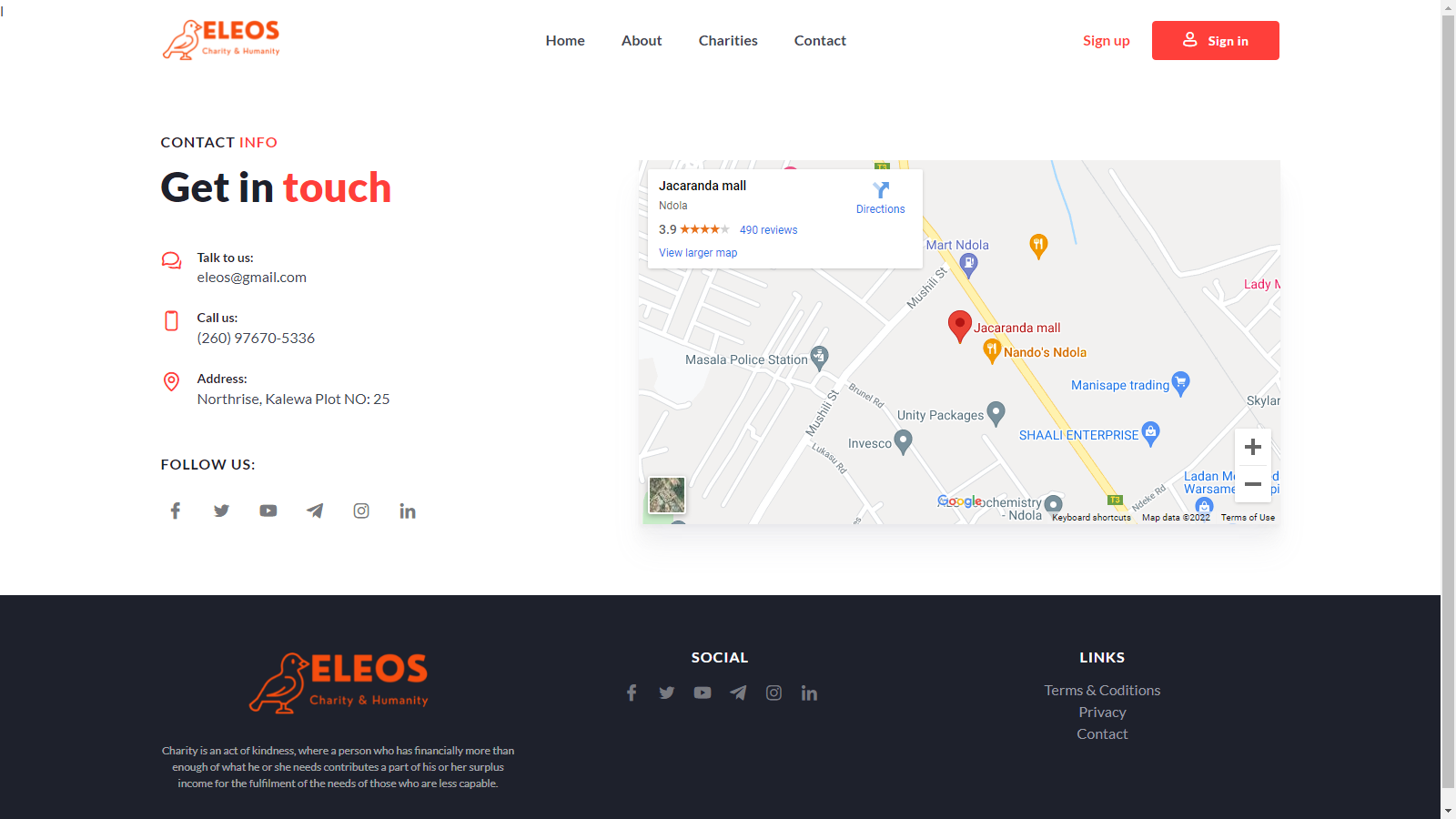
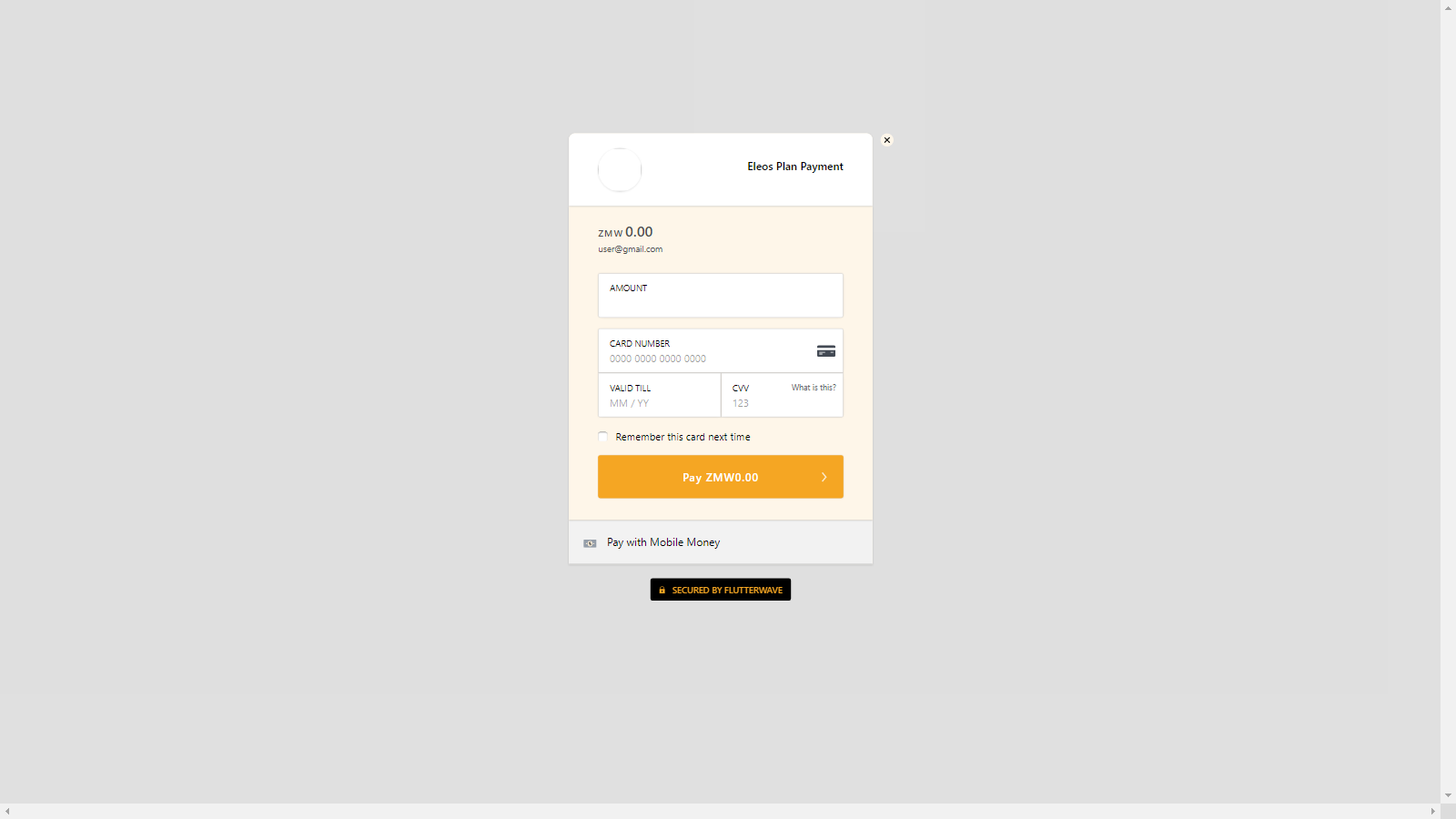
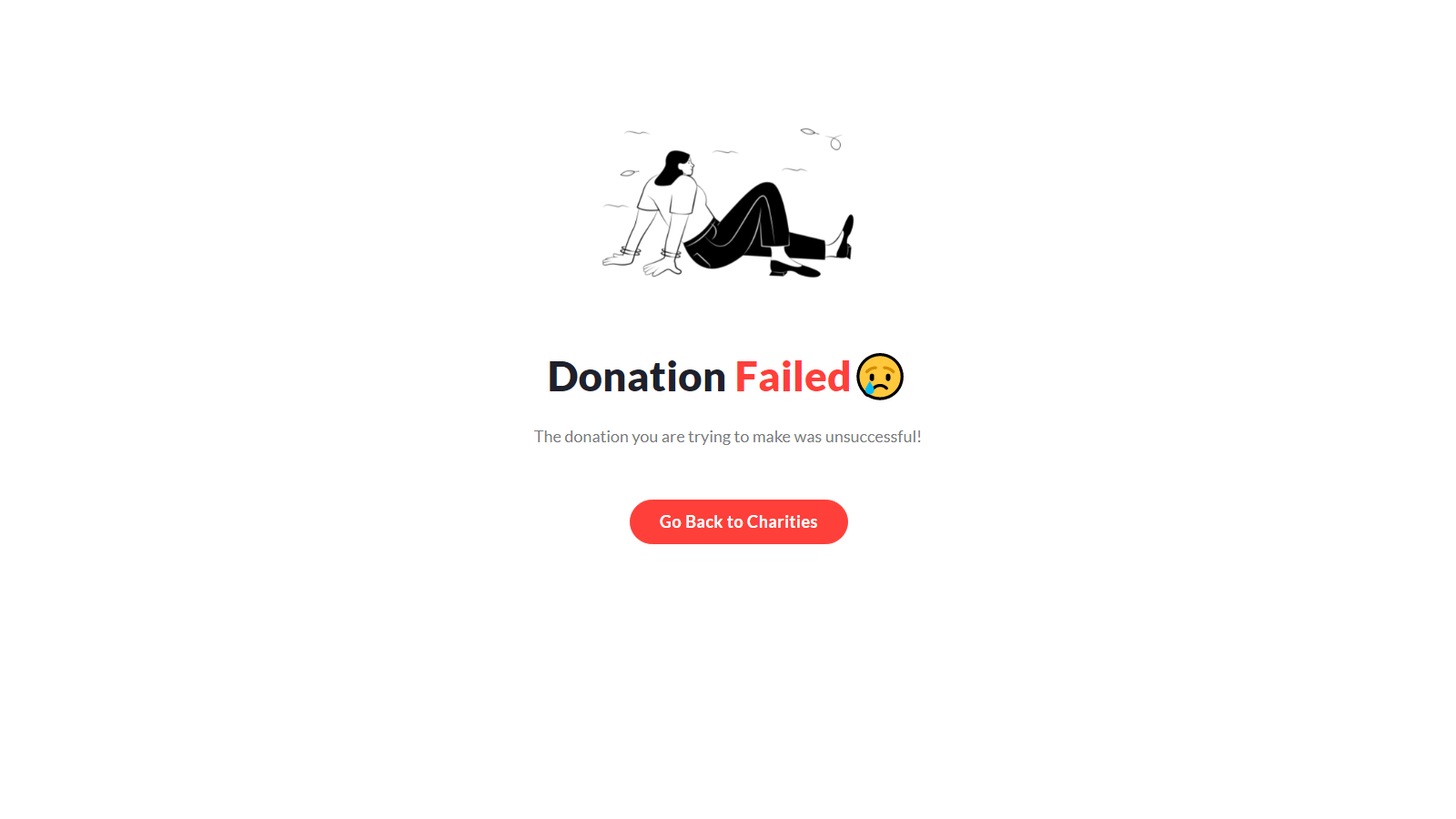
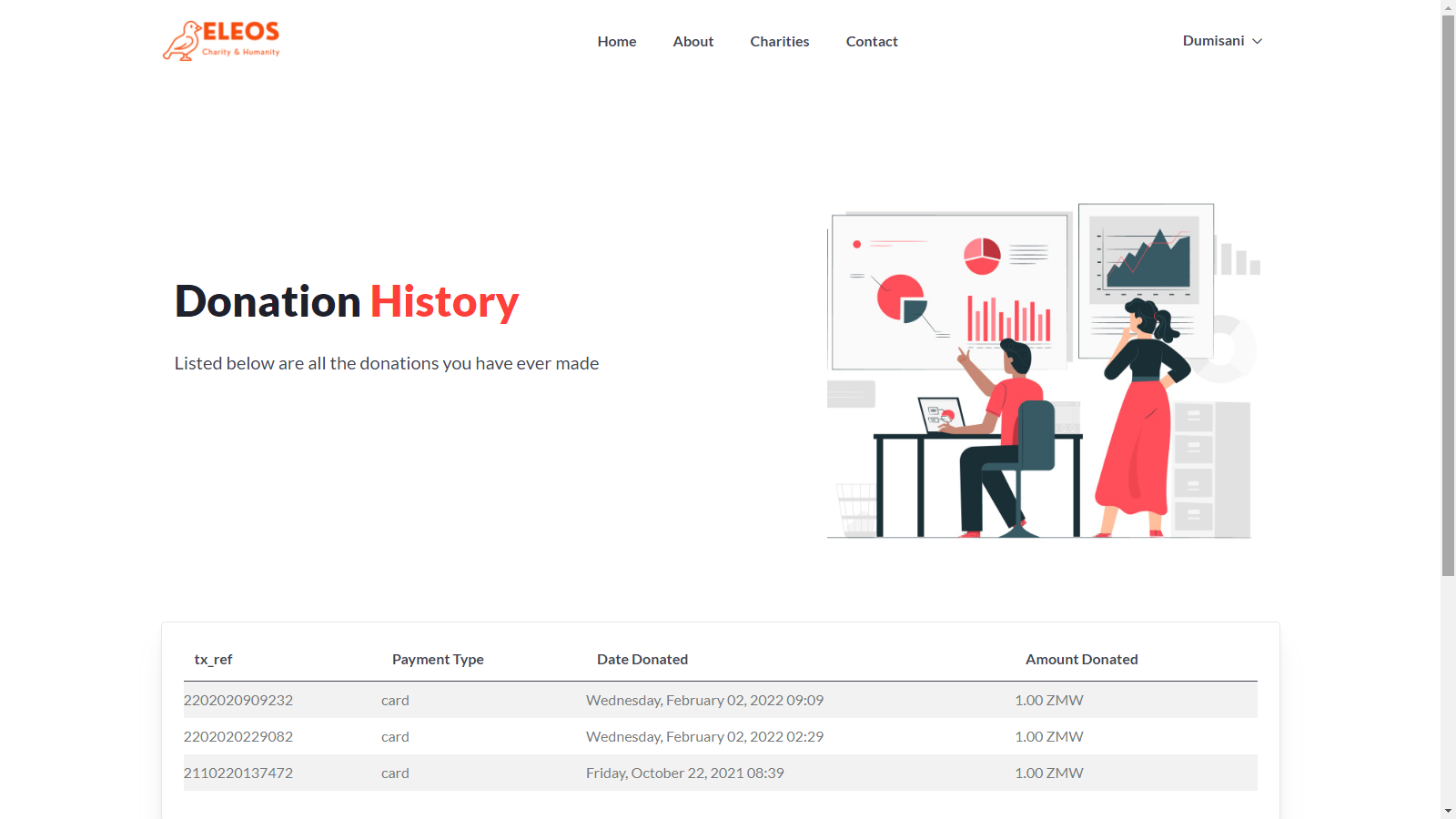
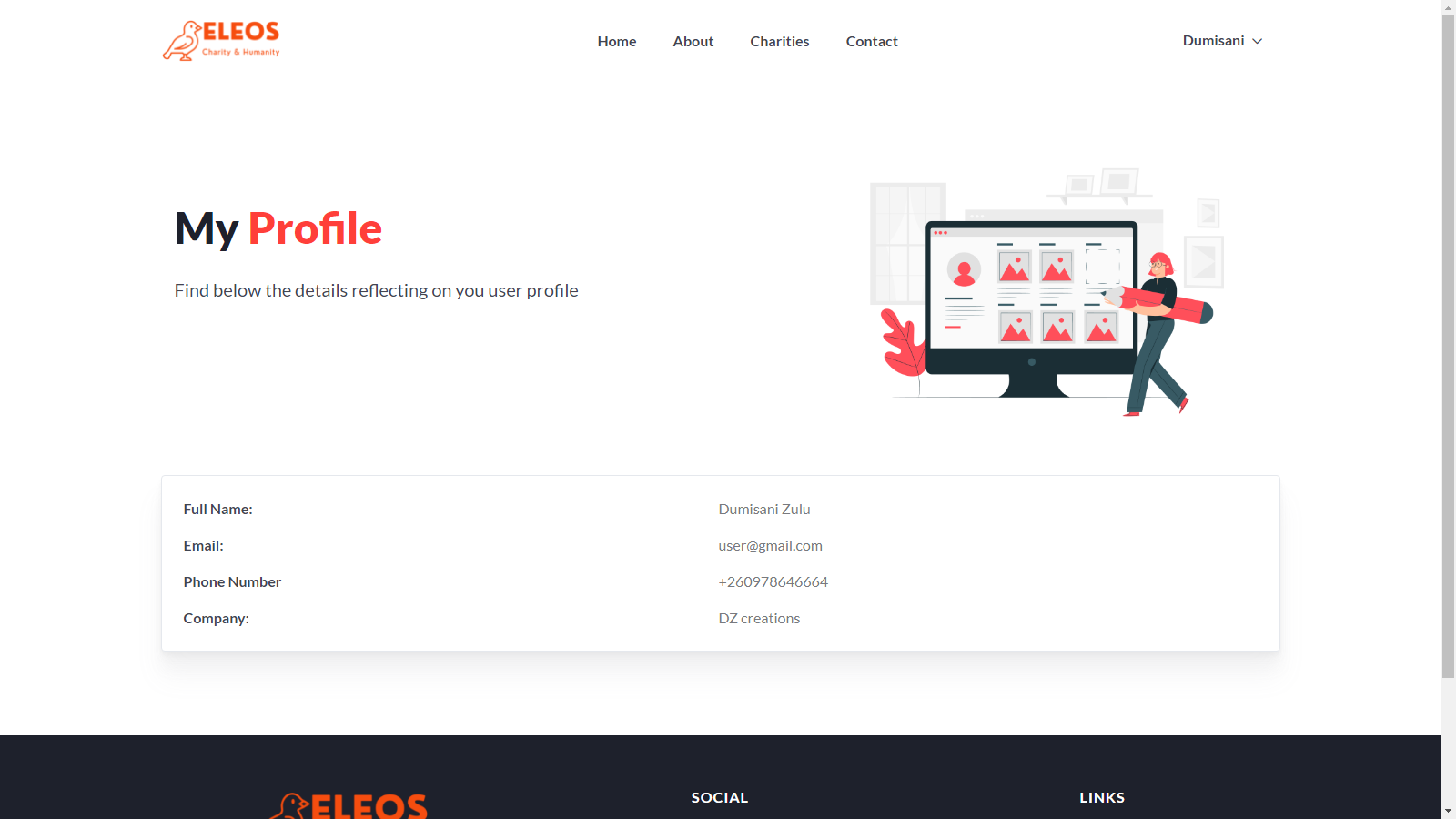
Figure 25 Contact Us Page

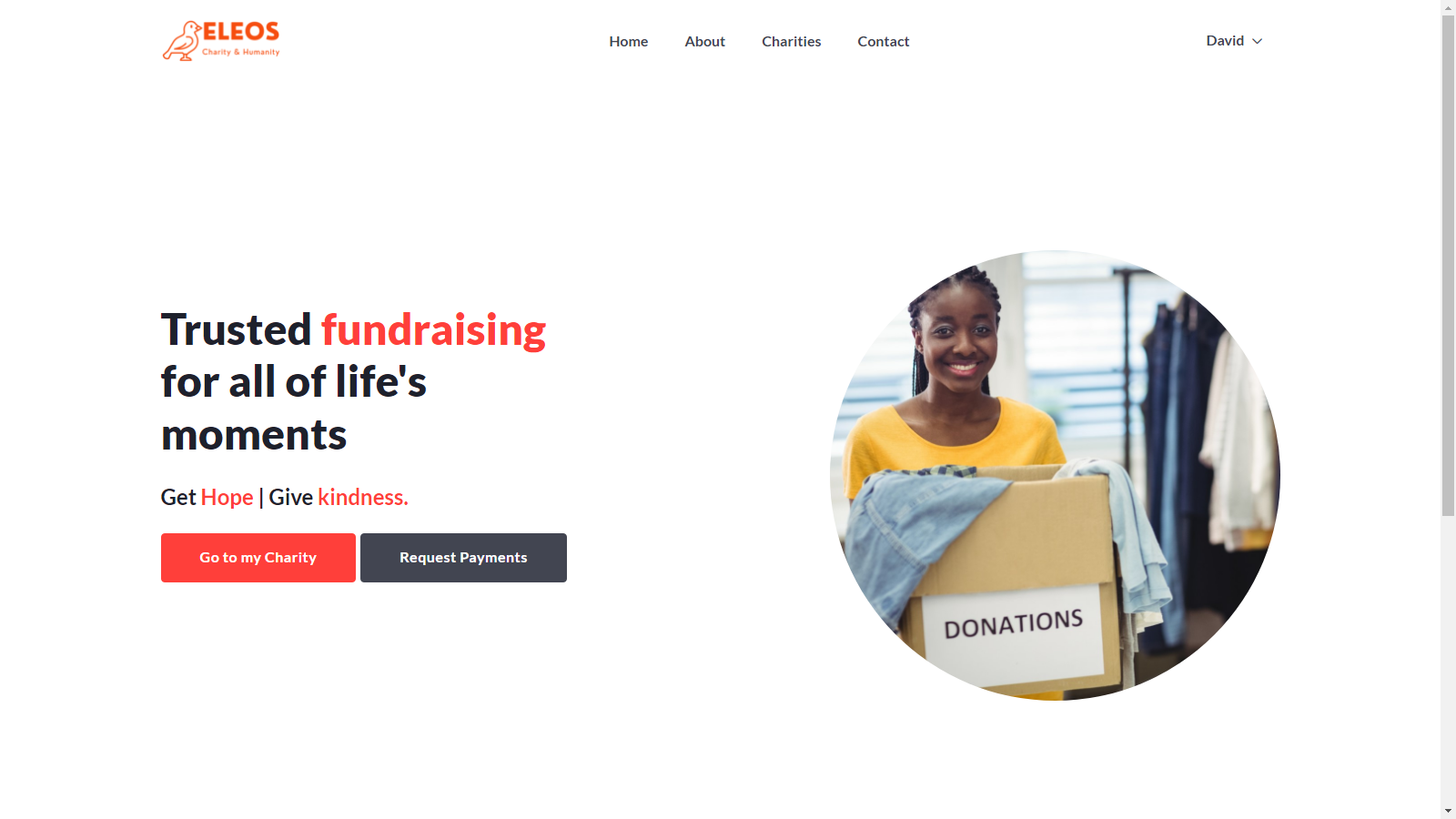
Figure 26 Charity Description Page

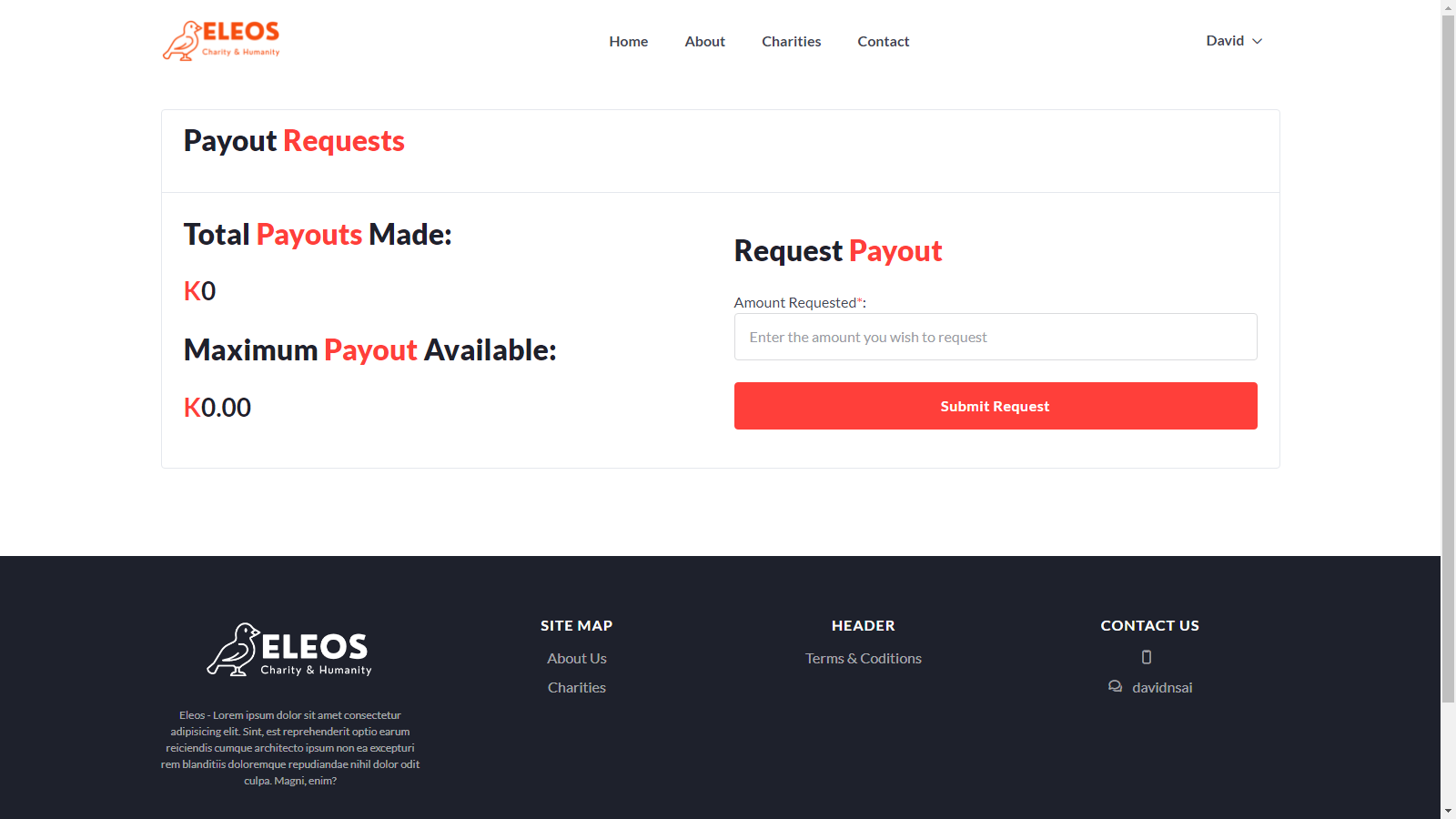
Figure 27 Payment Checkout Page

Figure 28 Donation Failed Page

Figure 29 Donation History Page

Figure 30 Donor User Profile Page

Figure 31 Charity User group Landing page

Figure 32 Charity Request Payout Page

## **Conclusion**

In conclusion, the tests that were carried out on this project were all successful. The system did all that it was required to do.

# **CHAPTER FIVE: CONCLUSION**

## **INTRODUCTION**

This chapter points out the achievements of the project, limitations of the system, the learning experience that the developers gathered during the time they worked on this project, as well as whether the system solved problem it was built to solve or not. It also dives into looking at the possible opportunities for future enhancement of the system.

## **SUCCESS ACCOMPLISHED**

The developers-based success on whether or not the system solved the problem it was built for, the delivery time of the system, cost against budget, and if it does what it was intended to do.

The developed system is successfully developed an online platform to facilitate online donations. The system is able to minimise charity fraud by ensuring that only registered organisations are able to utilise the services of the platform by means of the verification process.

Inequalities in the charity field have also been reduced by the system as the playing field has been levelled for all charity organisations registered on the platform. There is no special algorithm to give preference to particular organisations but all organisations are accorded the same opportunities.

The system also facilitates local donors to donated funds through local mobile money (Airtel, MTN and Zamtel Mobile Money) payments and international card payments to allow global donations to any charity accredited to Eleos. The charity organisations are able to request for payments withdraws.

The system has eliminated the barrier of donor’s scepticism on online donations and has provided an easier, faster and secure way of donating to verified charities.

The developers of this system picked up a lot of experience while working on this project. This project required the developers to work with web servers, web application programming languages and mark-up languages. Prior to the development of this project, the developers of this project were not adequately conversant with the languages that would make this project a success, however, after the completion of this project, the developers of the project had obtained a thorough understanding of the various technologies needed to implement such a project.

This success achieves the objectives that were set to be achieved at the end of the project implementation.

## **LIMITATIONS OF SYSTEM**

Despite possessing the core features it was designed to have, the system has quite a number of limitations. The system’s limitations are listed below:

1. Users are unable to view a charity organisation’s exact location on a map.
2. Although donors get an email receipt of their donation, they do not get a message to specify to which charity organisation they made a payment to. This is because the payment receipts are sent by the payment gateway provider and not the actual system.
3. The system can only be accessed through a web browser and can not be used as a progressive web application.
4. The system does not have a provision for live chat with the system administrators. Communication can only be done via email.

## **FUTURE ENHANCEMENTS**

The following features listed below will be added to the application as enhancements in the future:

1. The use of google maps to pinpoint the charity’s location in the event of donors who wish to visit the charities or prove their locality existence.
2. The donor will be able to receive SMSs upon donations made and to which charity they have made the donation to.
3. Creation of a mobile Eleos App that will be cross platform on multiple mobile firmware.
4. The application will be able to have a virtual 24/7 chat service.

## **RECOMMENDATIONS**

For this application to be used effectively, we strongly recommend that training be given to the admin, so he/she becomes acquainted with using the platform. Also, training should be given to donors in form of an advert on how to use the web application.

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# **APPENDIX**

## **Installation guide**

The Charity Management System is built using the CodeIgniter PHP framework.

**What is CodeIgniter?**

CodeIgniter is a PHP full-stack web framework that is light, fast, flexible, and secure.

More information can be found at the [official site] (http://codeigniter.com).

The link below is where the repository for the source code for the Charity Management system can be found.

<https://github.com/davidnsai/finalyear>

**Installation Steps**

**Step 1:**

Clone the Repository to your working directory

**Step 2:**

Create a virtualhost and point the document root to the 'public' folder.

**Step 3:**

Create a database and import the sql file which can be found in the root of this repo.

**Step 4:**

Edit the .env file and add your database credentials to the .env file.

**Step 5:**

Edit the App.php file located in 'app/config' change the base\_url to the virtualhost that you just created. Alternatively, the application can be run from the command line by executing the command, ‘php spark serve’ from the root level

**Server Requirements**

PHP version 7.2 or higher is required, with the following extensions installed:

* - [intl](http://php.net/manual/en/intl.requirements.php)
* - [libcurl](http://php.net/manual/en/curl.requirements.php) if you plan to use the HTTP\CURLRequest library

Additionally, make sure that the following extensions are enabled in your PHP:

* - json (enabled by default - don't turn it off)
* - [mbstring](http://php.net/manual/en/mbstring.installation.php)
* - [mysqlnd](http://php.net/manual/en/mysqlnd.install.php)
* - xml (enabled by default - don't turn it off)

**Research Questionnaire Titled (*The Anatomy of Charity Donations and The Impact of Online Charity fund Donation: A Study of Zambia ICT College Students*)**

1. Please indicate your gender

* Male
* Female

2. Please indicate your age range

* 18-24
* 25-35
* 46-59
* Above 60

3. Please indicate the range of your monthly income (While the question is optional, answering it will provide useful information for this research)

* ZMW 5000 or below
* ZMW 5000 to 10,000
* ZMW 15,000 to 25,000
* ZMW 25,000 to 40,000

4. Do you think there is local philanthropy activity in Ndola and Zambia in general?

* Yes
* No

5. If not why?

--------------------------------------------------------------------------------------------------------------------

6. Have you ever given money to a local organisation or cause?

* Yes
* No

7. What is the best channel to communicate a donation appeal?

* Email
* Website
* In-person
* Formal letter

8. Please use this space to share your thoughts or observations you may have on local philanthropy.

--------------------------------------------------------------------------------------------------------------------

9. What type of organisation have you given to?

* Church or faith-based organization
* Non-governmental organization
* School
* Orphanage

10. How many times have you donated to an organisation?

* Once
* 2 - 5 times
* More than five times
* More than ten times

11. How did you make your donation?

* Cash (In-person)
* Cheque or Bank transfer
* Online

12. Would you recommend donating to local charity to other people?

* Yes
* No

13. How would you like to donate?

* Online
* Cash (In-person)
* Cheque or Bank transfer

## **Essential Module Source Code**

### **Sign in source code**

public function login()

{

$this->data['title'] = lang('Auth.login\_heading');

// validate form input

$this->validation->setRule('identity', str\_replace(':', '', lang('Auth.login\_identity\_label')), 'required');

$this->validation->setRule('password', str\_replace(':', '', lang('Auth.login\_password\_label')), 'required');

if ($this->request->getPost() && $this->validation->withRequest($this->request)->run())

{

// check to see if the user is logging in

// check for "remember me"

$remember = (bool)$this->request->getVar('remember');

if ($this->ionAuth->login($this->request->getVar('identity'), $this->request->getVar('password'), $remember))

{

//if the login is successful

//redirect them back to the home page

$this->session->setFlashdata('message', $this->ionAuth->messages());

return redirect()->to($this->request->getVar('redirect'))->withCookies();

}

else

{

// if the login was un-successful

// redirect them back to the login page

$this->session->setFlashdata('message', $this->ionAuth->errors($this->validationListTemplate));

// use redirects instead of loading views for compatibility with MY\_Controller libraries

return redirect()->back()->withInput();

}

}

else

{

// the user is not logging in so display the login page

// set the flash data error message if there is one

$this->data['message'] = $this->validation->getErrors() ? $this->validation->listErrors($this->validationListTemplate) : $this->session->getFlashdata('message');

$this->data['redirect'] = base\_url();

$this->data['identity'] = [

'name' => 'identity',

'id' => 'identity',

'type' => 'text',

'value' => set\_value('identity'),

];

$this->data['password'] = [

'name' => 'password',

'id' => 'password',

'type' => 'password',

];

if($this->request->getVar('redirect') !='')

{

$this->data['redirect'] = $this->request->getVar('redirect');

}

echo view('auth/header', $this->data);

echo view('auth/login');

echo view('auth/footer');

}

}

### **Sign up source code**

public function signup()

{

$this->data['title'] = lang('Auth.create\_user\_heading');

if ($this->ionAuth->loggedIn() || $this->ionAuth->isAdmin())

{

return redirect()->to('/auth');

}

$tables = $this->configIonAuth->tables;

$identityColumn = $this->configIonAuth->identity;

$this->data['identity\_column'] = $identityColumn;

$this->data['page'] = "signup";

$this->data['auth'] = $this->ionAuth->user()->row();

// validate form input

$this->validation->setRules([

'type' => 'required',

'first\_name' => 'trim|required|min\_length[2]|alpha',

'last\_name' => 'trim|required|min\_length[2]|alpha',

'email' => 'trim|required|valid\_email|is\_unique[' . $tables['users'] . '.email]',

'password' => 'required|min\_length[' . $this->configIonAuth->minPasswordLength . ']|matches[password\_confirm]',

'password\_confirm' => 'required',

'terms'=>'required',

],

[ // Errors

'terms' => [

'required' => 'You must agree to our terms and conditions before proceeding',

],

'type' => [

'required' => 'You must select an account type before proceeding',

],

'first\_name' => [ 'required' => 'Firstname field cannot be empty', 'min\_length' => 'Firstname cannot have less than two characters','alpha' => 'Firstname must contain only characters from A-Z',

],

'last\_name' => [

'required' => 'Lastname field cannot be empty',

'min\_length' => 'Lastname cannot have less than two characters',

'alpha' => 'Lastname must contain only characters from A-Z',

],

'email' => [

'required' => 'Email field cannot be empty',

'valid\_email' => 'The email address field must contain a valid email address',

'is\_unique' => 'The email address selected already exists'

]

'password' => [

'required' => 'Password field cannot be empty',

'min\_length' => 'Password must contain a minimum of ' . $this->configIonAuth->minPasswordLength . 'Characters',

'matches' => 'Passwords do not match'

],

'password\_confirm' => [

'required' => 'Password Confirm field cannot be empty',

]

]

);

if ($this->request->getPost() && $this->validation->withRequest($this->request)->run())

{

$email = strtolower($this->request->getPost('email'));

$identity1 = $identity =strtolower($this->request->getPost('first\_name').$this->request->getPost('last\_name'));

$i=1;

while ($this->ionAuth->usernameCheck($identity1))

{

$identity1=$identity.$i;

$i++;

}

$identity = $identity1;

$password = $this->request->getPost('password');

$additionalData = [

'first\_name' => $this->request->getPost('first\_name'),

'last\_name' => $this->request->getPost('last\_name'),

];

$group = $this->request->getPost('type');

}

if ($this->request->getPost() && $this->validation->withRequest($this->request)->run() && $this->ionAuth->register($identity, $password, $email, $additionalData,$group) && ($group == 3 || $group == 4))

{

// if the account has been created show then the verify password message

$this->data['email'] = $email;

$this->data['fname'] = $this->request->getPost('first\_name');

$\_POST = array();

echo view('auth/header',$this->data);

echo view('auth/verify');

echo view('auth/footer');

}

else

{

// display the create user form

// set the flash data error message if there is one

$this->data['message'] = $this->validation->getErrors() ? $this->validation->listErrors($this->validationListTemplate) : ($this->ionAuth->errors($this->validationListTemplate) ? $this->ionAuth->errors($this->validationListTemplate) : $this->session->getFlashdata('message'));

$this->data['first\_name'] = [

'name' => 'first\_name',

'id' => 'first\_name',

'type' => 'text',

'value' => set\_value('first\_name'),

];

$this->data['last\_name'] = [

'name' => 'last\_name',

'id' => 'last\_name',

'type' => 'text',

'value' => set\_value('last\_name'),

];

$this->data['email'] = [

'name' => 'email',

'id' => 'email',

'type' => 'email',

'value' => set\_value('email'),

];

$this->data['company'] = [

'name' => 'company',

'id' => 'company',

'type' => 'text',

'value' => set\_value('company'),

];

$this->data['phone'] = [

'name' => 'phone',

'id' => 'phone',

'type' => 'text',

'value' => set\_value('phone'),

];

$this->data['password'] = [

'name' => 'password',

'id' => 'password',

'type' => 'password',

'value' => set\_value('password'),

];

$this->data['password\_confirm'] = [

'name' => 'password\_confirm',

'id' => 'password\_confirm',

'type' => 'password',

'value' => set\_value('password\_confirm'),

];

echo view('auth/header',$this->data);

echo view('auth/signup');

echo view('auth/footer');

}

}

### **Admin Dashboard source code**

<?php

namespace App\Controllers;

use App\Models\AdminModel;

class Admin extends BaseController

{

protected $admin;

public function \_\_construct()

{

$this->admin = new AdminModel();

}

public function index()

{

if (! $this->ionAuth->loggedIn())

{

return redirect()->to('/auth/login');

}

else if (! $this->ionAuth->inGroup('admin'))

{

return redirect()->to('/auth');

}

$data['title'] = "Dashboard";

$data['user'] = $this->ionAuth->user()->row();

$data['transactions'] = $this->admin->get\_all\_transactions();

$data['page'] = 'dashboard';

echo view('admin/header',$data);

echo view('admin/index');

echo view('admin/footer');

}

}

### Admin – User profile source code

<?php

namespace App\Controllers;

use App\Models\AdminModel;

class Admin extends BaseController

{

protected $admin;

public function \_\_construct()

{

$this->admin = new AdminModel();

}

public function userprofile(int $id = NULL)

{

if($id == NULL)

{

return redirect()->to('/pagenotfound');

}

if (! $this->ionAuth->loggedIn())

{

return redirect()->to('/auth/login');

}

else if (! $this->ionAuth->inGroup('admin'))

{

return redirect()->to('/auth');

}

$data['title'] = "User Profile";

$data['user'] = $this->ionAuth->user()->row();

$data['userprofile'] = $this->ionAuth->user($id)->row();

if (!$data['userprofile'])

{

return redirect()->to('/pagenotfound');

}

$data['page'] = 'users';

if ($data['userprofile']->user\_belongs\_group == 3)

{

$data['transactions'] = $this->admin->get\_funding\_history($id);

}

if ($data['userprofile']->user\_belongs\_group == 4)

{

$data['transactions'] = $this->admin->get\_donation\_history($id);

}

echo view('admin/header',$data);

echo view('admin/userprofile');

echo view('admin/footer');

}

}

### **Admin – users**

public function users(string $group)

{

if (! $this->ionAuth->loggedIn())

{

// redirect them to the login page

return redirect()->to('/auth/login');

}

else if (! $this->ionAuth->isAdmin()) // remove this elseif if you want to enable this for non-admins

{

// redirect them to the home page because they must be an administrator to view this

//show\_error('You must be an administrator to view this page.');

return redirect()->to('/pagenotfound');

}

else

{

$this->data['title'] = lang('Auth.index\_heading');

// set the flash data error message if there is one

$this->data['message'] = $this->validation->getErrors() ? $this->validation->listErrors($this->validationListTemplate) : $this->session->getFlashdata('message');

//list the users

$this->data['users'] = $this->ionAuth->users($group)->result();

foreach ($this->data['users'] as $k => $user)

{

$this->data['users'][$k]->groups = $this->ionAuth->getUsersGroups($user->id)->getResult();

}

$this->data['user'] = $this->ionAuth->user()->row();

$this->data['page'] = $group;

echo view('admin/header', $this->data);

echo view('auth/index');

echo view('admin/footer');

}

}

### **Finances source code**

public function finances()

{

if (! $this->ionAuth->loggedIn())

{

return redirect()->to('/auth/login');

}

else if (! $this->ionAuth->inGroup('admin'))

{

return redirect()->to('/auth');

}

$data['user'] = $this->ionAuth->user()->row();

$data['page'] = 'finances';

$data['transactions'] = $this->admin->get\_all\_transactions();

$data['title'] = "Finances";

echo view('admin/header',$data);

echo view('admin/finances');

echo view('admin/footer');

}

Pay-out Requests

public function payout\_requests()

{

if (! $this->ionAuth->loggedIn())

{

return redirect()->to('/auth/login');

}

else if (! $this->ionAuth->inGroup('admin'))

{

return redirect()->to('/auth');

}

$data['title'] = "Payout Requests";

$data['user'] = $this->ionAuth->user()->row();

$data['page'] = 'payout\_requests';

$data['payouts'] = $this->admin->get\_payouts();

echo view('admin/header',$data);

echo view('admin/payout\_requests');

echo view('admin/footer');

}

### **Edit users source code**

public function edit\_user(int $id)

{

$this->data['title'] = lang('Auth.edit\_user\_heading');

if (! $this->ionAuth->loggedIn() || (! $this->ionAuth->isAdmin() && ! ($this->ionAuth->user()->row()->id == $id)))

{

return redirect()->to('/auth');

}

$user = $this->ionAuth->user($id)->row();

$currentGroups = $this->ionAuth->getUsersGroups($id)->getResult();

if (! empty($\_POST))

{

// validate form input

$this->validation->setRule('first\_name', lang('Auth.edit\_user\_validation\_fname\_label'), 'trim|required');

$this->validation->setRule('last\_name', lang('Auth.edit\_user\_validation\_lname\_label'), 'trim|required');

$this->validation->setRule('phone', lang('Auth.edit\_user\_validation\_phone\_label'), 'trim|required');

$this->validation->setRule('company', lang('Auth.edit\_user\_validation\_company\_label'), 'trim|required');

// do we have a valid request?

if ($id !== $this->request->getPost('id', FILTER\_VALIDATE\_INT))

{

//show\_error(lang('Auth.error\_security'));

throw new \Exception(lang('Auth.error\_security'));

}

// update the password if it was posted

if ($this->request->getPost('password'))

{

$this->validation->setRule('password', lang('Auth.edit\_user\_validation\_password\_label'), 'required|min\_length[' . $this->configIonAuth->minPasswordLength . ']|matches[password\_confirm]');

$this->validation->setRule('password\_confirm', lang('Auth.edit\_user\_validation\_password\_confirm\_label'), 'required');

}

if ($this->request->getPost() && $this->validation->withRequest($this->request)->run())

{

$data = [

'first\_name' => $this->request->getPost('first\_name'),

'last\_name' => $this->request->getPost('last\_name'),

'company' => $this->request->getPost('company'),

'phone' => $this->request->getPost('phone'),

];

// update the password if it was posted

if ($this->request->getPost('password'))

{

$data['password'] = $this->request->getPost('password');

}

// Only allow updating groups if user is admin

if ($this->ionAuth->isAdmin())

{

// Update the groups user belongs to

$groupData = $this->request->getPost('groups');

if (! empty($groupData))

{

$this->ionAuth->removeFromGroup('', $id);

foreach ($groupData as $grp)

{

$this->ionAuth->addToGroup($grp, $id);

}

}

}

// check to see if we are updating the user

if ($this->ionAuth->update($user->id, $data))

{

$this->session->setFlashdata('message', $this->ionAuth->messages());

}

else

{

$this->session->setFlashdata('message', $this->ionAuth->errors($this->validationListTemplate));

}

// redirect them back to the admin page if admin, or to the base url if non admin

return $this->redirectUser();

}

}

// display the edit user form

// set the flash data error message if there is one

$this->data['message'] = $this->validation->getErrors() ? $this->validation->listErrors($this->validationListTemplate) : ($this->ionAuth->errors($this->validationListTemplate) ? $this->ionAuth->errors($this->validationListTemplate) : $this->session->getFlashdata('message'));

// pass the user to the view

$this->data['user'] = $user;

// $this->data['groups'] = $groups;

$this->data['currentGroups'] = $currentGroups;

$this->data['first\_name'] = [

'name' => 'first\_name',

'id' => 'first\_name',

'type' => 'text',

'value' => set\_value('first\_name', $user->first\_name ?: ''),

'class' => 'form-control form-control-lg form-control-solid',

'autocomplete' => 'off'

];

$this->data['last\_name'] = [

'name' => 'last\_name',

'id' => 'last\_name',

'type' => 'text',

'value' => set\_value('last\_name', $user->last\_name ?: ''),

'class' => 'form-control form-control-lg form-control-solid',

'autocomplete' => 'off'

];

$this->data['company'] = [

'name' => 'company',

'id' => 'company',

'type' => 'text',

'value' => set\_value('company', empty($user->company) ? '' : $user->company),

'class' => 'form-control form-control-lg form-control-solid',

'autocomplete' => 'off'

];

$this->data['phone'] = [

'name' => 'phone',

'id' => 'phone',

'type' => 'text',

'value' => set\_value('phone', empty($user->phone) ? '' : $user->phone),

'class' => 'form-control form-control-lg form-control-solid',

'autocomplete' => 'off'

];

$this->data['password'] = [

'name' => 'password',

'id' => 'password',

'type' => 'password',

'class' => 'form-control form-control-lg form-control-solid',

'autocomplete' => 'off'

];

$this->data['password\_confirm'] = [

'name' => 'password\_confirm',

'id' => 'password\_confirm',

'type' => 'password',

'class' => 'form-control form-control-lg form-control-solid',

'autocomplete' => 'off'

];

$this->data['ionAuth'] = $this->ionAuth;

$this->data['user'] = $this->ionAuth->user()->row();

$this->data['page'] = 'create user';

echo view('admin/header', $this->data);

echo view('auth/edit\_user');

echo view('admin/footer');

}

### **Landing Page Sourcecode**

public function index()

{

if (! $this->ionAuth->loggedIn())

{

return redirect()->to('/auth/login');

}

else if (! $this->ionAuth->inGroup('donors'))

{

return redirect()->to('/auth');

}

$data['auth'] = $this->ionAuth;

$data['user'] = $this->ionAuth->user()->row();

echo view('home/header', $data);

echo view('home/index');

echo view('home/footer');

}

### **Charities Source Code**

public function charities()

{

$model = new \App\Models\CharitiesModel(); // model based on the Model class in CodeIgniter this helps with pagination

$data['auth'] = $this->ionAuth;

$data['user'] = $this->ionAuth->user()->row();

$data['charities'] = $model->select('\*')

->where('user\_belongs\_group','3')->paginate(8); // pagination of charities

$data['pager'] = $model->pager;

echo view('home/header',$data);

echo view('home/charities');

echo view('home/footer');

}

### **Contact Page**

public function contact()

{

$data['auth'] = $this->ionAuth;

$data['user'] = $this->ionAuth->user()->row();

echo view('home/header', $data);

echo view('home/contact');

echo view('home/footer');

}

### View Charity

public function charity(int $id = NULL)

{

if($id==NULL)

{

return redirect()->to('/pagenotfound');

}

$data['charity'] = $this->ionAuth->user($id)->row();

$data['auth'] = $this->ionAuth;

$data['user'] = $this->ionAuth->user()->row();

echo view('home/header',$data);

echo view('home/charity');

echo view('home/footer');

}

### **Donation Method**

public function donate(int $id = NULL)

{

if ($id == NULL)

{

return redirect()->to('/pagenotfound');

}

if (! $this->ionAuth->loggedIn())

{

return redirect()->to('/auth/login?redirect='.current\_url());

}

else if (! $this->ionAuth->inGroup('donors'))

{

return redirect()->to('/auth');

}

$charity = $this->ionAuth->user($id)->row();

if ($charity->user\_belongs\_group != 3 && $charity->verified != 2)

{

return redirect()->to('/pagenotfound');

}

$this->data['auth'] = $this->ionAuth->user()->row();

$payment = new \App\Libraries\Rave();

$payment->set\_tx\_ref(date('ymdhis').$this->data['auth']->id);

//$payment->setAmount();

$payment->setCurrency('ZMW');

$payment->setPaymentOptions('card,mobilemoney');

$payment->setRedirectUrl(base\_url('verify\_payment'));

$payment->setCustomer(

array('email' =>$this->data['auth']->email,

'name' =>$this->data['auth']->first\_name." ".$this->data['auth']->last\_name,

'phonenumber'=>$this->data['auth']->phone ));

$payment->setCustomisations(

array("title"=>"Eleos Plan Payment",

"description"=>"",

"logo"=>" "

)

);

$payment->setMeta(

array('user\_id' =>$this->data['auth']->id,

'paid\_to' =>$id

)

);

return redirect()->to($payment->getPaymentLink())->withCookies();

}

### **Donor Profile**

public function profile()

{

if (! $this->ionAuth->loggedIn())

{

return redirect()->to('/auth/login');

}

else if (! $this->ionAuth->inGroup('donors'))

{

return redirect()->to('/auth');

}

$data['auth'] = $this->ionAuth;

$data['user'] = $this->ionAuth->user()->row();

echo view('home/header', $data);

echo view('donor/profile', );

echo view('home/footer');

}

### **Donation History**

public function history()

{

if (! $this->ionAuth->loggedIn())

{

return redirect()->to('/auth/login');

}

else if (! $this->ionAuth->inGroup('donors'))

{

return redirect()->to('/auth');

}

$data['auth'] = $this->ionAuth;

$data['user'] = $this->ionAuth->user()->row();

$data['payments'] = $this->donor->get\_donation\_history($data['user']->id);

echo view('home/header', $data);

echo view('donor/history');

echo view('home/footer');

}

### **Charity Client-Side Source Code**

public function index()

{

if (! $this->ionAuth->loggedIn())

{

return redirect()->to('/auth/login');

}

else if (! $this->ionAuth->inGroup('charity'))

{

return redirect()->to('/auth');

}

$data['user'] = $this->ionAuth->user()->row();

if($data['user']->verified == '0' || $data['user']->verified == '1')

{

return redirect()->to('/charity/verification');

}

$data['auth'] = $this->ionAuth;

echo view('charity/header', $data);

echo view('charity/index');

echo view('charity/footer');

}

### **Request Payment**

public function request\_payment()

{

if (! $this->ionAuth->loggedIn())

{

return redirect()->to('/auth/login');

}

else if (! $this->ionAuth->inGroup('charity'))

{

return redirect()->to('/pagenotfound');

}

$data['user'] = $this->ionAuth->user()->row();

if($data['user']->verified == '0' || $data['user']->verified == '1')

{

return redirect()->to('/charity/verification');

}

// validate form input

$this->validation->setRules([

'amount'=>'required|trim|less\_than\_equal\_to['.$data['user']->account\_balance.']|greater\_than\_equal\_to[15]',

],

[ // Errors

'amount' => [

'required' => 'You must enter an amount before proceeding with your request',

]

]

);

if ($this->request->getPost() && $this->validation->withRequest($this->request)->run())

{

$amount = $this->request->getPost('amount');

if(sizeof($this->charity->get\_pending\_payouts($data['user']->id)) > 0)

{

$this->session->setFlashdata('message', '<div class="alert alert-danger alert-dismissible fade show" role="alert">

### **Edit Charity Profile**

public function profile()

{

if (! $this->ionAuth->loggedIn())

{

return redirect()->to('/auth/login');

}

else if (! $this->ionAuth->inGroup('charity'))

{

return redirect()->to('/pagenotfound');

}

$data['auth'] = $this->ionAuth;

$data['user'] = $this->ionAuth->user()->row();

if($data['user']->verified == '0' || $data['user']->verified == '1')

{

return redirect()->to('/charity/verification');

}

echo view('charity/header', $data);

echo view('charity/profile');

echo view('charity/footer');

}