

Software Requirements Specification

for

Crowdfunding for Medical Aid

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Revision History

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Chapter 1

Introduction

Bangladesh is slowly growing as a medium income country. Our lives have drastically changed in the past thirty years. Internet had brought forth globalization, and globalization had brought forth prosperity. Yet still there is a very long way to go. Universal Healthcare is still a foreign concept to us. All of our lives would be dramatically different if we did not have to worry about our medical bills, and the medical bills of our family members. Diseases, falling ill, these are a part of every single life on this blue planet. What makes us different is that we, as a species can cure most of the deadly diseases, or vaccinate against it. And those that we cannot cure or prevent now, we will do it in the future! But healing is not free. Everything has a price. Not everyone is able to pay that price. In the western world most countries have Universal Healthcare or some sort of medical aid. We are not there yet. John F. Kennedy said in his inauguration speech, “Ask not what your country can do for you – ask what you can do for your country.” We must help ourselves first, we need to be helped first.

Now I have to be cold about this, emotion sells, and emotion sells like hot cake when it is on the internet. We see medical help posts on social media every day and people offer help but most of the time the help comes within the country, by some good Samaritan. But what if people of the first world could directly come to the aid of the rest of the world in need for help?

Enter, “Guardian Angel” our web application. We will directly connect individuals to one another on a personal level. When you help a child or an adult with a new life on a personal level, it will surely mean something to you. You can sleep easy at night, knowing there is at least one life that has been saved by your intervention, Devine or not!

1.1 Purpose

The primary purpose of ‘Guardian Angel’ is to provide medical funding to those who are in dire need of it. A user can post their necessary details, and in turn other users can donate to help. Crowd funding is a very old concept. Our intention is to utilize it optimally.

1.2 Intended Audience

Our main target demographic for donations, is the first world countries. And this donation will mainly be provided to the demographic of third world countries and developing nations. Primarily USA, Canada, UK, Australia, countries in the EU will be our main focus for donations. Initially, Bangladesh will be the target demographic for receiving the donations. Gradually it will expand to include other countries.

1.3 Intended Use

The primary use will be crowdfunding expensive medical treatments. There will be two types of users.

- Donor
- Seeker

Donor: A user will only be able to donate. They will not be able to post for help.

Seeker: A user will only be able to receive donations. They can never donate.

1.4 Product Scope

Our idea is not new or unique in any particular way. We have been collecting donations for medical treatments for as far back we can remember. This was primarily done in public places.

We intend to use this concept but adapt it to its modern counterpart, 'Online Crowd Funding'. The Internet has brought the world closer and exponentially accelerated Globalization. The state of life for all of mankind is not the same. If only those who are well off could help those who are in need, then the world would truly be a better place for all of us.

People from first world countries will be able to help those who are from the third world and developing nations. All of this in the speed of light! That is our scope.

1.5 Risk Definition

The main risk factor in this will be the same, that has always been in any endeavor man has ever taken. Man's ill intent.

There will be scammers, who will try to con unsuspecting users. We expect to see other online transaction hacks as well.

We still believe that with proper maintenance, the efficiency will outweigh the risk.

Chapter 2

Overall Description

The main aim of "Crowd Funding" is to create a secure link between the donors and the helpless family or person. We have a lot of valuable options here that will assist the Seeker in a number of ways. We're also attempting to construct a simple/user-friendly interface for those who are unfamiliar with websites and web materials. This initiative would enhance the quality of life. We've combined a few ideas here.

Like fundraising management, user usability (a donor can see his total contribution and the input of the person he helped), and better user experience (those needing support from others can post their issue with some facts so they can quickly get help from a donor). We are all conscious that life is a tough place. Some people are having a lot of trouble with their medical problems, and as well as other critical issues. They may use this forum to obtain assistance from people who really want to support others. That, we assume, would be extremely beneficial to our users. We are confident in our abilities, despite the fact that we are new to this. We assume that this application would usher in a revolution for Bangladesh's generous and Seeker people.

2.1 User Classes and Characteristics

Three forms of identities would be able to manipulate the system:

- Project Owner
- Admin Panel
- Project Communication Manager
- Developers

The project is owned by: The project's owner has complete access to all of the materials. If the owner desires, he may use developers to make some changes to the project. He also has the option of selling the project to others. In other words, He has the authority to make any project-related decision.

Admin Panel: In a project, there may be one or more administrators. It is determined by the owner. The project's operation is controlled by the admin, who has access to the central system. If the system administrator so desires, he may make improvements to the system's central database. If the owner requests it, he may update the project. He has the authority to oversee all project problems and make improvements if anything needs to be upgraded.

He's the Communication Manager, and he's in charge of what's going on in the system. He, for example, keeps track of the operation, the project's viewpoints, how it functions, and how users and doctors communicate. In a few words. He is only responsible for tracking the project's activities and informing the owner/administrator of any monitoring changes.

Developers: Developers simply work to develop the product, as if they have the ability to modify the project's theme and make design improvements in a specific part of the framework. Add new functionality to it, and so forth. Developers, on the other hand, have drawbacks, such as not having complete access to the device as an administrator or owner. The only thing one can do is to improve the system according to the wishes of the owner and administrator.

Our primary users would be these characters, despite the fact that it is an online-based system:

- i. Donor
- ii. Helpless Person.

Donor: These users are those people who are very much interested or searching for a reliable source to help other helpless people. They can search for the aid over here and give those people the aid instantly. They are the main part of this project and they have more flexibility to do their work by this project.

Helpless Person: These users are those people who are searching for aid and seek help from others. These users can post their problem with potential prove in this platform and find their help for health, education and other stuffs.

2.2 User Needs

The following are user criteria based on our users:

Donor: This segment was created with the needs of the donor in mind. Donors can use video calls to connect with clients (e.g., the Zoom / MEET application). Donors will use this tool to check on the clients' personal problems. It will also assist them in handling their clients. They can also access personal information about customers, such as names and addresses, and contact them directly if they want.

Helpless Person: This segment was created with the needs of the help seeker person in mind. They can express their problem with how much prove he or she wants to give to understanding the urgency of help. They can give their greetings and feedback after receiving the help who donate.

2.3 Operating Environment

The main motive of our Medical Aid Crowdfunding Project is to assist those in need of medical assistance, where the contributor may help by raising money or by providing donations to any cause of choice. With this in mind, we have made our web application site available to all users free of cost. The Operating Environment for our web application, Guardian Angel includes:

- Operating System: Windows (all versions) and Linux operating systems.
- Framework: Django
- Design (frontend) : HTML and CSS
- Programming Language (backend): Python
- Database Configuration: MySQL
- Payment Gateway

2.4 Constraints

There are a few inevitable limitations that have been taken into consideration when creating the crowdfunding medical aid web application and amongst them some of which includes,

- Use of English language only (US and UK English), no support for multiple languages.
- Availability of internet connection is required. As it is a web-based app it cannot be used offline because of the continuous input of data of the users. Any form of internet problems may disable the online payment methods.
- Less chances of the maintenance of storing the backup information.
- Chances of fraudulent behavior from the users asking for donations pretending to be helpless or incapable.
- Possibilities of Cyberattacks by Cybercriminals.
- Possible technical problems endured during online payments.
- Security and Identity Theft Concerns.

2.5 Assumptions

- Use of adequate English communication skills of the user, since multiple languages support, is not available.
- User using a relevant operating system which supports suitable internet connection.
- The user using any sort of devices such as a smartphone, desktop or a laptop to connect with our Crowdfunding Medical Aid web application.
- The ability of the Donor and Helpless Person to view their history of donations.
- Due to the fact that it is a virtual online donation platform, there is a chance that people will be able to donate more.

Chapter 3

Requirements

Specific Requirements

There are mainly two types of requirements.

- Functional Requirements
- Non-Functional Requirements

3.1 Functional Requirements

The web application has two types of users (consumer based). The normal users: **The Donor**, who want to donate money to help the helpless people and **the seeker**, who requires money for several reasons. Lastly the **admin users** or the super keys.

System features:

Sign-up:

As a user,
I want to register my identity
So that I can use all the features of this web application.

Confirmation/ Acceptance:

- User (Donor / Seeker) has to input of his/ her identity (user id, full name, email, password, phone no, address, age, gender, etc.).
- User (Donor) can set their occupation, financial status.

- User (Donor) can link their bank account to their account.
- User (Seeker) can set his/her occupation, financial status.
- User (Both) have to input one unique user id and password.
- If the registration information doesn't match all the criteria, the user won't be able to register.
- After the registration, the user will get a confirmation email to the provided email.
- User can also be signed up through a google/ Facebook account, but have to verify after registration.
- After successful registration, the user can avail themselves of the designated features of the web application.

Login:

As a user,

I want to login

So that I can use the services of the application.

Confirmation/ Acceptance:

- In the sign-up process, a user has to give one unique user id and a strong password.
- User (both) have to input the correct user id and password to login.
- If the user inputs the wrong id/pass, they won't be able to login.
- User can click forget password button when they forgot it.
- User can reset password through email or phone number.

User Profile:

As a user (both),

I want to have my user profile

So that I can input my personal data and edit it manually.

Confirmation/Acceptance:

- User can add all the basic information to their profile.
- User can link their bank account to their profile.
- Users (Donor) can look after their donated amount.
- Users (Seeker) can add several issues/problems to their profile.

- Users can edit their profile manually.
- Users can upload his/her profile pictures.

Post and share:

As a user,

I want to post blog of different issues

So that I can be helped.

Confirmation/Acceptance:

- User (Recipient) can make his post visible to everyone.
- User can upload photo or videos to their Aid request post.
- User can upload various medical documents to the Aid request post.
- User can share the post on various social media.

Aid Request:

As a user (donor),

I want to view the people who request for help

So that can I get helpless people more quickly.

Confirmation/Acceptance

- The user should find all the requested help to Aid request button.
- User can help people by clicking the request window.
- User can find all the helpless people together.

Search bar:

As a user (both),

I want to search people by their ID or name

So that I can track them more quickly.

Confirmation/Acceptance

- User can search any people through the search bar.
- The people who are being searched has to have a user profile.

- User has to search them by their id or name.
- User can write the name of people and the search bar will suggest one.
- The function is not case sensitive.
- The search bar also suggests a previous search result.

Donate:

As a user (Donor),
I want to donate to a cause
So that I can help.

Confirmation/Acceptance

- User can donate by clicking on the donate button.
- User can donate through a bank account or credit card.
- User can also donate through Bkash and another online platform.
- User has to be signed in to their specific account to donate.
- User can link their bank account for bank transaction.
- All the requirement must be followed by the user, otherwise, the payment method would be cancelled.

Donation Insights:

As a user (Donor),
I want to view donation insights of every post
So that I could donate further amount.

Confirmation/Acceptance

- User can see the donation insights of every post.
- User can make further donation.

Admin user:

As an Admin user,
I want to have full control over the web application
So that it will be helpful to manage for the authorized admin users.

Confirmation/Acceptance

- An authorized login option full name, ID and password.
- An email Notification over every login.
- A stop request option where the admin has to specify the number of requests, after that the request will be stopped until the admin finish previewing every request.
- Specific id generates for every user.
- Filter option for every post.
- Ban user option for violation rules.

3.2 Non-Functional Requirements

3.2.1 Performance Requirements

- The system has to be able to deal with a large number of requests and queries swiftly without getting the system lagged.
- Response time for search, getting any queries and also submitting information will be quick and swift. Responses must not take more than a few seconds.
- The system will be built and designed with keeping easy accessibility in focus. It has to be user friendly. Fewer bugs will necessarily improve much smooth use.
- The system shall be available to users 24 hours a day, 7 days a week. For maintenance not more than one hour a week should be needed.

3.2.2 Safety Requirements

- No harmful content will be permitted which can offend users in any way.
- User's personal information will be safely kept for extreme security measures.
- Transaction safety of users will be ensured.
- The website will use Renewable energy powered servers which ensures environmental safety.

3.2.3 Security Requirements

- SSL Certificates encrypts sensitive information to ensure that any data is unreadable to everyone other than the destination server.
- Users will be able to access only their own personal information and not of other users.
- They cannot edit or modify anything except their personal and some other information. As we have different types of users so every user has access constraints. Donates will be handled through a secure server to ensure the protection of the user's credit card and personal information.

3.2.4 Error Handling

Any type of errors should be automatically detected and fixing must be immediate. However, if few unexpected errors occur an error message will be provided to keep the user interested and engaged with the website rather than leaving them. Also using prompts to take them back to other areas of the site will be included. Personalized error messages will be provided to make them part of the website to keep the users logged in