# MedicAngel

## Title:

System Requirement Specification for online crowdfunding system related to unplanned medical expenses.

## Objective :

The main objective of a online crowdfunding web application project is to create a platform that enables individuals to raise funds for their medical expenses, such as medical procedures or treatments that may not be covered by insurance and to help them to get the necessary treatment they need. The platform would likely include

* Facilitate the process of fundraising for medical expenses by providing an easy-to-use platform for creating and sharing campaigns.
* Connect people in need of medical treatment with potential donors and supporters.
* Provide a secure payment gateway for accepting donations.
* Streamline the process of tracking and managing donations and campaign progress.
* Provide transparency and accountability for the use of funds.

The ultimate goal of the project is to make healthcare more accessible and affordable for people in need and to make it easier for them to get the medical treatment they require.

## Scope:

A online crowdfunding system can include raising funds for a variety of medical expenses such as medical treatments, surgeries, and equipment not covered by insurance or doesn’t have insurance. Additionally, a online crowdfunding system can provide a platform for individuals to share their medical stories and connect with others who may have similar conditions or experiences. Overall, the scope of a online crowdfunding system is to provide a way for individuals and communities to come together and support those in need of medical care.

## Definitions:

OCS: Online Crowdfunding System

QA: Quality Assurance

MIS: Management Information System

BI: Business Intelligence

KPI: Key Perfomornace Indicator

AML: Anti Money Laundring

SSL: Secure Socket Layer

PDA : Portable Device Application System

Dashboard: Personalized information presented using BI techniques such grid, scorecard, graph, KPI

## Functional Requirements:

Functional requirements for a online crowdfunding system may include:

* **User registration and authentication**: Patients and donors should be able to register and login to the system securely.
* **Campaign creation and management:** Patients or their representatives should be able to create campaigns to raise funds for medical treatment. The system should also allow for editing and updating of campaign details.
* **Administrative capabilities**: The platform should have an admin interface to manage and moderate campaigns and user profiles, as well as handle disputes or fraudulent activity.
* **Campaign discovery:** Users should be able to search and discover campaigns on the platform.
* **Donations:** Users should be able to make donations to campaigns using a variety of payment methods.
* **Campaign promotion:** The system should include tools for promoting campaigns on social media and other platforms.
* **Campaign tracking :** The system should provide real-time updates on the progress of campaigns, including the amount raised and the number of donors.
* **Donor management**: Platform should be able to manage donors, track their donations, and provide receipts for tax purposes.
* **Reporting and analytics:** Platform should provide reporting and analytics feature to track the performance of campaigns, donors, and the platform as a whole.
* **Efficient search filter and sorting options:** The system should have an efficient search filter and sorting options for the users to find the desired campaigns easily.
* **Responsive design:** The system should be accessible via mobile and desktop devices.

## NonFunctional Requirement:

### Security:

Security is a crucial aspect of any online crowdfunding system. Some of the key security considerations for online crowdfunding systems include.

* Data security: Personal and medical information of donors and patients should be kept secure and protected from unauthorized access, hacking, and data breaches. This includes encrypting sensitive information, regular backups, and implementing strict access controls.
* Payment security: The system should have secure payment methods in place, to ensure that donations and payments are processed safely and securely.
* Compliance: The system should comply with all relevant laws and regulations in India, such as the RBI's guidelines for crowdfunding platforms, to protect the privacy and security of personal and medical information.
* Fraud detection: The system should have mechanisms in place to detect and prevent fraud, such as identity verification and anti-money laundering (AML) checks.
* Access control: Only authorized personnel should have access to sensitive information and the ability to manage the system.

System will provide access to the content , operations using Role based security (Authorization) (Permissions based on Role) Using SSL in all transactions which will be performed stakeholder. It would protect confidential information shared by system to stake holder of Shared by stakeholder to system. System will automatically log of all stakeholder after some time due to inactiveness. System will block operations for inactive stakeholder and would redirect for authentication. System will internally maintain secure communiction channel between Servers (Web Servers, App Servers, databse Server) Sensitive data will be always encrypted across communcation. User proper firewall to protect servers from out side fishing, velnerable attacks.

By implementing these security measures, a online crowdfunding system ensure the safety and security of personal and medical information, protect against fraud and unauthorized access, and ensure compliance with relevant laws and regulations.

### Reliability:

The system will backup data on regular basis and recover in short time duration to keep system operational Continous updates are maintained , continuous Adminstration is done to keep system operational. During peak hours system will maintain same user experience by managing load balancing.

### Availability:

Uptime: 24\* 7 Available 99.999%

### Maintainability:

A Commercial database software will be used to maintain System data Persistence. A readymade Web Server will be installed to host online shopping portal (Web Site) to management server capabilities. IT operations team will easily monitor and configure System using Adminstrative tools provided by Servers. Separate enviornment will be maintained for system for isolation in production, testing, and development.

### Portablility:

PDA: Portable Device Application System will provide portable User Interface ( HTML, CSS, JS) through users will be able to access online shopping portal. System can be deployed to single server, multi server, to any OS, Cloud (Azure or AWS or GCP)

### Accessibility:

Users can make a online crowdfunding system more accessible by following a few steps:

Providing accurate and detailed information: Users should provide accurate and detailed information about their medical condition, treatment plan, and funding needs when creating a campaign. This information will help donors understand the situation and make informed decisions about whether to donate.

Making the campaign visually appealing: Users can make their campaign more visually appealing by including images, videos, and infographics that explain their situation and funding needs.

Communicating regularly: Users should communicate regularly with their donors by providing updates on their medical condition, treatment progress, and funding needs. This will help to build trust and keep donors engaged.

Making the campaign shareable: Users can make their campaign more accessible by sharing it on social media and other platforms, and encouraging friends, family, and community members to share it as well.

Providing alternative communication methods: Users should provide alternative communication methods like email, phone, or in-person meeting for those who are unable to access the system through a website or mobile app.

Providing accessibility options: Users can make their campaign more accessible by providing options such as larger font size, contrast options, and audio descriptions for users with visual impairments.

By following these steps, users can make their campaign more accessible and increase their chances of reaching a larger audience and raising the funds they need for their medical expenses.

### Durability:

The system should have a robust backup and disaster recovery plan in place to protect against data loss and ensure continuity of service in case of unexpected events. Also it should have robust security measures in place to protect against cyberattacks and data breaches, such as regular security updates and penetration testing. System should continuously tested and monitored to identify and resolve any issues that arise, and make necessary changes to improve performance and security.

By implementing these measures, a online crowdfunding system can be made more durable and able to withstand changes over time, which will help to ensure its continued success and effectiveness.

### Flexibility:

### The system should be able to adapt to changing user needs, such as new payment methods or regulatory requirements, by being able to easily update and modify the system.

### Efficiency:

Maximum number of users can view campaging or donate with same response time. System will be able to manage all transactions with isolation.

### Modularity:

Online crowdfunding system refers to the ability to break the system down into smaller, independent components, or modules, that can be easily modified, replaced, or updated without affecting the rest of the system. Here are a few ways in which a online crowdfunding system can be made more modular:

Loose coupling: Each module of the system should be designed to be independent of the others and communicate with them through well-defined interfaces, allowing for easy replacement or update of individual modules.

High cohesion: Each module should be designed to perform a specific set of related functions, and should not be overly complex, making it easier to understand, test and maintain.

### Scalability:

System will be able to provide consistent user experience to stakeholder as well as vistors irrespective of load.

### Safety:

Online crowdfunding system will be secure from malicious attack, fishing. online crowdfunding system functionalilites are protected from outside with proper firewall configuration. online crowdfunding system will be always kept updated with latest anit virus software. Bussiness Data will be backed up periodically to ensure safety of data using incremental back up strategy. Role based security will be applied for Application data and operations accessibility.