



Blockchain based Transparent and Genuine Charity Application

PREPARED FOR

System Analysis and Design
Shiraz University

PREPARED BY

Fereshteh Barardaran
Ayda Zamanian
Helia Shariati

January 25, 2023



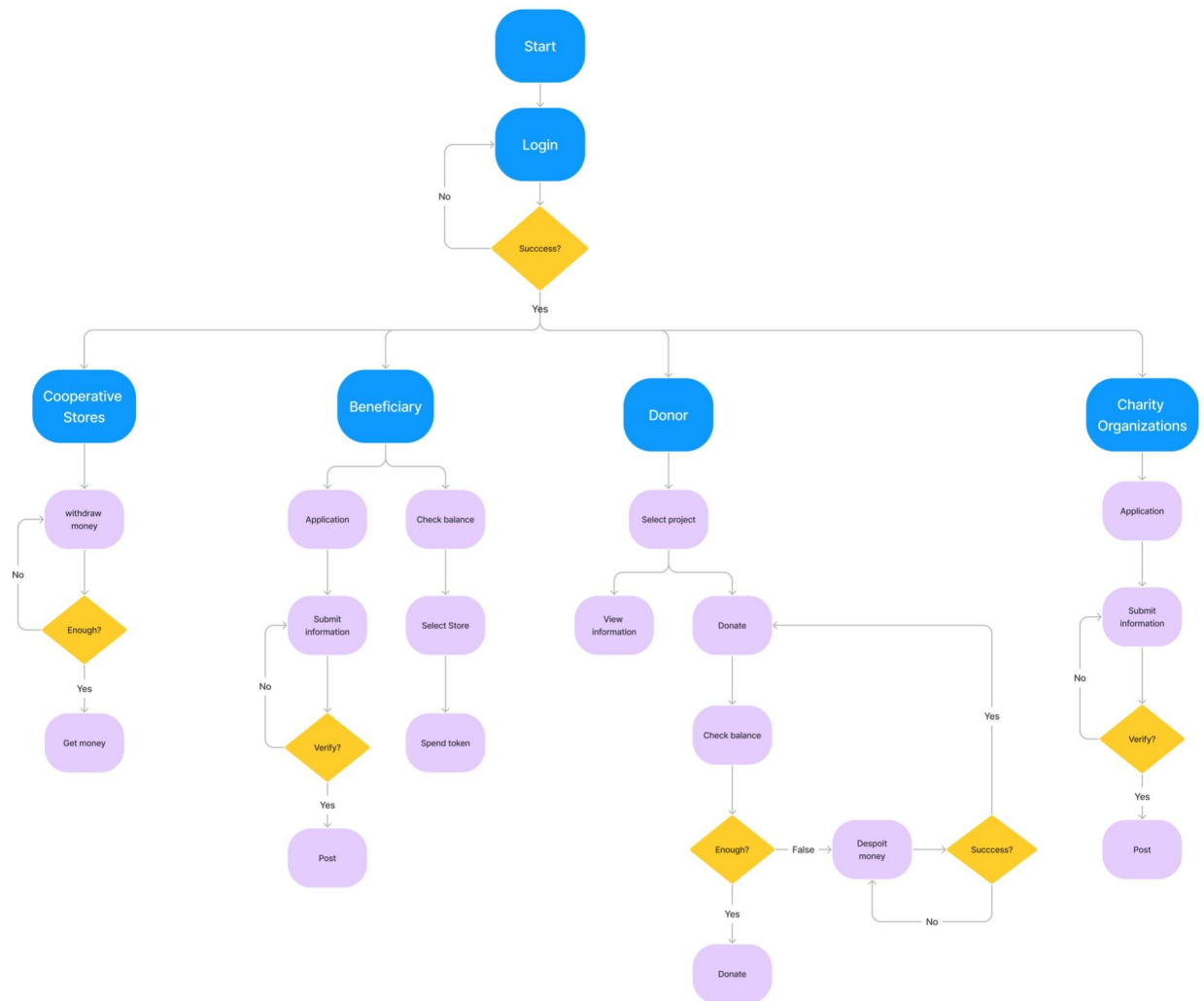
EXECUTIVE SUMMARY

Donors have every reason to fear that charitable funds will not reach people who really need them. According to the same HSE survey in 2017, 68% of citizens are willing to donate more if there is evidence of where and what they are going. By law, foundations are required to take care of public records (in particular, to publish reports on their websites), and now all reports are prepared by employees of a foundation manually. The problem of mistrust of donors and overloading of funds are often solved by organizing an external database, records during which are recorded within the blockchain. Therefore, it's important to develop a social platform supporting blockchain technology which will help non-profit organizations, foundations, volunteers and social entrepreneurs in their work and make donation processes transparent and understandable for all parties. Blockchain will allow all users of the platform to ascertain their account and an outline of every payment of the organization it supports. Also, the technology of distributed ledger will guarantee a donor that the quantity will reach the goal, and with none intermediaries consistent with Rosstat research, in 2017 there have been more than 9600 charitable foundations and about 1700 charitable organizations.

1. Requirements

- The organization can get donations from the platform to help other people and apply money to the cooperative shops for token exchanging.
- A Decentralized System That provides security and prevents loss of Transactional Data
- The User or beneficiary can seek help and create charity projects through the platform. Donors learn about charity projects on the platform, and then donate to beneficiaries or the charity organizations.
- Beneficiaries upload their information to the platform for help; they can get and spend tokens accordingly.
- Funds are transferred directly to beneficiaries. No third Party is involved.
- Low Transaction charges as no governmental charges are included.
- A beneficiary initiates a charity project through a smart contract, and then the project will be deployed on the blockchain.
- Donors view the charity project in browser and select an appropriate project to make donation.
- The funds will be transferred to the Dapp administrator account. When the beneficiary needs funds, the capital expenditure request is initiated with the smart contract. If most people who participate in the project agree to the request by voting, the donation funds of the project will be transferred from the Dapp administrator account to the beneficiary account.

2. Prototype Overview



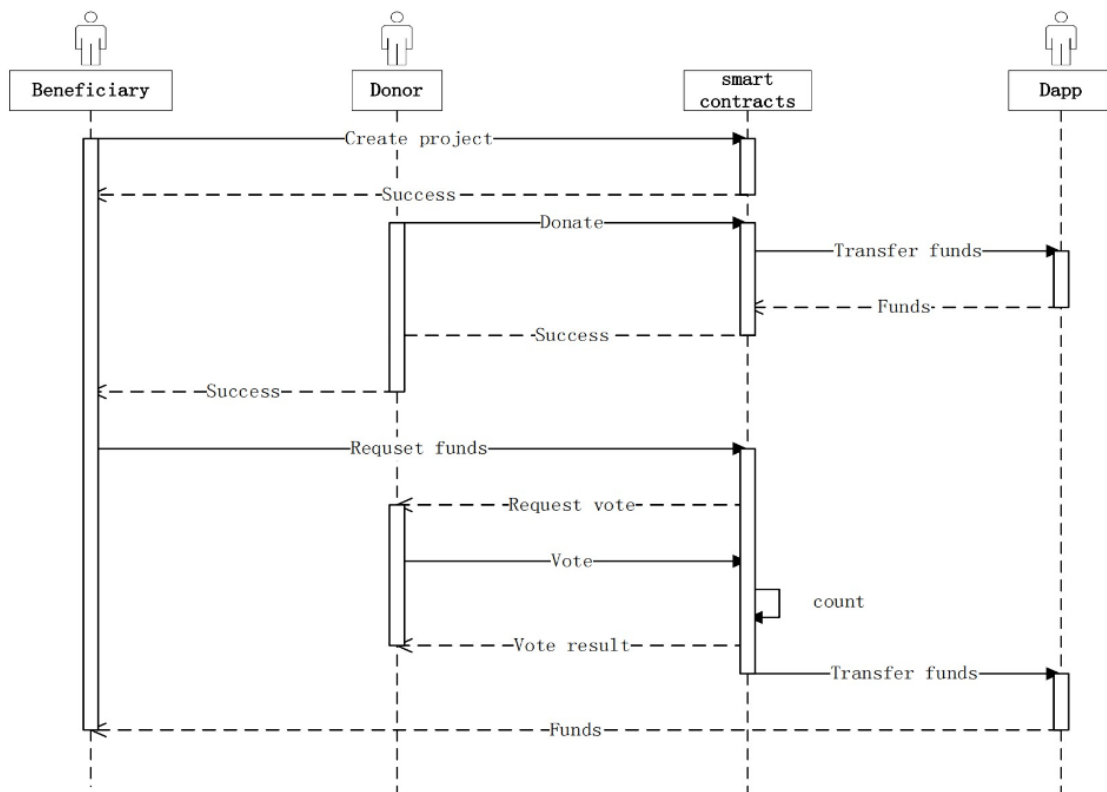
3. Project Management

Version Control Since we were a group of 3, we used git as a version control, and github as a git provider to collaborate on this project.

License For our project, we used MIT as our license, as the product owner recommended it.

Trello Since we were a group of 3, we needed very accurate planning for each sprint of our project to separate every one's task separately so we decided to use trello as our planning board.

3. Beneficiary, Donor, Dapp Diagram:



4. Implementation

Technologies:

- **Solidity:** implemented the smart contract charity.sol
- **Web3:** used in connecting the frontend and backend and also testing the .test.js files
- **Ganache-cli:** used for testing the .test.js files and testing the smart contract using remix.
- **Hardhat:** used with remix to test the charity.sol and debug. Also used to test the test.js files on sprint 1 and 2
- **HTML:** used for front end implementation
- **CSS:** used for style of front end implementation
- **JS:** used for testing and integrate of front and back end
- **RSK testnet:** used for deploying charity.sol

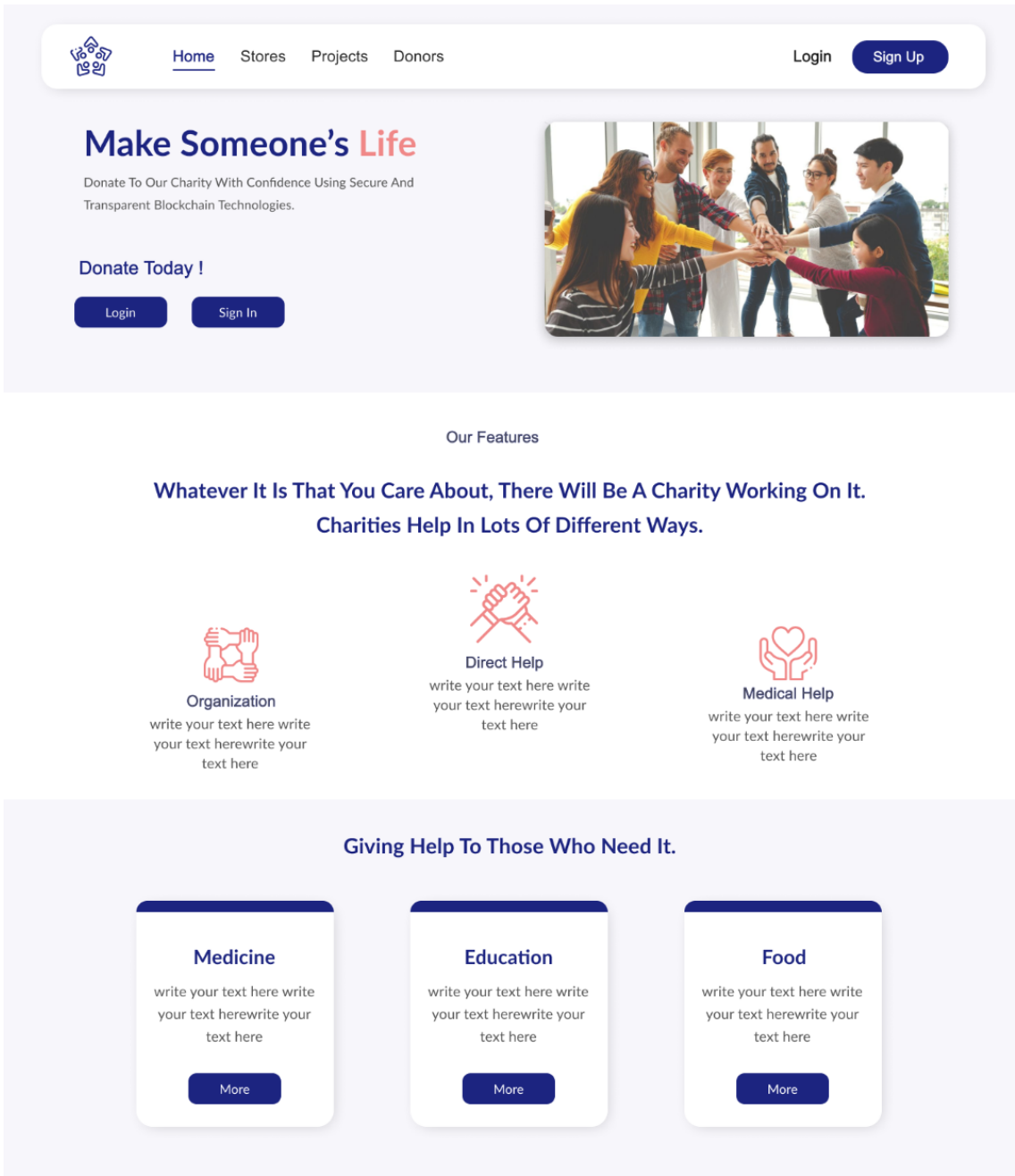
5. Milestones and Reporting

Total estimation of man hours: 300

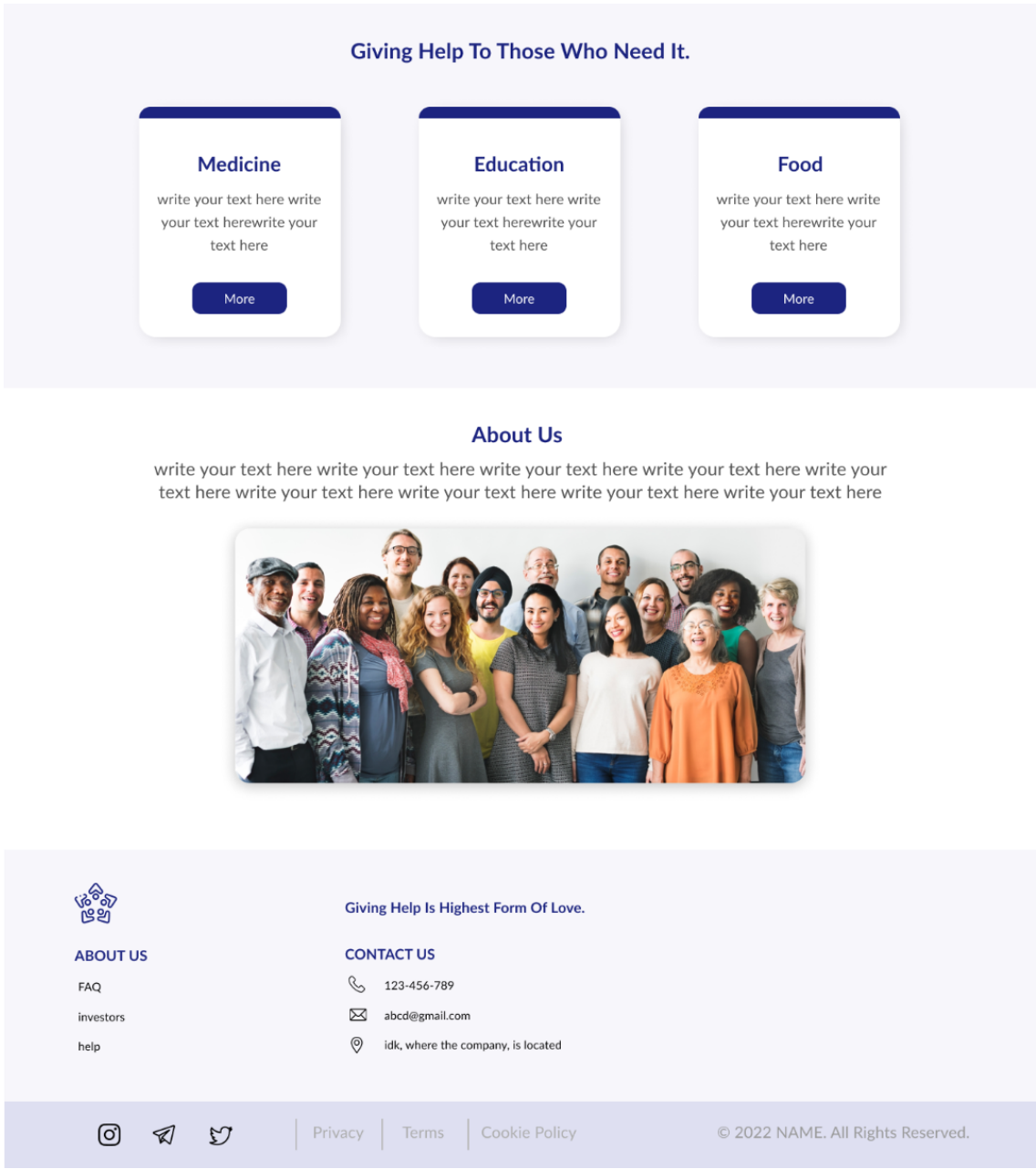
Milestone	Tasks	Reporting	Hrs	Date
1 - Analysis				
1.1	Analysis and design stage, gather data and create system mockup	Done	5	22/11/22
1.2	Architecture design	Done	5	25/11/22
1.3	Design work plan (distribution of tasks to development teams)	Client meeting to review work plan	6	26/11/22
2 - Development				
2.1	Learn about Solidity	Done and practiced	20	27/11/22
2.2	Create contracts (back)	Done and tested	30	28/11/22
2.3	Refactoring	Done	30	28/12/22
2.4	Create Wireframe	Client meeting to review GU	10	28/11/22
2.5	Design (ui - ux)	Done	20	24/12/22
2.6	Create html and css files (front)	Done and completed	20	26/12/22
2.7	Integration of front and back end	Done and connected	20	24/01/23
3 - Testing				
3.1	Unit testing (Closed)	Passed	10	20/01/23
3.2	System testing (Closed)	Passed	15	24/01/23
3.3	User testing (volunteer employees)	Client meeting	5	25/01/23
3.4	Finalize documentation	Done	5	26/01/23
4 - Deployment				
4.1	Deployment on Testnet (RSK testnet)	Done and tested	10	0/01/23
4.2	Deployment to remix	Done and tested	30	0/01/23

6. Figma Design

HomePage:



HomePage:



See more pages at:

<https://www.figma.com/file/27XrhP8F69FaRJPPB03UQ2/Genuine-Charity-App?node-id=0%3A1&t=FBqgi8S3OmHNtqWC-1>

7. Similar Products

- [1] <https://www.globalgiving.org/>
- [2] <https://thehelmfoundation.com/>
- [3] <https://www.damienfoundation.in/>
- [4] <https://www3.intralinks.com/>
- [5] <https://hivebrite.com/>

8. Useful link

<https://iopscience.iop.org/article/10.1088/1757-899X/768/7/072020/pdf>

9. Contact us

You can find our project at [github](#) or see final production [here](#)

We are willing to know your viewpoints and consider your ideas or suggestions. You can contact us by:

heliyash4380@gmail.com

bara.frsht@gmail.com

ayda.zaman1058@gmail.com