Project By : -

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Crowdfunding Platform Using a Smart Contract

1) Background/ Problem Statement

Crowdfunding is an online money-raising strategy that began as a way for the public to donate small amounts of money to help creative people finance their projects. Through crowdfunding, individuals are able to invest in entrepreneurial start-ups using an intermediary agency like a broker or dealer.

The problem with the current sites is that they don't provide a donor guarantee policy and they do not have control over the money they donated. Our Trusted Crowd-Funding Platform is a solution to these issues of the previous system. It uses smart contract technology to develop a trusted Crowd-Funding platform.

Through this, it will provide a safe, secure and transparent way for crowdfunding. The blockchain will record all the transactions and store them as a block. Blockchain provides transparency, trust and security to this system.

2) Working of the Project

Smart contracts in crowdfunding aim to solve three major problems – ease up KYC/AML verification, eliminate dependency on third parties such as banks due and speed up pay-in and pay-out transactions in the crowdfunding offerings.

In crowdfunding, a smart contract is a self-executing agreement between investor and fundraiser, platform and user, or between other parties depending on which process needs to be automated and put into the blockchain ecosystem.

As a part of the bigger concept such as blockchain integration in crowdfunding, smart contracts are one of the ways that can enhance the platform's technological capabilities and attract investments and new users.

In cirrus's core wallet, the admin creates an account for each user and updates the wallet information in their profile and the transaction is done using the Cirrus API. In this project, the front-end involves Html, CSS, and JavaScript . The IDE used is Visual Studio and the database is MSSQL.

3) Advantages

- It is easy to maintain.
- It is user-friendly.
- The system helps the user to view transactions by investors with a status of whether the transaction is manipulated or not.
- Users can add project details easily and get approved by the admin.

4) System Description

The system comprises 2 major modules with their sub-modules as follows:

❖ **ADMIN:**

- **Login:** The admin can log in the system using a username and password.
- **Users**: User's accounts will have to approve and updated with wallet & Cirrus information.
- **Projects**
    - **Pending**
        - **List of Projects:** They can also view all the preview projects.
        - **Project/Company Details:** Details of all the pending projects and companies can be viewed by the admin.
        - **Approve/Reject:** Admin can approve or reject the project.
    - **Approved**
        - **View List of Projects:** The list of all the previously approved projects can be viewed by the admin.
        - **Filter by Domain/Category:** Filter by domain or category can be applied to sort the approval list.
        - **Project/Company details:** Details of all the approved projects and companies can be viewed by the admin.
        - **View Transaction:** The admin can view transactions by investors from this platform (with a status of whether the transaction is manipulated.

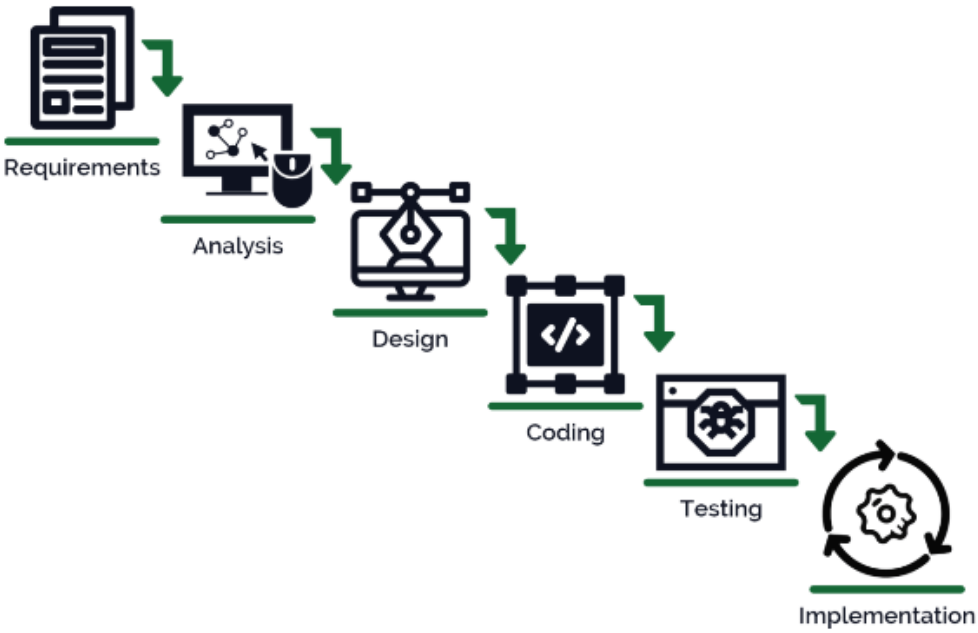
    - **Rejected**
        - **List of Projects:** The admin can view all the rejected projects.
        - **Project/Company Details:** They can also view all the rejected projects and companies.
        - **Approve:** The admin can approve projects.
- **Transactions**
    - Admin can view a list of projects which are accepted & whether they had tampered with the crowdfunding.
- **View Users**
    - The admin can view the lists and details of the user's register.

❖ **USER:**

- **Register:** The user will need to register their account and get approved by the admin.
- **Login:** Only after the admin approves the user's account, they can log in to the system.
- **Profile:** The user can update their details in the profile.
- **Change Password:** They can also change their password to the new one.
- **Invest**
    - The user can view a list of projects they want.
    - Filter can be applied to sort by domain or category.
    - The user can view the project and the company details.
    - They can view transactions by investors from this platform, with a status of whether the transaction is manipulated.
    - The user can invest their money.
    - Even if a single transaction is found manipulated the system will not allow investing.
    - The transaction is done by the smart contract.
- **My Projects**
    - **Manage Projects:** The user can view, add, update and delete projects.
    - **Admin Approval:** The user will need the approval of the admin for the project to go public.
    - **List of Projects:** The list of all the projects can be viewed.
    - **Project/Company Details:** The user can view the project and company's details.
    - **Investors & transactions:** The user can view investors and transaction status and whether a transaction was manipulated by any source.

5) Project Life Cycle

The waterfall model is a classical model used in the system development life cycle to create a system with a linear and sequential approach. It is termed a waterfall because the model develops systematically from one phase to another in a downward fashion. The waterfall approach does not define the process to go back to the previous phase to handle changes in requirements. The waterfall approach is the earliest approach that was used for software development.



6) System Requirements

I. Hardware Requirement

i. Laptop or PC

- Windows 7 or higher
- I3 processor system or higher
- 4 GB RAM or higher
- 100 GB ROM or higher

II. Software Requirement

ii. Laptop or PC

- Visual Studio
- SQL Server Management Studio's latest

7) Limitation/Disadvantages

- The user must add all the details regarding projects when getting approved, otherwise, it will get rejected.

8) Application – This application uses smart contract technology to develop a trusted crowd-funding platform.