

# Decentralized Crowdfunding Application

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## Description

We proposed to develop a decentralized crowdfunding application, which can help people who have great ideas to get their funding, and people who want to contribute to a meaningful project. This DApp offers two approaches to collect funding. One is the standard way, which is donation. Another method is people pay some money to participate in a lottery, and the majority of the funding will be used to support the project. Project creators can decide which approach they want to use to collect money. Here is the link to our repository

<https://github.com/Haotian-Yang/Decentralized-Funding>

## Main Features

- Transparent standard crowdfunding for project owners and investors
- Contributor-first project listing
- Lottery-based crowdfunding to attract more funders and raise more funds

## Incentive Designs

To encourage potential investors/funders to contribute to the crowdfunding projects in our DApp, we design the following incentives:

- Project Listing Priority: Contributors will have a higher priority in project listing than non-contributors when creating crowdfunding projects. The more they contribute, the more exposure their crowdfunding projects will gain.
- Lottery: Project owners can opt for a lottery project where a portion of the funds are set aside as the prize pool for the lottery to attract more funders and funds. All funders will have a chance to win the prize and the more they contribute, the more chance they will get.

## Basic Functionalities

### Project Owners

- Choose from standard crowdfunding project or lottery-based crowdfunding project
- Create a crowdfunding project with details: beneficiary, project title, description and image, funding goal, project duration
- Browse own projects
- Extend the duration of the crowdfunding project if funds raised to date are lower than expected

- Cancel the crowdfunding project if funds are no longer needed
- Complete the crowdfunding project and have the beneficiary receives raised funds

## Investors

- Browse details of all active projects and past projects
- Invest in standard crowdfunding projects with all funds going to the projects
- Invest in lottery-based crowdfunding projects with a chance to win back a larger prize

## APIs for Front End

- Create a project  
 function createProject(address receiver, string calldata title, string calldata desc, string calldata imgUrl, uint256 goalAmount, uint256 duration) external;  
 event NewProject(address indexed owner, address indexed receiver, string title, string description, string img\_url, uint goalAmount, uint duration);
- View projects  
 function getAllProjects () external view returns (Project[] memory);
- View project details  
 function getCurrentState() public;  
 event stateInfo(address indexed, address indexed, string, string, string, uint256, uint256, uint256, uint, uint, address[]);
- Contribute  
 function contribute() public payable returns(bool);  
 event fundingRecevied(address indexed, uint256, uint256);
- Cancel project  
 function cancelProject() public returns(bool);  
 event projectCanceled(address indexed, address indexed, uint256);

## Advanced Functionalities (if time permits)

- Project creation fees - a small fee to prevent abuse and can also be used to compensate transaction fees for early investors
- Reward-based crowdfunding projects - a way for project owners to say thank you to their funders
- More types of lottery games for lottery-based crowdfunding projects - more ways to play!

# Wireframes

HomeAboutFeaturesPricingContact us

Create your project now

Title

Description...

Goal amountDeadline

☐ Standard☒ Lottery

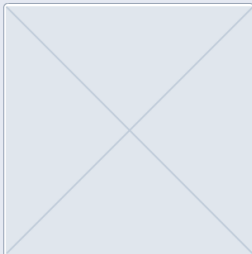
Create

HomeAboutFeaturesPricingContact us

The small money makes a big difference

Find a project in a few click

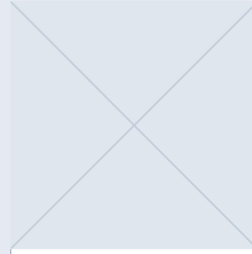
Search project



**Covid Relief Fund** 🙏  
3.12 ETH (\$8568.77)



**Help Stray Cats** 🙏  
0 ETH (target 1 ETH)



**Forest Conservation Fund** 🌳  
2.5 ETH (\$6866.00)



## Help Stray Cats



0 ETH (target 1 ETH)



Transfer



## Forest Conservation Fund



2.5 ETH (\$6866.00)

Transfer

Note: you need to pay at least 0.05 ETH to participate



## My projects



**Covid Relief Fund**

3.12 ETH (\$8568.77)

Cancel Project