BlockCrafters (Group 4)

Alan Song-Hong Lee, Boru Zhu, Jiapei Yu, Sara Zhang, Yixin Zhang

Introduction

- Traditional funding models are high entry barriers, opaque processes, and significant intermediary costs prevent small investors from participating.
- Our project is driven by the motivation to democratize investment, making fundraising more transparent, efficient, and accessible.
- Leveraging blockchain technology, we envision a platform where every transaction is verifiable, and all participants have power in project governance.

Foundations & Tokenomics

Market Gap

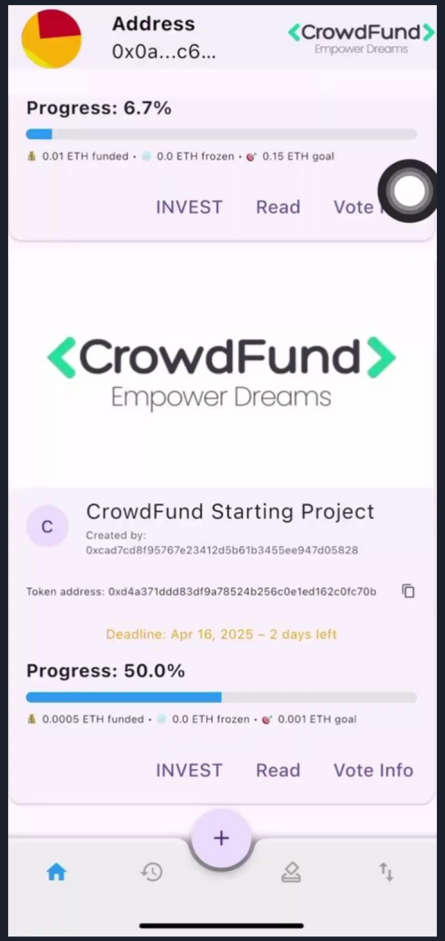
- One major gap is the high entry barrier.
- The lack of transparency and high intermediary costs in traditional fundraising.
- Does not provide equity or long-term governance rights.

Market fit

- Low entry barrier for both investors and startups.
- Leveraging blockchain provides a more transparent and accessible environment.
- Creates unique project tokens to provides proof of investments and utilizes these tokens for project governance.

Adoption Strategy

- Ease of use
  - Intuitive design for startups and retail investors
  - Cross-platform enables access on mobile and web
- Partnering with early-stage startups
  - Waived platform fees for launch-phase startup projects
  - Real campaigns validate infrastructure



Adoption Strategy

- Partnerships with incubators and influencers
- Incentivizing retail investors
  - Token-based governance rights
  - Early supporter recognition

Tokenomics

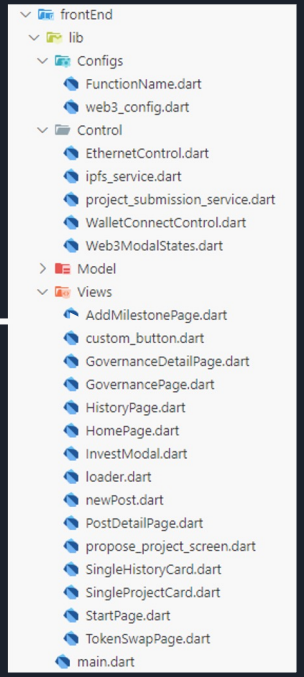
- Project-specific tokens represent both ownership and governance rights for startup projects.
  - Tokens are minted upon actual investment
  - On-chain voting weight is based on the token balance of an investor.
- Market buybacks allow investors to reclaim voting power by compensating token holders at current market prices.

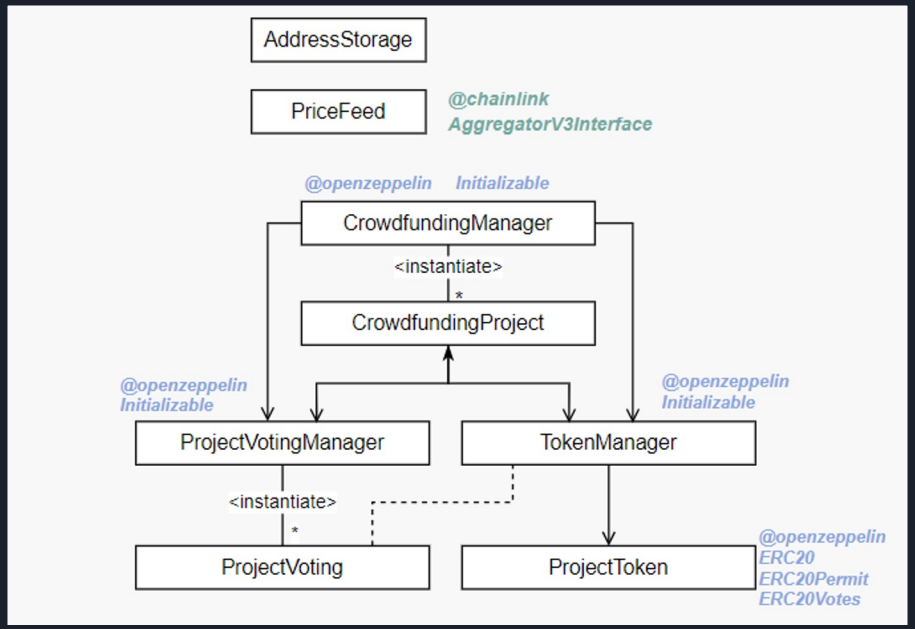
System Architecture

System Code Structure

Media storage:

Pinata
IPFS





Frontend: Flutter

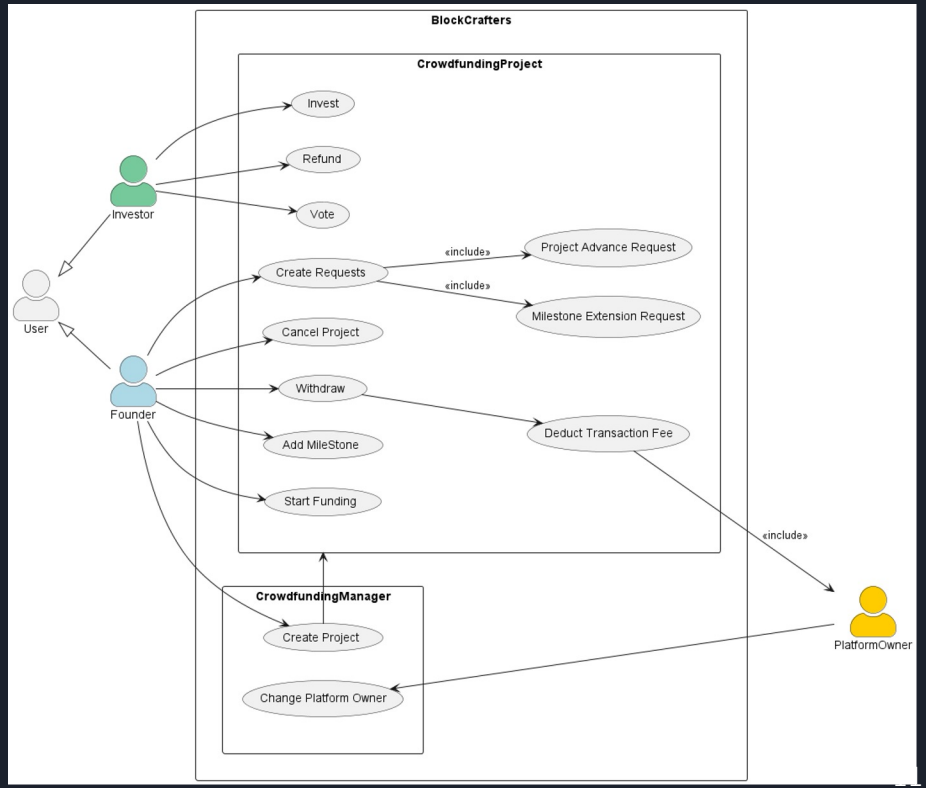
Backend: Smart contracts

Use cases

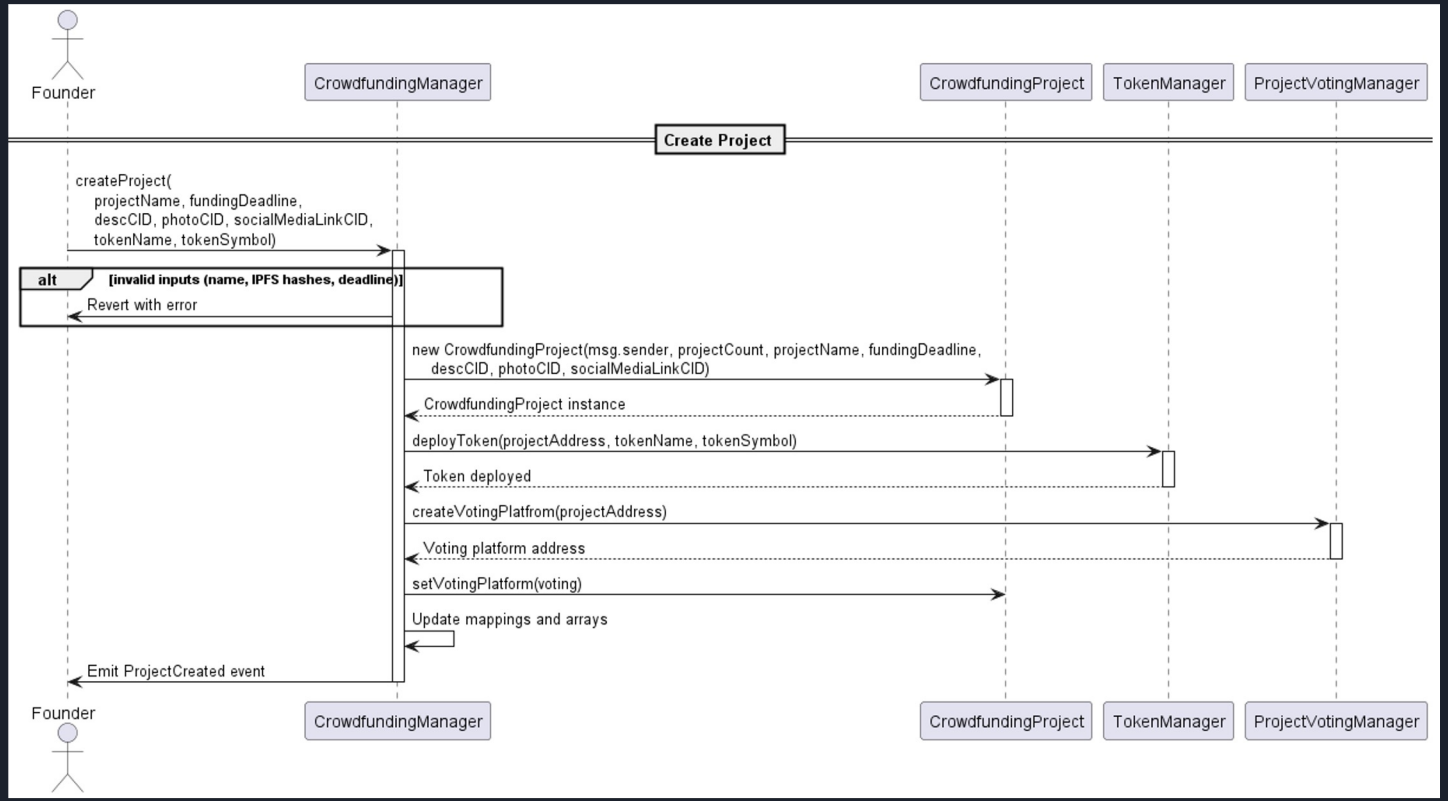
- **Investor**: Invests, refunds, and votes.
- **Founder**: Launches and manages projects (via milestones).

once all milestones are defined

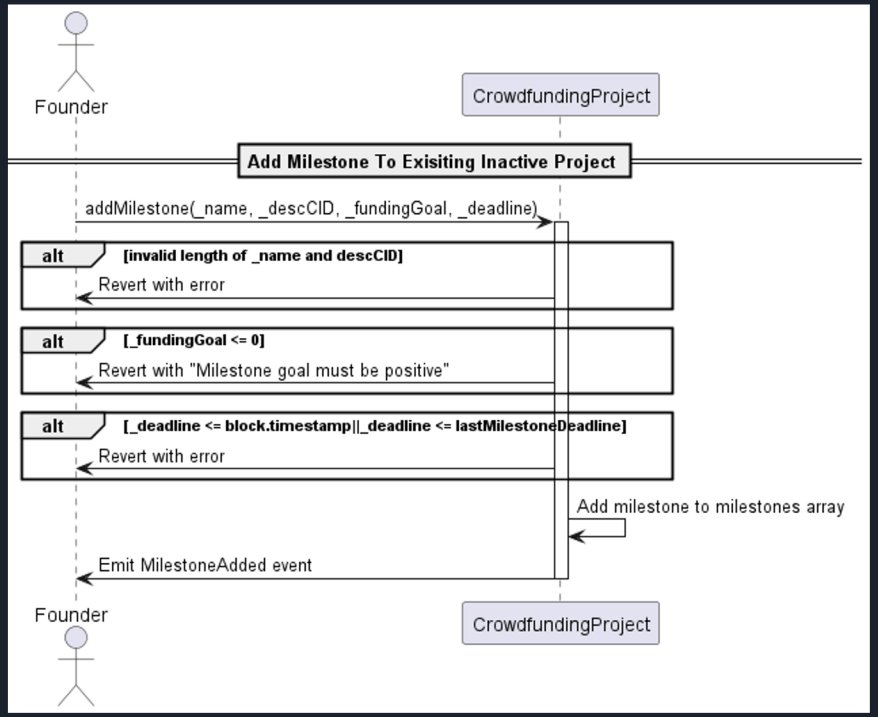
- **Platform Owner**: Oversees platform and receives transaction fees.

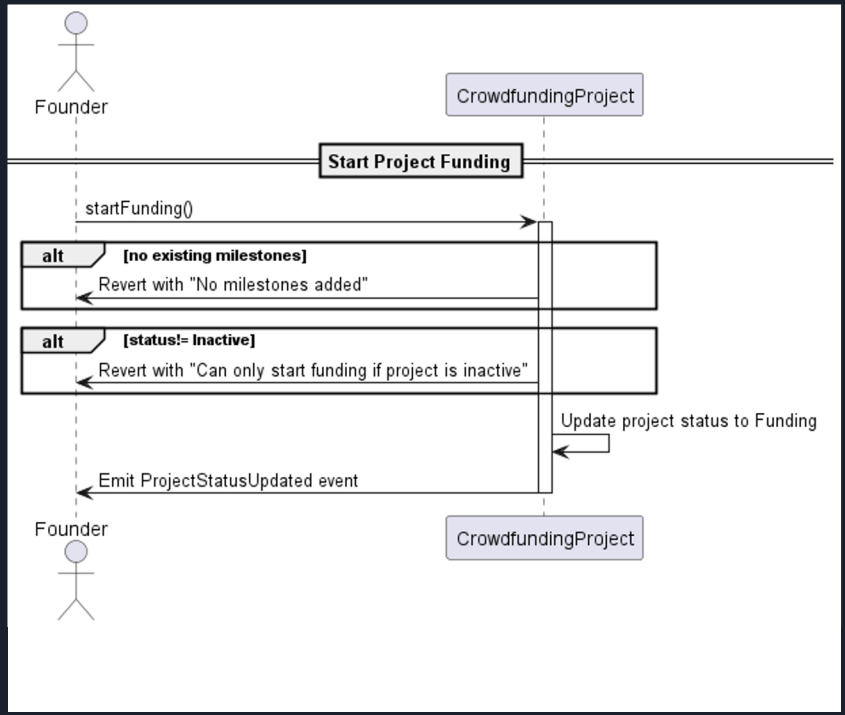


Create Project

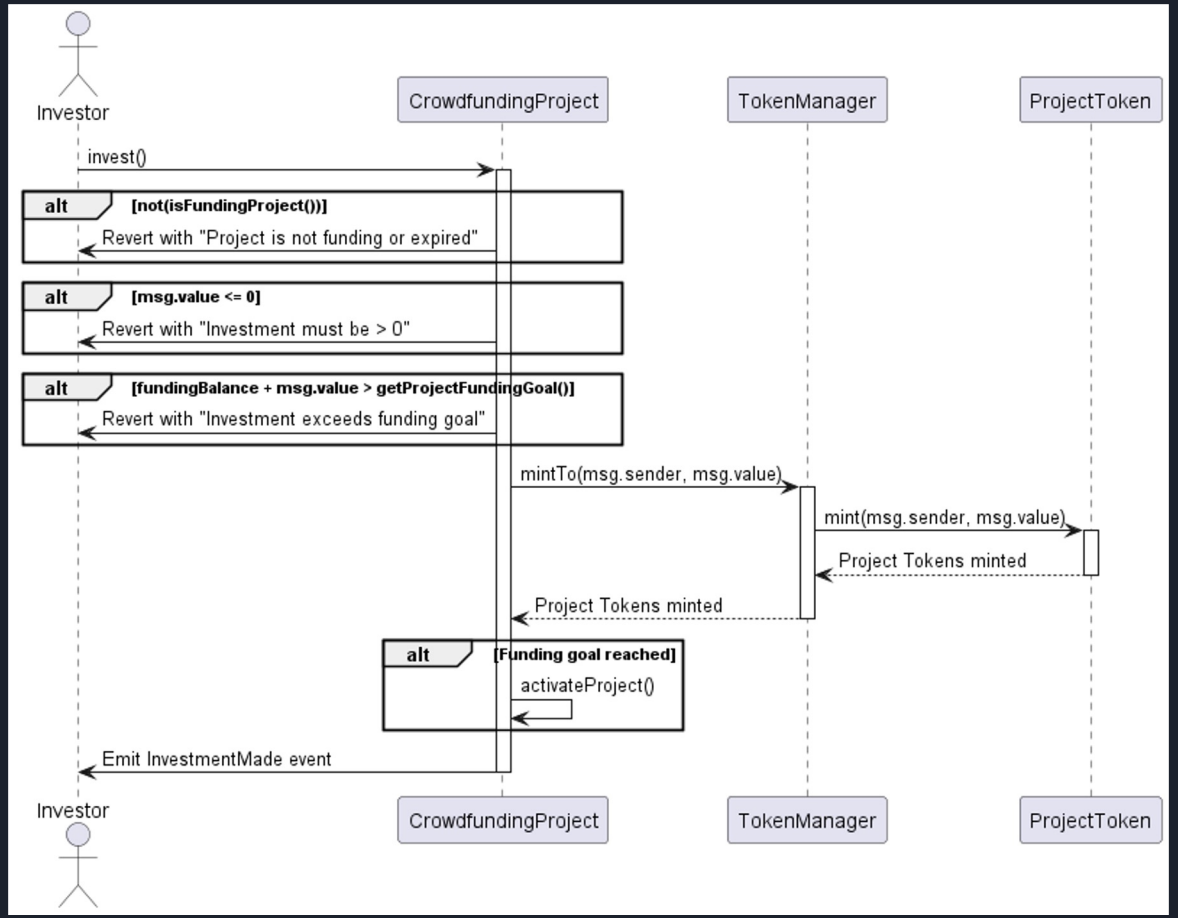


Add Milestone & Start Funding

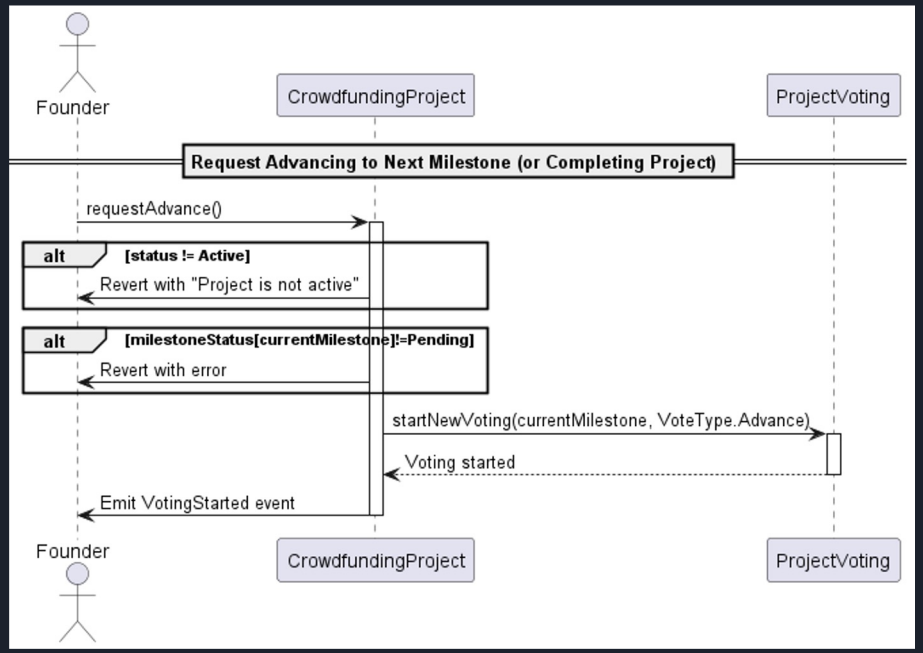


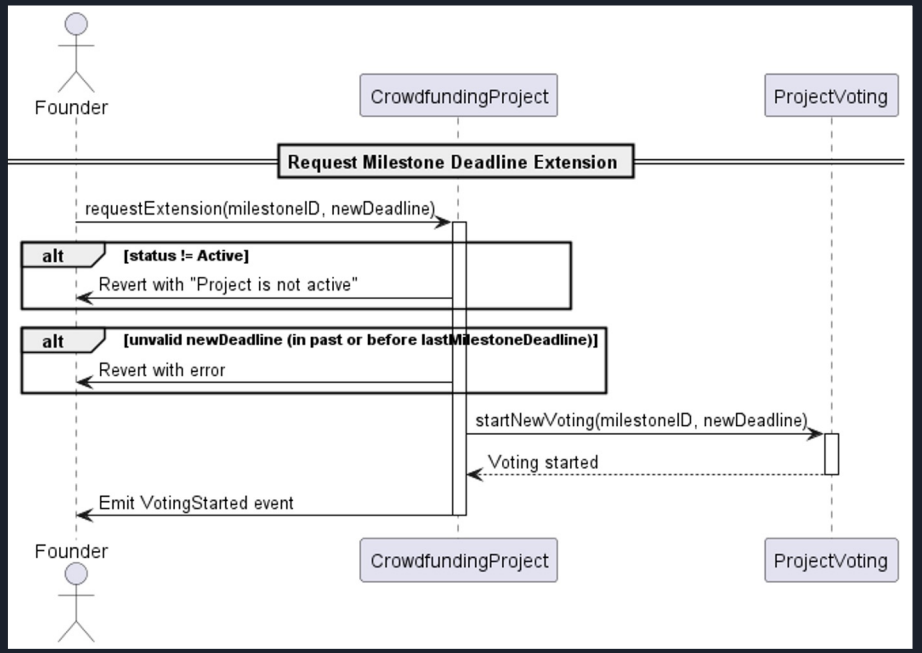


Invest


Investor
CrowdfundingProject
TokenManager
ProjectToken
invest()
alt
[not(isFundingProject())]
Revert with "Project is not funding or expired"
alt
[msg.value <= 0]
Revert with "Investment must be > 0"
alt
[fundingBalance + msg.value > getProjectFundingGoal()]
Revert with "Investment exceeds funding goal"
mintTo(msg.sender, msg.value)
mint(msg.sender, msg.value)
Project Tokens minted
Project Tokens minted
alt
[Funding goal reached]
activateProject()
Emit InvestmentMade event
Investor
CrowdfundingProject
TokenManager
ProjectToken

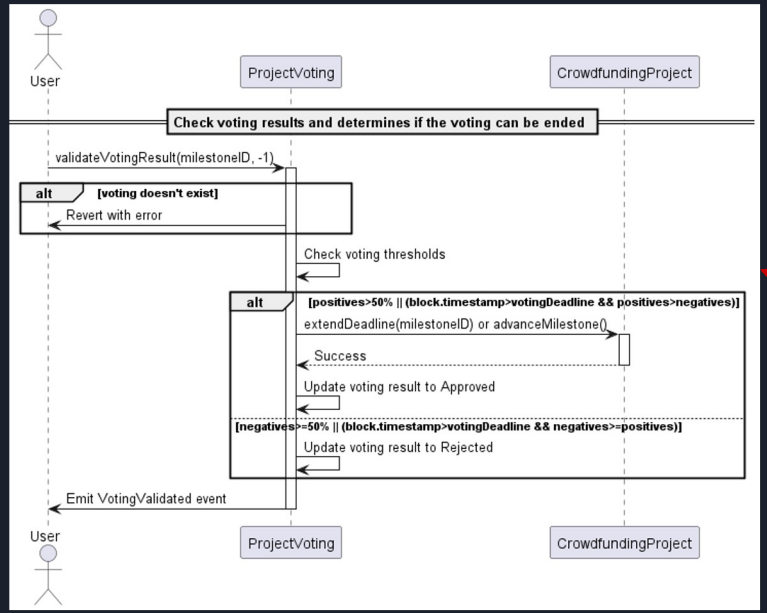
Voting Requests

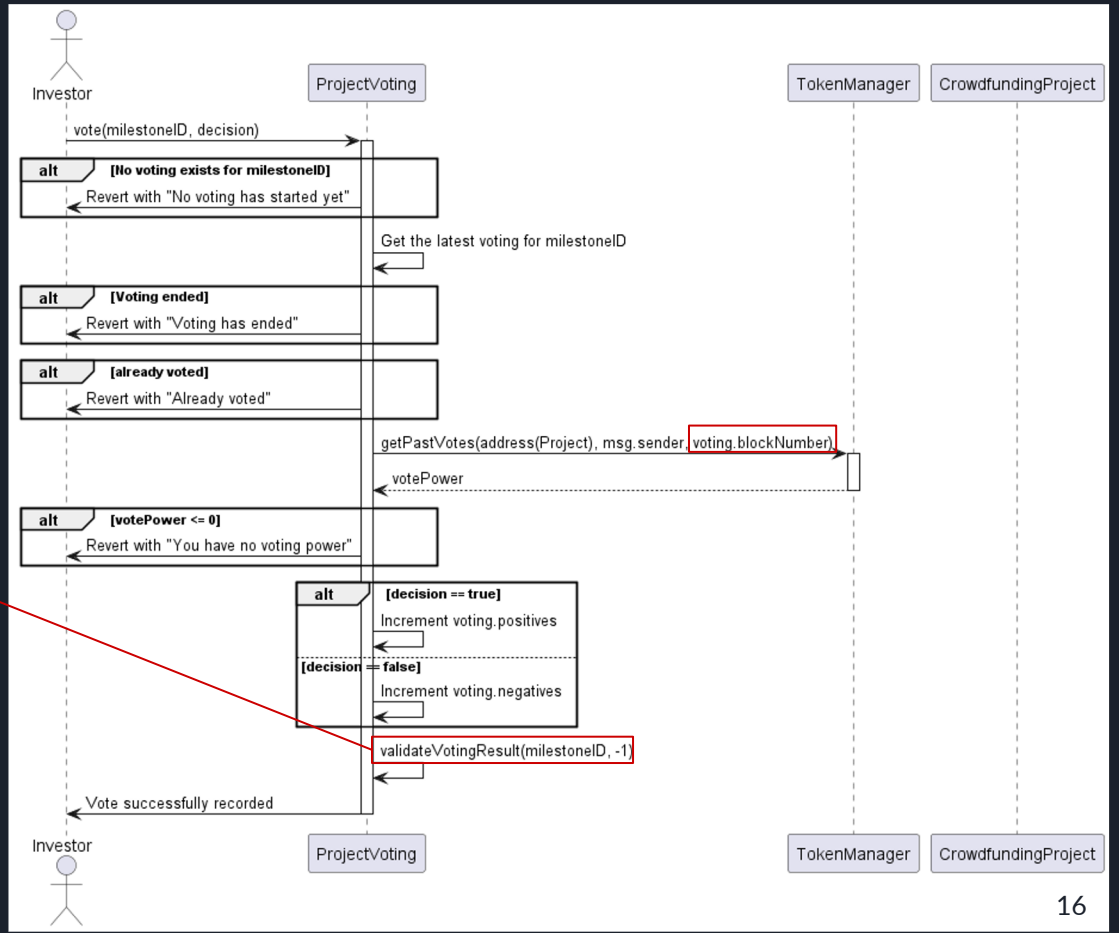




Vote

Utilize ERC20Vote





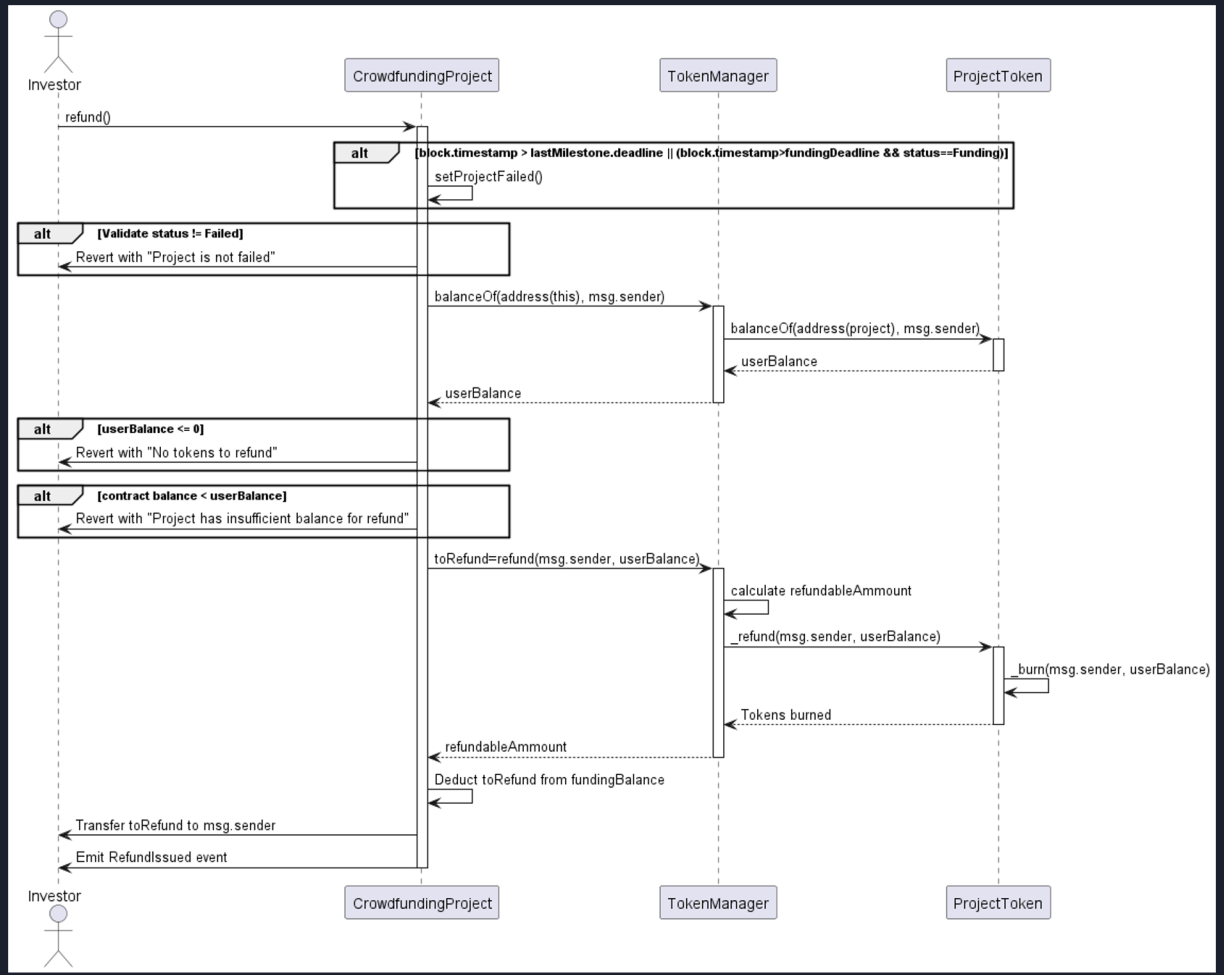
Refund

Funding Finished?

Project Failed

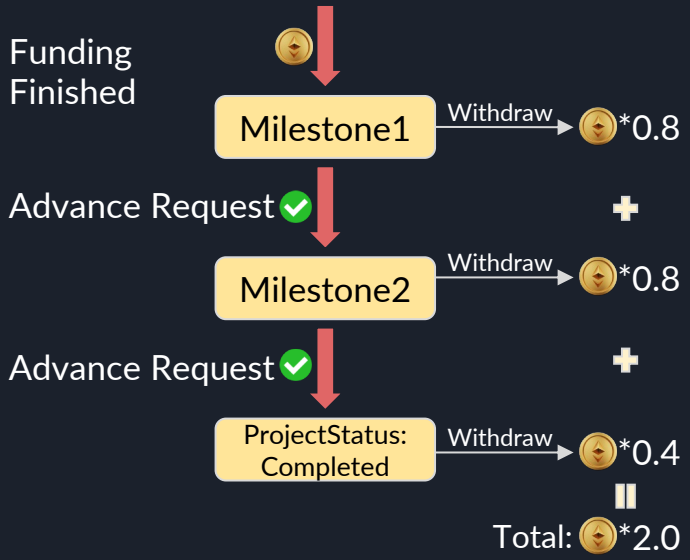
100% Refunded

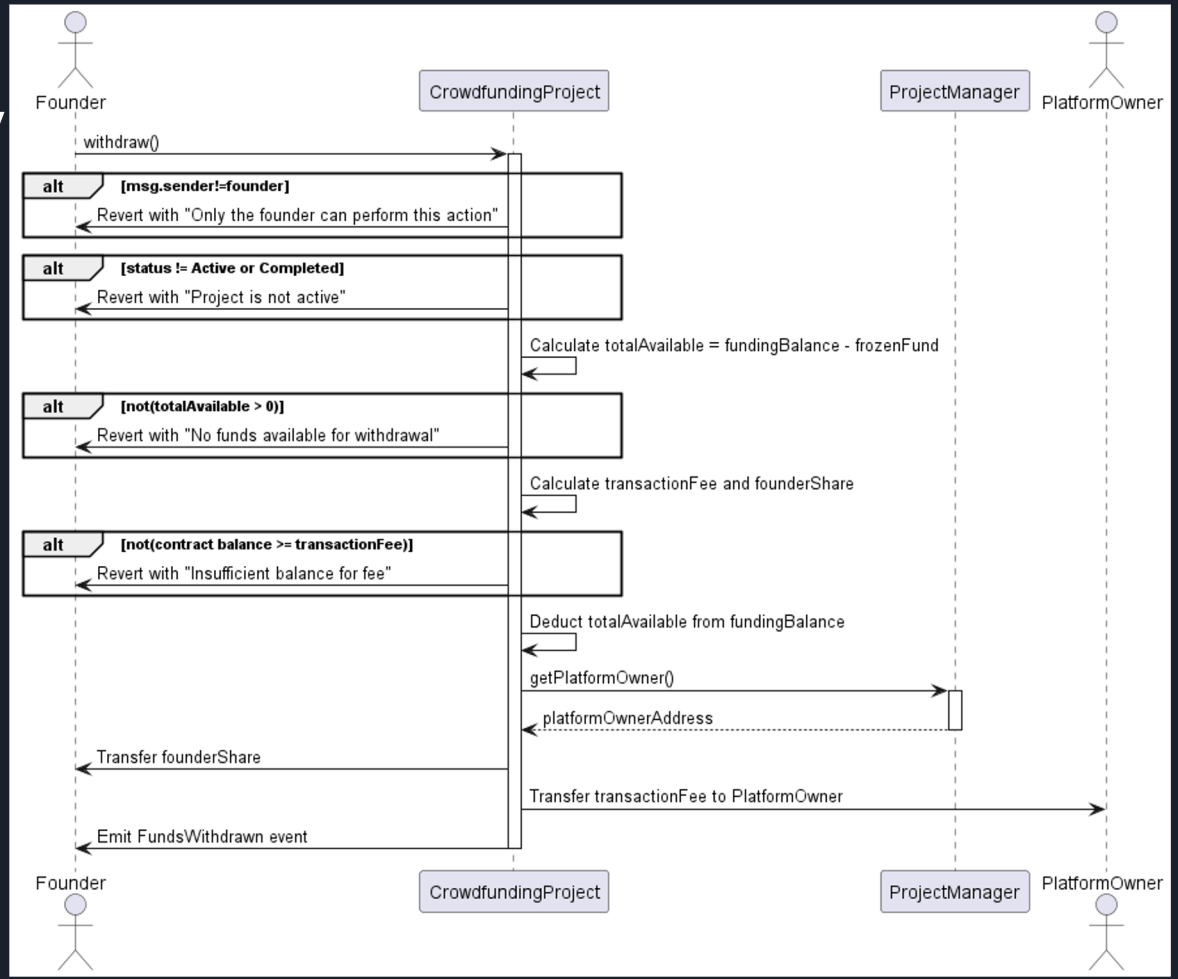
Frozen fundings refunded



Withdraw

20% of total fundings are frozen untill project is completed

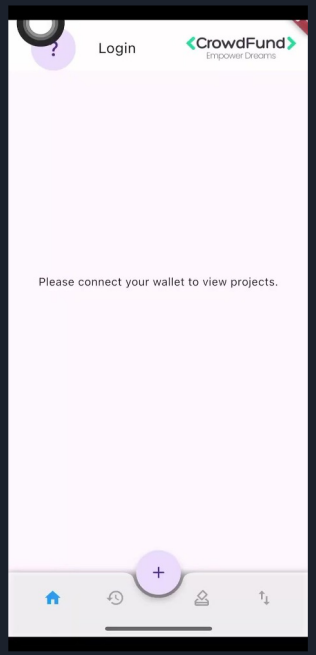




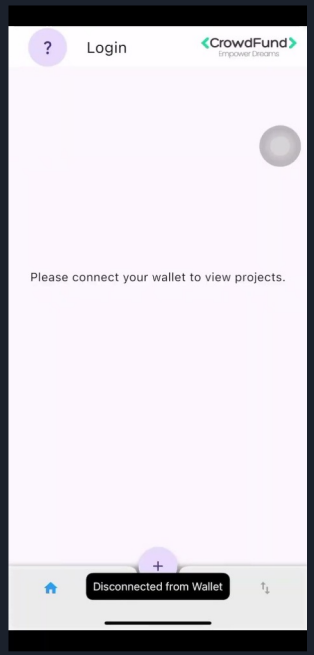
Live Demo

Demo - Start a project

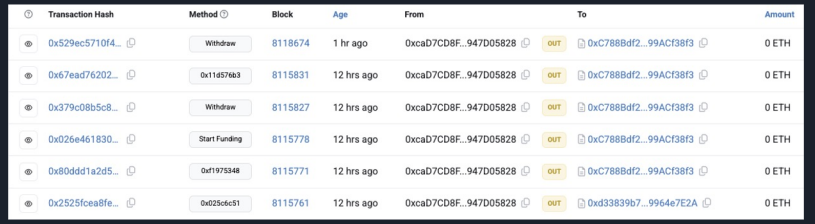
Creates a Project & Add milestone (“Funding” Status) → Investor Invests



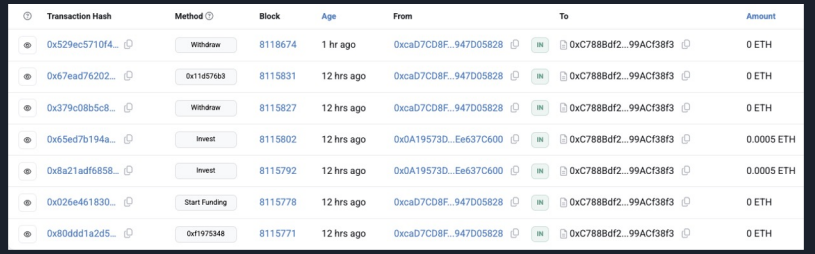
Startup



Investor



Transaction Hash	Method	Block	Age	From		To	Amount
0x529ec5710f4...	Withdraw	8118674	1 hr ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x67ead76202...	0x11d576b3	8115831	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x379c08b5c8...	Withdraw	8115827	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x026e461830...	Start Funding	8115778	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x80ddd1a2d5...	0xf1975348	8115771	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x2525fcea8fe...	0x025c6c51	8115761	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xd33839b7...9964e7E2A	0 ETH



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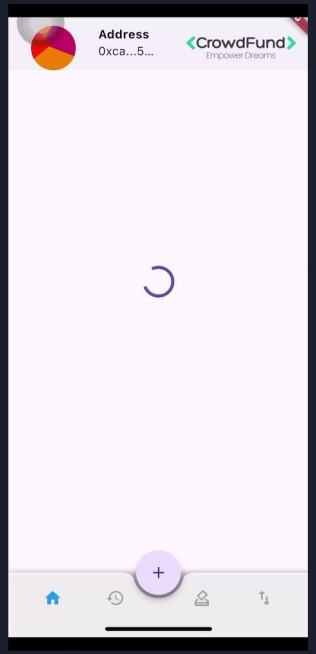
0x529ec5710f4...	Withdraw	8118674	1 hr ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH
0x67ead76202...	0x11d576b3	8115831	12 hrs ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH
0x379c08b5c8...	Withdraw	8115827	12 hrs ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH
0x65ed7b194a...	Invest	8115802	12 hrs ago	0x0A19573D...Ee637C600	IN	0xC788Bdf2...99ACf38f3	0.0005 ETH
0x8a21adf6858...	Invest	8115792	12 hrs ago	0x0A19573D...Ee637C600	IN	0xC788Bdf2...99ACf38f3	0.0005 ETH
0x026e461830...	Start Funding	8115778	12 hrs ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH
0x80ddd1a2d5...	0xf1975348	8115771	12 hrs ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH

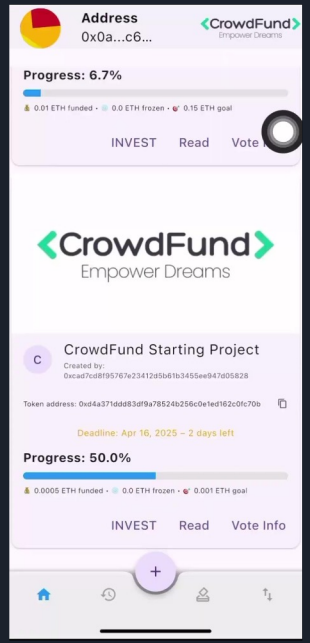
On-chain Record

Demo - Investing process + initial withdraw

Investor Invests → Reach funding goal (“Active” Status)→ Startup withdraw 80% funding



Startup



Investor

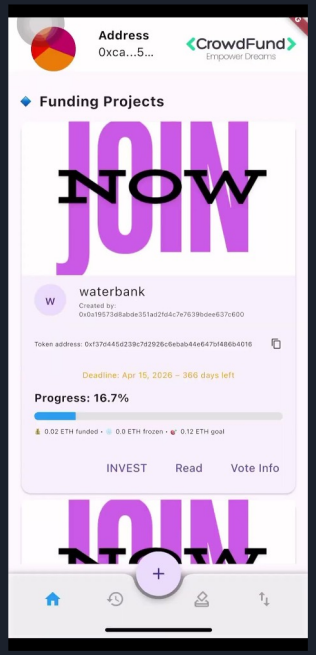
Transaction Hash	Method	Block	Age	From		To	Amount
0x529ec5710f4...	Withdraw	8118674	1 hr ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x67ead76202...	0x11d576b3	8115831	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x379c08b5c8...	Withdraw	8115827	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x026e461830...	Start Funding	8115778	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x80ddd1a2d5...	0xf1975348	8115771	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x2525fcea8fe...	0x025c6c51	8115761	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xd33839b7...9964e7E2A	0 ETH

Transaction Hash	Method	Block	Age	From		To	Amount
0x529ec5710f4...	Withdraw	8118674	1 hr ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH
0x67ead76202...	0x11d576b3	8115831	12 hrs ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH
0x379c08b5c8...	Withdraw	8115827	12 hrs ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH
0x65ed7b194a...	Invest	8115802	12 hrs ago	0x0A19573D...Ee637C600	IN	0xC788Bdf2...99ACf38f3	0.0005 ETH
0x8a21adf6858...	Invest	8115792	12 hrs ago	0x0A19573D...Ee637C600	IN	0xC788Bdf2...99ACf38f3	0.0005 ETH
0x026e461830...	Start Funding	8115778	12 hrs ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH
0x80ddd1a2d5...	0xf1975348	8115771	12 hrs ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH

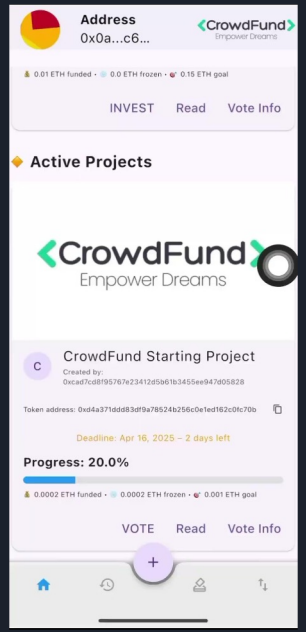
On-chain Record

Demo - Successful project

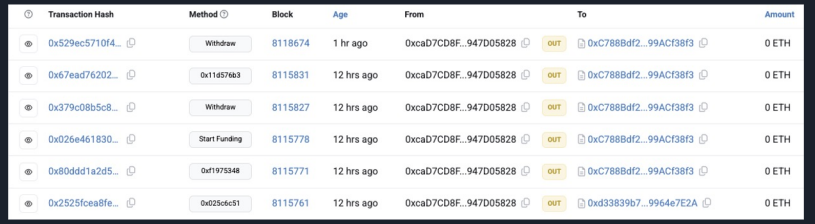
Startup Starts Voting process→ Investor Votes to approve → Startups withdraw 20% funding



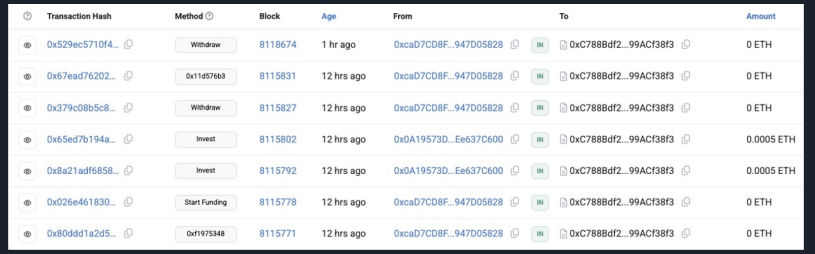
Startup



Investor



Transaction Hash	Method	Block	Age	From		To	Amount
0x529ec5710f4...	Withdraw	8118674	1 hr ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x67ead76202...	0x11d576b3	8115831	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x379c08b5c8...	Withdraw	8115827	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x026e461830...	Start Funding	8115778	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x80ddd1a2d5...	0xf1975348	8115771	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xC788Bdf2...99ACf38f3	0 ETH
0x2525fcea8fe...	0x025c6c51	8115761	12 hrs ago	0xcaD7CD8F...947D05828	OUT	0xd33839b7...9964e7E2A	0 ETH

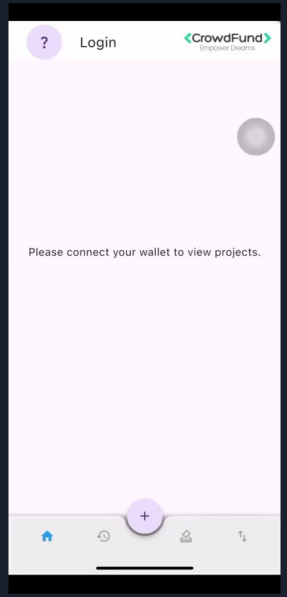


Transaction Hash	Method	Block	Age	From		To	Amount
0x529ec5710f4...	Withdraw	8118674	1 hr ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH
0x67ead76202...	0x11d576b3	8115831	12 hrs ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH
0x379c08b5c8...	Withdraw	8115827	12 hrs ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH
0x65ed7b194a...	Invest	8115802	12 hrs ago	0x0A19573D...Ee637C600	IN	0xC788Bdf2...99ACf38f3	0.0005 ETH
0x8a21adf6858...	Invest	8115792	12 hrs ago	0x0A19573D...Ee637C600	IN	0xC788Bdf2...99ACf38f3	0.0005 ETH
0x026e461830...	Start Funding	8115778	12 hrs ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH
0x80ddd1a2d5...	0xf1975348	8115771	12 hrs ago	0xcaD7CD8F...947D05828	IN	0xC788Bdf2...99ACf38f3	0 ETH

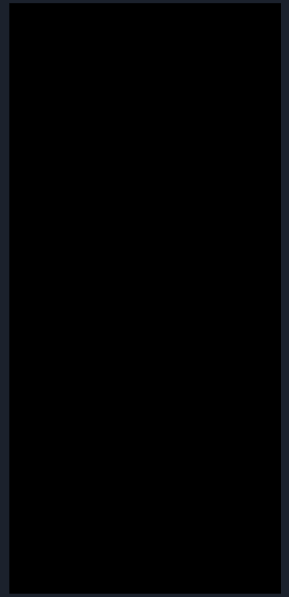
On-chain Record

Demo - Failed project

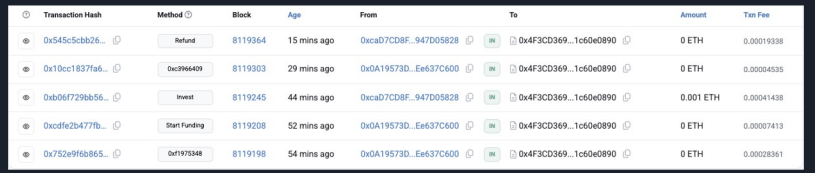
Creates a Project & Add milestone (“Funding” Status) → Investor Invests → Reach goal (“Active” Status)



Startup



Investor



Transaction Hash	Method	Block	Age	From	To	Amount	Txn Fee
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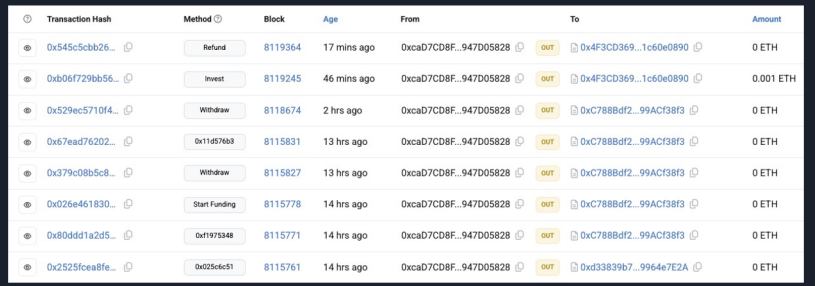
0x10cc1837fa6...	0xc3966409	8119303	29 mins ago	0x0A19573D...Ee637C600	IN 0x4F3CD369...1c60e0890	0 ETH	0.00004535
0xb06f729bb56...	Invest	8119245	44 mins ago	0xcaD7CD8F...947D05828	IN 0x4F3CD369...1c60e0890	0.001 ETH	0.00041438
0xcdfe2b477fb...	Start Funding	8119208	52 mins ago	0x0A19573D...Ee637C600	IN 0x4F3CD369...1c60e0890	0 ETH	0.00007413
0x752e9f6b865...	0xf1975348	8119198	54 mins ago	0x0A19573D...Ee637C600	IN 0x4F3CD369...1c60e0890	0 ETH	0.00028361



Transaction Hash	Method	Block	Age	From	To	Amount
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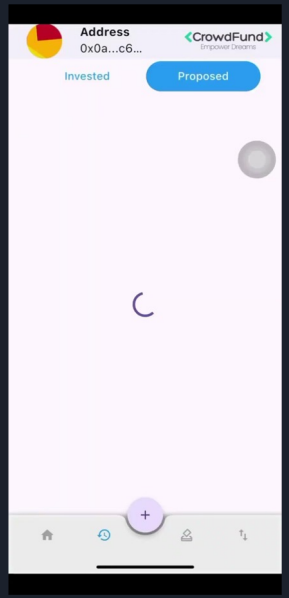
0xb06f729bb56...	Invest	8119245	46 mins ago	0xcaD7CD8F...947D05828	OUT 0x4F3CD369...1c60e0890	0.001 ETH
0x529ec5710f4...	Withdraw	8118674	2 hrs ago	0xcaD7CD8F...947D05828	OUT 0xC788Bdf2...99ACf38f3	0 ETH
0x67ead76202...	0x11d576b3	8115831	13 hrs ago	0xcaD7CD8F...947D05828	OUT 0xC788Bdf2...99ACf38f3	0 ETH
0x379c08b5c8...	Withdraw	8115827	13 hrs ago	0xcaD7CD8F...947D05828	OUT 0xC788Bdf2...99ACf38f3	0 ETH
0x026e461830...	Start Funding	8115778	14 hrs ago	0xcaD7CD8F...947D05828	OUT 0xC788Bdf2...99ACf38f3	0 ETH
0x80ddd1a2d5...	0xf1975348	8115771	14 hrs ago	0xcaD7CD8F...947D05828	OUT 0xC788Bdf2...99ACf38f3	0 ETH
0x2525fcea8fe...	0x025c6c51	8115761	14 hrs ago	0xcaD7CD8F...947D05828	OUT 0xd33839b7...9964e7E2A	0 ETH

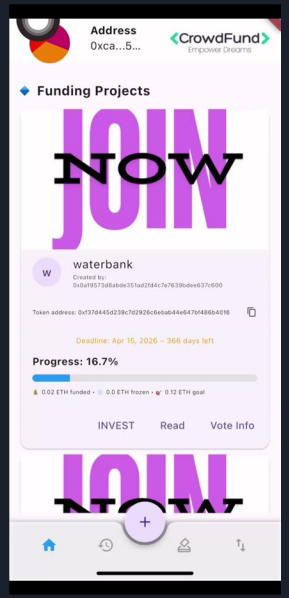
On-chain Record

Demo - Failed project

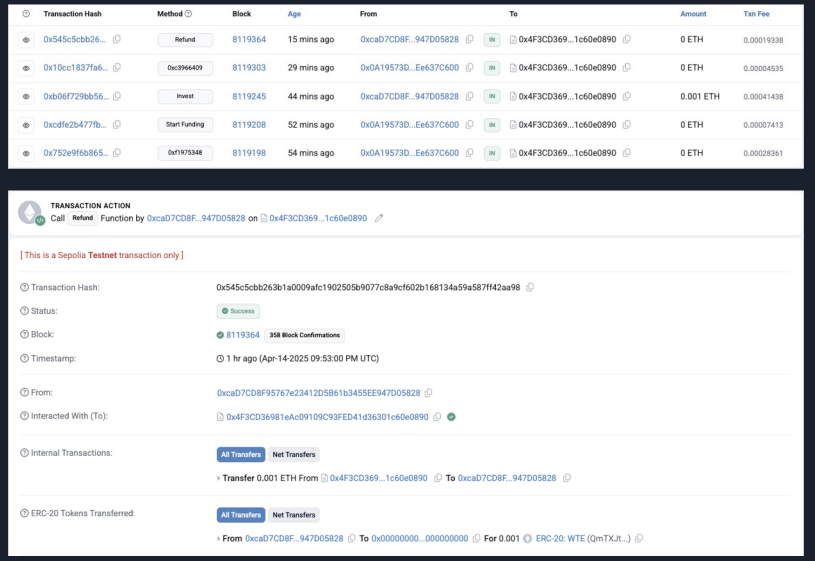
Startup cancels project → Investor gets refund



Startup



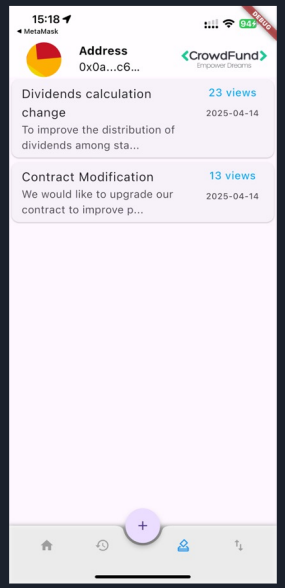
Investor

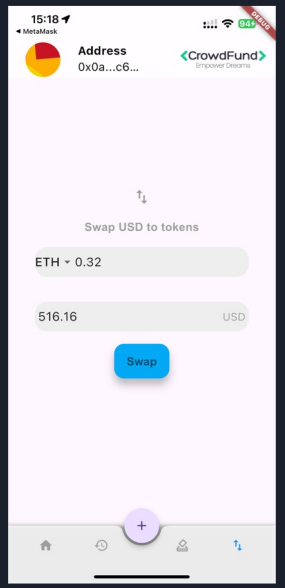


On-chain Record

Future works

- Platform governance support
- Token swapping functionalities





- Providing support for invest share dividends