# Crowdfunding Decentralization Application
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The flow of my application always starts from the Homepage. When we open the homepage we get the option to go to either Beneficiary's or Investor's homepage. While doing so, the app asks for credentials like your account address, password(if you are a beneficiary), and Contract address. Based on the inputs provided It tries to interact to that contract. This makes our app generic in some sense. The only thing that is hardcoded in the App is the Address of CustomToken Contract. Due to shortage of ethers we have used smaller amounts of ether as compared to what was supposed to be done(We have scaled down each of the amounts by a factor to 10 ). The homepage looks like following:
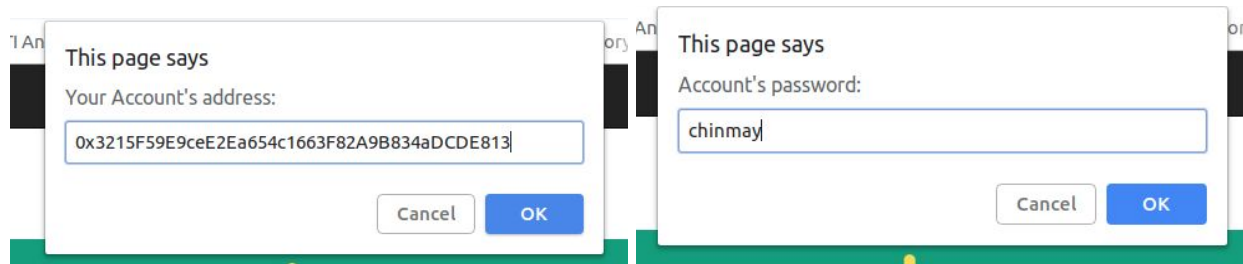
On clicking the Beneficiary button we are prompted to enter our Account Addr. , Password, and Crowd Fnding Contract Addr. This is also a security check gate for authentication of the owner. Screen shots :

Now we proceed with the two Specific cases of Success & failure of CrowdFunding.

## SUCCESS:

The CrowdFunding contract is provided with 200 CTC. Beneficiaries home page initially:



There after we click on Investor tab and provide our address (as investor) twice to initialize two different instance of Investment. The first Investors makes investment of 50 ETH, while the second investor funds 70 ETH. When an investor tries to fund the contract he is redirected to a new tab which lets him make funding after entering the respective details. This funding page closes after the investor has funded the contract. We show screenshots of each of the investors before and after they make the funding.

Investor 1 before Funding:

# Investors's Home

Status: Ongoing | Time till deadline (s) : 502

Total ether funded : 0 ⁄ 100

Ether Balance of Beneficiary : 98.97431038800000005 ETH

Join CrowdFunding

Your Account : 0xf665add50fc75c131175cc51805a5d4e1b39b247

Your Ether Balance : 100.00000076000000005

Your Token Balance : 0

Investor 1 after funding :

# Investors's Home

Status: Ongoing | Time till deadline (s) : 454

Total ether funded : 50 ⁄ 100

Ether Balance of Beneficiary : 98.97431038800000005 ETH

Join CrowdFunding

Your Account : 0xf665add50fc75c131175cc51805a5d4e1b39b247

Your Ether Balance : 49.99810836000000005

Your Token Balance : 50

Investor 2 Before Funding:

# Investors's Home

Status: Ongoing | Time till deadline (s) : 418

Total ether funded : 50∕100

Ether Balance of Beneficiary : 98.97431038800000005 ETH

Join CrowdFunding

Your Account : 0x8f922442f3ecaf5feade3abea1d51303fd212594

Your Ether Balance : 99.9983676

Your Token Balance : 0

Investor 2 after Funding:

# Investors's Home

Status: Ongoing | Time till deadline (s) : 303

Total ether funded : 120∕100

Ether Balance of Beneficiary : 98.97431038800000005 ETH

Join CrowdFunding

Your Account : 0x8f922442f3ecaf5feade3abea1d51303fd212594

Your Ether Balance : 29.9967752

Your Token Balance : 70

After Making both the fundings the Beneficiary's Homepage:

## Beneficiary's Home Crowd Fund Status

Status: Ongoing | Time till deadline (s) : 295

Total ether funded : 120 ∕ 100

Ether Balance of Beneficiary : 98.97431038800000005 ETH

Owner's Account : 0x3215F59E9ceE2Ea654c1663F82A9B834aDCDE813 /  (ETH) / 0 (CTC)

CrowdFunding Contract's Account : 0x5Ccc636DcabE953d0C7B2986D8e905e6425D401D / 120 (ETH) / 80 (CTC)

Withdraw

Then we waited for the deadline to pass before calling the CheckGoalReached function. After executing the check goal reached:

Home    Beneficiary    Investor

## Beneficiary's Home Crowd Fund Status

Status: Ended. | Time till deadline (s) : -277 | Goal has been reached

Total ether funded : 120 ∕ 100

Ether Balance of Beneficiary : 98.97331174800000005 ETH

Owner's Account : 0x3215F59E9ceE2Ea654c1663F82A9B834aDCDE813 /  (ETH) / 0 (CTC)

CrowdFunding Contract's Account : 0x5Ccc636DcabE953d0C7B2986D8e905e6425D401D / 120 (ETH) / 80 (CTC)

Withdraw    Check Goal Reached

Then we executed Withdraw function with the following results:

## Beneficiary's Home Crowd Fund Status

Status: Ended. | Time till deadline (s) : -315 | Goal has been reached

Total ether funded : 120 ∕ 100

Ether Balance of Beneficiary : 218.97265766800000005 ETH

Owner's Account : 0x3215F59E9ceE2Ea654c1663F82A9B834aDCDE813 /  (ETH) / 0 (CTC)

CrowdFunding Contract's Account : 0x5Ccc636DcabE953d0C7B2986D8e905e6425D401D / 0 (ETH) / 80 (CTC)

Withdraw    Check Goal Reached

## FAILURE :

The Crowd Funding contract is initialized with 120 CTC. Beneficiary's initial status:

## Beneficiary's Home Crowd Fund Status

Status: Ongoing | Time till deadline (s) : 495

Total ether funded : 0 ∕ 100

Ether Balance of Beneficiary : 218.93782074800000005 ETH

Owner's Account : 0x3215F59E9ceE2Ea654c1663F82A9B834aDCDE813 /  (ETH) / 0 (CTC)

CrowdFunding Contract's Account : 0xb5F61Db8AE67fC2f4a5a40F620224595B225F4B0 / 0 (ETH) / 120 (CTC)

Withdraw    Check Goal Reached

Then we make investments of 50 and 20 ETH from two different investment accounts:

Investor 1 before investments:

# Investors's Home

Status: Ongoing | Time till deadline (s) : 378

Total ether funded : 0 / 100

Ether Balance of Beneficiary : 218.93782074800000005 ETH

Join CrowdFunding

Your Account : 0xf665add50fc75c131175cc51805a5d4e1b39b247

Your Ether Balance : 50.99640628000000005

Your Token Balance : 0

Investor 1 after investments:

# Investors's Home

Status: Ongoing | Time till deadline (s) : 295

Total ether funded : 50 / 100

Ether Balance of Beneficiary : 218.93782074800000005 ETH

Join CrowdFunding

Your Account : 0xf665add50fc75c131175cc51805a5d4e1b39b247

Your Ether Balance : 0.99451388000000005

Your Token Balance : 50

Investor 2 before investments:

# Investors's Home

Status: Ongoing | Time till deadline (s) : 266

Total ether funded : 50/100

Ether Balance of Beneficiary : 218.93782074800000005 ETH

Join CrowdFunding

Your Account : 0x8f922442f3ecaf5feade3abea1d51303fd212594

Your Ether Balance : 30.99387312

Your Token Balance : 0

Investor 2 after investment:

# Investors's Home

Status: Ongoing | Time till deadline (s) : 234

Total ether funded : 70/100

Ether Balance of Beneficiary : 218.93782074800000005 ETH

Join CrowdFunding

Your Account : 0x8f922442f3ecaf5feade3abea1d51303fd212594

Your Ether Balance : 10.99228072

Your Token Balance : 20

Then we wait for the deadline to pass. Meanwhile beneficiary's homepage:

## Beneficiary's Home Crowd Fund Status

Status: Ongoing | Time till deadline (s) : 177

Total ether funded : 70 ⁄ 100

Ether Balance of Beneficiary : 218.93782074800000005 ETH

Owner's Account : 0x3215F59E9ceE2Ea654c1663F82A9B834aDCDE813 /  (ETH) / 0 (CTC)

CrowdFunding Contract's Account : 0xb5F61Db8AE67fC2f4a5a40F620224595B225F4B0 / 70 (ETH) / 50 (CTC)

Withdraw     Check Goal Reached

After deadline we call CheckGoalReached with following result:

Home     Beneficiary     Investor

## Beneficiary's Home Crowd Fund Status

Status: Ended. | Time till deadline (s) : -201 | Goal has not been reached

Total ether funded : 70 ⁄ 100

Ether Balance of Beneficiary : 218.93696444800000005 ETH

Owner's Account : 0x3215F59E9ceE2Ea654c1663F82A9B834aDCDE813 /  (ETH) / 0 (CTC)

CrowdFunding Contract's Account : 0xb5F61Db8AE67fC2f4a5a40F620224595B225F4B0 / 70 (ETH) / 50 (CTC)

Withdraw     Check Goal Reached

Since the goal is not reached we go on to call withdraw from each of the investor's account:

After withdraw for investor 1:

# Investors's Home

Status: Ended. | Time till deadline (s) : -661

Total ether funded : 70 ∕ 100

Ether Balance of Beneficiary : 218.91696444800000005 ETH

Join CrowdFunding    Withdraw

Your Account : 0xf665add50fc75c131175cc51805a5d4e1b39b247

Your Ether Balance : 50.99407584000000005

Your Token Balance : 50

After withdraw for investor 2:

# Investors's Home

Status: Ended. | Time till deadline (s) : -699

Total ether funded : 70 ∕ 100

Ether Balance of Beneficiary : 218.91696444800000005 ETH

Join CrowdFunding    Withdraw

Your Account : 0x8f922442f3ecaf5feade3abea1d51303fd212594

Your Ether Balance : 30.99184268

Your Token Balance : 20

Finally when we check the beneficiary's Home page:

## Beneficiary's Home Crowd Fund Status

Status: Ended. | Time till deadline (s) : -709

Total ether funded : 70 ⁄ 100

Ether Balance of Beneficiary : 218.91696444800000005 ETH

Owner's Account : 0x3215F59E9ceE2Ea654c1663F82A9B834aDCDE813 /  (ETH) / 0 (CTC)

CrowdFunding Contract's Account : 0xb5F61Db8AE67fC2f4a5a40F620224595B225F4B0 / 0 (ETH) / 50 (CTC)

Withdraw    Check Goal Reached

The ether value of contract has be deducted as can be seen in the balance of Contract Account. It can be seen that the Total Funded ethers doesn't change when a withdraw is made. That was due to the missing logic in contract code, which has been completed in the final submitted code.