

ReadME

Assignment - 3 (CS540)

Name - Bajrang Lal

Entry no - 2020CSB1081

Here are the following address we are using -

Owner address - 0x937A2493810FB7bBDB0afD96c7B47693680F11d4

Patient Address - 0x260368A06edCb404170c05269D74F651185FBd84











Doctor Address - 0x4690BB1aB21FE108C6528D23554c5B164E531D82

Here is how I implemented the complete program -

1. Owner can do the following things -
 - Add Doctor. - **addDoctor** method for this.
 - Add Patient. - **addPatient** method for this.
2. Patient Can do the following things -
 - Search for a Doctor.
 - Give permission to a doctor to view his medical records.
3. Doctor can do the following things -
 - Doctor can access a patient's data, if the patient has given permission to the doctor.
4. One more functionality added - where we can check that a particular doctor has the permission to view the patient data or not.
5. We can also access all doctors.

Deploy - Here is the Transaction for deploying the Project.

[This is a Sepolia **Testnet** transaction only]


Transaction Hash:	0xbab3876651bf702c4108552bdc49fb7ca32870779003cab71bf355f497a52f86 
Status:	 Success
Block:	 4205299  3 Block Confirmations
Timestamp:	 36 secs ago (Sep-01-2023 04:54:00 PM +UTC)
Method:	0x60806040
From:	0x937A2493810FB7bBDB0afD96c7B47693680F11d4 
To:	[ 0x59c987a96eba50c1e57cdd1ebfb7e44416b88a7c Created]  
Value:	 0 ETH (\$0.00)
Transaction Fee:	0.004860847780737673 ETH (\$0.00)
Gas Price:	2.767974191 Gwei (0.000000002767974191 ETH)


Add Doctor - Here Owner can add a new Doctor.

addDoctor

_doctorAddress:

"0x4690BB1aB21FE108C6528D23554c5B164E531D82"

 Calldata

 Parameters

transact

Once Owner enter doctorAddress and then click on “transact”, a doctor will be added to the contract, and here is transaction for that -

[This is a Sepolia **Testnet** transaction only]

Transaction Hash:	0x681edba56906f95d9eccfa6b35a7af944ed471702b4af6e728e6ca478ebfe78b
Status:	Success
Block:	4205328 3 Block Confirmations
Timestamp:	29 secs ago (Sep-01-2023 05:00:12 PM +UTC)
Method:	Add Doctor
From:	0x937A2493810FB7bBDB0afD96c7B47693680F11d4
To:	0x59C987A96eba50c1E57cdD1ebFb7e44416B88A7c
Value:	0 ETH (\$0.00)
Transaction Fee:	0.000253723728699694 ETH (\$0.00)
Gas Price:	2.709478858 Gwei (0.000000002709478858 ETH)

Add Patient - Here Owner can add a new Patient.

addPatient

_patientAddress:

"0x260368A06edCb404170c05269D74F651185FBd84"

_name:

"Bajrang"

_medicalRecord:

"Pain"

Calldata

Parameters

transact

Here the Owner enters the PatientAddress, Name, and MedicalRecord. Once he clicks on "transact", a new patient will be added.

Here is the transaction for that -

[This is a Sepolia **Testnet** transaction only]

Transaction Hash:	0x8c39d1870d7e815a23dd1db59550d7b24a89305fa0be375ff6ac80f348186f4b
Status:	Success
Block:	4205342 1 Block Confirmation
Timestamp:	12 secs ago (Sep-01-2023 05:03:36 PM +UTC)
Method:	0x37b16b50
From:	0x937A2493810FB7bBDB0afD96c7B47693680F11d4
To:	0x59C987A96eba50c1E57cdD1ebFb7e44416B88A7c
Value:	0 ETH (\$0.00)
Transaction Fee:	0.000251530522144576 ETH (\$0.00)
Gas Price:	2.649474616 Gwei (0.000000002649474616 ETH)

Give access to doctor - A Patient can give access to a Doctor to view his medical records, If a Patient has given access to doctor, then only he can view his medical record.
Only Patient can give the access, Owner also can't give the permission to the doctor to view Patient data.

giveAccessToDoctor

_doctorAddress:

"0x4690BB1aB21FE108C6528D23554c5B164E531D82"

Calldata

Parameters

transact

So, Patient will Enter the Address of the Doctor to whom he wants to give permission to view his medical record. And after that when Patient clicks on "transact" , if at that address a doctor exists then he will get the permission to view the respective patient data.
Here is the Transaction for that -

[This is a Sepolia **Testnet** transaction only]

Transaction Hash:	0x5d431605dd19bd3cfd9d1d94e9373cab4611faad9529edfb9e9d88fa078e7ad6
Status:	Success
Block:	4205372 3 Block Confirmations
Timestamp:	28 secs ago (Sep-01-2023 05:10:24 PM +UTC)
Method:	0x28b2b968
From:	0x260368A06edCb404170c05269D74F651185FBd84
To:	0x59C987A96eba50c1E57cdD1ebFb7e44416B88A7c
Value:	0 ETH (\$0.00)
Transaction Fee:	0.000259965546813574 ETH (\$0.00)
Gas Price:	2.778537727 Gwei (0.000000002778537727 ETH)

accessPatientData - Now once a patient has given permission to the doctor then the doctor can access his data.

Here is the data that we added earlier, and as a doctor I am accessing this data, and it is showing correct output according to that.

accessPatientData

_patientAddress:

0x260368A06edCb404170c05269D74F651185FBd84

Calldata

Parameters

call

0: bool: true

1: string: Bajrang

2: string: Pain

doctors - A patient can search for a doctor, whether a particular doctor exists or not. As we have added earlier this doctor, so it is showing “true”, that means this doctor exists. Patient just Enter the address of the doctor and he will get the result respectively.

doctors

:

"0x4690BB1aB21FE108C6528D23554c5B164E531D82"

Calldata

Parameters

call

0: bool: isDoctor true

doctorToPatients - Here we can check if a particular patient has given the permission to a doctor to view his medical record or not. If the patient has given permission to the doctor then we will get true otherwise we will get false. First we Enter the address of the doctor, and then Enter the address of the patient, after this we call this function and we will get the result respectively.

doctorToPatients

:

0x4690BB1aB21FE108C6528D23554c5B164E531D82

:

0x260368A06edCb404170c05269D74F651185FBd84

Calldata

Parameters

call

0: bool: true

getAllDoctors - When we call this function, we will get all the doctors added by the owner, as we have added only one doctor, so it is showing the address of that doctor.

getAllDoctors

0: address[]: 0x4690BB1aB21FE108C6528D23554c5B164E531D82

Owner - Here is the address -

owner

0: address: 0x937A2493810FB7bBDB0afD96c7B47693680F11d4

