***Covid Report Verification System Using BlockChain***

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**Abstract**:

Our System offers a blockchain-based Report administration and verification platform with the digital infrastructure necessary to manage the administration of COVID-19 report verification of a person, including the date when checked and patient info, or dates, of administration. All data is stored on the blockchain, enabling authorized users to access and monitor report verification programs in real-time, while ensuring personal control for the public at large – who retain access and ultimate control of their personal record.

**Roles:**

1. **Admin** (Only One Admin who will grant the permission to the labs and will administered the whole process)
2. **Labs** (Labs will Take Users data and will Generate Reports and will push the reports on the blockchain)
3. **Public Users** (Public Users can check their reports by logging in and using their unique Aadhar card no)

**Functions :**

* **Admin (ICMR):**

1. Admin can provide approval to the trusted testing labs and can also monitor the whole process of testing.
2. Can revoke the grant from the labs.
3. Check patients' details and the list of all approved labs.
4. Will only have the authority to change the details in Storage.

**Methods (Contract):**

1. GrantAccessToLabs
2. RevokeApproval
3. CheckStats
4. EditDetails
5. DetailsOfApprovedLabs

* **Testing Lab:**

1. Requests for the approval from admin.
2. Collects Patients Sample and Generate reports.
3. Pushes the report on the blockchain
4. Can’t edit the details once pushed onto blockchain.

**Methods (Contract):**

1. RequestAccess
2. RetrieveUserData
3. GenerateReports

* **Patient :**

1. Patient will fill the basic details in the registration form.
2. To view test reports, the patient will provide their unique Id and the reports will be retrieved.

**Methods (Contract):**

1. Login
2. SignUp
3. View Report

**1.3 FrontEnd Part**

**Forms:**

1. **SignUp :**

Patients will fill up their Basic details .

1. Name
2. Aadhar No.
3. Age
4. Contact No.
5. Address
6. **View Report (Already Tested Patient):**

Here Users can directly retrieve their reports using their unique id(Aadhar No.).

1. **Admin Login** :

Admin can login and check all the details of the patient and the labs.

**Flowchart For Our Covid Report Verification System**

