

Public Health Monitoring System

Participants:

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Title:

Public Health Monitoring System

Problem Statement:

Consider a region (even a country). Corresponding to the unprecedented situation of COVID-19, the government wants to create a health database of all the citizens. This database must in turn, allow the governing body to access the overall health of society. It must also contain all the information about doctors, hospitals, health schemes and insurances so as to serve the needy people, in case of shortage of beds.

Introduction:

Our project is based on the current scenario of health system of India and its difficulties. We notice today that our health system fails to cater the needs of masses if a pandemic (or even an epidemic) attacks us. The reason behind this may be lack of centralized database system to monitor real time status of health of citizen and hospital capacity. We plan to develop a database on the similar lines. Our main goal is to develop a web based application for user (govt) and a back-end database managed by some authority like NIC (National Informatics Center).

Advantages of using 'Public Health Monitoring System':

There exists no such centralized database for health management of masses. Using this system will ensure the best treatment and management of health services across the nation. The centralized database will also ensure that every needy and critical person will receive proper medical care. This database will also enable us to create a statistical model of the nation-wide health system. This system will also provide a better approach to ensure health care to economically weaker sections of the society, giving them preference over the privileged ones, if possible.

Functional Requirements:

Web application using:

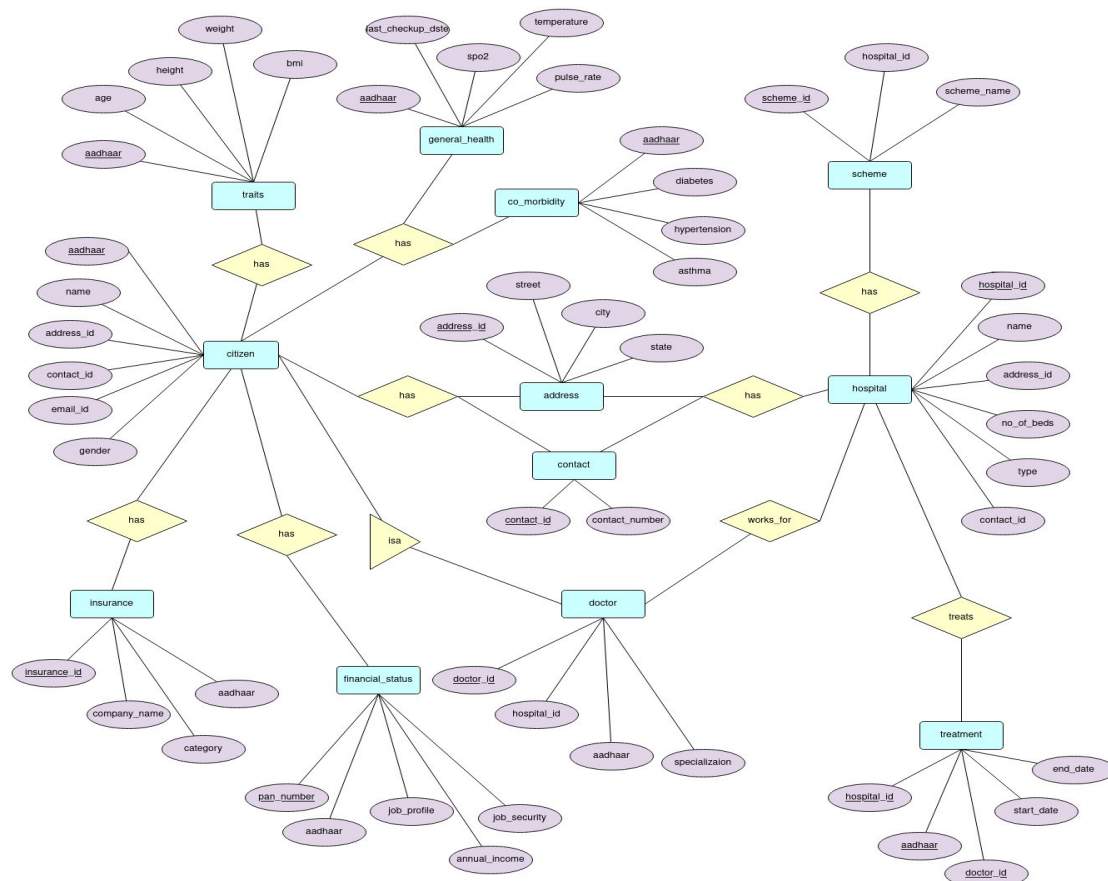
1. Django framework for back-end
2. HTML and CSS for the user interface
3. MySQL for database management

Functional dependencies:

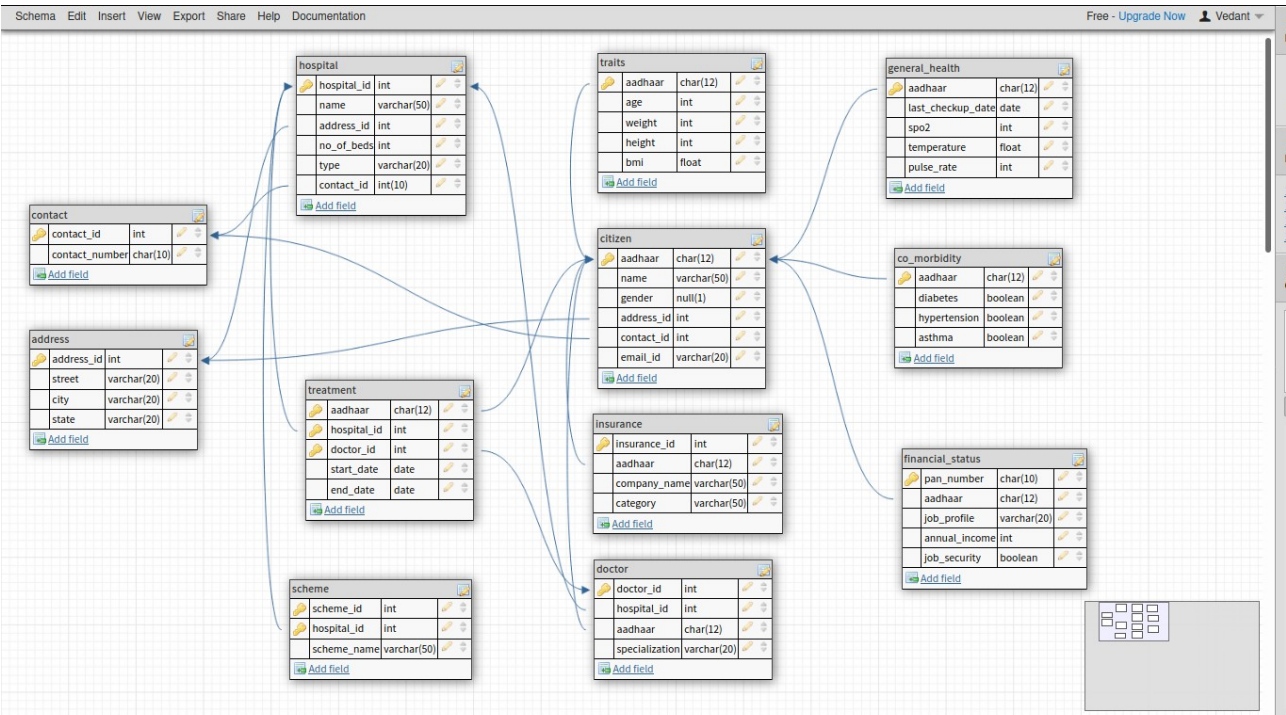
1. citizen table: candidate key(aadhaar) -> name, gender, address, phone_number, email_id
2. traits table: candidate key (aadhaar) -> age, weight, height, bmi
3. general_health: candidate key (aadhaar) -> last_check_date, spo2, temperature, pulse_rate
4. co_morbidity: candidate key (aadhaar) -> diabetes, hypertension, asthma
5. financial_status: candidate key (pan_number, aadhaar) -> job_profile, annual_income, job_security
6. treatment table: candidate key (aadhaar, hospital_id, doctor_id) -> start_date, end_date
7. scheme table: candidate key (scheme_id, hospital_id) -> scheme_name
8. insurance table: candidate key (insurance_id, aadhaar) -> company_name, category
9. doctor table: candidate key (doctor_id) -> name, aadhaar, specialization, hospital_id
aadhaar->name

10. hospital table: candidate key(hospital_id) -> name, address, no_of_beds, type, contact_number

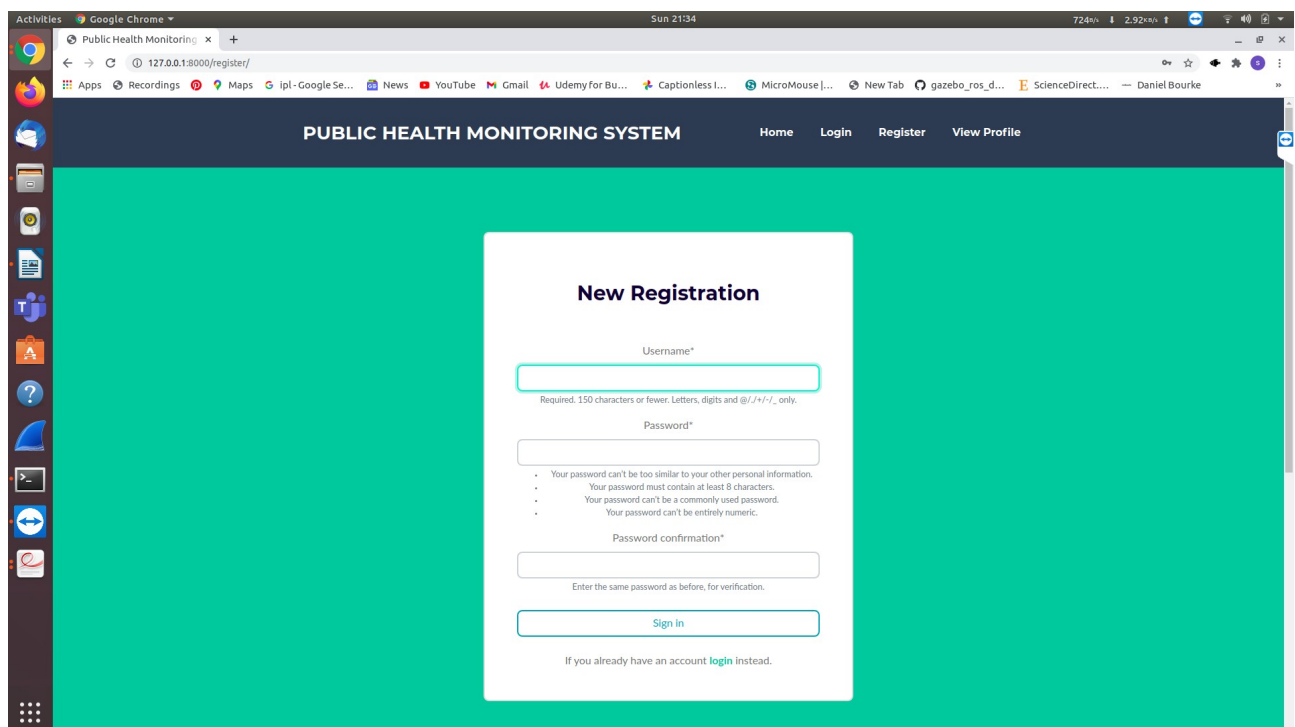
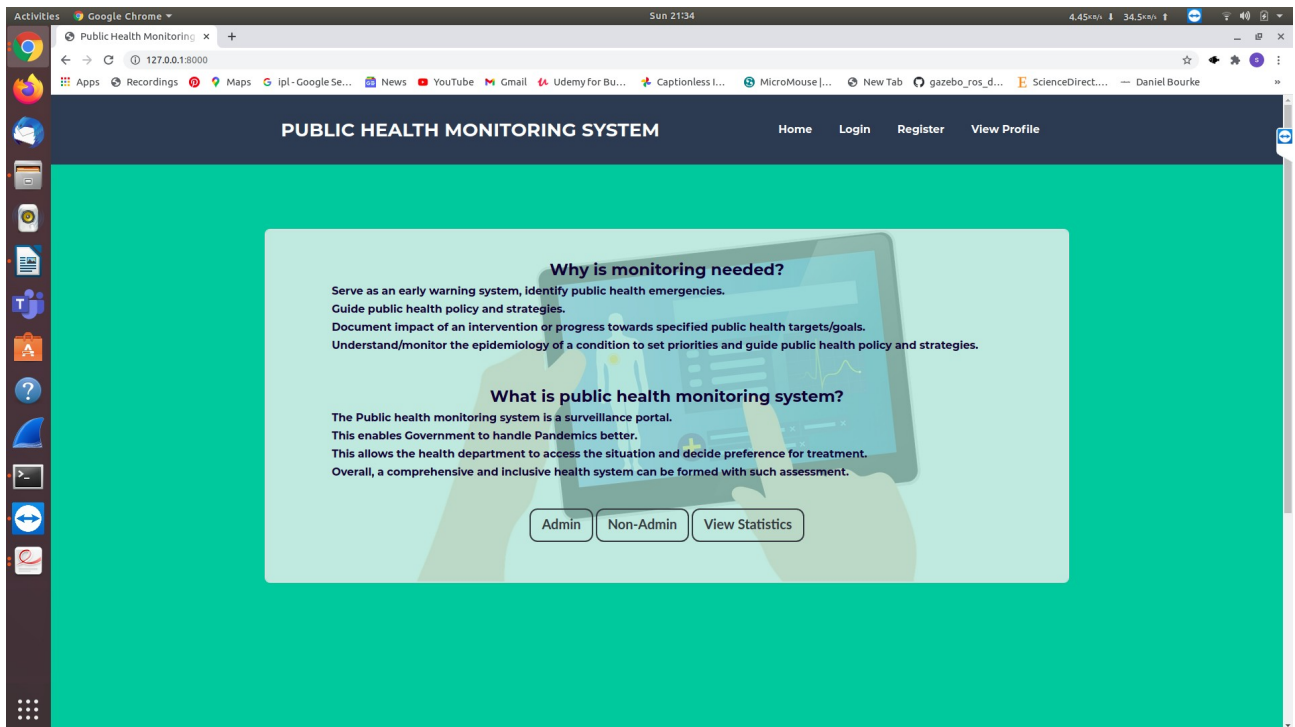
ER diagram:

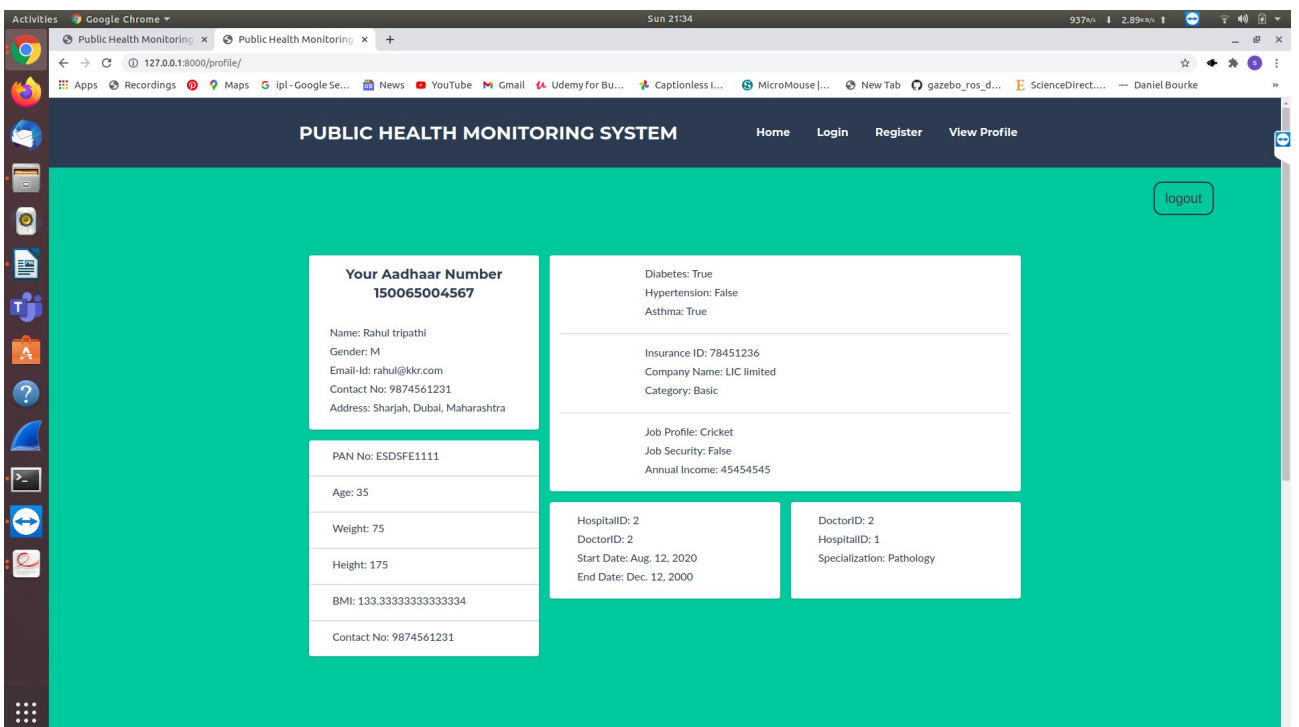
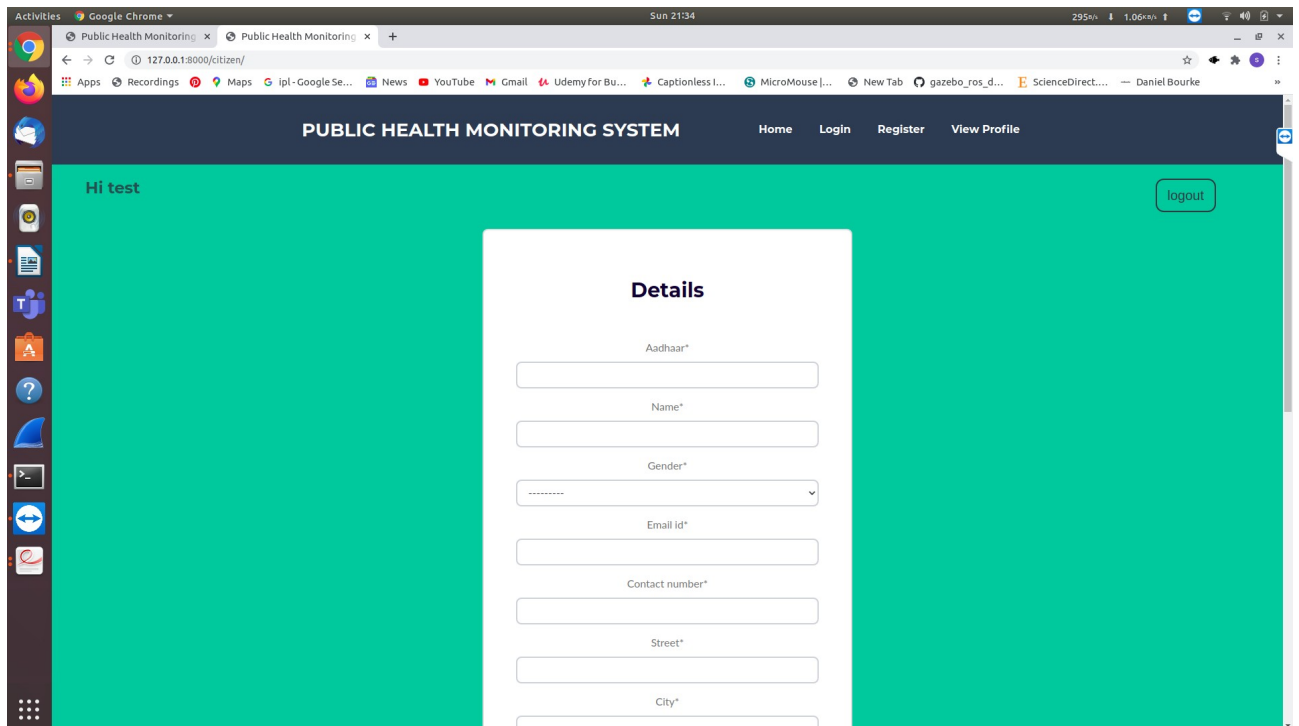


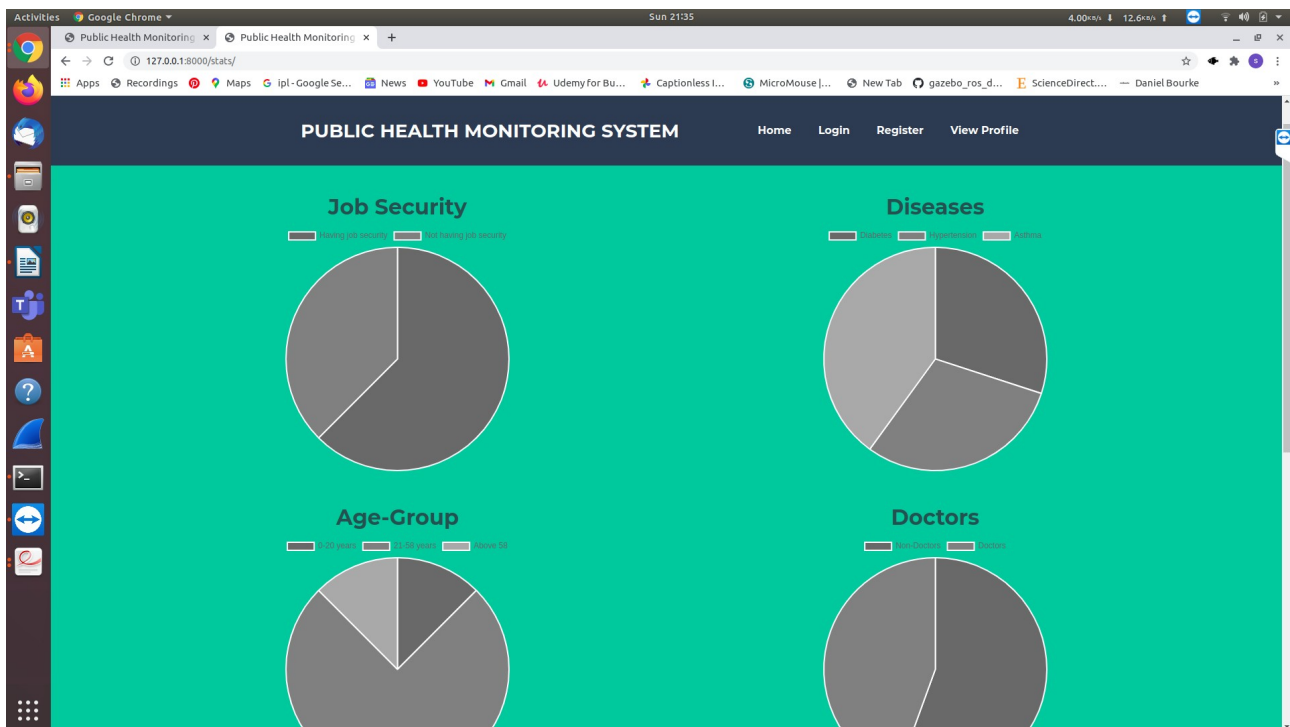
SCHEMA Diagram:



SNAPSHOTS:







Activities Terminal Sun 21:36 shaunak@shaunak-G3-357K ~

File Edit View Search Terminal Help

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

```
mysql> use PHMS2
Database changed
mysql> show tables
+-----+
| Tables_in_PHMS2 |
+-----+
| auth_group       |
| auth_group_permissions |
| auth_permission  |
| auth_user        |
| auth_user_groups |
| auth_user_user_permissions |
| django_admin_log |
| django_content_type |
| django_migrations |
| django_session   |
| main_address     |
| main_citizen     |
| main_co_morbidity |
| main_contact     |
| main_doctor      |
| main_financial_status |
| main_general_health |
| main_hospital    |
| main_insurance   |
| main_scheme      |
| main_traits      |
| main_treatment   |
+-----+
22 rows in set (0.00 sec)

mysql>
```

```
Activities Terminal Sun 21:37 shaunak@shaunak-G3-3572: - 707% 1.79ms
File Edit View Search Terminal Help
main_traits
main_treatment
-----
22 rows in set (0.00 sec)

mysql> select * from main_citizen;
+-----+-----+-----+-----+-----+-----+
| aadhaar | name | gender | address_id | contact_id | email_id |
+-----+-----+-----+-----+-----+-----+
| 150014003000 | Jasprit Bumrah | M | 11 | 11 | jasprit@mi.com |
| 150017005245 | Dinesh Karthik | M | 9 | 9 | dinesh@kkr.com |
| 150065004567 | Rahul tripathi | M | 7 | 7 | rahul@kkr.com |
| 162345674612 | Steve Rogers | M | 2 | 2 | steve@example.com |
| 180054005287 | Shaunak Mahajan | M | 6 | 6 | shaun@gmail.com |
| 185712343214 | Tony Stark | M | 1 | 1 | tony@example.com |
| 196347852142 | John Butler | M | 5 | 5 | john@demo.com |
| 352314511245 | Andre Russel | M | 13 | 13 | andre@kkr.com |
| 965325423656 | Steve Rogers | M | 4 | 4 | steve@example.com |
+-----+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)

mysql> select * from main_hospital;
+-----+-----+-----+-----+-----+-----+
| hospital_id | name | no_of_beds | type_hos | address_id | contact_id |
+-----+-----+-----+-----+-----+-----+
| 1 | Life care Hospital | 20 | Emergency | 3 | 3 |
| 2 | Dhanvantari Hospital | 15 | All medico | 8 | 8 |
| 3 | CIGMA | 50 | All medico | 10 | 10 |
| 4 | Govt. Hospital | 25 | Surgical | 12 | 12 |
| 5 | AIIMS | 500 | All medico | 14 | 14 |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from main_doctor;
+-----+-----+-----+-----+
| doctor_id | specialization | aadhaar_id | hospital_id |
+-----+-----+-----+-----+
| 1 | Orthiology | 965325423656 | 1 |
| 2 | Pathology | 150065004567 | 1 |
| 3 | Dentist | 150014003000 | 3 |
| 4 | Opthomlogist | 352314511245 | 4 |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```