DBMS Lab 1: Database Design: COVID-19 Tracking Information System

Design the E-R diagram to capture the logical data organization for the COVID-19 tracking system described below. Convert the E-R diagram to relational tables.

Upload a pdf file with the E-R diagram and the table definitions to moodle. Credits will be given based on the richness of the design and the number of functionalities that may be supported.

System Description:

A large-scale pandemic creates confusion and leads to the spread of rumors. We would like to build an information system where a user can access verified information about the pandemic. We obtain data from the following sources:

1. Hospitalizations: including patient information including location, symptoms, treatments involved, and healthcare resources used.

2. Self-reporting from affected citizens

3. Testing labs

4. Vaccination centres

5. Social media

The system is supposed to cater to the information need of the following users.

1. Citizens: for information gathering about various facets of the pandemic
2. Healthcare professionals: for patient profile, disease, and symptom tracking
3. Government agencies: for resource mobilization and infrastructure readiness

Various features of the system include – i. reporting the prevalence and progress of the pandemic with time, among various patient profiles, geographical units like districts and states, ii. tracking symptoms and variants that are currently common, iii. use of healthcare resources and inventory management for future readiness, iii. contact tracing, iv. any other functionality that you want to support.
