

DBMS Assignment 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 confusions and leads to spread of rumours. 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 following users.

- A. Citizens: for information gathering about various facets of the pandemic
- B. Healthcare professionals: for patient profile, disease, and symptom tracking
- C. Government agencies: for resource mobilization and infrastructure readiness

Various features of the system include –

- i. reporting the prevalence and progress of 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,
- iv. contact tracing,
- v. any other functionality that you want to support.