

Problem Statement:

Q: Design a system to manage the bed allocation process in many hospitals during COVID times. Many hospitals are involved in this database. Each hospital has its address, registration number which is unique to every hospital and patient availability. If a patient needs to be admitted to a hospital but the patient availability in that hospital is zero, the patients are put to a waiting list. Here, the patient's name, age, address, phone number are taken into account on the basis of first come first serve. Once they are admitted to a hospital, we take in details like patient id (which is unique), P-name, P-age, P-phone.

Many doctors work in a hospital. Each doctor has their unique id (d_id), name, phone no. Each hospital consists of multiple beds.

Each bed is associated with a bed-id, ward no.

Once the bed is allocated to a patient, we take it as a bed-patient.

Here, we take details like the bed-id, patient-id, in-date, out-date.

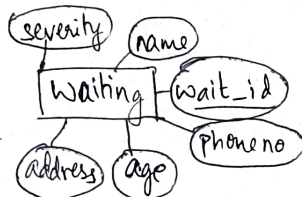
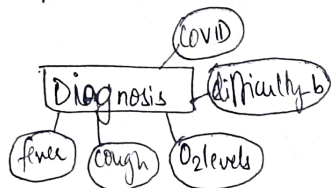
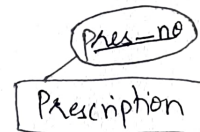
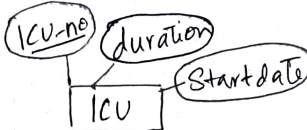
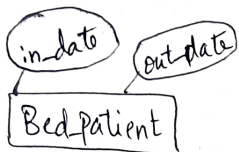
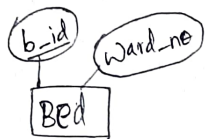
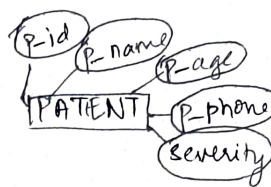
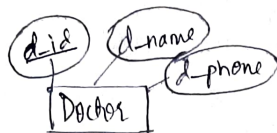
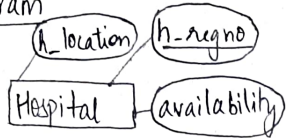
If the severity of the patient's condition is bad, then they might need ICU. For ICU, we take the duration of time the patient was in ICU and their respective start date.

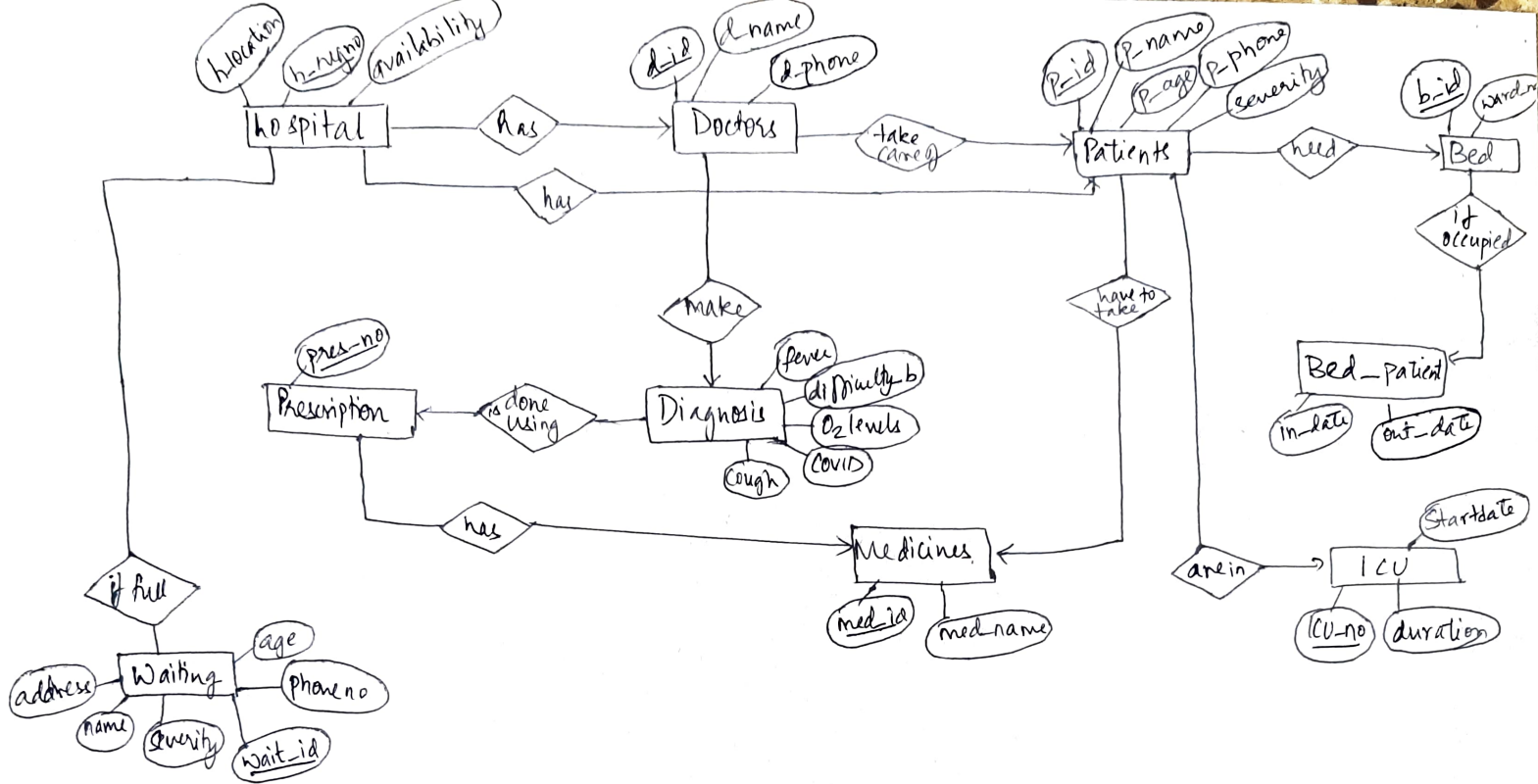
Every doctor does diagnosis on patients. Diagnosis includes whether or not the patient has fever, difficulty breathing, O_2 levels and finally if they are COVID+ve/not. Based on this diagnosis, the patients are prescribed medicines. Every medicine has its unique med-id & also a med-name. Prescription sheets have unique prescription-no.

Entities & their attributes

- ① Hospital (h_location, h_regno, availability)
- ② Doctor (d_id, d_name, d_phone)
- ③ Patient (P_id, P_name, P_age, P_phone, severity)
- ④ Bed (b_id, ward_no)
- ⑤ Bedpatient (in_date, out_date)
- ⑥ ICU (ICU_no, duration, start_date)
- ⑦ Medicine (med_id, med_name)
- ⑧ Prescription (pres_no)
- ⑨ Diagnosis (fever, difficulty_b, O_2 levels, COVID, cough)
- ⑩ Waiting (name, address, age, phone no., severity, Wait_id)

II ER diagram





Complete E-R diagram

Relational Database.

