Problem Statement:

Design a system to manage the bed allocation process in many hospitals across the 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 on a waiting list. Here, the patient's name, age, address, phone number are taken into account based on first come first serve. Once they are admitted to a hospital, we take in details like patient id p_id(which is unique), p_name, p_age, p_phone.

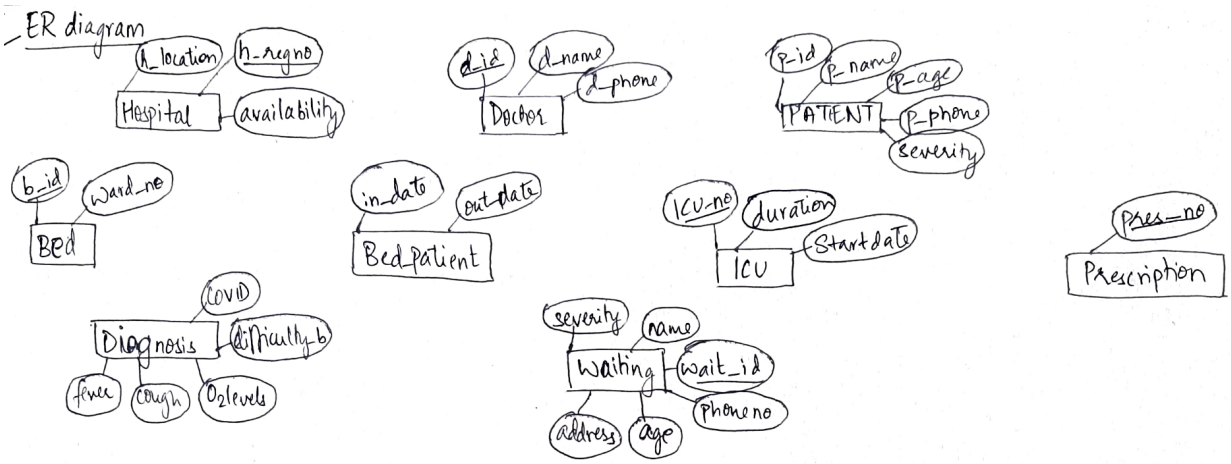
Many doctors work in a hospital. Each doctor has their unique id, name, phone_no. Each hospital consists of multiple beds. Each bed is associated with a bed_id, ward number.

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

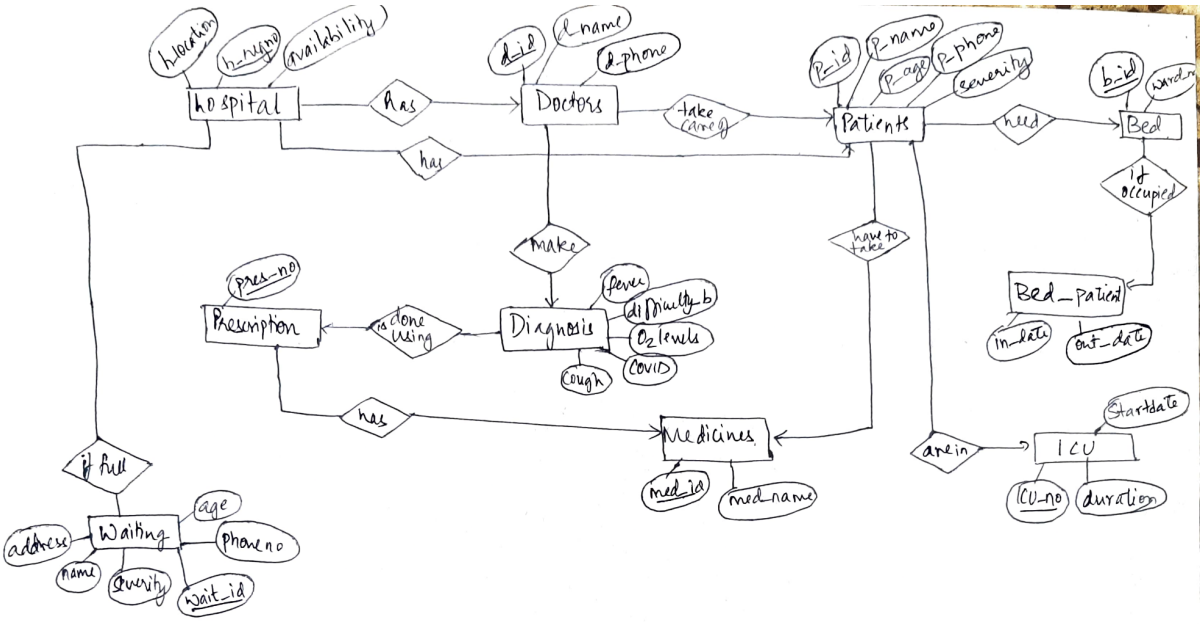
Every doctor does a diagnosis on patients. Diagnosis includes whether or not the patient has fever difficulty breathing o2 levels and finally if they are tested covid +ve or not. Based on this diagnosis the patients are prescribed medicine. Every medicine has its unique med_id and also a med_name. Prescription sheets have unique pres_no.

Stages of ER diagram:

- **Stage 1:** Drawing entities and their attributes



- **Stage 2:** Connecting entities using relationships

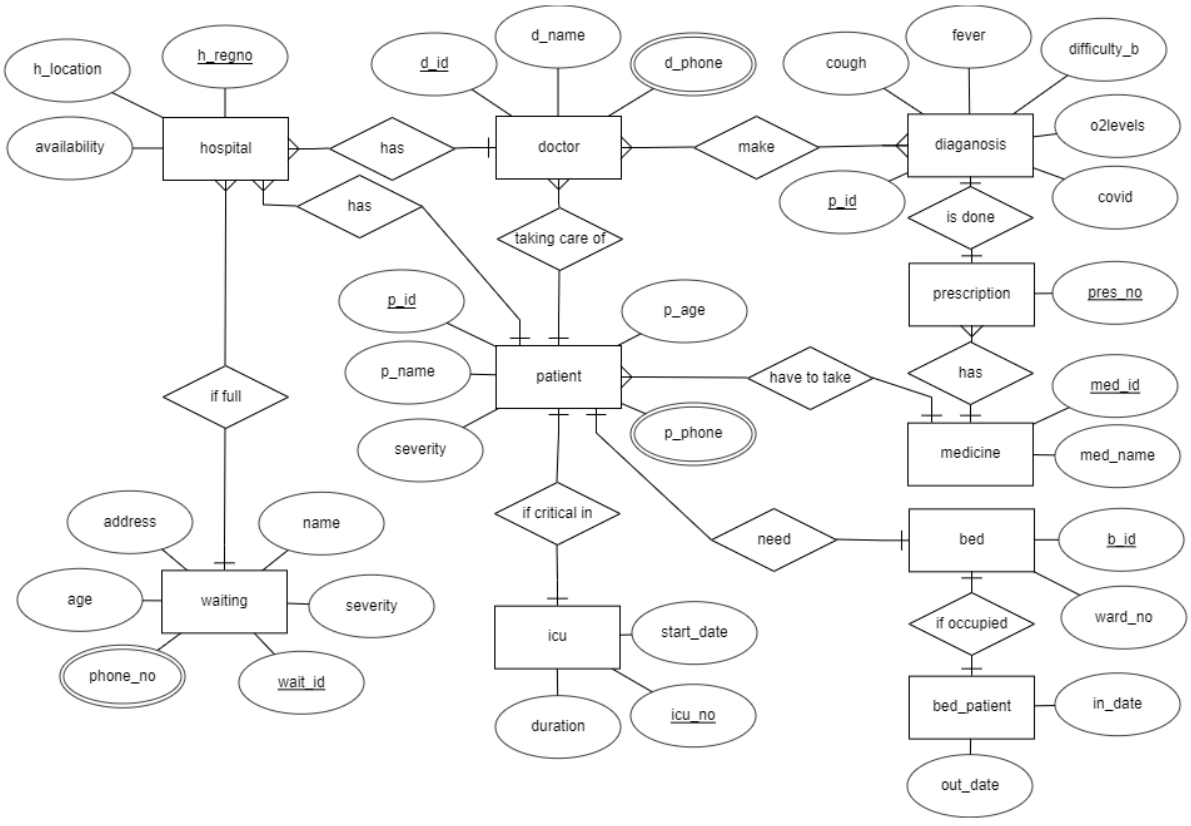


Complete E-R diagram

ER tool used: ERDPlus

A database modeling tool for creating Entity Relationship Diagrams, Relational Schemas, Star Schemas, and SQL statements.
This tool lets us create entities, relations, attributes and edit characteristics for it.
Entities have options of regular, weak, associative, and supertype.
Relationships let us decide if their connecting entities are one or many. This is done by using symbols.
Attributes can be unique or multivalued. The tool accordingly changes the character in the diagram.
This tool is open-source, free to use without signing up.

Final ER diagram:



Contribution:

Anjali Praveen (PES2UG19CS047): Deciding attributes and entities along with their properties. Time spent: 30 minutes
Anusha M S (PES2UG19CS055): Sketch of ER diagrams and briefing problem statement. Time spent: 20 minutes
Apurva Pothumarthi (PES2UG19CS060): Using tools, creating the ER diagram on ERDPlus. Time spent: 20 minutes

The report was done together and took about 1 hour to finish and submit.