

PROJECT PROPOSAL REPORT

ANALYSIS PHASE

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Problem Definition: A hospital database management system is a system that helps manage all operations and workflows in the hospital, like patient registration, subscribing medications, ordering tools from suppliers, bill payment, updating different logs for patients, doctors and nurses, as well as several doctors

I. System Users

All the users can login to the system portal through a username and password that are assigned to them by the hospital system.

- Assign rooms
- Assign doctors
- Assign nurses
- Finalize payments

A. Patient

- Request bills
- Pay bill
- Request for room change

B. Doctor

- Assign medication to patient
- Request CPR
- Request scans
- Request medical analysis
- View his/her schedule

C. Nurse

- View his/her assigned doctor
- Release patient
- Update patient status
- Review patient's next procedure (making scans, going to medic

D. Receptionist

- Add patient
- Remove patient
- Update the information of a certain patient
- Search for a certain patient

E. Logistics

- Add medication
- Remove medication
- Update the information of a certain medication
- Add supplier
- Remove supplier
- Update the information of a certain supplier
- Search for a certain supplier
- Order a certain medication from a certain supplier

II. System Entities

A. Patient

The patients are assigned through registration to a Doctor and a nurse. Also, the patient could reserve a room to stay in. If the patient is not satisfied with the doctor, nurse or the room he could request changing them Request bill Pay bill Change room request Change doctor request Change nurse request

B. Doctor

Each doctor belongs to a certain room. The Doctor can request certain medication for his patient and order the nurse to make sure that the medications are taken with the right dose and the right time. Also, the doctor could request scans, view medical analyses of each patient and view his/her schedule, assign medication to patient, request CPR, request scans, request medical analyses.

C. Nurse

The nurse assists the doctor by giving the medicine to the patients with the right dose and time. She is assigned to a doctor and a patient. She also monitors the patient frequently to update the doctor with the current patient condition. Can View his/her schedule, know the rooms she is assigned to, know the patient she is assigned to, know the doctor she is assigned with, provide the patient with medications.

D. Department

The section at which the Doctor works in. each doctor works in a department of his/her specialization.

E. Room

The location at which the patient chooses to stay in. it has many levels. Each level has its price.

F. Scans

Scans such as MRI, Blood tests and others are requested by the doctor for the patient and it is added to the medical record of the patient to keep track of his/her well-being.

G. Medication

The prescribed medicine the doctor requests for the patient. the medicine usage is administered by the nurse. Also, the logistic team keep track of the medications.

H. Medical Supplies

The tools used by the doctors in the operations. and the medical tools used by the patient during his stay in the hospital. Mainly the logistics team keeps track of the medical supplies.

I. Logistics Employee

Everybody who works in the hospital which basically are the nurses, doctors, receptionists, Logistic teams and others.

J. Receptionist

The receptionists match the patients with the doctor available. The receptionist also assigns rooms and nurses to the patients and handles changing requests. Furthermore, they handle finances in the hospital, add patient, remove patient, update the information of a certain patient, search for a certain patient, assign rooms, assign labs, assign doctors, assign nurses and finalize payments.

III. System Relationships

A. Purchase

A "Medication" is PURCHASEd by a "Logistics Employee" from a "Medication Supplier". All medications have to be purchased by at least one logistics employee from at least one medication supplier. Not each logistics employee has to purchase medications, but the same logistics employee can purchase more than one medication from

more than one medication supplier. Not each medication supplier has to supply medications to logistics employees, but the same medication supplier can supply more than one medication to more than one logistics employee.

B. Prescribe

A "Medication" is PRESCIBed in a "Registration" No, one or many medications can be prescribed per one registration entry. Each medication can be prescribed in more than one registration entry, or not at all.

C. Patient's Admission

In each "Registration", a "Patient" gets admitted. One and only one patient is admitted per one registration entry. However, a patient can be admitted and registered several times as long as it happens at different times.

D. Doctor's Assignment

In each "Registration", a "Doctor" gets assigned. One and only one doctor is assigned per one registration entry. However, not all doctors have to be assigned, and they can be assigned more than once as long as it happens at different times.

E. Room's Assignment

In each "Registration", a "Room" gets assigned. One and only one room is assigned per one registration entry. However, not all rooms have to be assigned, and they can be assigned more than once as long as it happens at different times.

F. Perform Registration

Each "Registration" is performed by one "Receptionist". A registration entry is performed by one and only one receptionist. However, not all receptionists have to perform registrations, and each one can perform more than one registration.

G. Belongs to

- "Doctor" BELONGS TO a "Department": A doctor must belong to one and only one department. A department can have many doctors but at least 1.
- "Nurse" BELONGS TO a "Department": A nurse must belong to one and only one department. A department can have many nurses but at least 1.
- "Room" BELONGS TO a "Department": A room must belong to one and only one department. A department can have many rooms but at least 1.

H. Assigned to

"Nurse" ASSIGNED TO a "Doctor": A nurse must get assigned to one and only one doctor. A doctor can have many nurses assigned to it but at least 1.

I. Order

A "Scan" in a certain "Room" can be ORDERed in a certain "Registration" entry. Not all registration entries order scans in any rooms, but if they do, they can order more than one scan in more than one room. Not all scans have to be ordered in registration

entries, but a single scan can be ordered in more than one registration entry and in more than one room. Not all rooms have to be reserved for scans in registration entries, but a single room can be reserved in more than one registration entry and for more than one scan, as long as it happens at different times.

IV. ER Diagram

