

Business Rule

- The hospital has three types of employees Doctors, Nurses and receptionists.
- The organization wants to store information about each employee working, Attributes of each employee include Employee_id (identifier/key), First_Name, Last_Name, Zip_Number, Phone, Address, Gender, Salary.
- The organization wants to save patients data, Attributes stored about each patient are patient_Id (identifier/key), First_Name, Last_Name, Zip_Number, Address, Gender, Age and the disease they are suffering from.
- This foundation aims to save data about both patient who stay for treatment in hospital rooms like (date of discharge and admission date) and patients who come for regular checkups and examination like admission date as well.
- Each patient could have multiple phone numbers to make contacting him or his family easier.
- We also need to keep track of hospital belongings like:

Equipment: Attributes include Equipment_id (identifier/key), Name, Production_Country, Production_Company, Equipment_price.

Departments: Attributes like Department_name.

Rooms: Attributes include Room_Number, Status.

Medicine: Attributes include Medicine_Name .

Laboratory: Attributes include Lab_number.

Bills: Attributes include bill_Id, Doctor_charges, Room_Charges.

Payment: Attributes include Payment_ID, Status, Type.

- Doctors have various rules, some doctors may work in a laboratory and a laboratory must be worked at by one or many doctors.
- They also Examine out and in patients, Doctors must examine one or more patient and patients must be examined by one or more doctors.
- Doctors must describe one or more medicine and a medicine must be described by one and only one doctor to either in or outpatient while keeping track of the exact quantity described to a certain patient, same medicine could be described to one or many patient.
- A doctor must work in one and only one department and a department must be worked at by one or many doctors.

- Doctors must be helped by one or more nurse and a nurse must help one or more doctor.
- Laboratory must contain one or many equipment and an equipment must exist in one and only one lab.
- A nurse may govern and take care of one or more rooms and a room must be governed by one or many nurses.
- Each inpatient must be assigned a room and a room may be assigned to one patient or an empty one.
- Laboratory keeps track of the analysis number and date and must analyze one or more patient whether he is an in or outpatient and for the inpatient he must be analyzed by one or many doctors for outpatient he may be analyzed by one or many doctors as the outpatient may not need to be analyzed at all.
- Each patient (in or out) must be issued only one bill and a bill must be issued to only one patient (in or out).
- Bill must contain one and only one payment and a payment must be contained in one and only one bill.
- Receptionists must prepare one or many bill, A bill must be prepared by one and only one receptionist.