# Business Rules

1. A person can be a Patient, Doctor, Nurse, or a combination of two or none.
2. A doctor must be assigned to at least one patient, and a patient may have more than one doctor.
3. A doctor must provide at least a service to a patient by at least one treatment.
4. A patient can have more than one treatment serviced by a doctor.
5. Each treatment must be prescribed to at least one patient by a doctor.
6. A doctor must have at least one specialty and a specialty must belong to only one doctor
7. A nurse must be assigned to only one Department and each department must have at least one nurse.
8. A department must be either a pharmacy or care center but not both.
9. A patient must be either a resident or outpatient and can not be both.
10. Each residents must have one bed and a bed must belong to only one resident.
11. A pharmacy must have at least one medicine, and each medicine must belong to only one pharmacy.
12. A care center can have at least one bed and a bed must belong to a care center.
13. A medicine must belong to one treatment and a treatment may have many medicines.

# Relationship Matrix

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Person | Nurse | Doctor | Patient | Resident | Outpatient | Specialty | Services | Treatment | Department | Pharmacy | Care Center | Medicine | Bed |
| Person |  | Can be | Can be | Can be |  |  |  |  |  |  |  |  |  |  |
| Nurse |  |  |  |  |  |  |  | provides |  | assigned |  |  |  |  |
| Doctor |  |  |  |  |  |  | have | provides |  |  |  |  |  |  |
| Patient |  |  |  |  | assigned | assigned |  | receives |  |  |  |  |  |  |
| Resident |  |  |  |  |  |  |  |  |  |  |  |  |  | assigned |
| Outpatient |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Specialty |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Services |  |  |  |  |  |  |  |  | provide |  |  |  |  |  |
| Treatment |  |  |  |  |  |  |  |  |  |  |  |  | contains |  |
| Department |  |  |  |  |  |  |  |  |  |  | contains | contains |  |  |
| Pharmacy |  |  |  |  |  |  |  |  |  |  |  |  | stores |  |
| Care Center |  |  |  |  |  |  |  |  |  |  |  |  |  | have |
| Medicine |  |  |  |  |  |  |  |  | Used for |  |  |  |  |  |
| Bed |  |  |  |  | assigned |  |  |  |  |  |  |  |  |  |

Table 2