**ENTITIES AND ATTRIBUTES:**

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| **ENTITIES** | **ATTRIBUTES** |
| Doctor | DoctorID, First Name, Last Name, Gender, DOB, Email, Specialization, Status, Years of experience, Salary, DOJ, Contact number |
| Department | DeptID, Dept Name, HOD |
| Patient | PatientID, First Name, Last Name, Gender, Medical History, DOB, Contact #, emergency contact number, |
| Appointment | AppointmentID, DoctorID, PatientID, Date & Time, Duration, Status, Prescription, Diagnosis |
| Diagnosis | DiagnosisID, PatientID, DoctorID, Date, Description, Diagnosis Code, Prescriptions |
| Prescription | PrescriptionID, DoctorID, PatientID, Prescription Date, Medication Name, Dosage, Frequency, Prescription Status, Instructions |
| Medical History | MHistory ID, PatientID, Allergies, Current medication , Social History |
| Billing | BillingID, PatientID, DoctorID, AppointmentID, Date, Total Amount, Payment Method. |

**RELATIOSHIPS:**

1. Doctor – Department: Many-to-One
2. Doctor – Patient: Many-to-Many
3. Doctor – Appointment: One-to-Many
4. Patient – Appointment: One-to-Many
5. Patient – Diagnosis: One-to-Many
6. Diagnosis – Prescription: One-to-Many
7. Patient – Prescription: One-to-Many
8. Appointment – Billing: One-to-One
9. Patient – Medical History: One-to-One

**BUSINESS RULES:**

1. Each doctor can be associated with only one department, but a department can have multiple doctors.
2. A doctor can have many patients.
3. A patient can visit multiple doctors.
4. A doctor can have multiple appointments, but an appointment is associated with only one doctor.
5. A patient can have multiple appointments, but an appointment is associated with only one patient.
6. A patient can have one or more diagnoses
7. Each diagnosis is associated with a specific patient.
8. A diagnosis may result in one or more prescriptions.
9. Each prescription is related to a specific diagnosis.
10. A patient can have multiple prescriptions over time, but each prescription is associated with exactly one patient.
11. Each appointment leads to a billing event and each billing event is associated with exactly one appointment.
12. Each patient has a unique medical history that pertains specifically to them.
13. Each medical history record is associated with exactly one patient.