

# **Patient Health Management System**

## **Milestone: Relational Model**

Group: - Data Dynamos

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**Percentage of Effort Contributed by Student1: 33.3%**

**Percentage of Effort Contributed by Student2: 33.3%**

**Percentage of Effort Contributed by Student3: 33.3%**

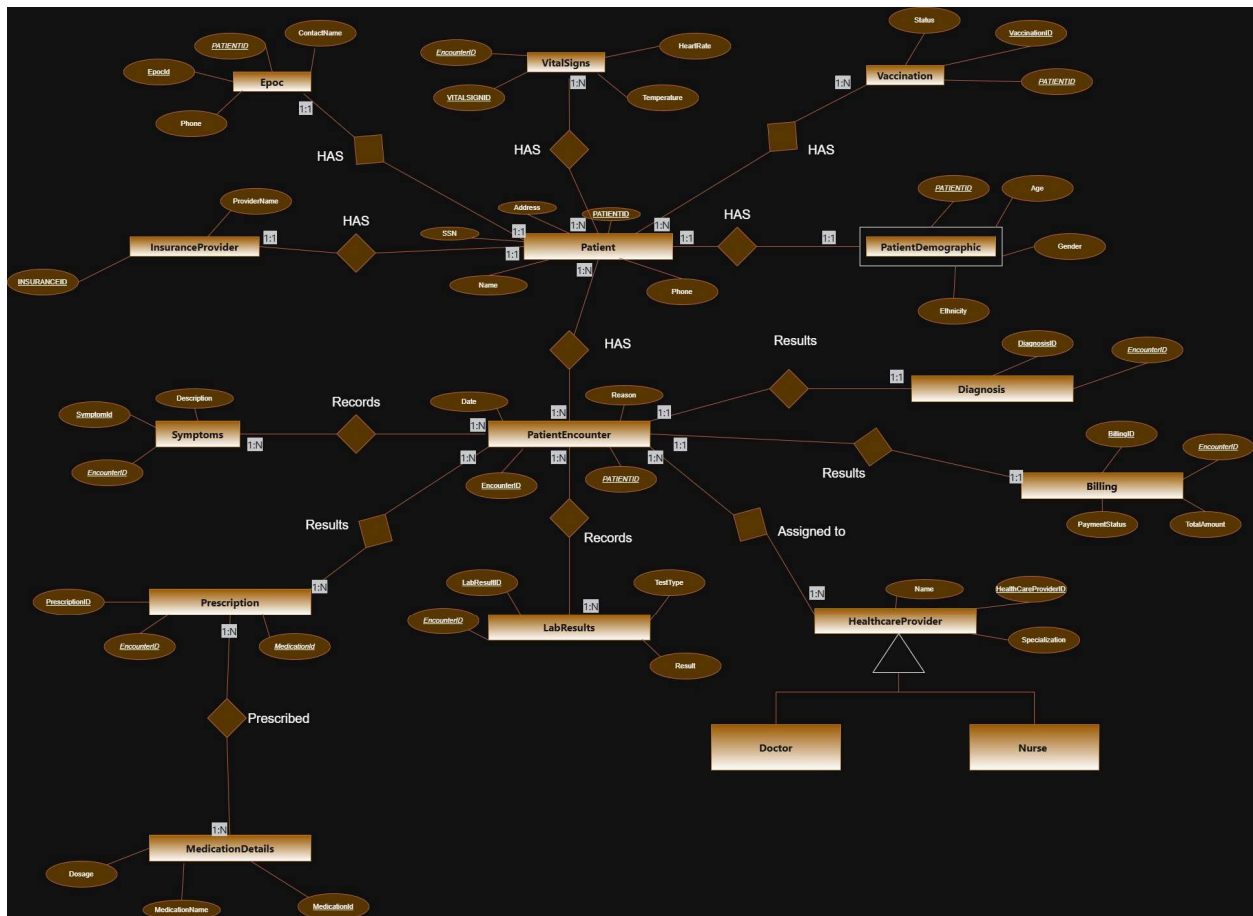
**Signature of Student 1: Muskan Sharma**

**Signature of Student 2: Hemalika Thirumavalavan**

**Signature of Student 3: Mohit Deshpande**

**Submission Date: 27/2/2025**

## EER Diagram



## Relational Model

**Patient** (PatientID , Name, SSN, Address, Phone)

**PatientDemographic** ( *PatientID* , Age, Gender, Ethnicity)

- *PatientID*: foreign key → Patient(*PatientID*)
- Constraints: NULL not allowed, on delete/update cascade

**InsuranceProvider** ( InsuranceID , ProviderName, *PatientID* )

- *PatientID*: foreign key → Patient(*PatientID*)
- Constraints: NULL not allowed, on delete/update cascade

**PatientEmergencyContact** ( *ContactID* , *PatientID* , ContactName, Phone)

- *PatientID*: foreign key → Patient(*PatientID*)
- Constraints: NULL not allowed, on delete cascade

**PatientEncounter ( EncounterID , *PatientID* , Date, Reason)**

- *PatientID*: foreign key → Patient(*PatientID*)  
Constraints: NULL not allowed, on delete cascade

**VitalSigns ( VitalSignID , *EncounterID* , HeartRate, Temperature)**

- *EncounterID*: foreign key → PatientEncounter(*EncounterID*)  
Constraints: NULL not allowed, on delete cascade

**Symptoms ( SymptomID , *EncounterID* , Description)**

- *EncounterID*: foreign key → PatientEncounter(*EncounterID*)  
Constraints: NULL not allowed, on delete cascade

**Diagnosis ( DiagnosisID , *EncounterID* , DiagnosisName)**

- *EncounterID*: foreign key → PatientEncounter(*EncounterID*)  
Constraints: NULL not allowed, on delete cascade

**Prescription ( PrescriptionID , *EncounterID* , *MedicationID* )**

- *EncounterID*: foreign key → PatientEncounter(*EncounterID*)
- *MedicationID*: foreign key → MedicationDetails(*MedicationID*)  
Constraints: NULL not allowed, on delete cascade

**MedicationDetails ( MedicationID , MedicationName, Dosage)**

**LabResults ( LabResultID , *EncounterID* , TestType, Result)**

- *EncounterID*: foreign key → PatientEncounter(*EncounterID*)  
Constraints: NULL not allowed, on delete cascade

**Billing ( BillingID , *EncounterID* , *ServiceID* , PaymentStatus)**

- *EncounterID*: foreign key → PatientEncounter(*EncounterID*)
- *ServiceID*: foreign key → ServiceCharges(*ServiceID*)  
Constraints: NULL not allowed, on delete cascade

**ServiceCharges ( ServiceID , ServiceName, TotalAmount)**

**Vaccination ( VaccinationID , *PatientID* , Status)**

- *PatientID*: foreign key → Patient(*PatientID*)  
Constraints: NULL not allowed, on delete cascade

**HealthcareProvider ( HealthcareProviderID , Name, Specialization)**

**Assignment ( *EncounterID* , *HealthcareProviderID* )**

- *EncounterID*: foreign key → PatientEncounter(*EncounterID*)
- *HealthcareProviderID*: foreign key → HealthcareProvider(*HealthcareProviderID*)  
Constraints: NULL not allowed, on delete cascade

**Doctor ( *HealthcareProviderID* )**

- ***HealthcareProviderID***: foreign key → HealthcareProvider(*HealthcareProviderID*)  
Constraints: NULL not allowed, on delete cascade

**Nurse ( *HealthcareProviderID* )**

- ***HealthcareProviderID***: foreign key → HealthcareProvider(*HealthcareProviderID*)  
Constraints: NULL not allowed, on delete cascade