

HOSPITAL INFORMATION MANAGEMENT SYSTEM



INTRODUCTION

The Hospital Information Management System (HIMS) is a comprehensive solution designed to streamline the administrative, clinical, and financial operations of a hospital, addressing the increasing demands and evolving expectations in healthcare.

Efficient hospital management is crucial as it ensures optimal resource utilization, minimizes operational costs, and enhances the quality of patient care by reducing administrative burdens on healthcare providers.

Additionally, a robust HIMS improves data management and security, ensuring accurate and secure storage of sensitive patient information in compliance with healthcare regulations.

It also facilitates better decision-making through comprehensive data analysis and reporting, enabling informed administrative decisions.



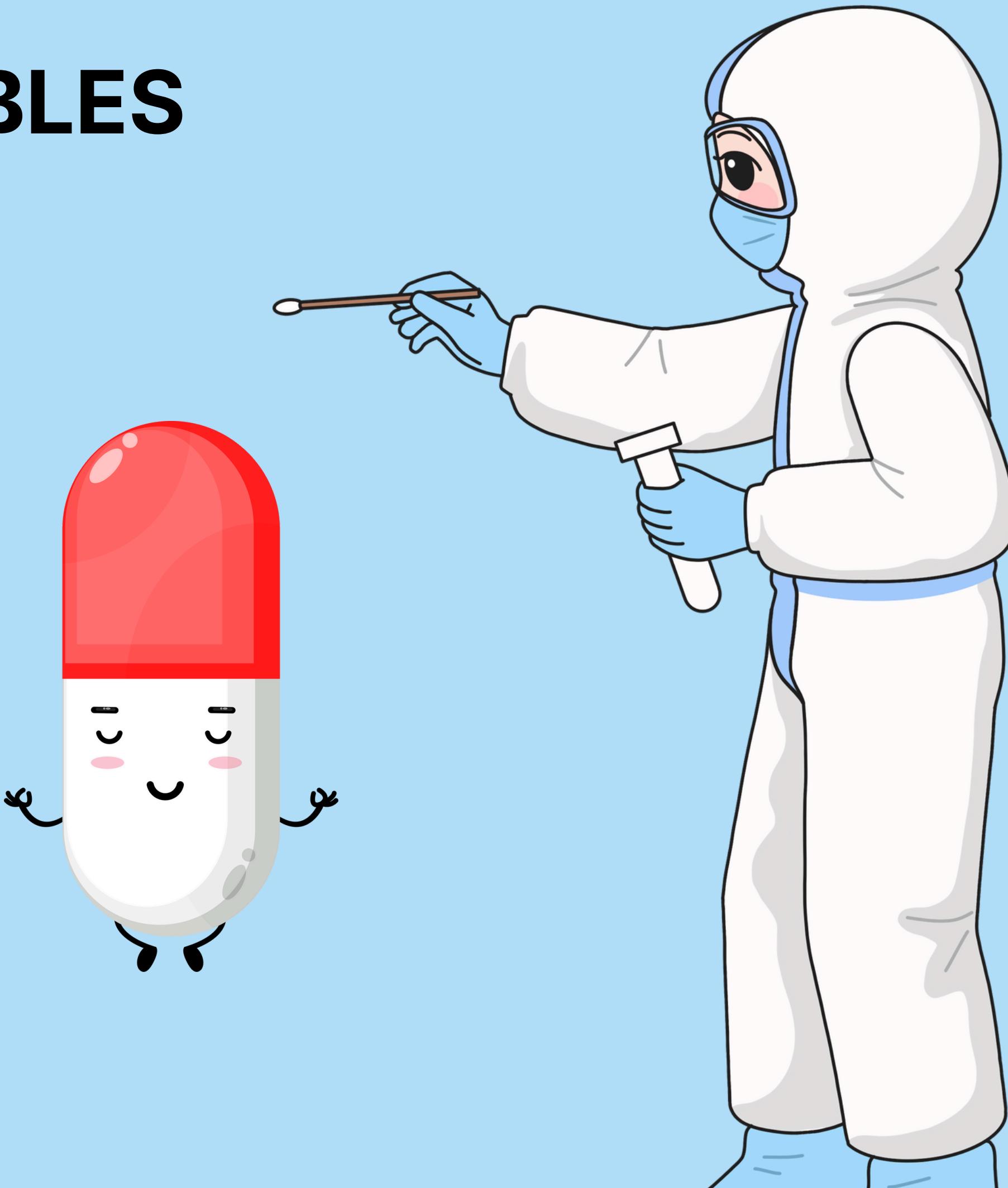
DATABASE TABLES

- Access Rights
- Admission
- Advance
- Application Functionality
- Bed
- Bill
- Charge
- City
- Clinical Note
- Country
- Department
- Discharge
- Doctor
- Gender
- Insurance Company



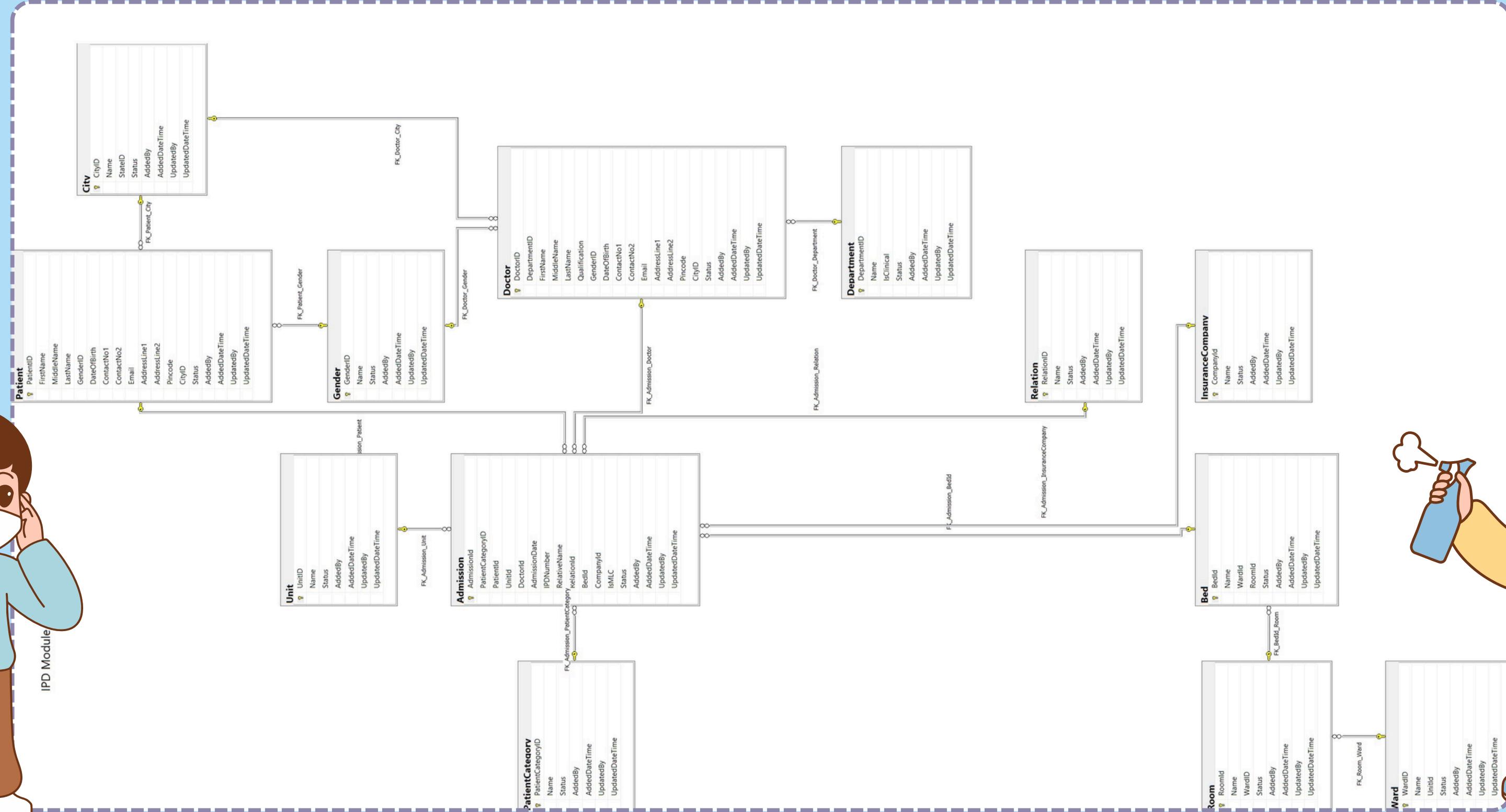
DATABASE TABLES

- Nationality
- Patient
- Patient Category
- Prescription
- Relation
- Room
- Service
- Service Category
- Service Type
- Staff
- State
- Unit
- Users
- Visit
- Ward



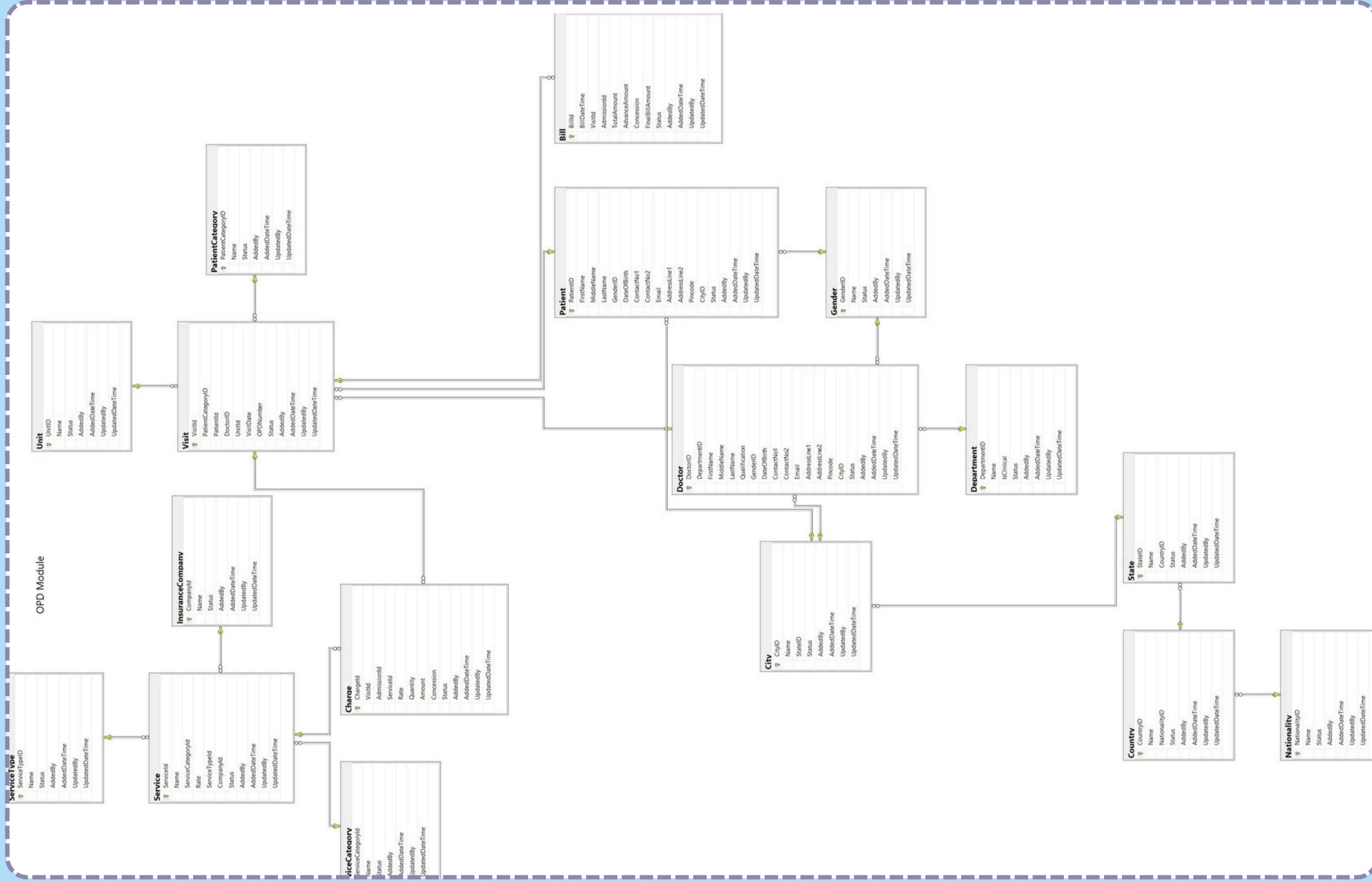
DATABASE DIAGRAM

IN PATIENT DEPARTMENT



DATABASE DIAGRAM

OUT PATIENT DEPARTMENT



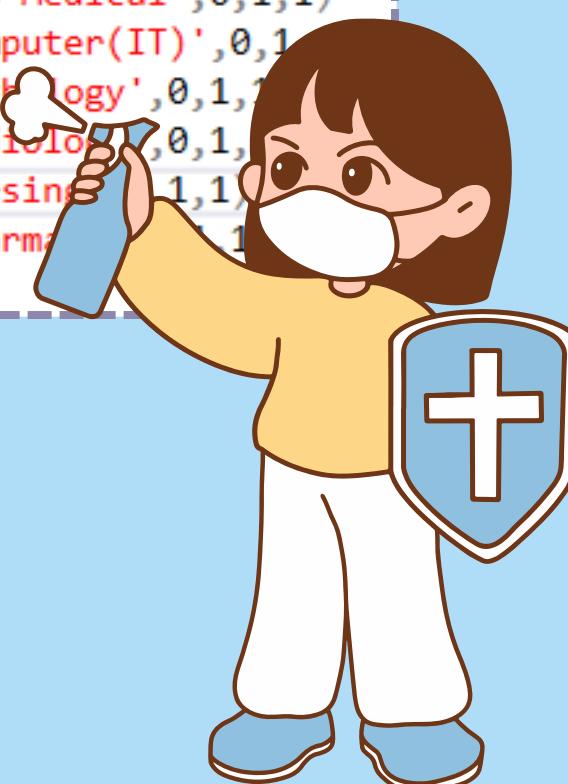
DUMMY DATA INSERTION SNIPPETS

```
declare @MinDeptID INT = (select min(DepartmentID) from Department where IsClinical = 0
declare @MaxDeptID INT = (select max(DepartmentID) from Department where IsClinical = 0

while(@MinDeptID <= @MaxDeptID)
begin
    Declare @i INT = 1
    While(@i <= 10)
    BEGIN
        Insert into Staff(DepartmentID,
        FirstName,
        MiddleName,
        LastName,
        GenderID,
        DateOfBirth,
        ContactNo1,
        ContactNo2,
        Email,
        AddressLine1,
        AddressLine2,
        Pincode,
        CityID,
        AddedBy,
        UpdatedBy
        )
        Values(@MinDeptID,
        'SName-'+Convert(varchar(5),@MinDeptID)+ '-' +convert(varchar(5),@i),
        'SMname-' +convert(varchar(5),@MinDeptID)+ '-' +convert(varchar(5),@i),
        'SLname-' +convert(varchar(5),@MinDeptID)+ '-' +convert(varchar(5),@i),
        (select Top 1 GenderID from Gender order by NEWID() asc),
        (select Getdate()-10000-(select RAND()*(245-10)+10)),
        '1234595011',
        '1234595013',
        'Fname'+convert(varchar(5),@MinDeptID)+ '-' +convert(varchar(5),@i)+ '@gmail.com',
        'Address Line1',
        'Address Line2',
        '3456',
        (select Top 1 cityid from city order by NEWID())),
        1,1)
        set @i = @i + 1
    END
```



```
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Cardiology',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Gynaecology',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Medicine',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Nephrology',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Ophthalmology',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Orthopedic',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Paediatrics',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Physiotherapy',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Neurology',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Surgery',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Dental',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('ENT',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Administration',0,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Reception',0,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Billing',0,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Store',0,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Account',0,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Maintainance',0,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Bio-Medical',0,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Computer(IT)',0,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Pathology',0,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Radiology',0,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Nursing',1,1,1)
Insert Into Department(Name,isClinical,AddedBy,UpdatedBy) Values ('Pharmacy',1,1,1)
GO
```



QUERIES

Q1. Patients details who visited to hospital and their corresponding doctors ?

```
select Visit.VisitDate,visit.OPDNumber,  
CONCAT(patient.Firstname, ' ',Patient.Lastname) AS PatientName,PatientCategory.Name,  
CONCAT(Doctor.FirstName, ' ',Doctor.LastName) As DoctorName,Unit.Name As UnitName  
From Visit  
INNER JOIN Patient On Visit.PatientID = Patient.PatientID  
INNER JOIN PatientCategory On Visit.PatientCategoryID = PatientCategory.PatientCategoryID  
INNER JOIN Doctor on Visit.DoctorID = Doctor.DoctorID  
INNER JOIN Unit On Unit.UnitID = Visit.UnitID;
```

Q2. Number of patients visited to medicine department in 2022 ?

```
Select Count(PatientID) AS [Number OF Patients] From Visit  
INNER JOIN Doctor On Doctor.DoctorID = visit.DoctorID  
LEFT JOIN Department On Doctor.DepartmentID = Department.DepartmentID  
where Year(visit.VisitDate) = 2022 and Department.Name = 'Medicine'
```



QUERIES

Q3. Patients who are visited and Admitted at Cardiology Department

```
Select V.PatientId,A.PatientId from Visit V  
INNER JOIN Admission A ON V.PatientId=A.PatientId  
INNER JOIN Doctor d ON v.DoctorID=D.DoctorID  
INNER JOIN Department dp ON d.DepartmentID=dp.DepartmentID  
INNER JOIN Doctor d1 ON A.DoctorID=d1.DoctorID  
INNER JOIN Department dp1 ON d1.DepartmentID=dp1.DepartmentID  
where Year(VisitDate)=2022 AND dp.Name='Cardiology' AND Year(AmissionDate)=2022 AND dp1.Name='Cardiology'
```



Q4. Patients details based on their diagnosis departments ?

```
select *,R.Name,De.Name From Admission A Inner JOIN Relation R On R.RelationID = A.RelationID  
Inner Join Doctor on Doctor.DoctorID = A.DoctorID  
Inner Join Department De on Doctor.DepartmentID = De.DepartmentID
```





**THANK YOU
VERY MUCH!**