

Pharmacy Inventory System Requirements

The Pharmacy Inventory System is designed to manage the operations of a pharmacy. This includes tracking pharmacies, staff members, medications, inventory, suppliers, patients, prescriptions, and insurance information. The system ensures that each pharmacy is adequately staffed, maintains an accurate inventory of medications, and provides a seamless process for managing patient prescriptions and insurance details. It enforces various constraints to maintain data integrity and relationships among different entities.

Pharmacy (PHARMACY)

Each pharmacy (PHARMACY) has a unique identifier (PharmacyID), a name (PName), an address (PAddress), a phone number (PPhone), and an email (PEmail). The pharmacy has a designated head pharmacist (HEAD_PHARMACIST) who oversees all operations.

Staff (STAFF)

The system tracks staff members (STAFF), each with a unique identifier (StaffID), name (SName), role (SRole), email (SEmail), phone number (SPhone), and work schedule (Schedule). Staff are responsible for various roles within the pharmacy, staff members include, but are not limited to, head pharmacists and cashiers.

Head Pharmacist (HEAD_PHARMACIST)

The head pharmacist is a special role within the staff (STAFF), identified by a unique identifier (StaffID), with additional attributes such as qualifications and date of appointment.

A head pharmacist is assigned to one pharmacy.

Cashier (CASHIER)

The cashier is a special role within the staff (STAFF), identified by a unique identifier (StaffID), with additional attributes such as full-time (FullTime) and part-time (PartTime) status. FullTime and PartTime attributes must be 'Y' or 'N'.

Medication (MEDICATION)

Medications (MEDICATION) are managed with a unique medication code (MedCode), a name (MName), a description (MDesc), dosage form (DosageForm), and cost (MCost). The cost must be non-negative. Medications are classified by a therapeutic class (TClass), which categorizes them based on the type of treatment they provide.

Inventory (INVENTORY)

Inventory details include a unique identifier (InventoryID), medication code (MedCode), quantity on hand (QtyOnHand), reorder level (ReorderLevel), expiration date (ExpDate). Inventory

records are linked to suppliers (SUPPLIER) to track from whom the medication was ordered and to which pharmacy the inventory belongs.

Supplier (SUPPLIER)

Each supplier (SUPPLIER) has a unique identifier (SupplierID), a name (SName), contact information (SContact), and preferred payment terms (PaymentTerms). Suppliers provide the pharmacy with various medications and are essential for maintaining the inventory. The relationship between INVENTORY and SUPPLIER includes an OrderDate (OrderDate) attribute to track the date when the order was placed.

Patient (PATIENT)

The system keeps track of patients (PATIENT) using a unique patient identifier (PatientID), name (PName), address (PAddress), phone (PPhone), and date of birth (PDOB). Patient records also include their insurance provider (INSURANCE), ensuring that all transactions are billed correctly.

Prescription (PRESCRIPTION)

Prescriptions (PRESCRIPTION) are recorded with a unique prescription number (PrescNum), patient identifier (PatientID), medication code (MedCode), dosage instructions (DosageInstr), quantity prescribed (PrescQty), and issue date (PrescDate). Prescriptions detail what medication a patient needs to receive and in what dosage and quantity.

Insurance (INSURANCE)

Insurance details (INSURANCE) include an insurance provider identifier (InsuranceID), patient identifier (PatientID), policy number (PolicyNum), and coverage details (Coverage). The insurance information is necessary for processing prescriptions and determining the costs covered for the patient.

Prescribed In (PRESCRIBED_IN)

The Prescribed In table maintains the many-to-many relationship between prescriptions and medications. The primary key consists of PrescNum and MedCode.

Stored In (STORED_IN)

The Stored In table maintains the many-to-many relationship between inventory and medications. The primary key consists of InventoryID and MedCode.

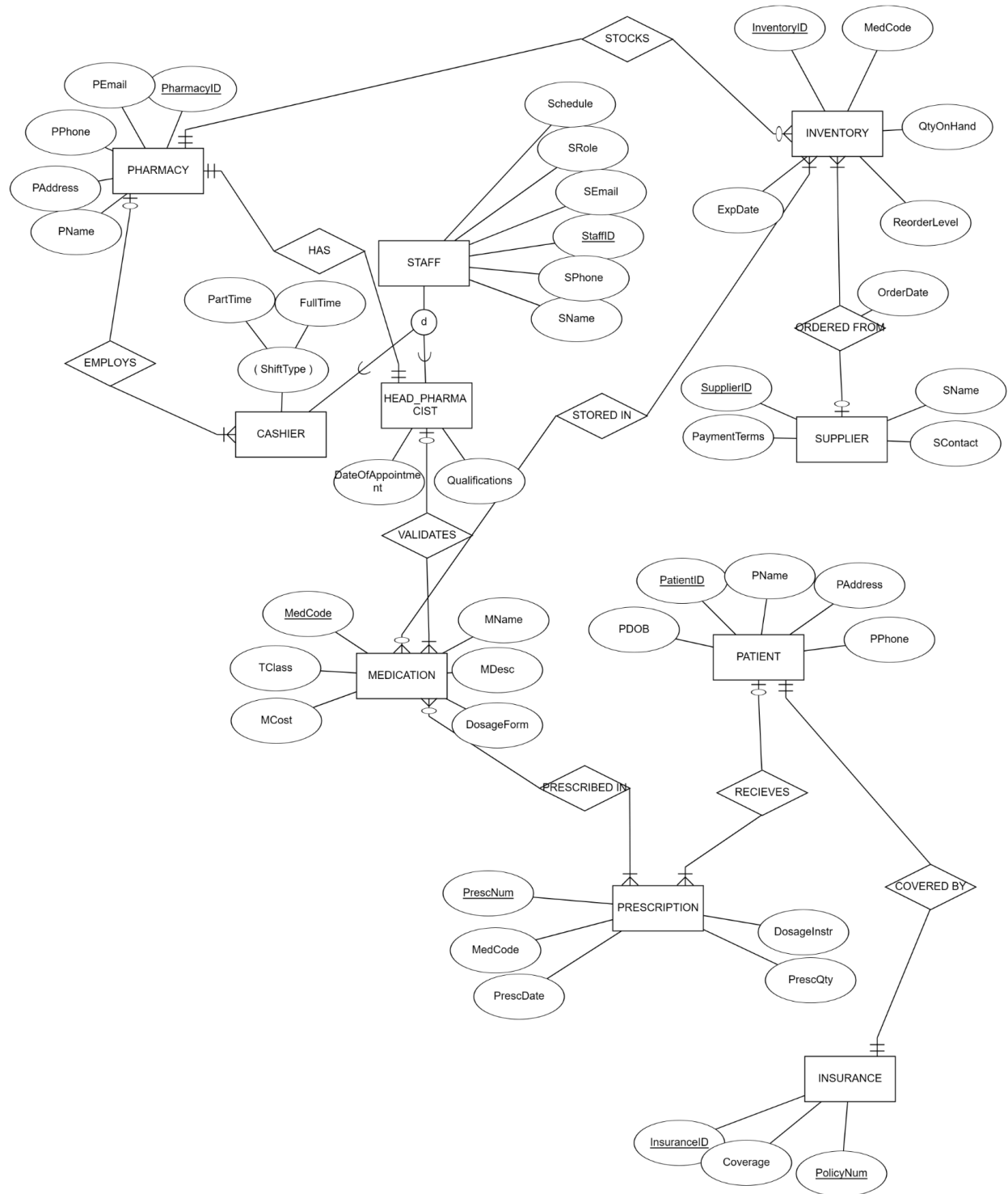


Figure 1: EER Diagram for the system

DROP TABLE PHARMACY CASCADE CONSTRAINTS;

```
CREATE TABLE PHARMACY (  
    PharmacyID INT PRIMARY KEY,  
    PName VARCHAR2(100),  
    PAddress VARCHAR2(200),  
    PPhone VARCHAR2(15),  
    PEmail VARCHAR2(100)  
);  
INSERT INTO PHARMACY (PharmacyID, PName, PAddress, PPhone, PEmail) VALUES (1,  
'Dawakom Pharmacy', '123 St', '123-456-7890', 'Dawakom@gmail.com');  
INSERT INTO PHARMACY (PharmacyID, PName, PAddress, PPhone, PEmail) VALUES (2,  
'Pharmacy One', '456 St', '987-654-3210', 'pharmacyOne@gmail.com');  
INSERT INTO PHARMACY (PharmacyID, PName, PAddress, PPhone, PEmail) VALUES (3, 'Al  
Nada Pharmacy', '789 St', '555-555-5555', 'NadaPharmacy@gmail.com');  
INSERT INTO PHARMACY (PharmacyID, PName, PAddress, PPhone, PEmail) VALUES (4,  
'Bab Heta Pharmacy', '101 St', '222-333-4444', 'BabHetaPharmacy@gmail.com');  
INSERT INTO PHARMACY (PharmacyID, PName, PAddress, PPhone, PEmail) VALUES (5,  
'Hayat Pharmacy', '202 St', '333-444-5555', 'HayatPharmacy@gmail.com');
```

DROP TABLE STAFF CASCADE CONSTRAINTS;

```
CREATE TABLE STAFF (  
    StaffID INT PRIMARY KEY,  
    SName VARCHAR2(100),  
    SRole VARCHAR2(50),  
    SEmail VARCHAR2(100),  
    SPhone VARCHAR2(15),  
    Schedule VARCHAR2(100),  
    PharmacyID INT,  
    FOREIGN KEY (PharmacyID) REFERENCES PHARMACY(PharmacyID) ON DELETE  
CASCADE  
);  
  
INSERT INTO STAFF (StaffID, SName, SRole, SEmail, SPhone, Schedule, PharmacyID)  
VALUES (1, 'Omair Saijary', 'Head_Pharmacist', 'omair@gmail.com', '123-456-7890', 'Sun-Thu  
9-5',1);  
INSERT INTO STAFF (StaffID, SName, SRole, SEmail, SPhone, Schedule, PharmacyID)  
VALUES (2, 'Omar Azab', 'Head_Pharmacist', 'omar@gmail.com', '987-654-3210', 'Sun-Thu  
9-5',2);  
INSERT INTO STAFF (StaffID, SName, SRole, SEmail, SPhone, Schedule, PharmacyID)  
VALUES (3, 'Hazem Abdeen', 'Head_Pharmacist', 'hazem@gmail.com', '555-555-5555',  
'Sun-Thu 9-5',3);
```

```

INSERT INTO STAFF (StaffID, SName, SRole, SEmail, SPhone, Schedule, PharmacyID)
VALUES (4, 'Ibrahim Zraiqa', 'Head_Pharmacist', 'Ibrahim@gmail.com', '222-333-4444',
'Sun-Thu 9-5',4);
INSERT INTO STAFF (StaffID, SName, SRole, SEmail, SPhone, Schedule, PharmacyID)
VALUES (5, 'Basel Abu Abood', 'Head_Pharmacist', 'basel@gmail.com', '333-444-5555',
'Sun-Thu 9-5',5);
INSERT INTO STAFF (StaffID, SName, SRole, SEmail, SPhone, Schedule, PharmacyID)
VALUES (6,'John', 'Cashier', 'john@gmail.com', '555-666-7777', 'Sun-Thu 9-5',2);
INSERT INTO STAFF (StaffID, SName, SRole, SEmail, SPhone, Schedule, PharmacyID)
VALUES (7,'Hasan', 'Cashier', 'hasan@gmail.com', '777-888-9999', 'Sun-tue 12-5',3);
INSERT INTO STAFF (StaffID, SName, SRole, SEmail, SPhone, Schedule, PharmacyID)
VALUES (8,'Ahmad', 'Janitor', 'Ahmad@gmail.com', '999-888-7777', 'Sun-Thu 9-5',4);

```

```

DROP TABLE CASHIER CASCADE CONSTRAINTS;
CREATE TABLE CASHIER (
    StaffID INT PRIMARY KEY,
    SName VARCHAR2(100),
    SRole VARCHAR2(50),
    SEmail VARCHAR2(100),
    SPhone VARCHAR2(15),
    Schedule VARCHAR2(100),
    FullTime CHAR(1) CHECK (FullTime IN ('Y', 'N')),
    PartTime CHAR(1) CHECK (PartTime IN ('Y', 'N')),
    PharmacyID INT,
    FOREIGN KEY (StaffID) REFERENCES STAFF(StaffID) ON DELETE CASCADE,
    FOREIGN KEY (PharmacyID) REFERENCES PHARMACY(PharmacyID) ON DELETE
CASCADE
);

```

```

INSERT INTO CASHIER (StaffID, SName, SRole, SEmail, SPhone, Schedule, FullTime,
PartTime, PharmacyID)
VALUES (6, 'John', 'Cashier', 'john@gmail.com', '555-666-7777', 'Sun-Thu 9-5', 'Y', 'N', 2);

```

```

INSERT INTO CASHIER (StaffID, SName, SRole, SEmail, SPhone, Schedule, FullTime,
PartTime, PharmacyID)
VALUES (7, 'Hasan', 'Cashier', 'hasan@gmail.com', '777-888-9999', 'Sun-tue 12-5', 'N', 'Y', 3);

```

```

DROP TABLE HEAD_PHARMACIST CASCADE CONSTRAINTS;
CREATE TABLE HEAD_PHARMACIST (
    StaffID INT PRIMARY KEY,
    SName VARCHAR2(100),
    SRole VARCHAR2(50),
    SEmail VARCHAR2(100),

```

```

SPhone VARCHAR2(15),
Schedule VARCHAR2(100),
Qualifications VARCHAR2(200),
DateOfAppointment DATE,
PharmacyID INT UNIQUE,
FOREIGN KEY (StaffID) REFERENCES STAFF(StaffID) ON DELETE CASCADE,
FOREIGN KEY (PharmacyID) REFERENCES PHARMACY(PharmacyID) ON DELETE
CASCADE
);

```

```

INSERT INTO HEAD_PHARMACIST (StaffID, SName, SRole, SEmail, SPhone, Schedule,
Qualifications, DateOfAppointment, PharmacyID)
VALUES (1, 'Omair Saijary', 'Head_Pharmacist', 'omair@gmail.com', '123-456-7890', 'Sun-Thu
9-5', 'PhD in Pharmacy', TO_DATE('2020-01-15', 'YYYY-MM-DD'), 1);

```

```

INSERT INTO HEAD_PHARMACIST (StaffID, SName, SRole, SEmail, SPhone, Schedule,
Qualifications, DateOfAppointment, PharmacyID)
VALUES (2, 'Omar Azab', 'Head_Pharmacist', 'omar@gmail.com', '987-654-3210', 'Sun-Thu
9-5', 'PhD in Pharmacy', TO_DATE('2021-06-20', 'YYYY-MM-DD'), 2);

```

```

INSERT INTO HEAD_PHARMACIST (StaffID, SName, SRole, SEmail, SPhone, Schedule,
Qualifications, DateOfAppointment, PharmacyID)
VALUES (3, 'Hazem Abdeen', 'Head_Pharmacist', 'hazem@gmail.com', '555-555-5555',
'Sun-Thu 9-5', 'PhD in Pharmacy', TO_DATE('2021-01-10', 'YYYY-MM-DD'), 3);

```

```

INSERT INTO HEAD_PHARMACIST (StaffID, SName, SRole, SEmail, SPhone, Schedule,
Qualifications, DateOfAppointment, PharmacyID)
VALUES (4, 'Ibrahim Zraiqy', 'Head_Pharmacist', 'ibrahim@gmail.com', '222-333-4444',
'Sun-Thu 9-5', 'PhD in Pharmacy', TO_DATE('2022-02-15', 'YYYY-MM-DD'), 4);

```

```

INSERT INTO HEAD_PHARMACIST (StaffID, SName, SRole, SEmail, SPhone, Schedule,
Qualifications, DateOfAppointment, PharmacyID)
VALUES (5, 'Basel Abu Abood', 'Head_Pharmacist', 'basel@gmail.com', '333-444-5555',
'Sun-Thu 9-5', 'PhD in Pharmacy', TO_DATE('2023-03-01', 'YYYY-MM-DD'), 5);

```

```

DROP TABLE MEDICATION CASCADE CONSTRAINTS;
CREATE TABLE MEDICATION (
    MedCode INT PRIMARY KEY,
    MName VARCHAR2(100),
    MDesc VARCHAR2(200),
    DosageForm VARCHAR2(50),
    MCost DECIMAL(10, 2) NOT NULL CHECK (MCost >= 0),
    TClass VARCHAR2(50)
);

```

```
INSERT INTO MEDICATION (MedCode, MName, MDesc, DosageForm, MCost, TClass)
VALUES (1, 'Paracetamol', 'Pain reliever', 'Tablet', 10.50, 'Analgesic');
```

```
INSERT INTO MEDICATION (MedCode, MName, MDesc, DosageForm, MCost, TClass)
VALUES (2, 'Ibuprofen', 'Anti-inflammatory', 'Tablet', 12.00, 'NSAID');
```

```
INSERT INTO MEDICATION (MedCode, MName, MDesc, DosageForm, MCost, TClass)
VALUES (3, 'Amoxicillin', 'Antibiotic', 'Capsule', 20.00, 'Antibiotic');
```

```
INSERT INTO MEDICATION (MedCode, MName, MDesc, DosageForm, MCost, TClass)
VALUES (4, 'Cough Syrup', 'Cough suppressant', 'Liquid', 15.00, 'Antitussive');
```

```
INSERT INTO MEDICATION (MedCode, MName, MDesc, DosageForm, MCost, TClass)
VALUES (5, 'Vitamin D', 'Supplement', 'Tablet', 8.00, 'Vitamin');
```

```
DROP TABLE SUPPLIER CASCADE CONSTRAINTS;
```

```
CREATE TABLE SUPPLIER (
    SupplierID INT PRIMARY KEY,
    SName VARCHAR2(100),
    SContact VARCHAR2(100),
    PaymentTerms VARCHAR2(100)
);
```

```
INSERT INTO SUPPLIER (SupplierID, SName, SContact, PaymentTerms)
VALUES (1, 'MedSupplies Inc.', 'contact@medsupplies.com', 'Net 30');
```

```
INSERT INTO SUPPLIER (SupplierID, SName, SContact, PaymentTerms)
VALUES (2, 'PharmaCorp', 'info@pharmacorp.com', 'Net 60');
```

```
INSERT INTO SUPPLIER (SupplierID, SName, SContact, PaymentTerms)
VALUES (3, 'HealthFirst', 'support@healthfirst.com', 'Net 45');
```

```
INSERT INTO SUPPLIER (SupplierID, SName, SContact, PaymentTerms)
VALUES (4, 'Wellness Wholesale', 'sales@wellness.com', 'Net 30');
```

```
INSERT INTO SUPPLIER (SupplierID, SName, SContact, PaymentTerms)
VALUES (5, 'CarePlus', 'service@careplus.com', 'Net 60');
```

```
DROP TABLE INVENTORY CASCADE CONSTRAINTS;
```

```
CREATE TABLE INVENTORY (
    InventoryID INT PRIMARY KEY,
```



```
MedCode INT,  
QtyOnHand INT,  
ReorderLevel INT,  
ExpDate DATE,  
OrderDate DATE,  
PharmacyID INT,  
SupplierID INT,  
FOREIGN KEY (MedCode) REFERENCES MEDICATION(MedCode) ON DELETE  
CASCADE,  
FOREIGN KEY (PharmacyID) REFERENCES PHARMACY(PharmacyID) ON DELETE  
CASCADE,  
FOREIGN KEY (SupplierID) REFERENCES SUPPLIER(SupplierID) ON DELETE CASCADE  
);
```

```
INSERT INTO INVENTORY (InventoryID, MedCode, QtyOnHand, ReorderLevel, ExpDate,  
OrderDate, PharmacyID, SupplierID)  
VALUES (1, 1, 100, 20, TO_DATE('2025-12-31', 'YYYY-MM-DD'), TO_DATE('2023-05-01',  
'YYYY-MM-DD'), 1, 1);
```

```
INSERT INTO INVENTORY (InventoryID, MedCode, QtyOnHand, ReorderLevel, ExpDate,  
OrderDate, PharmacyID, SupplierID)  
VALUES (2, 2, 200, 50, TO_DATE('2024-11-30', 'YYYY-MM-DD'), TO_DATE('2023-06-01',  
'YYYY-MM-DD'), 2, 2);
```

```
INSERT INTO INVENTORY (InventoryID, MedCode, QtyOnHand, ReorderLevel, ExpDate,  
OrderDate, PharmacyID, SupplierID)  
VALUES (3, 3, 150, 30, TO_DATE('2023-07-31', 'YYYY-MM-DD'), TO_DATE('2023-07-01',  
'YYYY-MM-DD'), 3, 3);
```

```
INSERT INTO INVENTORY (InventoryID, MedCode, QtyOnHand, ReorderLevel, ExpDate,  
OrderDate, PharmacyID, SupplierID)  
VALUES (4, 4, 80, 20, TO_DATE('2023-09-30', 'YYYY-MM-DD'), TO_DATE('2023-08-01',  
'YYYY-MM-DD'), 4, 4);
```

```
INSERT INTO INVENTORY (InventoryID, MedCode, QtyOnHand, ReorderLevel, ExpDate,  
OrderDate, PharmacyID, SupplierID)  
VALUES (5, 5, 120, 25, TO_DATE('2025-10-31', 'YYYY-MM-DD'), TO_DATE('2023-09-01',  
'YYYY-MM-DD'), 5, 5);
```

```
INSERT INTO INVENTORY (InventoryID, MedCode, QtyOnHand, ReorderLevel, ExpDate,  
OrderDate, PharmacyID, SupplierID)  
VALUES (6, 1, 110, 22, TO_DATE('2026-01-15', 'YYYY-MM-DD'), TO_DATE('2023-10-01',  
'YYYY-MM-DD'), 1, 1);
```

```
INSERT INTO INVENTORY (InventoryID, MedCode, QtyOnHand, ReorderLevel, ExpDate,
OrderDate, PharmacyID, SupplierID)
VALUES (7, 2, 90, 15, TO_DATE('2024-12-01', 'YYYY-MM-DD'), TO_DATE('2023-09-01',
'YYYY-MM-DD'), 2, 2);
```

```
INSERT INTO INVENTORY (InventoryID, MedCode, QtyOnHand, ReorderLevel, ExpDate,
OrderDate, PharmacyID, SupplierID)
VALUES (8, 3, 170, 45, TO_DATE('2023-10-01', 'YYYY-MM-DD'), TO_DATE('2023-06-15',
'YYYY-MM-DD'), 3, 3);
```

```
INSERT INTO INVENTORY (InventoryID, MedCode, QtyOnHand, ReorderLevel, ExpDate,
OrderDate, PharmacyID, SupplierID)
VALUES (9, 4, 65, 18, TO_DATE('2024-11-01', 'YYYY-MM-DD'), TO_DATE('2023-07-20',
'YYYY-MM-DD'), 4, 4);
```

```
INSERT INTO INVENTORY (InventoryID, MedCode, QtyOnHand, ReorderLevel, ExpDate,
OrderDate, PharmacyID, SupplierID)
VALUES (10, 5, 130, 28, TO_DATE('2026-02-28', 'YYYY-MM-DD'), TO_DATE('2023-11-10',
'YYYY-MM-DD'), 5, 5);
```

```
DROP TABLE PATIENT CASCADE CONSTRAINTS;
```

```
CREATE TABLE PATIENT (
    PatientID INT PRIMARY KEY,
    PName VARCHAR2(100),
    PAddress VARCHAR2(200),
    PPhone VARCHAR2(15),
    PDOB DATE
);
```

```
INSERT INTO PATIENT (PatientID, PName, PAddress, PPhone, PDOB) VALUES (1, 'Emily
Clark', '789 Pine St', '123-456-7890', TO_DATE('1990-01-01', 'YYYY-MM-DD'));
INSERT INTO PATIENT (PatientID, PName, PAddress, PPhone, PDOB) VALUES (2, 'Michael
Johnson', '456 Oak St', '987-654-3210', TO_DATE('1985-02-02', 'YYYY-MM-DD'));
INSERT INTO PATIENT (PatientID, PName, PAddress, PPhone, PDOB) VALUES (3, 'Sarah
Davis', '123 Birch St', '555-555-5555', TO_DATE('1995-03-03', 'YYYY-MM-DD'));
INSERT INTO PATIENT (PatientID, PName, PAddress, PPhone, PDOB) VALUES (4, 'David
Martinez', '202 Maple St', '222-333-4444', TO_DATE('2000-04-04', 'YYYY-MM-DD'));
INSERT INTO PATIENT (PatientID, PName, PAddress, PPhone, PDOB) VALUES (5, 'Laura
Lee', '303 Cedar St', '333-444-5555', TO_DATE('1980-05-05', 'YYYY-MM-DD'));
```

```
DROP TABLE PRESCRIPTION CASCADE CONSTRAINTS;
```

```
CREATE TABLE PRESCRIPTION (
```

```
PrescNum INT PRIMARY KEY,  
MedCode INT,  
PatientID INT,  
DosageInstr VARCHAR2(200),  
PrescQty INT,  
PrescDate DATE,  
FOREIGN KEY (MedCode) REFERENCES MEDICATION(MedCode) ON DELETE  
CASCADE,  
FOREIGN KEY (PatientID) REFERENCES PATIENT(PatientID) ON DELETE CASCADE  
);
```

```
INSERT INTO PRESCRIPTION (PrescNum, MedCode, PatientID, DosageInstr, PrescQty,  
PrescDate)  
VALUES (1, 1, 1, 'Take one tablet every 6 hours', 30, TO_DATE('2024-05-01', 'YYYY-MM-DD'));
```

```
INSERT INTO PRESCRIPTION (PrescNum, MedCode, PatientID, DosageInstr, PrescQty,  
PrescDate)  
VALUES (2, 2, 2, 'Take one tablet twice a day', 20, TO_DATE('2024-05-02', 'YYYY-MM-DD'));
```

```
INSERT INTO PRESCRIPTION (PrescNum, MedCode, PatientID, DosageInstr, PrescQty,  
PrescDate)  
VALUES (3, 3, 3, 'Take one capsule every 8 hours', 10, TO_DATE('2024-05-03',  
'YYYY-MM-DD'));
```

```
INSERT INTO PRESCRIPTION (PrescNum, MedCode, PatientID, DosageInstr, PrescQty,  
PrescDate)  
VALUES (4, 4, 4, 'Take 5ml every 4 hours', 25, TO_DATE('2024-05-04', 'YYYY-MM-DD'));
```

```
INSERT INTO PRESCRIPTION (PrescNum, MedCode, PatientID, DosageInstr, PrescQty,  
PrescDate)  
VALUES (5, 5, 5, 'Take one tablet daily', 60, TO_DATE('2024-05-05', 'YYYY-MM-DD'));
```

```
DROP TABLE INSURANCE CASCADE CONSTRAINTS;  
CREATE TABLE INSURANCE (  
InsuranceID INT PRIMARY KEY,  
PatientID INT,  
PolicyNum VARCHAR2(50) UNIQUE,  
Coverage VARCHAR2(200),  
FOREIGN KEY (PatientID) REFERENCES PATIENT(PatientID) ON DELETE CASCADE  
);
```

```
INSERT INTO INSURANCE (InsuranceID, PatientID, PolicyNum, Coverage) VALUES (1, 1,  
'POL12345', 'Full Coverage');
```

```
INSERT INTO INSURANCE (InsuranceID, PatientID, PolicyNum, Coverage) VALUES (2, 2, 'POL23456', 'Partial Coverage');
INSERT INTO INSURANCE (InsuranceID, PatientID, PolicyNum, Coverage) VALUES (3, 3, 'POL34567', 'Full Coverage');
INSERT INTO INSURANCE (InsuranceID, PatientID, PolicyNum, Coverage) VALUES (4, 4, 'POL45678', 'Full Coverage');
INSERT INTO INSURANCE (InsuranceID, PatientID, PolicyNum, Coverage) VALUES (5, 5, 'POL56789', 'No Coverage');
```

```
DROP TABLE PRESCRIBED_IN CASCADE CONSTRAINTS;
CREATE TABLE PRESCRIBED_IN (
    PrescNum INT,
    MedCode INT,
    PRIMARY KEY (PrescNum, MedCode),
    FOREIGN KEY (PrescNum) REFERENCES PRESCRIPTION(PrescNum) ON DELETE CASCADE,
    FOREIGN KEY (MedCode) REFERENCES MEDICATION(MedCode) ON DELETE CASCADE
);
```

```
INSERT INTO PRESCRIBED_IN (PrescNum, MedCode) VALUES (1, 1);
INSERT INTO PRESCRIBED_IN (PrescNum, MedCode) VALUES (2, 2);
INSERT INTO PRESCRIBED_IN (PrescNum, MedCode) VALUES (3, 3);
INSERT INTO PRESCRIBED_IN (PrescNum, MedCode) VALUES (4, 4);
INSERT INTO PRESCRIBED_IN (PrescNum, MedCode) VALUES (5, 5);
```

```
DROP TABLE STORED_IN CASCADE CONSTRAINTS;
CREATE TABLE STORED_IN (
    InventoryID INT,
    MedCode INT,
    PRIMARY KEY (InventoryID, MedCode),
    FOREIGN KEY (InventoryID) REFERENCES INVENTORY(InventoryID) ON DELETE CASCADE,
    FOREIGN KEY (MedCode) REFERENCES MEDICATION(MedCode) ON DELETE CASCADE
);
```

```
INSERT INTO STORED_IN (InventoryID, MedCode) VALUES (1, 1);
INSERT INTO STORED_IN (InventoryID, MedCode) VALUES (2, 2);
INSERT INTO STORED_IN (InventoryID, MedCode) VALUES (3, 3);
INSERT INTO STORED_IN (InventoryID, MedCode) VALUES (4, 4);
INSERT INTO STORED_IN (InventoryID, MedCode) VALUES (5, 5);
```

```
COMMIT;
```

```
UPDATE STAFF
SET SEmail = 'Hazem_Abdeen@gmail.com', SPhone = '555-000-1234'
WHERE StaffID = 3;
```

```
SELECT Semail,SPhone FROM staff
WHERE staffID = 3;
```

SEMAIL	SPHONE
Hazem_Abdeen@gmail.com	555-000-1234

```
UPDATE PHARMACY
SET PAddress = 'New Address 456 St', PPhone = '999-888-7777'
WHERE PharmacyID = 2;
```

```
SELECT PAddress, PPhone FROM Pharmacy
WHERE PharmacyID=2;
```

PADDRESS	PPHONE
New Address 456 St	999-888-7777

```
UPDATE PATIENT
SET PAddress = 'Updated Address 123', PPhone = '111-222-3333'
WHERE PatientID = 1;
```

```
SELECT PAddress, PPhone FROM Patient
WHERE PatientID = 1;
```

PADDRESS	PPHONE
Updated Address 123	111-222-3333

```
UPDATE MEDICATION
SET MCost = 9.50, MDesc = 'Updated Supplement Description'
WHERE MedCode = 5;
```

```
SELECT MCost, MDesc FROM Medication
WHERE MedCode = 5;
```

MCOST	MDESC
9.5	Updated Supplement Description

```
UPDATE INSURANCE
SET PolicyNum = 'NEWPOL3333', Coverage = 'Extended Full Coverage'
WHERE InsuranceID = 3;
```

```
SELECT PolicyNum, Coverage FROM Insurance
WHERE InsuranceID = 3;
```

POLICYNUM	COVERAGE
NEWPOL3333	Extended Full Coverage

```
DELETE FROM STAFF
WHERE StaffID = 8;
```

```
SELECT * FROM STAFF
WHERE StaffID = 8;
```

```
DELETE FROM PHARMACY
WHERE PharmacyID = 5;
```

```
SELECT * FROM PHARMACY
WHERE PharmacyID = 5;
```

```
SELECT S.StaffID, S.SName, P.PName AS PharmacyName
FROM STAFF S
JOIN PHARMACY P ON S.PharmacyID = P.PharmacyID;
```

STAFFID	SNAME	PHARMACYNAME
1	Omar Saijary	Dawakom Pharmacy
2	Omar Azab	Pharmacy One
3	Hazem Abdeen	Al Nada Pharmacy
4	Ibrahim Zraiqy	Bab Heta Pharmacy
6	John	Pharmacy One
7	Hasan	Al Nada Pharmacy

```

SELECT I.InventoryID, I.QtyOnHand, M.MName AS MedicationName, M.DosageForm
FROM INVENTORY I
JOIN MEDICATION M ON I.MedCode = M.MedCode;

```

INVENTORYID	QTYONHAND	MEDICATIONNAME	DOSAGEFORM
1	100	Paracetamol	Tablet
2	200	Ibuprofen	Tablet
3	150	Amoxicillin	Capsule
4	80	Cough Syrup	Liquid
6	110	Paracetamol	Tablet
7	90	Ibuprofen	Tablet
8	170	Amoxicillin	Capsule
9	65	Cough Syrup	Liquid

```

SELECT P.PrescNum, P.DosageInstr, PT.PName AS PatientName, PT.PPhone
FROM PRESCRIPTION P
JOIN PATIENT PT ON P.PatientID = PT.PatientID;

```

PRESCNUM	DOSAGEINSTR	PATIENTNAME	PPHONE
1	Take one tablet every 6 hours	Emily Clark	111-222-3333
2	Take one tablet twice a day	Michael Johnson	987-654-3210
3	Take one capsule every 8 hours	Sarah Davis	555-555-5555
4	Take 5ml every 4 hours	David Martinez	222-333-4444
5	Take one tablet daily	Laura Lee	333-444-5555

```

SELECT P.PrescNum, P.DosageInstr, M.MName AS MedicationName
FROM PRESCRIPTION P
JOIN MEDICATION M ON P.MedCode = M.MedCode;

```

PRESCNUM	DOSAGEINSTR	MEDICATIONNAME
1	Take one tablet every 6 hours	Paracetamol
2	Take one tablet twice a day	Ibuprofen
3	Take one capsule every 8 hours	Amoxicillin
4	Take 5ml every 4 hours	Cough Syrup
5	Take one tablet daily	Vitamin D

```

SELECT I.InsuranceID, I.PolicyNum, I.Coverage, PT.PName AS PatientName
FROM INSURANCE I
JOIN PATIENT PT ON I.PatientID = PT.PatientID;

```


INSURANCEID	POLICYNUM	COVERAGE	PATIENTNAME
1	POL12345	Full Coverage	Emily Clark
2	POL23456	Partial Coverage	Michael Johnson
3	NEWPOL3333	Extended Full Coverage	Sarah Davis
4	POL45678	Full Coverage	David Martinez
5	POL56789	No Coverage	Laura Lee

```

SELECT S.SName AS SupplierName, AVG(M.MCost) AS AverageMedicationCost
FROM INVENTORY I
JOIN MEDICATION M ON I.MedCode = M.MedCode
JOIN SUPPLIER S ON I.SupplierID = S.SupplierID
GROUP BY S.SName;

```

SUPPLIERNAME	AVERAGEMEDICATIONCOST
PharmaCorp	12
MedSupplies Inc.	10.5
HealthFirst	20
Wellness Wholesale	15

```

SELECT P.PName AS PharmacyName, COUNT(S.StaffID) AS NumberOfStaff
FROM STAFF S
JOIN PHARMACY P ON S.PharmacyID = P.PharmacyID
GROUP BY P.PName;

```

PHARMACYNAME	NUMBEROFSTAFF
Pharmacy One	2
Bab Heta Pharmacy	1
Dawakom Pharmacy	1
Al Nada Pharmacy	2

```

SELECT M.MName AS MedicationName, SUM(I.QtyOnHand) AS TotalQuantity
FROM INVENTORY I
JOIN MEDICATION M ON I.MedCode = M.MedCode
GROUP BY M.MName;

```

MEDICATIONNAME	TOTALQUANTITY
Amoxicillin	320
Ibuprofen	290
Paracetamol	210
Cough Syrup	145

```

COMMIT;

```