

PLP ACADEMY DATABASE ASSIGNMENT

WEEK 8

SCHEMA DESIGN

CREATE TABLE Regions (

RegionID INT PRIMARY KEY,

RegionName VARCHAR(100),

Population INT

);

CREATE TABLE HealthCenters (

HealthCenterID INT PRIMARY KEY,

Name VARCHAR(100),

RegionID INT,

ServicesAvailable TEXT,

FOREIGN KEY (RegionID) REFERENCES Regions(RegionID)

);

CREATE TABLE Mothers (

MotherID INT PRIMARY KEY,

Name VARCHAR(100),

Age INT,

RegionID INT,

HealthCenterID INT,

FOREIGN KEY (RegionID) REFERENCES Regions(RegionID),

FOREIGN KEY (HealthCenterID) REFERENCES HealthCenters(HealthCenterID)

);

```
CREATE TABLE HealthInterventions (  
    InterventionID INT PRIMARY KEY,  
    MotherID INT,  
    Date DATE,  
    Type VARCHAR(100),  
    HealthCenterID INT,  
    FOREIGN KEY (MotherID) REFERENCES Mothers(MotherID),  
    FOREIGN KEY (HealthCenterID) REFERENCES HealthCenters(HealthCenterID)  
);
```

```
CREATE TABLE Outcomes (  
    OutcomeID INT PRIMARY KEY,  
    MotherID INT,  
    Date DATE,  
    OutcomeType VARCHAR(100),  
    Notes TEXT,  
    FOREIGN KEY (MotherID) REFERENCES Mothers(MotherID)  
);
```

SAMPLE DATA

INSERT INTO Regions (RegionID, RegionName, Population) VALUES

(1, 'Rural Area 1', 500000),
(2, 'Urban Area 1', 1000000);

INSERT INTO HealthCenters (HealthCenterID, Name, RegionID, ServicesAvailable) VALUES

(1, 'Rural Clinic A', 1, 'Basic maternal care, Vaccinations'),
(2, 'Urban Hospital B', 2, 'Comprehensive maternal care, Emergency services');

INSERT INTO Mothers (MotherID, Name, Age, RegionID, HealthCenterID) VALUES

(1, 'Zoe Dube', 28, 1, 1),
(2, 'Buhle Sibanda', 32, 2, 2);

INSERT INTO HealthInterventions (InterventionID, MotherID, Date, Type, HealthCenterID) VALUES

(1, 1, '2024-01-10', 'Prenatal Checkup', 1),
(2, 2, '2024-02-14', 'Emergency Delivery', 2);

INSERT INTO Outcomes (OutcomeID, MotherID, Date, OutcomeType, Notes) VALUES

(1, 1, '2024-03-01', 'Healthy Baby', 'No complications'),
(2, 2, '2024-04-12', 'Complications', 'Required C-section');

RETRIEVE THE NUMBER OF MOTHERS PER REGION

SELECT r.RegionName, COUNT(m.MotherID) AS NumberOfMothers

FROM Mothers m

JOIN Regions r ON m.RegionID = r.RegionID

GROUP BY r.RegionName;

RETRIEVE INTERVENTIONS BY HEALTH CENTRE

```
SELECT h.Name,  
COUNT(i.InterventionID) AS NumberOfInterventions  
FROM HealthInterventions i  
JOIN HealthCenters h ON  
i.HealthCenterID =  
h.HealthCenterID  
GROUP BY h.Name;
```

ANALYZE MATERNAL OUTCOMES BY REGION

```
SELECT r.RegionName, o.OutcomeType, COUNT(o.OutcomeID) AS OutcomeCount  
FROM Outcomes o  
JOIN Mothers m ON o.MotherID = m.MotherID  
JOIN Regions r ON m.RegionID = r.RegionID  
GROUP BY r.RegionName, o.OutcomeType;
```