**DDL**

**-- Create Table: Defines a table named 'Employees' with columns for employee information.**

**CREATE TABLE Employees (**

**EmployeeID INT PRIMARY KEY,**

**FirstName VARCHAR(50),**

**LastName VARCHAR(50),**

**DepartmentID INT,**

**CONSTRAINT FK\_Department FOREIGN KEY (DepartmentID) REFERENCES Departments(DepartmentID)**

**);**

**-- Create View: Creates a view named 'EmployeeDetails' that combines data from 'Employees' and 'Departments'.**

**CREATE VIEW EmployeeDetails AS**

**SELECT EmployeeID, FirstName, LastName, DepartmentName**

**FROM Employees**

**JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID;**

**-- Create Index: Creates an index on the 'LastName' column of the 'Employees' table for faster retrieval.**

**CREATE INDEX IX\_EmployeeLastName ON Employees(LastName);**

**-- Create Sequence: Defines a sequence named 'EmployeeID\_Seq' to generate unique employee IDs.**

**CREATE SEQUENCE EmployeeID\_Seq START WITH 1 INCREMENT BY 1;**

**-- Create Synonym: Establishes a synonym 'Emp' for the 'Employees' table for simplified referencing.**

**CREATE SYNONYM Emp FOR Employees;**

**-- Add Check Constraint: Enforces a check constraint on the 'Salary' column to ensure it is greater than or equal to 30000.**

**ALTER TABLE Employees**

**ADD CONSTRAINT CHK\_Salary CHECK (Salary >= 30000);**

**-- Add Unique Constraint: Adds a unique constraint to ensure each 'EmployeeID' in the 'Employees' table is unique.**

**ALTER TABLE Employees**

**ADD CONSTRAINT UQ\_EmployeeID UNIQUE (EmployeeID);**

**-- Add Default Constraint: Sets a default value 'Active' for the 'Status' column in the 'Employees' table.**

**ALTER TABLE Employees**

**ALTER COLUMN Status SET DEFAULT 'Active';**

**-- Create Unique Index: Creates a unique index on the 'DepartmentName' column of the 'Departments' table.**

**CREATE UNIQUE INDEX UQ\_Index\_DepartmentName ON Departments(DepartmentName);**

**-- Create Foreign Key Constraint: Establishes a foreign key constraint on the 'ManagerID' column in the 'Employees' table.**

**ALTER TABLE Employees**

**ADD CONSTRAINT FK\_Manager FOREIGN KEY (ManagerID) REFERENCES Employees(EmployeeID);**