CREATE DATABASE QLChungCu

GO

USE QLChungCu

GO

CREATE TABLE NguoiQuanLy(

IDNguoiQuanLy VARCHAR(30) PRIMARY KEY NOT NULL,

TenNguoiQuanLy NVARCHAR(100) NOT NULL,

NgaySinh DATE,

SDTNguoiQuanLy VARCHAR(12))

GO

CREATE TABLE Admin(

IDAdmin VARCHAR(30) PRIMARY KEY NOT NULL,

TenAdmin NVARCHAR(200) NOT NULL

)

GO

CREATE TABLE CuDan (

IDCuDan VARCHAR(30) PRIMARY KEY NOT NULL,

TenCuDan NVARCHAR(200) NOT NULL,

NgaySinh DATE,

GioiTinh NVARCHAR(50),

GiayToTuyThan VARCHAR(50) NOT NULL,

SoCanHo VARCHAR(20) NOT NULL,

IDNguoiQuanLy VARCHAR(30) NOT NULL,

FOREIGN KEY (IDNguoiQuanLy) REFERENCES NguoiQuanLy(IDNguoiQuanLy)

);

GO

CREATE TABLE TaiKhoan (

IDTaiKhoan VARCHAR(30) PRIMARY KEY NOT NULL,

MatKhau VARCHAR(50) NOT NULL,

QuyenHan NVARCHAR(50) NOT NULL,

Avatar NVARCHAR(MAX),

IDNguoiQuanLy VARCHAR(30),

IDAdmin VARCHAR(30),

IDCuDan VARCHAR(30)

FOREIGN KEY (IDNguoiQuanLy) REFERENCES NguoiQuanLy(IDNguoiQuanLy),

FOREIGN KEY (IDAdmin) REFERENCES Admin(IDAdmin),

FOREIGN KEY (IDCuDan) REFERENCES CuDan(IDCuDan)

);

GO

CREATE TRIGGER trg\_AfterInsertNguoiQuanLy

ON NguoiQuanLy

AFTER INSERT

AS

BEGIN

INSERT INTO TaiKhoan (IDTaiKhoan, MatKhau, QuyenHan, Avatar, IDNguoiQuanLy)

SELECT

IDNguoiQuanLy,

'123456',

N'Quản lý',

'https://uploads.commoninja.com/searchengine/wordpress/user-avatar-reloaded.png',

IDNguoiQuanLy

FROM INSERTED

WHERE NOT EXISTS (SELECT 1 FROM TaiKhoan WHERE IDTaiKhoan = INSERTED.IDNguoiQuanLy);

END;

GO

GO

INSERT INTO NguoiQuanLy (IDNguoiQuanLy, TenNguoiQuanLy, NgaySinh, SDTNguoiQuanLy)

VALUES

('quanly01', N'Lê Thị B', '1990-11-25', '0912345678'),

('quanly02', N'Nguyễn Tiến D', '1989-5-10', '0987654321'),

('quanly03', N'Phạm Tiến A', '1985-10-15', '0134879543');

GO

CREATE TRIGGER trg\_AfterInsertAdmin

ON Admin

AFTER INSERT

AS

BEGIN

INSERT INTO TaiKhoan (IDTaiKhoan, MatKhau, QuyenHan, Avatar, IDAdmin)

SELECT

IDAdmin,

'123456',

N'Admin',

'https://uploads.commoninja.com/searchengine/wordpress/user-avatar-reloaded.png',

IDAdmin

FROM INSERTED

WHERE NOT EXISTS (SELECT 1 FROM TaiKhoan WHERE IDTaiKhoan = INSERTED.IDAdmin);

END;

GO

INSERT INTO Admin (IDAdmin, TenAdmin)

VALUES

('admin01', N'Nguyễn Văn A')

GO

CREATE TRIGGER trg\_AfterInsertCuDan

ON CuDan

AFTER INSERT

AS

BEGIN

INSERT INTO TaiKhoan (IDTaiKhoan, MatKhau, QuyenHan, Avatar, IDCuDan)

SELECT

IDCuDan,

'123456',

N'Cư dân',

'https://uploads.commoninja.com/searchengine/wordpress/user-avatar-reloaded.png',

IDCuDan

FROM INSERTED

WHERE NOT EXISTS (SELECT 1 FROM TaiKhoan WHERE IDTaiKhoan = INSERTED.IDCuDan);

END;

GO

INSERT INTO CuDan (IDCuDan, TenCuDan, NgaySinh, GioiTinh, GiayToTuyThan, SoCanHo, IDNguoiQuanLy)

VALUES

('cda101-1', N'Nguyễn Văn A', '1985-06-15', N'Nam', 'CMND123456', 'A101', 'quanly01'),

('cda101-2', N'Nguyễn Thị B', '1990-09-10', N'Nữ', 'CMND123457', 'A101', 'quanly01'),

('cda102-1', N'Phạm Văn C', '1978-03-20', N'Nam', 'CMND123458', 'A102', 'quanly01'),

('cda102-2', N'Nguyễn Thị D', '1982-01-25', N'Nữ', 'CMND123459', 'A102', 'quanly01'),

('cda103-1', N'Nguyễn Minh E', '1995-11-05', N'Nam', 'CMND123460', 'A103', 'quanly01'),

('cda103-2', N'Phan Thị F', '1993-04-17', N'Nữ', 'CMND123461', 'A103', 'quanly01'),

('cda201-1', N'Nguyễn Hoàng G', '1980-07-12', N'Nam', 'CMND123462', 'A201', 'quanly02'),

('cda201-2', N'Nguyễn Thị H', '1988-11-28', N'Nữ', 'CMND123463', 'A201', 'quanly02'),

('cda202-1', N'Phạm Minh I', '1992-08-03', N'Nam', 'CMND123464', 'A202', 'quanly02'),

('cda202-2', N'Nguyễn Kim J', '1987-05-22', N'Nữ', 'CMND123465', 'A202', 'quanly02'),

('cda301-1', N'Trần Quang K', '1983-02-11', N'Nam', 'CMND123466', 'A301', 'quanly03'),

('cda301-2', N'Phan Thị L', '1990-07-17', N'Nữ', 'CMND123467', 'A301', 'quanly03'),

('cda302-1', N'Nguyễn Hoàng M', '1989-04-25', N'Nam', 'CMND123468', 'A302', 'quanly03'),

('cda302-2', N'Phạm Minh N', '1992-01-03', N'Nữ', 'CMND123469', 'A302', 'quanly03'),

('cda303-1', N'Nguyễn Thu O', '1994-03-13', N'Nữ', 'CMND123470', 'A303', 'quanly03'),

('cda303-2', N'Phạm Văn P', '1986-12-22', N'Nam', 'CMND123471', 'A303', 'quanly03');

GO

CREATE TABLE MatBangThuongMai(

IDMBTM INT IDENTITY(1,1) PRIMARY KEY NOT NULL,

DienTich FLOAT,

TenDonViThue NVARCHAR(50),

GiaThue FLOAT,

TinhTrang NVARCHAR(50) NOT NULL,

IDNguoiQuanLy VARCHAR(30)

FOREIGN KEY (IDNguoiQuanLy) REFERENCES NguoiQuanLy(IDNguoiQuanLy)

)

GO

INSERT INTO MatBangThuongMai (DienTich, TenDonViThue, GiaThue, TinhTrang)

VALUES

(120.5, N'Công ty ABC', 20000000, N'Đang thuê'),

(80.0, N'Lê Văn C', 15000000, N'Chưa cho thuê'),

(100.0, N'Cửa hàng XYZ', 18000000, N'Đang thuê');

GO

CREATE TABLE HoaDonTM (

IDHoaDon INT IDENTITY(1,1) PRIMARY KEY NOT NULL,

SoTien FLOAT NOT NULL,

HanThanhToan DATE NOT NULL,

TrangThai NVARCHAR(50) NOT NULL,

IDMBTM INT NOT NULL,

CONSTRAINT FK\_HDTM\_MBTM FOREIGN KEY (IDMBTM) REFERENCES MatBangThuongMai(IDMBTM)

)

GO

INSERT INTO HoaDonTM (SoTien, HanThanhToan, TrangThai, IDMBTM)

VALUES

(20000000, '2024-12-15', N'Chưa thanh toán', 1),

(15000000, '2024-11-30', N'Quá hạn', 2),

(18000000, '2024-12-10', N'Đã thanh toán', 3);

GO

CREATE TABLE VatTu (

IDVatTu INT IDENTITY(1,1) PRIMARY KEY NOT NULL,

TenVatTu NVARCHAR(200) NOT NULL,

SoLuong INT,

IDNguoiQuanLy VARCHAR(30) NOT NULL,

CONSTRAINT FK\_VT\_NQL FOREIGN KEY (IDNguoiQuanLy) REFERENCES NguoiQuanLy(IDNguoiQuanLy)

);

GO

INSERT INTO VatTu (TenVatTu, SoLuong, IDNguoiQuanLy)

VALUES

(N'Thang máy', 3, 'quanly01'),

(N'Bàn ghế', 10, 'quanly02');

GO

CREATE TABLE Tang(

SoTang VARCHAR(6) PRIMARY KEY NOT NULL,

TongCanHo INT DEFAULT 0

);

GO

INSERT INTO Tang (SoTang)

VALUES

('1'),

('2'),

('3'),

('4'),

('5'),

('6'),

('7'),

('8'),

('9'),

('10');

GO

CREATE TABLE CanHo (

SoCanHo NVARCHAR(20) PRIMARY KEY NOT NULL,

SoTang VARCHAR(6) NOT NULL,

SoCuDan INT DEFAULT 0,

SoOTo INT DEFAULT 0,

SoXeMay INT DEFAULT 0,

SoXeDap INT DEFAULT 0,

IDNguoiQuanLy VARCHAR(30) NOT NULL,

CONSTRAINT FK\_CH\_NQL FOREIGN KEY (IDNguoiQuanLy) REFERENCES NguoiQuanLy(IDNguoiQuanLy),

CONSTRAINT FK\_CH\_Tang FOREIGN KEY (SoTang) REFERENCES Tang(SoTang)

)

GO

CREATE TRIGGER trg\_UpdateTongCanHo

ON CanHo

AFTER INSERT, DELETE

AS

BEGIN

-- Cập nhật tổng căn hộ khi thêm mới

UPDATE Tang

SET TongCanHo = (

SELECT COUNT(\*)

FROM CanHo c

WHERE c.SoTang = Tang.SoTang

)

WHERE Tang.SoTang IN (

SELECT SoTang FROM inserted -- Thay đổi do thêm

UNION

SELECT SoTang FROM deleted -- Thay đổi do xóa

);

END;

GO

-- Thêm dữ liệu vào bảng CanHo

INSERT INTO CanHo (SoCanHo, SoTang, IDNguoiQuanLy)

VALUES

('A101', '1', 'quanly01'),

('A102', '1', 'quanly01'),

('A103', '1', 'quanly01'),

('A104', '1', 'quanly01'),

('A105', '1', 'quanly01'),

('A201', '2', 'quanly01'),

('A202', '2', 'quanly01'),

('A203', '2', 'quanly01'),

('A204', '2', 'quanly01'),

('A205', '2', 'quanly01'),

('A301', '3', 'quanly02'),

('A302', '3', 'quanly02'),

('A303', '3', 'quanly02'),

('A304', '3', 'quanly02'),

('A305', '3', 'quanly02')

GO

CREATE TABLE CuDan\_CanHo (

IDCuDan VARCHAR(30) NOT NULL,

SoCanHo NVARCHAR(20) NOT NULL,

CONSTRAINT FK\_CDCH\_CD FOREIGN KEY (IDCuDan) REFERENCES CuDan(IDCuDan),

CONSTRAINT FK\_CDCH\_CH FOREIGN KEY (SoCanHo) REFERENCES CanHo(SoCanHo)

)

GO

CREATE TRIGGER trg\_UpdateTongCuDan

ON CuDan\_CanHo

AFTER INSERT, DELETE

AS

BEGIN

PRINT N'Trigger'

-- Cập nhật tổng số cư dân trong bảng CanHo sau khi chèn hoặc xóa

UPDATE CanHo

SET SoCuDan = (

SELECT COUNT(\*)

FROM CuDan\_CanHo

WHERE CuDan\_CanHo.SoCanHo = CanHo.SoCanHo

)

FROM CanHo

INNER JOIN CuDan\_CanHo ON CanHo.SoCanHo = CuDan\_CanHo.SoCanHo

WHERE CuDan\_CanHo.IDCuDan IN (

SELECT IDCuDan FROM inserted -- Thay đổi do thêm

UNION

SELECT IDCuDan FROM deleted -- Thay đổi do xóa

);

END;

GO

INSERT INTO CuDan\_CanHo (IDCuDan, SoCanHo)

VALUES

('cda101-1', 'A101'),

('cda101-2', 'A101'),

('cda102-1', 'A102'),

('cda102-2', 'A102'),

('cda103-1', 'A103'),

('cda103-2', 'A103'),

('cda201-1', 'A201'),

('cda201-2', 'A201'),

('cda202-1', 'A202'),

('cda202-2', 'A202'),

('cda301-1', 'A301'),

('cda301-2', 'A301'),

('cda302-1', 'A302'),

('cda302-2', 'A302'),

('cda303-1', 'A303'),

('cda303-2', 'A303');

GO

CREATE TABLE HoaDonCuDan (

IDHoaDon INT IDENTITY(1,1) PRIMARY KEY NOT NULL,

SoCanHo NVARCHAR(20) NOT NULL,

SoTien FLOAT NOT NULL,

HanDong DATE NOT NULL,

TrangThai NVARCHAR(50) NOT NULL,

IDNguoiQuanLy VARCHAR(30) NOT NULL,

CONSTRAINT FK\_HoaDonCuDan\_NguoiQuanLy FOREIGN KEY (IDNguoiQuanLy) REFERENCES NguoiQuanLy(IDNguoiQuanLy),

CONSTRAINT FK\_HoaDonCuDan\_CanHo FOREIGN KEY (SoCanHo) REFERENCES CanHo(SoCanHo)

)

GO

INSERT INTO HoaDonCuDan (SoCanHo, SoTien, HanDong, TrangThai, IDNguoiQuanLy)

VALUES

('A101', 500000, '2024-12-01', N'Chưa thanh toán', 'quanly01'),

('A102', 750000, '2024-12-05', N'Chưa thanh toán', 'quanly01'),

('A103', 600000, '2024-12-10', N'Chưa thanh toán', 'quanly01'),

('A201', 700000, '2024-12-01', N'Chưa thanh toán', 'quanly01'),

('A202', 850000, '2024-12-05', N'Chưa thanh toán', 'quanly01'),

('A203', 650000, '2024-12-10', N'Chưa thanh toán', 'quanly01'),

('A301', 600000, '2024-12-01', N'Chưa thanh toán', 'quanly02'),

('A302', 750000, '2024-12-05', N'Chưa thanh toán', 'quanly02'),

('A303', 650000, '2024-12-10', N'Chưa thanh toán', 'quanly02')

GO

CREATE TABLE XeOTo (

IDXeOTo INT IDENTITY(1,1) PRIMARY KEY NOT NULL,

BienSoXe NVARCHAR(50) NOT NULL,

LoaiXe NVARCHAR(100),

MauXe NVARCHAR(50),

IDCuDan VARCHAR(30) NOT NULL,

IDNguoiQuanLy VARCHAR(30) NOT NULL,

CONSTRAINT FK\_XeOTo\_NguoiQuanLy FOREIGN KEY (IDNguoiQuanLy) REFERENCES NguoiQuanLy(IDNguoiQuanLy),

CONSTRAINT FK\_XeOTo\_CuDan FOREIGN KEY (IDCuDan) REFERENCES CuDan(IDCuDan)

)

GO

CREATE TRIGGER trg\_UpdateTongOTo

ON XeOTo

AFTER INSERT, DELETE

AS

BEGIN

-- Cập nhật tổng số ô tô trong bảng CanHo sau khi chèn hoặc xóa xe

UPDATE CanHo

SET SoOTo = (

SELECT COUNT(\*)

FROM XeOTo

WHERE XeOTo.IDCuDan = CuDan\_CanHo.IDCuDan

)

FROM CanHo

INNER JOIN CuDan\_CanHo ON CanHo.SoCanHo = CuDan\_CanHo.SoCanHo

WHERE CuDan\_CanHo.IDCuDan IN (

SELECT IDCuDan FROM inserted -- Thay đổi do thêm

UNION

SELECT IDCuDan FROM deleted -- Thay đổi do xóa

);

END;

GO

INSERT INTO XeOTo (BienSoXe, LoaiXe, MauXe, IDCuDan, IDNguoiQuanLy)

VALUES

('29A-12345', N'Sedan', N'Đỏ', 'cda101-1', 'quanly01'),

('29A-12346', N'Hatchback', N'Vàng', 'cda101-2', 'quanly01'),

('29B-23456', N'SUV', N'Xanh', 'cda102-1', 'quanly01'),

('29B-23457', N'Coupe', N'Đen', 'cda102-2', 'quanly01'),

('29C-34568', N'Vehicle', N'Màu bạc', 'cda103-2', 'quanly01'),

('29D-45678', N'SUV', N'Xanh lá', 'cda201-1', 'quanly02'),

('29D-45679', N'Pickup', N'Xám', 'cda201-2', 'quanly02'),

('29E-56789', N'Hatchback', N'Màu hồng', 'cda202-1', 'quanly02'),

('29F-67890', N'Sedan', N'Màu bạc', 'cda301-1', 'quanly02'),

('29G-78902', N'SUV', N'Màu vàng', 'cda302-2', 'quanly03'),

('29H-89012', N'Sedan', N'Màu đen', 'cda303-1', 'quanly03');

GO

CREATE TABLE XeMay (

IDXeMay INT IDENTITY(1,1) PRIMARY KEY NOT NULL,

BienSoXe NVARCHAR(50) NOT NULL,

LoaiXe NVARCHAR(100),

MauXe NVARCHAR(50),

IDCuDan VARCHAR(30) NOT NULL,

IDNguoiQuanLy VARCHAR(30) NOT NULL,

CONSTRAINT FK\_XeMay\_NguoiQuanLy FOREIGN KEY (IDNguoiQuanLy) REFERENCES NguoiQuanLy(IDNguoiQuanLy),

CONSTRAINT FK\_XeMay\_CuDan FOREIGN KEY (IDCuDan) REFERENCES CuDan(IDCuDan)

)

GO

CREATE TRIGGER trg\_UpdateTongXeMay

ON XeMay

AFTER INSERT, DELETE

AS

BEGIN

-- Cập nhật tổng số ô tô trong bảng CanHo sau khi chèn hoặc xóa xe

UPDATE CanHo

SET SoXeMay = (

SELECT COUNT(\*)

FROM XeMay

WHERE XeMay.IDCuDan = CuDan\_CanHo.IDCuDan

)

FROM CanHo

INNER JOIN CuDan\_CanHo ON CanHo.SoCanHo = CuDan\_CanHo.SoCanHo

WHERE CuDan\_CanHo.IDCuDan IN (

SELECT IDCuDan FROM inserted -- Thay đổi do thêm

UNION

SELECT IDCuDan FROM deleted -- Thay đổi do xóa

);

END;

GO

INSERT INTO XeMay (BienSoXe, LoaiXe, MauXe, IDCuDan, IDNguoiQuanLy)

VALUES

('29M-12345', N'Xe tay ga', N'Đỏ', 'cda101-1', 'quanly01'),

('29M-12346', N'Xe phân khối lớn', N'Xanh', 'cda102-2', 'quanly01'),

('29M-23456', N'Xe số', N'Vàng', 'cda201-1', 'quanly02'),

('29M-23457', N'Xe tay ga', N'Trắng', 'cda301-2', 'quanly02'),

('29M-34567', N'Xe phân khối lớn', N'Đen', 'cda303-2', 'quanly03');

GO

CREATE TABLE XeDap (

IDXeDap INT IDENTITY(1,1) PRIMARY KEY NOT NULL,

LoaiXe NVARCHAR(100),

MauXe NVARCHAR(50),

IDCuDan VARCHAR(30) NOT NULL,

IDNguoiQuanLy VARCHAR(30) NOT NULL,

CONSTRAINT FK\_XeDap\_NguoiQuanLy FOREIGN KEY (IDNguoiQuanLy) REFERENCES NguoiQuanLy(IDNguoiQuanLy),

CONSTRAINT FK\_XeDap\_CuDan FOREIGN KEY (IDCuDan) REFERENCES CuDan(IDCuDan)

)

GO

CREATE TRIGGER trg\_UpdateTongXeDap

ON XeDap

AFTER INSERT, DELETE

AS

BEGIN

-- Cập nhật tổng số ô tô trong bảng CanHo sau khi chèn hoặc xóa xe

UPDATE CanHo

SET SoXeDap = (

SELECT COUNT(\*)

FROM XeDap

WHERE XeDap.IDCuDan = CuDan\_CanHo.IDCuDan

)

FROM CanHo

INNER JOIN CuDan\_CanHo ON CanHo.SoCanHo = CuDan\_CanHo.SoCanHo

WHERE CuDan\_CanHo.IDCuDan IN (

SELECT IDCuDan FROM inserted -- Thay đổi do thêm

UNION

SELECT IDCuDan FROM deleted -- Thay đổi do xóa

);

END;

GO

INSERT INTO XeDap (LoaiXe, MauXe, IDCuDan, IDNguoiQuanLy)

VALUES

(N'Xe đạp thể thao', N'Đỏ', 'cda101-1', 'quanly01'),

(N'Xe đạp điện', N'Xanh', 'cda102-2', 'quanly01'),

(N'Xe đạp gấp', N'Vàng', 'cda201-1', 'quanly02'),

(N'Xe đạp thể thao', N'Trắng', 'cda301-2', 'quanly02'),

(N'Xe đạp điện', N'Đen', 'cda303-2', 'quanly03');

GO