-- Tạo database mang tên QLNV\_HELEN

create database QLNV\_HELEN

go

use QLNV\_HELEN

go

--Tạo bảng CONG

create table CONG

(

MaCong varchar(3) primary key,

LoaiCong nvarchar(50),

HeSoCong int

)

-- Tạo bảng LUONG

create table LUONG

(

MaLuong varchar(3) primary key,

TenLuong nvarchar(20),

MucLuong numeric

)

--Tạo bảng NHANVIEN

create table NHANVIEN

(

MaNV varchar(4) primary key,

TenNV nvarchar(100),

SDT char(10) unique,

MaLuong varchar(3)

)

--Tạo bảng BANGCHAMCONG

create table BANGCHAMCONG

(

MaCC varchar(10) primary key,

MaNV varchar(4),

NgayCong date,

SoGio int,

MaCong varchar(3)

)

--Tạo bảng BANGTHCC

create table BANGTHCC

(

MaTHC varchar(10) primary key,

NgayTHC date,

MaNV varchar(4),

SoCongThuong int,

SoCongTet int,

TongCong int

)

--Tạo bảng BANGTHLUONG

create table BANGTHLUONG

(

MaPL varchar(9) primary key,

NgayTHL date,

MaNV varchar(4),

MaLuong varchar(3),

TongCong int,

ThanhTien numeric,

Thuong numeric default 0,

KhauTru numeric default 0,

ThucLinh numeric

)

--Thêm dữ liệu vào bảng NHANVIEN

insert into NHANVIEN(MaNV, TenNV, SDT, MaLuong)

values('NV01', N'Nguyễn Thị Thanh Hằng', '0397567325', 'L01'),

('NV02', N'Trần Thị Hằng', '0970463848', 'L01'),

('NV03', N'Đặng Thị Thảo Hiền', '0735217845', 'L02'),

('NV04', N'Lê Thu Huyền', '0965678341', 'L01'),

('NV05', N'Cai Thị Thùy Kiên', '0815649807', 'L01'),

('NV06', N'Nguyễn Thị Mai Lan', '0984762398', 'L01'),

('NV07', N'Nguyễn Trường An', '0975345934', 'L01'),

('NV08', N'Lê Anh Nuôi', '0983427453', 'L02'),

('NV09', N'Ngô Diệc Phàm', '0987454723', 'L01'),

('NV10', N'Nguyễn Văn Thái', '0982745783', 'L02'),

('NV11', N'Ngô Mạnh Hùng', '0928599485', 'L01'),

('NV12', N'Nguyễn Thị Mộng Mơ', '0935729360', 'L01'),

('NV13', N'Trần Thị Thu Hoài', '0916735940', 'L02'),

('NV14', N'Nguyễn Thị Thu Thủy', '0845657340', 'L01'),

('NV15', N'Trần Thị Nhung', '0354867920', 'L01')

--Thêm dữ liệu vào bảng CONG

insert into CONG(MaCong, LoaiCong, HeSoCong)

values('MC1', N'Công thường',1),

('MC3',N'Công tết',3)

--Thêm dữ liệu vào bảng LUONG

insert into LUONG(MaLuong, TenLuong, MucLuong)

values('L01',N'Chính thức',17000),

('L02',N'Thử việc',15000)

--Thêm dữ liệu vào bảng BANGCHAMCONG

set dateformat DMY

insert into BANGCHAMCONG(MaCC, MaNV, NgayCong, SoGio, MaCong)

values('CC0123\_001', 'NV01', '01/01/2023', 6, 'MC1'),

('CC0123\_002', 'NV03', '01/01/2023', 3, 'MC1'),

('CC0123\_003', 'NV13', '01/01/2023', 5, 'MC1'),

('CC0123\_004', 'NV15', '01/01/2023', 5, 'MC1'),

('CC0123\_005', 'NV03', '02/01/2023', 5, 'MC1'),

('CC0123\_006', 'NV08', '02/01/2023', 5, 'MC1'),

('CC0123\_007', 'NV10', '02/01/2023', 5, 'MC1'),

('CC0123\_008', 'NV12', '02/01/2023', 5, 'MC1'),

('CC0123\_009', 'NV07', '03/01/2023', 5, 'MC1'),

('CC0123\_010', 'NV14', '03/01/2023', 5, 'MC1'),

('CC0123\_011', 'NV15', '03/01/2023', 4, 'MC1'),

('CC0123\_012', 'NV03', '04/01/2023', 5, 'MC1'),

('CC0123\_013', 'NV04', '04/01/2023', 5, 'MC1'),

('CC0123\_014', 'NV08', '04/01/2023', 5, 'MC1'),

('CC0123\_015', 'NV01', '05/01/2023', 5, 'MC1'),

('CC0123\_016', 'NV07', '05/01/2023', 5, 'MC1'),

('CC0123\_017', 'NV12', '05/01/2023', 5, 'MC1'),

('CC0123\_018', 'NV05', '06/01/2023', 5, 'MC1'),

('CC0123\_019', 'NV08', '06/01/2023', 5, 'MC1'),

('CC0123\_020', 'NV10', '06/01/2023', 10,'MC1'),

('CC0123\_021', 'NV02', '07/01/2023', 4, 'MC1'),

('CC0123\_022', 'NV04', '07/01/2023', 5, 'MC1'),

('CC0123\_023', 'NV05', '07/01/2023', 5, 'MC1'),

('CC0123\_024', 'NV09', '07/01/2023', 4, 'MC1'),

('CC0123\_025', 'NV01', '08/01/2023', 5, 'MC1'),

('CC0123\_026', 'NV04', '08/01/2023', 5, 'MC1'),

('CC0123\_027', 'NV05', '08/01/2023', 5, 'MC1'),

('CC0123\_028', 'NV01', '08/01/2023', 5, 'MC1'),

('CC0123\_029', 'NV06', '09/01/2023', 5, 'MC1'),

('CC0123\_030', 'NV09', '09/01/2023', 4, 'MC1'),

('CC0123\_031', 'NV10', '09/01/2023', 5, 'MC1'),

('CC0123\_032', 'NV11', '09/01/2023', 4, 'MC1'),

('CC0123\_033', 'NV06', '10/01/2023', 6, 'MC1'),

('CC0123\_034', 'NV07', '10/01/2023', 5, 'MC1'),

('CC0123\_035', 'NV13', '10/01/2023', 4, 'MC1'),

('CC0123\_036', 'NV14', '10/01/2023', 5, 'MC1'),

('CC0123\_037', 'NV01', '11/01/2023', 5, 'MC1'),

('CC0123\_038', 'NV05', '11/01/2023', 5, 'MC1'),

('CC0123\_039', 'NV01', '11/01/2023', 5, 'MC1'),

('CC0123\_040', 'NV15', '11/01/2023', 5, 'MC1'),

('CC0123\_041', 'NV10', '12/01/2023', 5, 'MC1'),

('CC0123\_042', 'NV12', '12/01/2023', 5, 'MC1'),

('CC0123\_043', 'NV04', '13/01/2023', 5, 'MC1'),

('CC0123\_044', 'NV10', '13/01/2023', 11,'MC1'),

('CC0123\_045', 'NV11', '13/01/2023', 5, 'MC1'),

('CC0123\_046', 'NV14', '13/01/2023', 5, 'MC1'),

('CC0123\_047', 'NV01', '14/01/2023', 5, 'MC1'),

('CC0123\_048', 'NV02', '14/01/2023', 5, 'MC1'),

('CC0123\_049', 'NV04', '14/01/2023', 5, 'MC1'),

('CC0123\_050', 'NV12', '14/01/2023', 5, 'MC1'),

('CC0123\_051', 'NV05', '14/01/2023', 5, 'MC1'),

('CC0123\_052', 'NV04', '15/01/2023', 5, 'MC1'),

('CC0123\_053', 'NV05', '15/01/2023', 5, 'MC1'),

('CC0123\_054', 'NV07', '15/01/2023', 5, 'MC1'),

('CC0123\_055', 'NV13', '15/01/2023', 4, 'MC1'),

('CC0123\_056', 'NV06', '16/01/2023', 5, 'MC1'),

('CC0123\_057', 'NV11', '16/01/2023', 4, 'MC1'),

('CC0123\_058', 'NV12', '16/01/2023', 5, 'MC1'),

('CC0123\_059', 'NV08', '17/01/2023', 10, 'MC1'),

('CC0123\_060', 'NV12', '17/01/2023', 6, 'MC1'),

('CC0123\_061', 'NV14', '17/01/2023', 5, 'MC1'),

('CC0123\_062', 'NV01', '18/01/2023', 4, 'MC1'),

('CC0123\_063', 'NV08', '18/01/2023', 10, 'MC1'),

('CC0123\_064', 'NV07', '19/01/2023', 5, 'MC1'),

('CC0123\_065', 'NV08', '19/01/2023', 5, 'MC1'),

('CC0123\_066', 'NV12', '19/01/2023', 5, 'MC1'),

('CC0123\_067', 'NV14', '19/01/2023', 4, 'MC1'),

('CC0123\_068', 'NV12', '19/01/2023', 4, 'MC1'),

('CC0123\_069', 'NV02', '20/01/2023', 5, 'MC3'),

('CC0123\_070', 'NV07', '20/01/2023', 5, 'MC3'),

('CC0123\_071', 'NV10', '20/01/2023', 5, 'MC3'),

('CC0123\_072', 'NV13', '20/01/2023', 5, 'MC3'),

('CC0123\_073', 'NV08', '21/01/2023', 6, 'MC3'),

('CC0123\_074', 'NV09', '21/01/2023', 5, 'MC3'),

('CC0123\_075', 'NV13', '21/01/2023', 4, 'MC3'),

('CC0123\_076', 'NV01', '22/01/2023', 5, 'MC3'),

('CC0123\_077', 'NV04', '22/01/2023', 5, 'MC3'),

('CC0123\_078', 'NV08', '22/01/2023', 4, 'MC3'),

('CC0123\_079', 'NV12', '22/01/2023', 5, 'MC3'),

('CC0123\_080', 'NV13', '22/01/2023', 4, 'MC3'),

('CC0123\_081', 'NV06', '23/01/2023', 6, 'MC3'),

('CC0123\_082', 'NV10', '23/01/2023', 5, 'MC3'),

('CC0123\_083', 'NV15', '23/01/2023', 4, 'MC3'),

('CC0123\_084', 'NV01', '24/01/2023', 5, 'MC3'),

('CC0123\_085', 'NV03', '24/01/2023', 5, 'MC3'),

('CC0123\_086', 'NV09', '24/01/2023', 5, 'MC3'),

('CC0123\_087', 'NV11', '24/01/2023', 5, 'MC3'),

('CC0123\_088', 'NV12', '24/01/2023', 5, 'MC3'),

('CC0123\_089', 'NV01', '25/01/2023', 5, 'MC3'),

('CC0123\_090', 'NV05', '25/01/2023', 5, 'MC3'),

('CC0123\_091', 'NV06', '25/01/2023', 5, 'MC3'),

('CC0123\_092', 'NV11', '25/01/2023', 5, 'MC3'),

('CC0123\_093', 'NV10', '26/01/2023',10, 'MC3'),

('CC0123\_094', 'NV14', '26/01/2023', 3, 'MC3'),

('CC0123\_095', 'NV15', '26/01/2023', 5, 'MC3'),

('CC0123\_096', 'NV08', '27/01/2023', 5, 'MC1'),

('CC0123\_097', 'NV12', '27/01/2023', 5, 'MC1'),

('CC0123\_098', 'NV06', '28/01/2023', 5, 'MC1'),

('CC0123\_099', 'NV09', '28/01/2023', 5, 'MC1'),

('CC0123\_100', 'NV12', '28/01/2023', 5, 'MC1'),

('CC0123\_101', 'NV01', '29/01/2023', 5, 'MC1'),

('CC0123\_102', 'NV05', '29/01/2023',11, 'MC1'),

('CC0123\_103', 'NV04', '30/01/2023', 5, 'MC1'),

('CC0123\_104', 'NV05', '30/01/2023', 10, 'MC1'),

('CC0123\_105', 'NV14', '30/01/2023', 4, 'MC1'),

('CC0123\_106', 'NV02', '31/01/2023', 5, 'MC1'),

('CC0123\_107', 'NV07', '31/01/2023', 5, 'MC1'),

('CC0123\_108', 'NV11', '31/01/2023', 5, 'MC1')

--Thêm dữ liệu vào BANGTHCC

insert into BANGTHCC(MaTHC, NgayTHC, MaNV, SoCongThuong, SoCongTet)

values('THC0123\_01','01/02/2023','NV01',35,15),

('THC0123\_02','01/02/2023','NV02',14,5),

('THC0123\_03','01/02/2023','NV03',13,5),

('THC0123\_04','01/02/2023','NV04',35,5),

('THC0123\_05','01/02/2023','NV05',35,5),

('THC0123\_06','01/02/2023','NV06',31,11),

('THC0123\_07','01/02/2023','NV07',30,5),

('THC0123\_08','01/02/2023','NV08',50,10),

('THC0123\_09','01/02/2023','NV09',13,10),

('THC0123\_10','01/02/2023','NV10',41,20),

('THC0123\_11','01/02/2023','NV11',18,10),

('THC0123\_12','01/02/2023','NV12',51,10),

('THC0123\_13','01/02/2023','NV13',23,13),

('THC0123\_14','01/02/2023','NV14',24,3),

('THC0123\_15','01/02/2023','NV15',18,9)

--Update BANGTHCC: update TongCong bên BANGTHCC bằng SoCongThuong, SoCongTet \* HeSoCong

update BANGTHCC

set TongCong = SoCongThuong\*(select HeSoCong from CONG where MaCong = 'MC1') + SoCongTet\*(select HeSoCong from CONG where MaCong = 'MC3')

--Thêm dữ liệu vào BANGTHLUONG

insert into BANGTHLUONG(MaPL, NgayTHL, MaNV, MaLuong)

values('PL0123\_01', '01/02/2023', 'NV01', 'L01'),

('PL0123\_02', '01/02/2023', 'NV02', 'L01'),

('PL0123\_03', '01/02/2023', 'NV03', 'L02'),

('PL0123\_04', '01/02/2023', 'NV04', 'L01'),

('PL0123\_05', '01/02/2023', 'NV05', 'L01'),

('PL0123\_06', '01/02/2023', 'NV06', 'L01'),

('PL0123\_07', '01/02/2023', 'NV07', 'L01'),

('PL0123\_08', '01/02/2023', 'NV08', 'L02'),

('PL0123\_09', '01/02/2023', 'NV09', 'L01'),

('PL0123\_10', '01/02/2023', 'NV10', 'L02'),

('PL0123\_11', '01/02/2023', 'NV11', 'L01'),

('PL0123\_12', '01/02/2023', 'NV12', 'L01'),

('PL0123\_13', '01/02/2023', 'NV13', 'L02'),

('PL0123\_14', '01/02/2023', 'NV14', 'L01'),

('PL0123\_15', '01/02/2023', 'NV15', 'L01')

--update BANGTHLUONG với TongCong = TongCong ở BANGTHCC

update BANGTHLUONG

set TongCong = (select TongCong from BANGTHCC

where BANGTHLUONG.MaNV = BANGTHCC.MaNV)

--update BANGTHLUONG với ThanhTien = TongCong\*MucLuong

update BANGTHLUONG

set ThanhTien = TongCong \* (select MucLuong from LUONG where BANGTHLUONG.MaLuong = LUONG.MaLuong)

--update BANGTHLUONG với ThucLinh = Thanhtien + Thuong - KhauTru

update BANGTHLUONG

set ThucLinh = ThanhTien + Thuong - KhauTru

--Thêm các khóa ngoại cho DB

alter table NHANVIEN add constraint FK\_NV\_LUONG foreign key (MaLuong) references LUONG (MaLuong)

alter table BANGCHAMCONG add constraint FK\_BCC\_CONG foreign key (MaCong) references CONG (MaCong)

alter table BANGCHAMCONG add constraint FK\_BCC\_NV foreign key (MaNV) references NHANVIEN(MaNV)

alter table BANGTHCC add constraint FK\_BTHCC\_NV foreign key (maNV) references NHANVIEN(MaNV)

alter table BANGTHLUONG add constraint FK\_BTHL\_NV foreign key (MaNV) references NHANVIEN (MaNV)

alter table BANGTHLUONG add constraint FK\_BTHL\_LUONG foreign key (MaLuong) references LUONG (MaLuong)

--Xem các trigger

SELECT \* FROM sys.triggers

--TẠO TRIGGER

/\*TRIGGER 1: khi insert dữ liệu vô bảng chấm công, cập nhật số công thưởng, tết, tổng công bên BANGTHCC;

tổng công bên BANGTHL\*/

go

create or alter trigger tInsertBCC

on BANGCHAMCONG

after insert

as

begin

declare @sogio int = (select SoGio from inserted)

declare @macong varchar(3) = (select MaCong from inserted)

declare @maNV varchar(4) = (select MaNV from inserted)

if @macong = 'MC1'

begin

update BANGTHCC set SoCongThuong = SoCongThuong + @sogio,

TongCong = TongCong + @sogio\* (select HeSoCong from CONG where MaCong = 'MC1')

where MaNV = (select MaNV from inserted)

end

else if @macong = 'MC3'

begin

update BANGTHCC set SoCongTet = SoCongTet + @sogio,

TongCong = TongCong + @sogio\* (select HeSoCong from CONG where MaCong = 'MC3')

where MaNV = (select MaNV from inserted)

end

update BANGTHLUONG set

TongCong = (select TongCong from BANGTHCC where BANGTHLUONG.MaNV = BANGTHCC.MaNV),

ThanhTien = (select TongCong from BANGTHCC where BANGTHLUONG.MaNV = BANGTHCC.MaNV)\*(select MucLuong from LUONG where BANGTHLUONG.MaLuong = LUONG.MaLuong),

ThucLinh = (select TongCong from BANGTHCC where BANGTHLUONG.MaNV = BANGTHCC.MaNV)\*(select MucLuong from LUONG where BANGTHLUONG.MaLuong = LUONG.MaLuong) + Thuong - KhauTru

where MaNV = @maNV

end

/\* TRIGGER 2: khi XÓA dữ liệu trong bảng BANGCHAMCONG

cập nhật lại SoCongThuong, SoCongTet, và TongCong trong BANGTHCC

cập nhật lại TongCong trong BANGTHLUONG\*/

go

create or alter trigger tdeleteBCC

on BANGCHAMCONG

after delete

as

begin

declare @maNV varchar(4), @soGio int, @maCong varchar(3);

select @maNV = (select MaNV from deleted),

@soGio = (select SoGio from deleted),

@maCong = (select MaCong from deleted)

if @maCong = 'MC1'

begin

update BANGTHCC set

SoCongThuong = SoCongThuong - @soGio,

TongCong = TongCong - @soGio \* (select HeSoCong from CONG where MaCong = 'MC1')

where MaNV = @maNV;

end

else if @maCong = 'MC3'

begin

update BANGTHCC set

SoCongTet = SoCongTet - @soGio,

TongCong = TongCong - @soGio \* (select HeSoCong from CONG where MaCong = 'MC3')

where MaNV = @maNV;

end

update BANGTHLUONG set

TongCong = (select TongCong from BANGTHCC where BANGTHLUONG.MaNV = BANGTHCC.MaNV),

ThanhTien = (select TongCong from BANGTHCC where BANGTHLUONG.MaNV = BANGTHCC.MaNV)\*(select MucLuong from LUONG where BANGTHLUONG.MaLuong = LUONG.MaLuong),

ThucLinh = (select TongCong from BANGTHCC where BANGTHLUONG.MaNV = BANGTHCC.MaNV)\*(select MucLuong from LUONG where BANGTHLUONG.MaLuong = LUONG.MaLuong) + Thuong - KhauTru

where MaNV = @maNV

end

/\*TRIGGER 3: khi sửa số giờ trong bảng BANGCHAMCONG

cập nhật lại SoCongThuong, SoCongTet, và TongCong trong BANGTHCC

cập nhật lại TongCong trong BANGTHLUONG \*/

go

create or alter trigger tupdateBCC

on BANGCHAMCONG

after update

as

begin

declare @maNV varchar(4), @soGioCu int, @soGioMoi int, @maCong varchar(3);

select @maNV = (select MaNV from inserted),

@soGioMoi = (select SoGio from inserted),

@maCong = (select MaCong from inserted)

select @soGioCu = (select SoGio from deleted)

if @maCong = 'MC1'

begin

update BANGTHCC set

SoCongThuong = SoCongThuong - @soGioCu + @soGioMoi,

TongCong = TongCong - @soGioCu \* (select HeSoCong from CONG where MaCong = 'MC1') + @soGioMoi \* (select HeSoCong from CONG where MaCong = 'MC1')

where MaNV = @maNV;

end

else if @maCong = 'MC3'

begin

update BANGTHCC set

SoCongTet = SoCongTet - @soGioCu + @soGioMoi,

TongCong = TongCong - @soGioCu \* (select HeSoCong from CONG where MaCong = 'MC3') + @soGioMoi \* (select HeSoCong from CONG where MaCong = 'MC3')

where MaNV = @maNV;

end

update BANGTHLUONG set

TongCong = (select TongCong from BANGTHCC where BANGTHLUONG.MaNV = BANGTHCC.MaNV),

ThanhTien = (select TongCong from BANGTHCC where BANGTHLUONG.MaNV = BANGTHCC.MaNV)\*(select MucLuong from LUONG where BANGTHLUONG.MaLuong = LUONG.MaLuong),

ThucLinh = (select TongCong from BANGTHCC where BANGTHLUONG.MaNV = BANGTHCC.MaNV)\*(select MucLuong from LUONG where BANGTHLUONG.MaLuong = LUONG.MaLuong) + Thuong - KhauTru

where MaNV = @maNV

end

---TRIGGER 4: khi update Thưởng + khấu trừ trong BANGTHLUONG => tính lại Thực lĩnh

go

CREATE OR ALTER TRIGGER tupdateThucLinh

ON BANGTHLUONG

AFTER UPDATE

AS

BEGIN

DECLARE @KhauTruMoi numeric, @ThuongMoi numeric, @MaPL varchar(10);

SET @MaPL = (SELECT TOP 1 MaPL FROM inserted);

SELECT @KhauTruMoi = (SELECT TOP 1 KhauTru FROM inserted),

@ThuongMoi = (SELECT TOP 1 Thuong FROM inserted);

IF UPDATE(KhauTru) OR UPDATE(Thuong)

BEGIN

UPDATE BANGTHLUONG

SET

ThucLinh = Thanhtien + @ThuongMoi - @KhauTruMoi

WHERE MaPL = @MaPL;

END

END

--Tạo login (R5)

--Quản lý có thể update, insert, delete, select

create login QUANLY with password = 'quanly123'

create user quanly for login QUANLY

grant select, insert, update on database::QLNV\_HELEN to quanly;

--nhân viên chỉ có thể select

create login NHANVIEN with password = 'nhanvien123'

create user nhanvien for login NHANVIEN

grant select on object:: NHANVIEN to nhanvien

grant select on object:: CONG to nhanvien

grant select on object:: LUONG to nhanvien

grant select on object:: BANGCHAMCONG to nhanvien

--Xem các login của database bằng lệnh

use QLNV\_HELEN

SELECT name

FROM sys.sql\_logins;