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CREATE DATABASE QLSinhVien2 ;
USE QLSinhVien2;

create table KHOA (
    MaKhoa char(4) primary key,
    TenKhoa nvarchar(30)
)

create table LOP(
    MaLop char(4) primary key,
    TenLop nvarchar(30),
    SiSo int,
    MaKhoa char(4) foreign key references KHOA
)

create table SINHVIEN(
    MaSV char(4),
    HoTen nvarchar(30),
    NgaySinh datetime,
    GioiTinh char(5),
    MaLop char(4) foreign key references LOP
)

insert into KHOA values
('KH01', 'Kinh te'),
('KH02', 'Cong nghe thong tin')

insert into LOP values
('LP01', ' 59B1 Ke toan', 70, 'KH01'),
('LP02', ' 59K CNTT', 47, 'KH02')

insert into SINHVIEN values
('SV01', 'Bui Dinh Chi', '11/09/2000', 'Nam', 'LP01'),
('SV02', 'Nguyen Van A', '11/07/1999', 'Nam', 'LP01'),
('SV02', 'Tran Thi B', '29/03/1999', 'Nu', 'LP02'),
('SV04', 'Ho Thi C', '05/12/1999', 'Nu', 'LP02'),
('SV05', 'Phan Van S', '10/10/2000', 'Nam', 'LP01')

--- Cau 2:
create procedure cau2 @tenkhoa nvarchar(30)
as
    select MaSV, HoTen, 2020 - YEAR(NgaySinh) as 'Tuoi' from SINHVIEN SV
    JOIN LOP LP on SV.MaLop = LP.MaLop
    JOIN KHOA KH on KH.MaKhoa = LP.MaKhoa
    where TenKhoa = @tenkhoa

exec cau2 @tenkhoa = 'Kinh te'

-- cau 3
create function filter_age (@tutuoi int, @dentuoi int)
returns table
as
return
    select MaSV, HoTen, NgaySinh, TenLop, TenKhoa , 2020-YEAR(NgaySinh) as
'Tuoi' from SINHVIEN SV
    join LOP LP on SV.MaLop = LP.MaLop
    join KHOA KH on KH.MaKhoa = LP.MaKhoa
    where 2020-YEAR(NgaySinh) >= @tutuoi and 2020-YEAR(NgaySinh) <= @dentuoi

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select * from dbo.filter_age(19,20)

-- cau 4
create trigger cau4 ON SINHVIEN
for insert as
begin
    declare @siso INT = (select SiSo from LOP L join inserted on inserted.MaLop =
L.MaLop );
    declare @malop char(4) = (select L.MaLop from LOP L join inserted on
inserted.MaLop = L.MaLop );
    update LOP SET SiSo = @siso + 1 where MaLop = @malop

    if(@siso >= 80)
    begin
        update LOP SET SiSo = @siso - 1 where MaLop = @malop
        RAISERROR('Lop cua ban da vuot qua 80 nguoi',16,1)
        ROLLBACK TRAN
    end
    else
    begin
        print 'THEM THANH CONG'
    end
end

insert into LOP values
('LP03', ' 59B1 Luat', 90, 'KH01')

select * from LOP

insert into SINHVIEN values
('SV11', 'Nguyen Thi Teo', '11/11/2000', 'Nam', 'LP03')

insert into SINHVIEN values
('SV08', 'Nguyen Tran A', '11/11/2000', 'Nam', 'LP01')

-- cau 5
declare @hoten nvarchar(30) = '', @tenlop nvarchar(30)
declare @tenkhoa nvarchar(30)
declare cur_sv cursor
keyset
for
    select HoTen, TenLop, TenKhoa as 'Tuoi' from SINHVIEN SV
    JOIN LOP LP on SV.MaLop = LP.MaLop
    JOIN KHOA KH on KH.MaKhoa = LP.MaKhoa
    where SV.MaSV = 'SV15'
open cur_sv

while 0=0
begin
    fetch next from cur_sv into @hoten, @tenlop, @tenkhoa
    if @hoten = ''
    begin
        print 'Khong ton tai ma sinh vien';
        break;
    end
    if @@fetch_status <> 0 break
end

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        print @hoten+' ' + @tenlop+' ' +@tenkhoa
end
close cur_sv
deallocate cur_sv
```