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-- Y4
CREATE DATABASE asm;
USE asm;

CREATE TABLE sach (
    maSach INT PRIMARY KEY,
    tieuDe VARCHAR(20),
    nhaXuatBan VARCHAR(20),
    soTrang INT,
    soLuongBanSao INT,
    giaTien DOUBLE,
    ngayNhapKho DATE,
    viTriDatSach VARCHAR(20)
    CHECK (soTrang >= 0 AND soLuongBanSao >= 0 AND giaTien >= 0)
);

CREATE TABLE tacgia (
    maSach INT PRIMARY KEY,
    tenTacGia VARCHAR(20)
);

CREATE TABLE loaiSach (
    maSach INT PRIMARY KEY,
    tenLoai VARCHAR(20)
);

CREATE TABLE sinhvien (
    maSV INT PRIMARY KEY,
    tenSV VARCHAR(20),
    chuyenNganhHoc VARCHAR(20)
);

CREATE TABLE thesinhvien (
    maSv INT PRIMARY KEY,
    ngayHetHan DATE
);

CREATE TABLE lienhe (
    maSV INT PRIMARY KEY,
    email VARCHAR(20),
    soDienThoai INT
);

CREATE TABLE phieumuonsach (
    soPhieu INT PRIMARY KEY,
    ngayMuon DATE,
    maSV INT
);

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CREATE TABLE chitietphieumuon (
    soPhieu INT,
    maSach INT,
    ghiChu VARCHAR(255),
    ngayTra DATE,
    trangThai VARCHAR(10),
    PRIMARY KEY (soPhieu, maSach)
);

ALTER TABLE tacgia
ADD FOREIGN KEY (maSach) REFERENCES sach (maSach);

ALTER TABLE loaisach
ADD FOREIGN KEY (maSach) REFERENCES sach (maSach);

ALTER TABLE thesinhvien
ADD FOREIGN KEY (maSV) REFERENCES sinhvien (maSV);

ALTER TABLE lienhe
ADD FOREIGN KEY (maSV) REFERENCES sinhvien (maSV);

ALTER TABLE phieumuonsach
ADD FOREIGN KEY (maSV) REFERENCES sinhvien (maSV);

ALTER TABLE chitietphieumuon
ADD FOREIGN KEY (soPhieu) REFERENCES phieumuonsach (soPhieu),
ADD FOREIGN KEY (maSach) REFERENCES sach (maSach);

-- Y5
INSERT INTO sach VALUES
    (1, 'Clean Code', 'NXB1', 462, 150, 150000, '2013-12-04', 'VT1'),
    (2, 'SQL Cook Book', 'NXB2', 572, 40, 100000, '2015-04-02',
'VT2'),
    (3, 'Code Complete 2', 'NXB3', 912, 150, 150000, '2014-02-03',
'VT3'),
    (4, 'Learn SQL', 'NXB4', 377, 30, 150000, '2014-01-02', 'VT4'),
    (5, 'The Clean Coder', 'NXB5', 244, 100, 100000, '2016-04-02',
'VT5'),
    (6, 'Chí Phèo', 'NXB6', 200, 70, 70000, '2014-04-02', 'VT6'),
    (7, 'Luật Du Lịch', 'NXB7', 150, 50, 50000, '2015-02-02', 'VT7');

INSERT INTO tacgia VALUES
    (1, 'Robert C. Martin'),
    (2, 'Anthony Molinaro, Robert de Greaf'),
    (3, 'Steve McConnell'),
    (4, 'Alan Beaulieu'),
    (5, 'Robert C. Martin'),

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(6, 'Nam Cao'),  
(7, '');
```

INSERT INTO loaisach VALUES

```
(1, 'IT'),  
(2, 'IT'),  
(3, 'IT'),  
(4, 'IT'),  
(5, 'IT'),  
(6, 'Văn học'),  
(7, 'Du lịch');
```

INSERT INTO sinhvien VALUES

```
(001, 'Nguyen Van A', 'IT'),  
(002, 'Nguyen Van B', 'IT'),  
(003, 'Nguyen Van C', 'IT'),  
(004, 'Nguyen Van D', 'IT'),  
(005, 'Nguyen Van E', 'IT');
```

INSERT INTO thesinhvien VALUES

```
(001, '2025-02-03'),  
(002, '2023-05-06'),  
(003, '2024-06-23'),  
(004, '2024-08-24'),  
(005, '2023-09-21');
```

INSERT INTO lienhe VALUES

```
(001, 'anv1@gmail.com', 'anv2@gmail.com', 1234567890),  
(002, 'bnv@gmail.com', 2151511112),  
(003, 'cnv@gmail.com', 5162782673),  
(004, 'dvn@gmail.com', 9706483741),  
(005, 'env@gmail.com', 7585445458);
```

INSERT INTO phieumuonsach VALUES

```
(1, '2016-02-04', 002),  
(2, '2017-01-01', 001),  
(3, '2015-10-11', 002),  
(4, '2014-12-13', 005),  
(5, '2015-03-21', 003);
```

INSERT INTO chitietphieumuon VALUES

```
(1, 1, 'ghi chu 1', '2016-02-08', 'Chưa trả'),  
(2, 1, 'ghi chu 2', '2017-01-06', 'Chưa trả'),  
(2, 2, 'ghi chu 3', '2017-01-06', 'Đã trả'),  
(2, 4, 'ghi chu 4', '2017-01-06', 'Chưa trả'),  
(3, 1, 'ghi chu 5', '2015-10-15', 'Đã trả'),  
(3, 4, 'ghi chu 6', '2015-10-15', 'Đã trả'),  
(4, 1, 'ghi chu 7', '2014-12-17', 'Chưa trả'),
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    (5, 2, 'ghi chu 8', '2015-03-25', 'Đã trả');

-- Y6
-- 1
SELECT sach.maSach, sach.tieuDe,
sach.giaTien, tacgia.tenTacGia, loaisach.tenLoai FROM sach
JOIN loaisach ON loaisach.maSach = sach.maSach
JOIN tacgia ON tacgia.maSach = sach.maSach
WHERE loaisach.tenLoai = 'IT';

-- 2
SELECT phieumuonsach.*, chitietphieumuon.maSach
FROM phieumuonsach
JOIN chitietphieumuon
ON chitietphieumuon.soPhieu = phieumuonsach.soPhieu
WHERE phieumuonsach.ngayMuon LIKE '2017-01%';

-- 3
SELECT chitietphieumuon.*, phieumuonsach.ngayMuon
FROM phieumuonsach
JOIN chitietphieumuon
ON chitietphieumuon.soPhieu = phieumuonsach.soPhieu
WHERE chitietphieumuon.trangThai = 'Chưa trả'
ORDER BY phieumuonsach.ngayMuon;

-- 4
SELECT tenLoai, COUNT(tenLoai) AS 'So Luong'
FROM loaisach
GROUP BY tenLoai;

-- 5
SELECT COUNT(soPhieu) AS 'Luot moun sach' FROM chitietphieumuon;

-- 6
SELECT * FROM sach
WHERE tieuDe LIKE '%SQL%';

-- 7
SELECT sinhvien.maSV, sinhvien.tenSV,
phieumuonsach.soPhieu, sach.tieuDe,
phieumuonsach.ngayMuon, chitietphieumuon.ngayTra
FROM sinhvien
JOIN phieumuonsach ON phieumuonsach.maSV = sinhvien.maSV
JOIN chitietphieumuon ON chitietphieumuon.soPhieu =
phieumuonsach.soPhieu
JOIN sach ON sach.maSach = chitietphieumuon.maSach
ORDER BY phieumuonsach.ngayMuon;

```

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-- 8
SELECT sach.*, tacgia.tenTacGia, loaisach.tenLoai
FROM sach
JOIN tacgia ON tacgia.maSach = sach.maSach
JOIN loaisach ON loaisach.maSach = sach.maSach
JOIN chitietphieumuon ON chitietphieumuon.maSach = sach.maSach
GROUP BY chitietphieumuon.maSach
HAVING COUNT(chitietphieumuon.maSach) > 20;

-- 9
UPDATE sach
SET giaTien = giaTien * 70 / 100
WHERE ngayNhapKho < '2014-01-01';

-- 10
UPDATE chitietphieumuon
SET trangThai = 'Đã trả'
WHERE soPhieu IN (
    SELECT soPhieu FROM phieumuonsach
    WHERE maSV = 2
);

-- 11
SELECT chitietphieumuon.soPhieu, sinhvien.tenSV,
lienhe.email, sach.tieuDe, phieumuonsach.ngayMuon
FROM chitietphieumuon
JOIN phieumuonsach ON phieumuonsach.soPhieu =
chitietphieumuon.soPhieu
JOIN sinhvien ON sinhvien.maSV = phieumuonsach.maSV
JOIN lienhe ON lienhe.maSV = sinhvien.maSV
JOIN sach ON sach.maSach = chitietphieumuon.maSach
WHERE chitietphieumuon.trangThai = 'Chưa trả';

-- 12
UPDATE sach
SET soLuongBanSao = soLuongBanSao + 5
WHERE maSach IN (
    SELECT sach.maSach FROM sach
    JOIN tacgia ON tacgia.maSach = sach.maSach
    JOIN loaisach ON loaisach.maSach = sach.maSach
    JOIN chitietphieumuon ON chitietphieumuon.maSach = sach.maSach
    GROUP BY chitietphieumuon.maSach
    HAVING COUNT(chitietphieumuon.maSach) > 10
);

-- 13
DELETE FROM phieumuonsach
WHERE soPhieu IN (

```

```
SELECT phieumuonsach.soPhieu FROM phieumuonsach
JOIN chitietphieumuon
ON chitietphieumuon.soPhieu = phieumuonsach.soPhieu
WHERE phieumuonsach.ngayMuon < '2010-01-01'
AND chitietphieumuon.ngayTra < '2010-01-01'
);
```