KIỂM TRA GIỮA KỲ MÔN: THỰC HÀNH CƠ SỞ DỮ LIỆU 20232

 Họ tên sinh viên:  Lương Văn Khanh        MSSV: 20225728

**Câu 1.**

*SQL:*

*CREATE TABLE library.Book (*

*book\_id char(10) PRIMARY KEY,*

*title char(50) NOT NULL,*

*publisher char(20) NOT NULL,*

*published\_year integer CHECK (published\_year > 1900),*

*total\_number\_of\_copies integer CHECK (total\_number\_of\_copies >= 0),*

*current\_number\_of\_copies integer CHECK (current\_number\_of\_copies >= 0),*

*CHECK (total\_number\_of\_copies >= current\_number\_of\_copies)*

*);*

*CREATE TABLE library.Borrower (*

*borrower\_id char(10) PRIMARY KEY,*

*name char(50) NOT NULL,*

*address text,*

*telephone\_number char(12)*

*);*

*CREATE TABLE library.BorrowCard (*

*card\_id int PRIMARY KEY,*

*borrower\_id char(10) REFERENCES library.Borrower(borrower\_id),*

*borrow\_date date NOT NULL,*

*expected\_return\_date date NOT NULL,*

*actual\_return\_date date*

*);*

*CREATE TABLE library.BorrowCardItem (*

*card\_id int,*

*book\_id char(10),*

*number\_of\_copies integer,*

*PRIMARY KEY (card\_id, book\_id),*

*FOREIGN KEY (card\_id) REFERENCES library.BorrowCard(card\_id),*

*FOREIGN KEY (book\_id) REFERENCES library.Book(book\_id)*

*);*

**Câu 2.**

*SQL:*

*SELECT \* FROM library.Book*

*WHERE published\_year = 2012 AND publisher = 'Wiley';*

*Kết quả*



**Câu 3.**

*SQL:*

*SELECT publisher, COUNT(\*) AS total*

*FROM library.Book*

*GROUP BY publisher;*

*Kết quả:*



**Câu 4.**

*SQL:*

SELECT Book.book\_id, Book.title

FROM library.Book

JOIN library.BorrowCardItem ON Book.book\_id = BorrowCardItem.book\_id

JOIN library.BorrowCard ON BorrowCardItem.card\_id = BorrowCard.card\_id

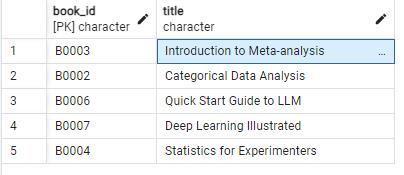
WHERE EXTRACT(YEAR FROM BorrowCard.borrow\_date) = 2024

GROUP BY Book.book\_id, Book.title

ORDER BY COUNT(\*) DESC

LIMIT 5;

*Kết quả:*



**Câu 5.**

*SQL:*

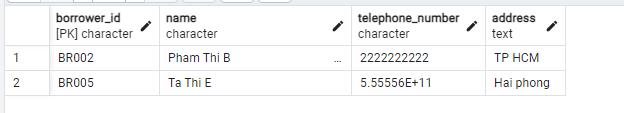
SELECT Borrower.borrower\_id, Borrower.name, Borrower.telephone\_number, Borrower.address

FROM library.Borrower

LEFT JOIN BorrowCard ON Borrower.borrower\_id = BorrowCard.borrower\_id

WHERE BorrowCard.actual\_return\_date IS NULL;

*Kết quả:*



**Câu 6.**

*SQL:*

SELECT Borrower.borrower\_id, Borrower.name, Borrower.telephone\_number, Borrower.address

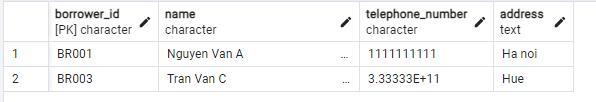
FROM library.Borrower

JOIN library.BorrowCard ON Borrower.borrower\_id = BorrowCard.borrower\_id

WHERE library.BorrowCard.actual\_return\_date > BorrowCard.expected\_return\_date

ORDER BY library.Borrower.name;

*Kết quả:*



**Câu 7.**

*SQL:*

*DELETE FROM library.Book*

*WHERE book\_id NOT IN (*

*SELECT book\_id*

*FROM library.BorrowCardItem*

*);*

*Kết quả:*



**Câu 8.**

*SQL:*

*UPDATE library.Book*

*SET total\_number\_of\_copies = total\_number\_of\_copies + 10*

*WHERE book\_id IN (*

*SELECT library.book\_id*

*FROM (*

*SELECT BorrowCardItem.book\_id, COUNT(\*) AS borrow\_count*

*FROM library. BorrowCardItem*

*JOIN library. BorrowCard ON BorrowCardItem.card\_id = BorrowCard.card\_id*

*JOIN library. Book ON BorrowCardItem.book\_id = Book.book\_id*

*WHERE Book.publisher = 'Wiley'*

*GROUP BY BorrowCardItem.book\_id*

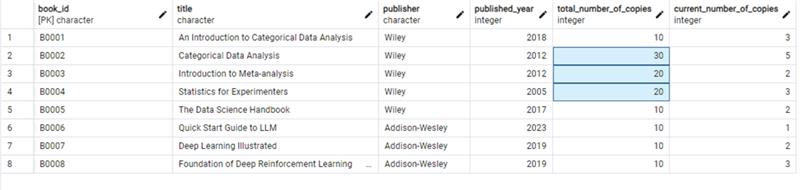
*ORDER BY borrow\_count DESC*

*LIMIT 3*

*) AS top\_books*

*);*

*Kết quả:*



**Câu 9.**

*SQL:*

*SELECT Borrower.borrower\_id, Borrower.name*

*FROM library.Borrower*

*JOIN BorrowCard ON Borrower.borrower\_id = BorrowCard.borrower\_id*

*JOIN BorrowCardItem ON BorrowCard.card\_id = BorrowCardItem.card\_id*

*JOIN Book ON BorrowCardItem.book\_id = Book.book\_id*

*WHERE Book.publisher IN ('Wiley', 'Addison-Wesley')*

*GROUP BY Borrower.borrower\_id, Borrower.name*

*HAVING COUNT(DISTINCT Book.publisher) = 2;*

*Kết quả:*

