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1) CREATE TABLE Book(

ISBN VARCHAR(20) PRIMARY KEY,

title VARCHAR(50) NOT NULL,

edition VARCHAR(50),

year INT NOT NULL);

CREATE TABLE BookCopy(

copyNo INT PRIMARY KEY,

ISBN VARCHAR(20) NOT NULL,

available BOOLEAN NOT NULL DEFAULT TRUE,

FOREIGN KEY(ISBN)REFERENCES Book(ISBN));

CREATE TABLE Borrower(

borrowerNo INT PRIMARY KEY,

borrowerName VARCHAR(100) NOT NULL,

borrowerAddress VARCHAR(150));

CREATE TABLE BookLoan(

copyNo INT NOT NULL,

dateOut DATE NOT NULL,

dateDue DATE NOT NULL,

borrowerNo INT NOT NULL,

PRIMARY KEY(copyNo,dateOut),

FOREIGN KEY(copyNo)REFERENCES BookCopy(copyNo),

FOREIGN KEY(borrowerNo)REFERENCES Borrower (borrowerNo));

2) Book table must be created before BookCopy table and boookCopy table must be created before bookLoan and borrower table. Because some properties are transferred to other tables by reference. (For example, the ISBN between Book and BookCopy)Ex: FOREIGN KEY(ISBN)REFERENCES Book(ISBN));

3)ALTER TABLE BookCopy ADD CONSTRAINT ISBN FOREIGN KEY(ISBN\_key) REFERENCES Book(ISBN);

4)SELECT \*

FROM Book;

5)SELECT borrowerName

FROM Borrower;

6)SELECT title,edition

FROM Book

WHERE year BETWEEN 2010 AND 2020;

7)SELECT title

FROM Book

WHERE title LIKE ‘%database%’ AND ISBN IN

(SELECT ISBN

FROM BookCopy

WHERE available=TRUE);

8)SELECT title

FROM Book

WHERE ISBN NOT IN

(SELECT ISBN

FROM BookCopy

INNER JOIN BookLoan ON BookCopy.copyNo=BookLoan.copyNo);

9)DELETE FROM Book

WHERE year<1979;

10)SELECT Book.title,COUNT(BookCopy.copyNo) AS numberCopies

FROM Book

INNER JOIN BookCopy ON Book.ISBN=BookCopy.ISBN

GROUP BY Book.title;

11)SELECT COUNT(\*) AS numberAvailable

FROM BookCopy

WHERE ISBN=’9781292061184’ AND available=TRUE;

12) SELECT borrowerName

FROM borrower

INNER JOIN BookLoan ON Borrower.borrowerNo = BookLoan.borrowerNo

WHERE Bookloan.dateDue < CURRENT\_DATE;

13) SELECT Book.title, Borrower.\*

FROM bookloan bookloan, book book, borrower borrower, bookcopy bookcopy

WHERE bookloan.dateDue = CURRENT\_DATE AND book.ISBN = bookcopy.ISBN AND

bookcopy.copyNo = bookloan.copyNo AND borrower.borrowerNo = bookloan.borrowerNo;

14) SELECT COUNT(\*)

FROM BookCopy

INNER JOIN BookLoan ON BookCopy.copyNo= BookLoan.copyNo

WHERE ISBN = "781292061184";

15) SELECT Book.\*

FROM BookLoan bookloan, Book book, Borrower borrower, Bookcopy bookcopy

WHERE Borrower.borrowerName = "Joseph Ledet" AND Book.ISBN =Bookcopy.ISBN AND

Bookcopy.copyNo = Bookloan.copyNo AND Borrower.borrowerNo = BookLoan.borrowerNo;

16) SELECT Book.ISBN, Borrower.borrowerName

FROM Bookloan bookloan, Book book, Borrower borrower, Bookcopy bookcopy

WHERE book.ISBN = bookcopy.ISBN AND bookcopy.copyNo = bookloan.copyNo AND

borrower.borrowerNo = bookloan.borrowerNo AND book.ISBN IN (SELECT bookcopy.ISBN

FROM bookcopy GROUP BY bookcopy.ISBN HAVING COUNT(\*) > 3)

17) SELECT book.title, COUNT(\*)

FROM bookloan bookloan, book book, borrower borrower, bookcopy bookcopy

WHERE book.ISBN = bookcopy.ISBN AND bookcopy.copyNo = bookloan.copyNo AND

borrower.borrowerNo = bookloan.borrowerNo

GROUP BY bookcopy.ISBN;

18) ALTER TABLE Book ADD numberOfPages;

ALTER TABLE Borrower ADD borrowerAge;