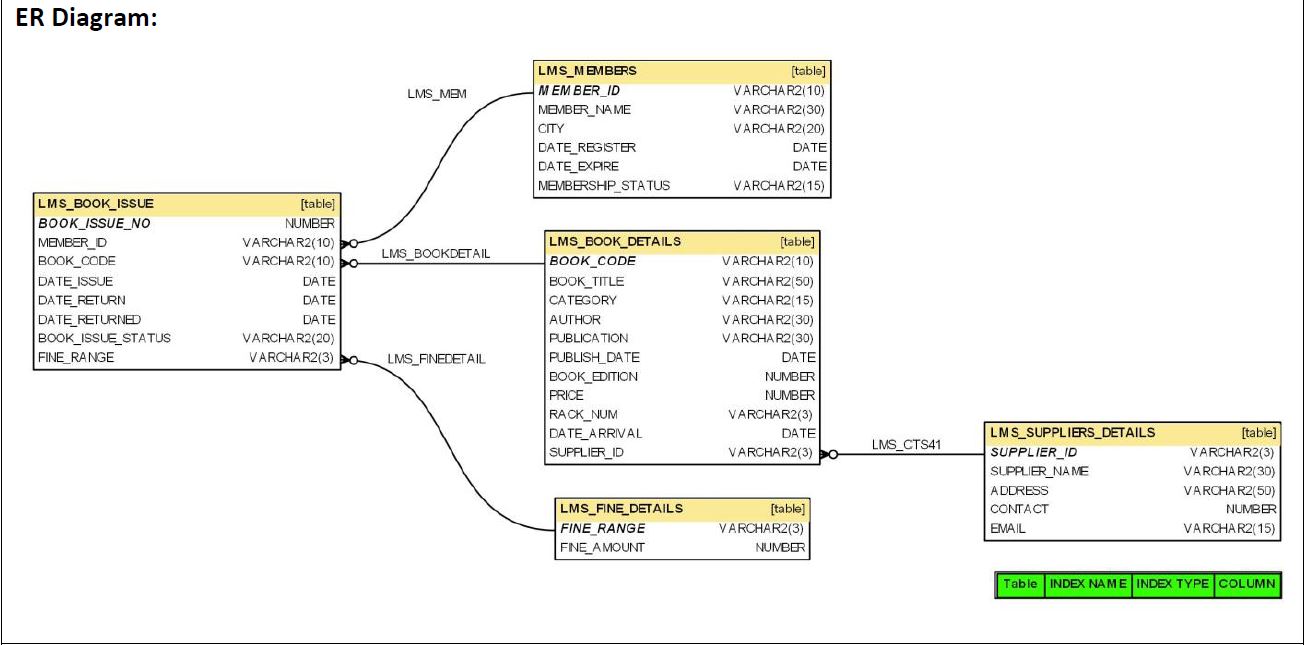
**Library Management System**



**Entity Relationship Diagram**

**1.** Write a query to display the book code, book title and supplier name of the supplier who has supplied maximum number of books. For example, if “ABC Store” supplied 3 books, “LM Store” has supplied 2 books and “XYZ Store” has supplied 1 book. So “ABC Store” has supplied maximum number of books.

with m as (select supplier\_id, max(n\_book) from (select count(book\_code) n\_book, supplier\_id from lms\_book\_details

group by supplier\_id) as counted)

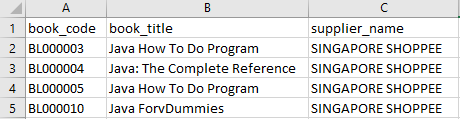
select bd.book\_code, bd.book\_title, sd.supplier\_name

from lms\_book\_details bd join lms\_suppliers\_details sd

on bd.supplier\_id = sd.supplier\_id join m

on m.supplier\_id = sd.supplier\_id

where bd.supplier\_id = m.supplier\_id



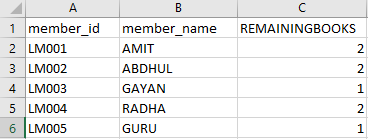
**2.** Write a query to display the member id, member name and number of remaining books he/she can take with “REMAININGBOOKS” as alias name. Hint: Assuming a member can take maximum 3 books.

SELECT ms.member\_id, ms.member\_name, 3-count(date\_issue) REMAININGBOOKS

FROM lms\_members ms JOIN lms\_book\_issue bi

ON ms.member\_id = bi.member\_id

GROUP BY ms.member\_id



**3.** Write a query to display the supplier id and supplier name of the supplier who has supplied minimum number of books. For example, if “ABC Store” supplied 3 books, “LM Store” has supplied 2 books and “XYZ Store” has supplied 1 book. So “XYZ Store” has supplied minimum number of books.

with counting as (

    select count(bd.book\_code) counted, sd.supplier\_id, sd.supplier\_name

    from lms\_book\_details bd join lms\_suppliers\_details sd

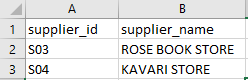
    on bd.supplier\_id = sd.supplier\_id

    group by bd.supplier\_id

)

select supplier\_id, supplier\_name from counting

where counted = (select min(counted) from counting)

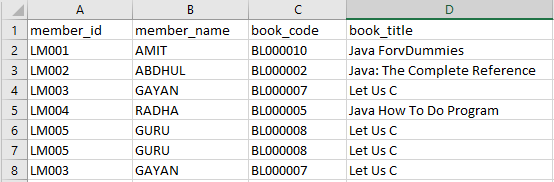


**4.** Write a query to display the member id, member name of the members, book code and book title of the books taken by them.

select ms.member\_id, ms.member\_name, bi.book\_code, bd.book\_title from lms\_members ms

join lms\_book\_issue bi on ms.member\_id =  bi.member\_id

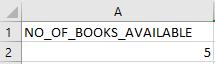
join lms\_book\_details bd on bi.book\_code = bd.book\_code;



**5.** Write a query to display the total number of books available in the library with alias name “NO\_OF\_BOOKS\_AVAILABLE” (Which is not issued). Hint: The issued books details are available in the LMS\_BOOK\_ISSUE table.

select count(book\_code) as NO\_OF\_BOOKS\_AVAILABLE from lms\_book\_details

where book\_code NOT IN (select book\_code from lms\_book\_issue);



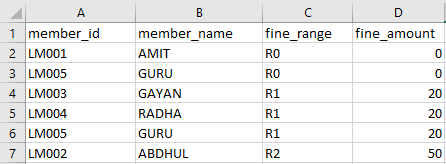
**6.** Write a query to display the member id, member name, fine range and fine amount of the members whose fine amount is less than 100.

select ms.member\_id, ms.member\_name, fd.fine\_range, fd.fine\_amount

from lms\_members ms join lms\_book\_issue bi on ms.member\_id = bi.member\_id

join lms\_fine\_details fd on fd.fine\_range = bi.fine\_range

where fd.fine\_amount < 100;

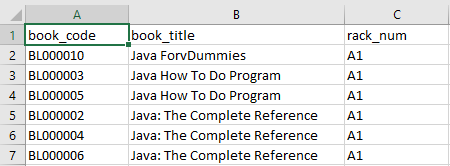


**7.** Write a query to display the book code, book title and rack number of the books which are placed in rack 'A1' and sort by book title in ascending order.

select book\_code, book\_title, rack\_num from lms\_book\_details

where rack\_num = 'A1'

ORDER BY book\_title ASC;



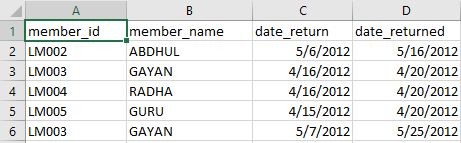
**8.** Write a query to display the member id, member name, due date and date returned of the members who has returned the books after the due date. Hint: Date\_return is due date and Date\_returned is actual book return date.

SELECT ms.member\_id, ms.member\_name, bi.date\_return, bi.date\_returned

FROM lms\_members ms

JOIN lms\_book\_issue bi ON ms.member\_id = bi.member\_id

WHERE bi.date\_returned > bi.date\_return;



**9.** Write a query to display the member id, member name and date of registration who have not taken any book.

SELECT ms.member\_id, ms.member\_name, ms.date\_register

FROM lms\_members ms

WHERE ms.member\_id NOT IN (

    SELECT member\_id from lms\_book\_issue

);



**10.** Write a Query to display the member id and member name of the members who has not paid any fine in the year 2012.

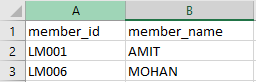
SELECT member\_id, member\_name FROM lms\_members

WHERE member\_id NOT IN (SELECT member\_id FROM lms\_book\_issue bi

    JOIN lms\_fine\_details fd on bi.fine\_range = fd.fine\_range

    WHERE year(bi.date\_returned) = 2012

    GROUP BY bi.member\_id HAVING SUM(fd.fine\_amount)>0);

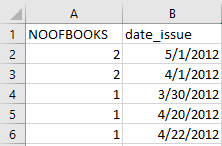


**11.** Write a query to display the date on which the maximum numbers of books were issued and the number of books issued with alias name “NOOFBOOKS”.

SELECT COUNT(book\_code) as NOOFBOOKS, date\_issue

FROM lms\_book\_issue

GROUP BY date\_issue;



**12.** Write a query to list the book title and supplier id for the books authored by “Herbert Schildt" and the book edition is 5 and supplied by supplier ‘S01’.

SELECT bd.book\_title, sd.supplier\_id FROM lms\_book\_details bd

JOIN lms\_suppliers\_details sd ON bd.supplier\_id = sd.supplier\_id

WHERE bd.author = 'Herbert Schildt' AND book\_edition = 5

AND sd.supplier\_id = 'S01';



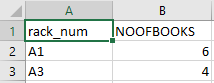
**13.** Write a query to display the rack number and the number of books in each rack with alias name “NOOFBOOKS” and sort by rack number in ascending order.

select rack\_num, count(book\_code) as NOOFBOOKS

from lms\_book\_details

group by rack\_num

order by rack\_num asc;



**14.** Write a query to display book issue number, member name, date or registration, date of expiry, book title, category author, price, date of issue, date of return, actual returned date, issue status, fine amount.

SELECT bi.book\_issue\_no, ms.member\_name, ms.date\_register, ms.date\_expire,

bd.book\_title, bd.category, bd.author, bd.price, bi.date\_issue, bi.date\_return,

bi.date\_returned, fd.fine\_amount

FROM lms\_members ms

JOIN lms\_book\_issue bi

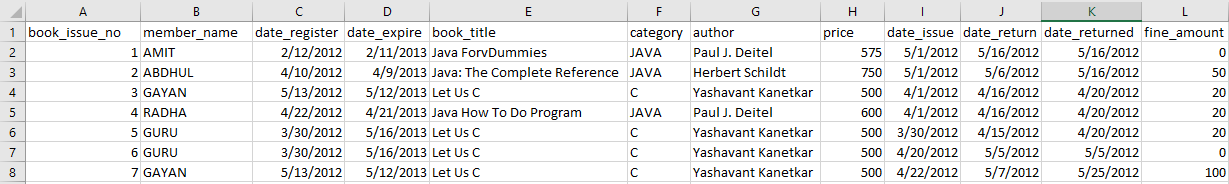
ON ms.member\_id = bi.member\_id

JOIN lms\_book\_details bd

ON bi.book\_code = bd.book\_code

JOIN lms\_fine\_details fd

ON bi.fine\_range = fd.fine\_range



**15.** Write a query to display the book code, title, publish date of the books which is been published in the month of December.

SELECT book\_code, book\_title, publish\_date FROM lms\_book\_details

WHERE month(publish\_date) = 12

