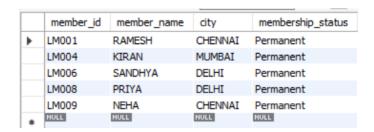
Simple Questions:

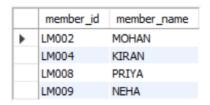
Problem # 1: Write a query to display the member id, member name, city and membership status who are all having life time membership. Hint: Life time membership status is "Permanent".

Query : select member_id, member_name, city, membership_status from Ims_members where membership_status = "Permanent";



Problem # 2: Write a query to display the member id, member name who have not returned the books. Hint: Book return status is book issue status ='Y' or 'N'.

Query: select lb.member_id, lm.member_name from lms_members lm join lms_book_issue lb on lm.member_id = lb.member_id where book_issue_status = "N";



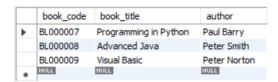
Problem # 3: Write a query to display the member id, member name who have taken the book with book code 'BL000002'.

Query : select lm.member_id, lm.member_name from lms_members lm join lms_book_issue lb on lm.member_id = lb.member_id where book_code = "BL000002";



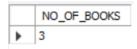
Problem # 4: Write a query to display the book code, book title and author of the books whose author name begins with 'P'

Query: select book_code, book_title, author from lms_book_details where author like 'p%';



Problem # 5: Write a query to display the total number of Java books available in library with alias name 'NO_OF_BOOKS'.

Query: select count(category) as NO_OF_BOOKS from lms_book_details where category = "java";



Problem # 6: Write a query to list the category and number of books in each category with alias name 'NO_OF_BOOKS'.

Query : select category, count(category) as NO_OF_BOOKS from lms_book_details group by category;

	category	NO_OF_BOOKS
•	Programming	4
	JAVA	3
	Systems	1
	Networking	1
	Databases	1

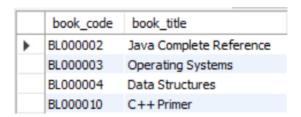
Problem # 7: Write a query to display the number of books published by "Prentice Hall" with the alias name "NO_OF_BOOKS".

Query: select count(category) as NO_OF_BOOKS from lms_book_details where publication = "Prentice Hall";



Problem # 8: Write a query to display the book code, book title of the books which are issued on the date "1 st April 2012".

Query : select lbd.book_code , lbd.book_title from lms_book_issue lbi join lms_book_details lbd on lbd.book code = lbi.book code where lbi.date issue = '2012-04-01';



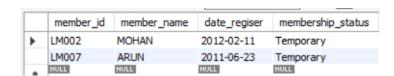
Problem # 9: Write a query to display the member id, member name, date of registration and expiry date of the members whose membership expiry date is before APR 2013.

Query : select member_id, member_name, date_regiser, date_expire from Ims_members where date_expire < '2013-04-01';



Problem # 10: write a query to display the member id, member name, date of registration, membership status of the members who registered before "March 2012" and membership status is "Temporary"

Query: select member_id, member_name, date_regiser, membership_status from Ims_members where date_regiser < '2012-03-01' and membership_status = "Temporary";



Problem #11: Write a query to display the member id, member name who's City is CHENNAI or DELHI. Hint: Display the member name in title case with alias name 'Name'.

Query: select member_id, member_name Name from lms_members where city in ('chennai','delhi');

	member_id	Name
•	LM001	RAMESH
	LM002	MOHAN
	LM005	VIGNESH
	LM006	SANDHYA
	LM008	PRIYA
	LM009	NEHA
	NULL	NULL

Problem #12: Write a query to concatenate book title, author and display in the following format. Book_Title_is_written_by_Author Example: Let Us C_is_written_by_Yashavant Kanetkar Hint: display unique books. Use "BOOK_WRITTEN_BY" as alias name.

Query: select concat(book_title,"_is_written_by_",author) BOOK_WRITTEN_BY from Ims_book_details;

	BOOK_WRITTEN_BY
•	Let Us C_is_written_by_Yashavant Kanetkar
	Java Complete Reference_is_written_by_Herbert Schildt
	Operating Systems_is_written_by_Galvin
	Data Structures_is_written_by_Seymour Lipschutz
	Computer Networks_is_written_by_Andrew Tanenbaum
	Database Systems_is_written_by_Raghu Ramakrishnan
	Programming in Python_is_written_by_Paul Barry
	Advanced Java_is_written_by_Peter Smith
	Visual Basic_is_written_by_Peter Norton
	C++ Primer_is_written_by_Stanley Lippman

Problem #13: Write a query to display the average price of books which is belonging to 'JAVA' category with alias name "AVERAGEPRICE".

Query: select round(avg(price),2) as AVERAGEPRICE from Ims_book_details where category = "java";

AVERAGEPRICE	
•	410.00

Problem #14: Write a query to display the supplier id, supplier name and email of the suppliers who are all having gmail account.

Query : select supplier_id, supplier_name, email from lms_suppliers_details where email is not null;

	supplier_id	supplier_name	email
•	S01	ABC STORE	abcstore@gmail.com
	S02	LM STORE	lmstore@yahoo.com
	S03	TECH SUPPLIERS	tech@outlook.com
	504	XYZ STORE	xyzstore@gmail.com
	NULL	NULL	NULL

Problem#15: Write a query to display the supplier id, supplier name and contact details. Contact details can be either phone number or email or address with alias name "CONTACTDETAILS". If phone number is null then display email, even if email also null then display the address of the supplier. Hint: Use Coalesce function.

Query: select supplier_id, supplier_name, coalesce(contact,email,address) CONTACTDETAILS from lms_suppliers_details;

	supplier_id	supplier_name	CONTACTDETAILS
•	S01	ABC STORE	1234567890
	S02	LM STORE	1234567890
	S03	TECH SUPPLIERS	1234560987
	S04	XYZ STORE	1876543201

Problem#16: Write a query to display the supplier id, supplier name and contact. If phone number is null then display 'No' else display 'Yes' with alias name "PHONENUMAVAILABLE". Hint: Use NVL2.

Query: select supplier_id, supplier_name, case

when contact is not null then

"Yes"

else

"No"

end PHONENUMAVAILABLE
from lms_suppliers_details;

	supplier_id	supplier_name	PHONENUMAVAILABLE
١	S01	ABC STORE	Yes
	S02	LM STORE	Yes
	S03	TECH SUPPLIERS	Yes
	S04	XYZ STORE	Yes

Average

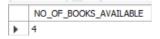
Problem # 1: Write a query to display the member id, member name of the members, book code and book title of the books taken by them.

Query: select Im.member_id, Im.member_name, Ibd.book_code, Ibd.book_title from Ims_book_details Ibd join Ims_book_issue Ibi on Ibi.book_code = Ibd.book_code join Ims_members Im on Im.member_id = Ibi.member_id;

	member_id	member_name	book_code	book_title
١	LM001	RAMESH	BL000002	Java Complete Reference
	LM002	MOHAN	BL000003	Operating Systems
	LM003	SURESH	BL000001	Let Us C
	LM004	KIRAN	BL000005	Computer Networks
	LM005	VIGNESH	BL000004	Data Structures
	LM006	SANDHYA	BL000006	Database Systems
	LM007	ARUN	BL000008	Advanced Java
	LM008	PRIYA	BL000009	Visual Basic
	LM009	NEHA	BL000010	C++ Primer
	LM010	AKASH	BL000007	Programming in Python

Problem # 2: 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.

Query: select count(book_issue_status) NO_OF_BOOKS_AVAILABLE from Ims_book_issue where book issue status = "N";



Problem # 3: 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.

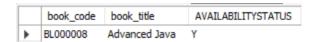
Query : select Im.member_id, Im.member_name, Ifd.fine_range, Ifd.fine_amount from Ims_fine_details Ifd join Ims_book_issue Ibi on Ibi.fine_range = Ifd.fine_range join Ims_members Im on Im.member_id = Ibi.member_id where Ifd.fine_amount <100;

	member_id	member_name	fine_range	fine_amount
•	LM001	RAMESH	F1	50
	LM004	KIRAN	F1	50
	LM007	ARUN	F1	50
	LM010	AKASH	F1	50

Problem # 4: Write a query to display the book code, book title and availability status of the 'JAVA' books whose edition is "6". Show the availability status with alias name "AVAILABILITYSTATUS". Hint: Book availability status can be fetched from "BOOK_ISSUE_STATUS" column of LMS_BOOK_ISSUE table.

Query : select lbi.book_code, lbd.book_title, lbi.book_issue_status AVAILABILITYSTATUS from lms_book_details lbd join

lms_book_issue lbi on lbi.book_code = lbd.book_code where category = "java" and book_edition = 6;



Problem # 5: 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.

Query : select book_code, book_title, rack_num from lms_book_details where rack_num = "A1" order by book_title;

	book_code	book_title	rack_num
•	BL000001	Let Us C	A1
	BL000007	Programming in Python	A1
	NULL	NULL	NULL

Problem # 6: 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.

Query : select lm.member_id, lm.member_name, lbi.date_return, lbi.date_returned from lms_book_issue lbi join lms_members lm on lbi.member_id = lm.member_id

where Ibi.date_returned > Ibi.date_return;

	member_id	member_name	date_return	date_returned
•	LM001	RAMESH	2012-04-15	2012-04-16
	LM003	SURESH	2012-03-30	2012-04-01
	LM006	SANDHYA	2012-03-15	2012-03-18
	LM007	ARUN	2012-03-05	2012-03-06

Problem # 7: Write a query to display the member id, member name and date of registration who have not taken any book.

Query: select lm.member_id, lm.member_name, lm.date_regiser from lms_members lm where lm.member_id not in (select member id from lms_book_issue);



Problem # 8: Write a Query to display the member id and member name of the members who has not paid any fine in the year 2012.

Query: select lbi.member_id, lm.member_name, lbi.date_return, lbi.date_returned from lms_members lm join lms_book_issue lbi on lbi.member_id = lm.member_id where (lbi.date_returned < lbi.date_return) and year(lbi.date_returned) = 2012;

	_	
	member_id	member_name
•	LM002	MOHAN
	LM004	KIRAN
	LM005	VIGNESH
	LM009	NEHA
	LM010	AKASH

Problem # 9: 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".

Query : select date_issue, count(book_code) NOOFBOOKS from Ims_book_issue group by date_issue;

	date_issue	NOOFBOOKS
•	2012-04-01	4
	2012-03-15	1
	2012-03-10	1
	2012-03-01	1
	2012-02-20	1
	2012-01-15	1
	2012-03-20	1

Problem # 10: 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'.

Query: select Imd.book_title, Imd.supplier_id from Ims_book_details Imd join Ims_suppliers_details Isd on Imd.supplier_id = Isd.supplier_id where Imd.author = "Herbert Schildt" and Imd.book_edition = 5 and Imd.supplier_id = "s01";

	book_title	supplier_id
•	Java Complete Reference	S01

Problem # 11: 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.

Query : select rack_num, count(book_code) NOOFBOOKS from lms_book_details group by(rack_num) order by rack_num;

	rack_num	NOOFBOOKS
•	A1	2
	A2	2
	B1	1
	B2	1
	C1	1
	C2	1
	D1	1
	D2	1

Problem # 12: 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.

Query: select lbi.book_issue_no, lm.member_name, lm.date_regiser, lm.date_expire, lbd.book_title, lbd.author, lbd.category, lbd.price, lbi.date_issue, lbi.date_return, lbi.date_returned, lbi.book_issue_status, lfd.fine_amount

from Ims_members Im join Ims_book_issue lbi on Im.member_id = lbi.member_id join Ims_book_details lbd on lbd.book_code = lbi.book_code join Ims_fine_details lfd on lbi.fine_range = lfd.fine_range;

	book_issu	member_name	date_regiser	date_expire	book_title	author	category	price	date_issue	date_return	date_returned	book_issue	fine_amoun
•	1	RAMESH	2011-03-12	2016-03-12	Java Complete	Herbert Schildt	JAVA	450	2012-04-01	2012-04-15	2012-04-16	Υ	50
	2	MOHAN	2012-02-11	2015-02-11	Operating Syst	Galvin	Systems	500	2012-04-01	2012-04-14	2012-04-10	N	100
	3	SURESH	2012-04-01	2014-04-01	Let Us C	Yashavant Kanetkar	Programming	300	2012-03-15	2012-03-30	2012-04-01	Υ	150
	4	KIRAN	2013-03-21	2015-03-21	Computer Netw	Andrew Tanenbaum	Networking	400	2012-03-10	2012-03-25	2012-03-20	N	50
	5	VIGNESH	2012-12-12	2014-12-12	Data Structures	Seymour Lipschutz	Programming	350	2012-04-01	2012-04-20	2012-04-01	Υ	100
	6	SANDHYA	2011-01-01	2013-01-01	Database Syste	Raghu Ramakrishnan	Databases	550	2012-03-01	2012-03-15	2012-03-18	Υ	150
	7	ARUN	2011-06-23	2014-06-23	Advanced Java	Peter Smith	JAVA	480	2012-02-20	2012-03-05	2012-03-06	Υ	50
	8	PRIYA	2012-05-05	2015-05-05	Visual Basic	Peter Norton	Programming	250	2012-01-15	2012-01-30	2012-01-30	N	100
	9	NEHA	2013-07-07	2016-07-07	C++ Primer	Stanley Lippman	Programming	500	2012-04-01	2012-04-10	2012-04-09	N	150
	10	AKASH	2012-08-08	2015-08-08	Programming in	Paul Barry	JAVA	300	2012-03-20	2012-04-04	2012-04-01	Υ	50

Problem # 13: Write a query to display the book code, title, publish date of the books which is been published in the month of December.

Query : select Imd.book_code, Imd.book_title, Imd.publish_date from Ims_book_details Imd where month(Imd.publish_date)=12;



Problem # 14: Write a query to display the book code, book title and availability status of the 'JAVA' books whose edition is "5". Show the availability status with alias name "AVAILABILITYSTATUS". Hint: Book availability status can be fetched from "BOOK_ISSUE_STATUS" column of LMS_BOOK_ISSUE table.

from lms_book_details lbd join lms_book_issue lbi on lbi.book_code = lbd.book_code where lbd.categroy = "java" and lbd.book_edition = 5;

	book_code	book_title	AVAILABILITYSTATUS
•	BL000002	Java Complete Reference	yes
	BL000007	Programming in Python	yes

Complex Questions:

Problem # 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, hence display the details as mentioned below.

Query : select lbd.book_code, lbd.book_title, lsd.supplier_name
from lms_book_details lbd join lms_suppliers_details lsd on lbd.supplier_id = lsd.supplier_id
where lbd.supplier_id =(select supplier_id
 from lms_book_details
 group by supplier_id
 order by COUNT(supplier_id) desc
 limit 1
);

	book_code	book_title	supplier_name
•	BL000001	Let Us C	ABC STORE
	BL000002	Java Complete Reference	ABC STORE
	BL000008	Advanced Java	ABC STORE

Problem # 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. For example, Ramesh has already taken 2 books; he can take only one book now. Hence display the remaining books as 1 in below format.

Query: select Im.member_id, Im.member_name, 3-count(Ibi.member_id) REMAININGBOOKS from Ims_members Im join Ims_book_issue Ibi on Im.member_id = Ibi.member_id group by Im.member_id, Im.member_name;

	member_id	member_name	REMAININGBOOKS
•	LM001	RAMESH	2
	LM002	MOHAN	2
	LM003	SURESH	2
	LM004	KIRAN	2
	LM005	VIGNESH	2
	LM006	SANDHYA	2
	LM007	ARUN	2
	LM008	PRIYA	2
	LM009	NEHA	2
	LM010	AKASH	2

Problem # 3: Write a query t 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, hence display the details as mentioned below.

```
Query : select lsd.supplier_id, lsd.supplier_name
from lms_suppliers_details lsd
where lsd.supplier_id =( select supplier_id
    from lms_book_details
    group by supplier_id
    order by COUNT(supplier_id) asc
    limit 1
);
```

	supplier_id	supplier_name
•	504	XYZ STORE
	NULL	NULL