

## 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 lms\_members where membership\_status = "Permanent";

	member_id	member_name	city	membership_status
▶	LM001	RAMESH	CHENNAI	Permanent
	LM004	KIRAN	MUMBAI	Permanent
	LM006	SANDHYA	DELHI	Permanent
	LM008	PRIYA	DELHI	Permanent
	LM009	NEHA	CHENNAI	Permanent
•	NULL	NULL	NULL	NULL

**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";

	member_id	member_name
▶	LM002	MOHAN
	LM004	KIRAN
	LM008	PRIYA
	LM009	NEHA

**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";

	member_id	member_name
▶	LM001	RAMESH

**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%';

	book_code	book_title	author
▶	BL000007	Programming in Python	Paul Barry
	BL000008	Advanced Java	Peter Smith
	BL000009	Visual Basic	Peter Norton
*	NULL	NULL	NULL

**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";

	NO_OF_BOOKS
▶	3

**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";

	NO_OF_BOOKS
▶	2

**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';

	book_code	book_title
▶	BL000002	Java Complete Reference
	BL000003	Operating Systems
	BL000004	Data Structures
	BL000010	C++ Primer

**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 lms\_members where date\_expire < '2013-04-01';

	member_id	member_name	date_regiser	date_expire
▶	LM006	SANDHYA	2011-01-01	2013-01-01
*	NULL	NULL	NULL	NULL

**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 lms\_members where date\_regiser < '2012-03-01' and membership\_status = "Temporary";

	member_id	member_name	date_regiser	membership_status
▶	LM002	MOHAN	2012-02-11	Temporary
	LM007	ARUN	2011-06-23	Temporary
*	NULL	NULL	NULL	NULL

**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 lms\_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 lms\_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
	S04	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
▶	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 lm.member\_id, lm.member\_name, lbd.book\_code, lbd.book\_title  
from lms\_book\_details lbd  
join lms\_book\_issue lbi on lbi.book\_code = lbd.book\_code  
join lms\_members lm on lm.member\_id = lbi.member\_id;

	member_id	member_name	book_code	book_title
▶	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 lms\_book\_issue  
where book\_issue\_status = "N";

	NO_OF_BOOKS_AVAILABLE
▶	4

**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 lm.member\_id, lm.member\_name, lfd.fine\_range, lfd.fine\_amount from  
lms\_fine\_details lfd join lms\_book\_issue lbi on lbi.fine\_range = lfd.fine\_range  
join lms\_members lm on lm.member\_id = lbi.member\_id  
where lfd.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;

	book_code	book_title	AVAILABILITYSTATUS
▶	BL000008	Advanced Java	Y

**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 lbi.date\_returned > lbi.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);

	member_id	member_name	date_regiser
*	NULL	NULL	NULL

**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 lms\_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 lmd.book\_title, lmd.supplier\_id  
from lms\_book\_details lmd join lms\_suppliers\_details lsd on lmd.supplier\_id = lsd.supplier\_id  
where lmd.author = "Herbert Schildt" and lmd.book\_edition = 5 and lmd.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 of 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 lms_members lm join lms_book_issue lbi on lm.member_id = lbi.member_id
join lms_book_details lbd on lbd.book_code = lbi.book_code
join lms_fine_details lfd on lbi.fine_range = lfd.fine_range;

```

	book_issue	member_name	date_register	date_expire	book_title	author	category	price	date_issue	date_return	date_returned	book_issue	fine_amount
1		RAMESH	2011-03-12	2016-03-12	Java Complete ...	Herbert Schildt	JAVA	450	2012-04-01	2012-04-15	2012-04-16	Y	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	Y	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	Y	100
6		SANDHYA	2011-01-01	2013-01-01	Database Syste...	Raghu Ramakrishnan	Databases	550	2012-03-01	2012-03-15	2012-03-18	Y	150
7		ARUN	2011-06-23	2014-06-23	Advanced Java	Peter Smith	JAVA	480	2012-02-20	2012-03-05	2012-03-06	Y	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	Y	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 lmd.book\_code, lmd.book\_title, lmd.publish\_date from lms\_book\_details lmd where month(lmd.publish\_date)=12;

	book_code	book_title	publish_date
*	NULL	NULL	NULL

**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.

**Query :** select lbd.book\_code, lbd.book\_title,  
case when lbi.book\_issue\_status = 'y' then  
    'yes'  
else  
    'No'  
end AVAILABILITYSTATUS

from lms\_book\_details lbd join lms\_book\_issue lbi on lbi.book\_code = lbd.book\_code  
where lbd.category = "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 lm.member\_id, lm.member\_name, 3-count(lbi.member\_id) REMAININGBOOKS  
from lms\_members lm join lms\_book\_issue lbi on lm.member\_id = lbi.member\_id  
group by lm.member\_id, lm.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 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
▶	S04	XYZ STORE
✱	NULL	NULL