week-1

date - 13-07-25

library management system

create database Ims;

use Ims:

member table

create table lms_members(member_id varchar(10) primary key,member_name varchar(30),city varchar(20),date_register date,date_expire date,membership_status varchar(15));

supplier table

create table lms_suppliers_details(supplier_id varchar(3) primary key,supplier_name varchar(30),address varchar(50),contact bigint,email varchar(15));

book_details table

create table lms_book_details(book_code varchar(10) primary key,book_title varchar(50),category varchar(15),author varchar(30),publication varchar(30),publish_date date,book_edition int,price int,rack_num varchar(3),date_arrival date,supplier_id varchar(3),constraint book_supplier_fk foreign key (supplier_id) references lms_suppliers_details(supplier_id));

fine details table

create table lms_fine_details(fine_range varchar(3) primary key,fine_amount int);

book issue table

create table lms_book_issue(book_issue_no int primary key,member_id varchar(10),book_code varchar(10),date_issue date,date_return date,date_returned date,book_issue_status varchar(20),fine_range varchar(3),constraint issue_mem_fk foreign key (member_id) references lms_members(member_id),constraint issue_bookcode_fk foreign key (book_code) references lms_book_details(book_code),constraint issue_fine_fk foreign key (fine_range) references lms_fine_details(fine_range));

problems:

Write a query to display the member id, member name, city and membership status who are all having life time membership.

select member_id,member_name,city,membership_status from lms_members where membership_status='Permanent';



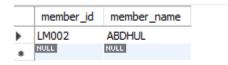
Write a query to display the member id, member name who have not returned the books

select member_id,member_name from Ims_members where member_id in(select member_id from Ims_book_issue where book_issue_status='N');



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

select member_id,member_name from lms_members where member_id in(select member_id fromlms_book_issue where book_code='BL000002');



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

select book code, book title, author from lms book details where author like 'P%';



Write a query to display the total number of Java books available in library with alias name 'NO_OF_BOOKS'

select count(book_code) as no_of_books from lms_book_details where category='JAVA';



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

select category, count(book_code) as no_of_books from lms_book_details

group by category

	category	no_of_books
•	JAVA	6
	С	2

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

select count(book_code) as no_of_books from lms_book_details where publication='Prentice Hall';



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

select book_code,book_title from lms_book_details where book_code in

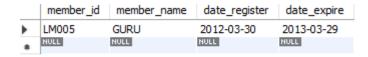
(select book_code from lms_book_issue where date_issue='2012-04-01');



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.

select member_id,member_name,date_register,date_expire from lms_members

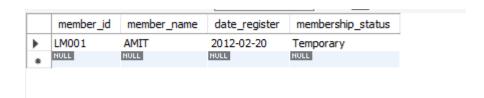
where date_expire<'2013-04-01';



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"

select member_id,member_name,date_register,membership_status from lms_members

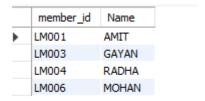
where date_register<'2012-03-01' and membership_status ='Temporary';



Write a query to display the member id, member name who's City is CHENNAI or DELHI.

select member_id,upper(member_name) as Name from lms_members

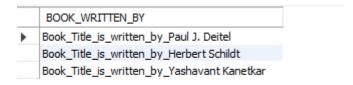
where city='CHENNAI' or 'DELHI';



Write a query to concatenate book title, author and display in the following format.

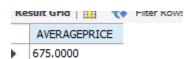
Book_Title_is_written_by_Author

select distinct(concat('Book_Title_is_written_by_',author)) as BOOK_WRITTEN_BY from lms_book_details;



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

select avg(price) as AVERAGEPRICE from lms_book_details where category='JAVA';



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

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

	supplier_id	supplier_name	email
•	S01	SINGAPORE SHOPPEE	sing@gmail.com
	S02	JK Stores	jks@yahoo.com
	S03	ROSE BOOK STORE	rose@gmail.com
	504	KAVARI STORE	kavi@redif.com
	S05	EINSTEN BOOK GALLARY	eingal@aol.com
	S06	AKBAR STORE	akbakst@aol.com
	NULL	HULL	NULL

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.

select supplier_id,supplier_name,Coalesce(contact,email,address)as CONTACTDETAILS

from lms_suppliers_details;

	supplier_id	supplier_name	CONTACTDETAILS
•	S01	SINGAPORE SHOPPEE	989412355
	S02	JK Stores	994012345
	S03	ROSE BOOK STORE	944441122
	S04	KAVARI STORE	863000145
	S05	EINSTEN BOOK GALLARY	954200001
	S06	AKBAR STORE	785562310

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".

select supplier_id,supplier_name,contact,

case

when contact is null then 'NO'

else 'YES'

end as PHONENUMAVAILABLE

from lms_suppliers_details;

				The second secon
	supplier_id	supplier_name	contact	PHONENUMAVAILABLE
•	S01	SINGAPORE SHOPPEE	989412355	YES
	S02	JK Stores	994012345	YES
	S03	ROSE BOOK STORE	944441122	YES
	S04	KAVARI STORE	863000145	YES
	S05	EINSTEN BOOK GALLARY	954200001	YES
	S06	AKBAR STORE	785562310	YES

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 mem.member_id,mem.member_name,bok.book_code,bok.book_title
from lms_members mem join lms_book_issue book on mem.member_id=book.member_id
join lms_book_details bok on bok.book_code=book.book_code;

		-		
	member_id	member_name	book_code	book_title
٠	LM001	AMIT	BL000001	Java How To Do Program
	LM002	ABDHUL	BL000002	Java: The Complete Reference
	LM003	GAYAN	BL000007	Let Us C
	LM004	RADHA	BL000005	Java How To Do Program
	LM005	GURU	BL000008	Let Us C

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).

select count(*) AS NO_OF_BOOKS_AVAILABLE

from lms_book_details b

where not exists (select 1 from lms_book_issue i

where i.book_code = b.book_code and i.date_returned is null);

NO_OF_BOOKS_AVAILABLE

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 mem.member_id,mem.member_name,b.fine_range,f.fine_amount from lms_members mem join lms_book_issue b on mem.member_id=b.member_id join lms_fine_details f on b.fine_range=f.fine_range where f.fine_amount<100;

		_		
	member_id	member_name	fine_range	fine_amount
٠	LM001	AMIT	R1	20
	LM003	GAYAN	R1	20
	LM004	RADHA	R1	20
	LM002	ABDHUL	R2	50
	LM005	GURU	R2	50

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"

```
case
```

when exists(select 1 from lms_book_issue issue

where book.book_code=issue.book_code and date_returned is null)

then 'Not Available'

else 'Available'

end as AVAILABILITYSTATUS

select book.book_code,book.book_title,

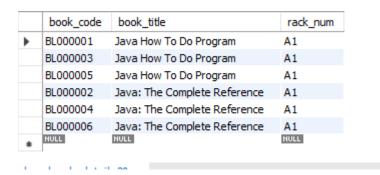
from lms_book_details book

where category='JAVA' and book_edition=6;

	book_code	book_title	AVAILABILITYSTATUS
•	BL000001	Java How To Do Program	Available
	BL000003	Java How To Do Program	Available
	BL000005	Java How To Do Program	Available

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;
```



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 mem.member_id,mem.member_name,acc.date_return,acc.date_returned

from lms members mem join lms book issue acc

on mem.member id=acc.member id

where acc.date_return<acc.date_returned;

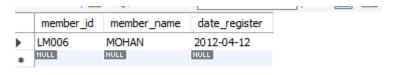
	member_id	member_name	date_return	date_returned
•	LM002	ABDHUL	2012-06-06	2012-11-01
	LM003	GAYAN	2012-05-06	2012-10-05
	LM005	GURU	2012-08-16	2012-08-19

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

select member_id,member_name,date_register

from Ims_members where member_id not in

(select distinct(member_id) from lms_book_issue);



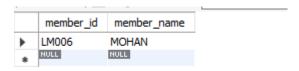
Write a Query to display the member id and member name of the members who has not paid any fine in the year 2012.

select member_id,member_name from lms_members

where member_id not in(

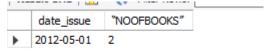
select distinct(member_id) from lms_book_issue

where year(date_issue)='2012' and fine_range is not null);



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 date_issue,count(book_issue_no) as "NOOFBOOKS" from lms_book_issue group by date_issue having count(book_issue_no)=(select max(book_count) from (select count(book_issue_no) as book_count from lms_book_issue group by date_issue) as t1);



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 book_title,supplier_id from lms_book_details where
author='Herbert Schildt' and
book_edition=5 and
supplier_id='S01';

	book_title	supplier_id
•	Java: The Complete Reference	S01

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 noofbooks;
```

rack_num	NOOFBOOKS
A3	2
A1	6

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
```

```
i.book_issue_no,
m.member_name,
m.date_register,
m.date_expire,
b.book_title,
b.category,
b.author,
b.price,
i.date_issue,
i.date_return,
i.date_returned,
i.book_issue_status,
f.fine_amount
```

```
from

Ims_book_issue i

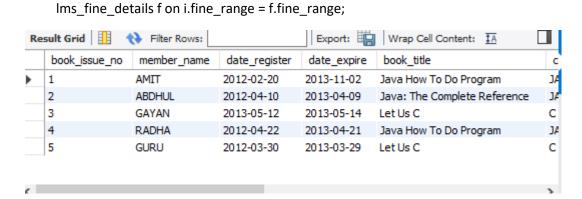
join

Ims_members m on i.member_id = m.member_id

join

Ims_book_details b on i.book_code = b.book_code

join
```



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;
```

	book_code	book_title	publish_date	
•	BL000005	Java How To Do Program	1999-12-10	
	BL000007	Let Us C	2010-12-11	
	BL000008	Let Us C	2010-12-11	
	NULL	NULL	NULL	

Write a query to display the book code, book title and supplier name of the supplier who has supplied maximum number of books.

```
select book.book_code,book.book_title,supp.supplier_name
from lms_book_details book join lms_suppliers_details supp
on book.supplier_id=supp.supplier_id
where supp.supplier_id in
(select supplier_id from lms_book_details
group by supplier_id
having count(book_code)=(
(select max(book_count) from(
select supplier_id,count(book_code)as book_count
from lms_book_details
group by supplier_id) as t1)));
```

	book_code	book_title	supplier_name
•	BL000001	Java How To Do Program	SINGAPORE SHOPPEE
	BL000003	Java How To Do Program	SINGAPORE SHOPPEE
	BL000004	Java: The Complete Reference	SINGAPORE SHOPPEE
	BL000005	Java How To Do Program	SINGAPORE SHOPPEE

Write a query to display the member id, member name and number of remaining books he/she can take with "REMAININGBOOKS" as alias name.

```
select
```

```
m.member_id,m.member_name,3 - COUNT(i.book_issue_no) AS REMAININGBOOKS
```

from

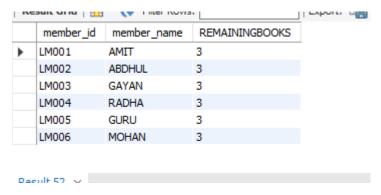
Ims_members m

left join

lms_book_issue i on m.member_id = i.member_id and i.date_returned IS NULL

group by

m.member_id, m.member_name;



Write a query to display the supplier id and supplier name of the supplier who has supplied minimum number of books.

select supplier_id,supplier_name from lms_suppliers_details

where supplier_id in(

select supplier_id from(

select supplier_id from lms_book_details

group by supplier_id

having count(*)=(

select min(minc) from(

select supplier_id,count(*) as minc

from lms_book_details

group by supplier_id)as t1))as t2);

