

## Library Database – JOIN Queries

1. Display library ID, name, and the name of the manager.

```
display library id, name, and the name of the manager
select l.library_id, l.name, s.fullname
from library l
join staff s on l.library_id = s.library_id
where s.position = 'Manager';
```

0 %

Results Messages

library_id	name	fullname
1	Central Library	Ali Hassan

2. Display library names and the books available in each one.

```
select l.name, b.title
from library l
INNER JOIN book b on l.library_id = b.library_id;
```

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Results Messages

	name	title
1	Central Library	Database Systems
2	Central Library	Children Stories
3	North Branch	Fiction Novel
4	North Branch	Science Facts
5	East Branch	Programming Basics
6	Central Library	Special Book

3. Display all member data along with their loan history

```

select m.*, l.loan_id, l.loandate, l.status
from member m
LEFT JOIN loan l on m.member_id = l.member_id;

```

Results Messages

member_id	fullname	email	membershipstartdate	phonenumber	status	loan_id	loandate	status
1	Mohammed Ali	mohammed@example.com	2023-01-10	96123456	Active	1	2023-05-01	Returned
2	Aisha Noor	aisha@example.com	2023-02-15	96234567	Active	2	2023-06-01	Issued
3	Khalid Yousuf	khalid@example.com	2023-03-20	96345678	Active	3	2023-07-01	Overdue
4	Layla Hassan	layla@example.com	2023-04-25	96456789	Active	4	2023-08-01	Issued
405	MKM	mkmalafi@gmail.com	2025-12-17	97123456	Active	7	2025-12-17	Issued
405	MKM	mkmalafi@gmail.com	2025-12-17	97123456	Active	8	2025-12-17	Issued
405	MKM	mkmalafi@gmail.com	2025-12-17	97123456	Active	10	2025-12-17	Returned

4. Display all books located in 'Zamalek' or 'Downtown'.

```

select b.title, l.location
from book b
INNER JOIN library l on b.library_id = l.library_id
where l.location in ('Zamalek','Downtown'); -----empty because no exist in data---

select * from library;

```

Results Messages

title	location

5. Display all books whose titles start with 'T'.

```

select book_id, title
from book
where title like 'T%';
select*from book;

```

Results Messages

book_id	title

6. List members who borrowed books priced between 100 and 300 LE.

```

select distinct m.fullname, b.title, b.price
from member m
INNER JOIN loan l on m.member_id = l.member_id
INNER JOIN book b on l.book_id = b.book_id
where b.price between 100 and 300;

```

fullname	title	price
MKM	Special Book	157.50

7. Retrieve members who borrowed and returned books titled 'The Alchemist'.

```

select distinct m.fullname
from member m
INNER JOIN loan l on m.member_id = l.member_id
INNER JOIN book b on l.book_id = b.book_id
where b.title = 'The Alchemist' and l.status = 'Returned';

```

fullname

8. Find all members assisted by librarian "Sarah Fathy".

```

select distinct m.fullname
from member m
inner join loan l on m.member_id = l.member_id
inner join staff s on l.staff_id = s.staff_id
where s.fullname = 'Sarah Fathy';

select * from staff where fullname = 'Sarah Fathy';

```

fullname

9. Display each member's name and the books they borrowed, ordered by book title.

```

select m.fullname, b.title
from member m
INNER JOIN loan l on m.member_id = l.member_id
INNER JOIN book b on l.book_id = b.book_id
order by b.title;

```

% ▾

Results Messages

fullname	title
Aisha Noor	Children Stories
Mohammed Ali	Database Systems
MKM	Database Systems
MKM	Database Systems
Khalid Yousuf	Fiction Novel
Layla Hassan	Science Facts
MKM	Special Book

10. For each book located in 'Cairo Branch', show title, library name, manager, and shelf info.

```

select b.title, l.name, s.fullname, b.shelflocation
from book b
INNER JOIN library l on b.library_id = l.library_id
INNER JOIN staff s on l.library_id = s.library_id
where l.name = 'Cairo Branch' and s.position = 'Manager';

```

% ▾

Results Messages

title	name	fullname	shelflocation

11. Display all staff members who manage libraries.

```

select s.staff_id, s.fullname, l.name
from staff s
INNER JOIN library l on s.library_id = l.library_id
where s.position = 'Manager';

```

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	Results	Messages						
	<table border="1"> <thead> <tr> <th>staff_id</th> <th>fullname</th> <th>name</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Ali Hassan</td> <td>Central Library</td> </tr> </tbody> </table>	staff_id	fullname	name	1	Ali Hassan	Central Library	
staff_id	fullname	name						
1	Ali Hassan	Central Library						

12. Display all members and their reviews, even if some didn't submit any review yet

```

select m.fullname, r.review_id, r.rating, r.comments
from member m
LEFT JOIN review r on m.member_id = r.member_id;

```

% ▾

	Results	Messages																								
	<table border="1"> <thead> <tr> <th>fullname</th> <th>review_id</th> <th>rating</th> <th>comments</th> </tr> </thead> <tbody> <tr> <td>Mohammed Ali</td> <td>1</td> <td>5</td> <td>Excellent book!</td> </tr> <tr> <td>Aisha Noor</td> <td>2</td> <td>4</td> <td>Very useful reference.</td> </tr> <tr> <td>Khalid Yousuf</td> <td>3</td> <td>3</td> <td>Good but a bit long.</td> </tr> <tr> <td>Layla Hassan</td> <td>4</td> <td>2</td> <td>Not very interesting.</td> </tr> <tr> <td>MKM</td> <td>NULL</td> <td>NULL</td> <td>NULL</td> </tr> </tbody> </table>	fullname	review_id	rating	comments	Mohammed Ali	1	5	Excellent book!	Aisha Noor	2	4	Very useful reference.	Khalid Yousuf	3	3	Good but a bit long.	Layla Hassan	4	2	Not very interesting.	MKM	NULL	NULL	NULL	
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