

SQL Project - Creating and Using Views (Library DB)

Library Database Tables (Example Structure)

Books

book_id	title	category	pages
1	SQL Basics	Database	200
2	Learn Python	Programming	350
3	DBMS Concepts	Database	280

Members

member_id	name	city
1	Riya Sharma	Delhi
2	Aman Joshi	Mumbai

Borrow

borrow_id	book_id	member_id	borrow_date
1	1	1	2024-01-02
2	2	2	2024-02-15

SQL VIEW Queries and Explanation

1. Create a View for borrowing details with book and member info:

```
CREATE VIEW BorrowDetails AS
SELECT B.borrow_id, M.name AS member_name, K.title AS book_title, B.borrow_date
FROM Borrow B
JOIN Members M ON B.member_id = M.member_id
JOIN Books K ON B.book_id = K.book_id;
```

2. Select from the view:

```
SELECT * FROM BorrowDetails;
```

3. Create a View for borrowed books with more than 250 pages:

```
CREATE VIEW BorrowedLongBooks AS
SELECT M.name, K.title, K.pages
FROM Members M
JOIN Borrow B ON M.member_id = B.member_id
JOIN Books K ON B.book_id = K.book_id
WHERE K.pages > 250;
```

4. Use views for abstraction and security:
- Hide joins and sensitive structure behind a view.
 - Allow users to access data via views instead of raw tables.

Outcome:

Learned how to create reusable SQL logic using views to simplify complex queries and enhance security.