

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

MANAGEMENT

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INSTANCE

- Startup / Shutdown
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PERFORMANCE

- Dashboard
- Performance Reports
- Performance Schema Setup

Administration Schemas

No object selected

SQL File 127

```

100 * UPDATE Books SET available_copies = available_copies - 1 WHERE book_id = 3;
101 * UPDATE Books SET available_copies = available_copies + 1 WHERE book_id = 3;
102
103 -- DELETE members who haven't borrowed in the last 1 year
104 * DELETE FROM Members
105 * WHERE member_id NOT IN (
106 *   SELECT DISTINCT member_id FROM Transactions
107 *   WHERE borrow_date >= DATE_SUB(CURRENT(), INTERVAL 1 YEAR)
108 * );
109
110 -- 2. Basic queries with filtering
111 * SELECT * FROM Books WHERE available_copies > 0;
112 * SELECT * FROM Books WHERE YEAR(published_date) > 2015;
113 * SELECT * FROM Books ORDER BY price DESC LIMIT 5;
114 * SELECT * FROM Members WHERE membership_date < '2022-01-01';

```

Result Grid

book_id	title	author_id	category	isbn	published_date	price	available_copies
7	New Book2	2	Fiction	ISBN0020	2018-01-01	150.00	0
8	New Book	3	Science	ISBN0008	2018-01-01	450.00	2
9	New Book	1	Science	ISBN0009	2018-01-01	150.00	2

Books 4 x

Output

Action Output

```

103 18:03:36 UPDATE Books SET available_copies = available_copies - 1 WHERE book_id = 3;
104 18:03:39 UPDATE Books SET available_copies = available_copies + 1 WHERE book_id = 3;
105 18:03:45 DELETE FROM Members WHERE member_id NOT IN ( SELECT DISTINCT member_id FROM Transactions
106 18:03:58 SELECT * FROM Books WHERE YEAR(published_date) > 2015 LIMIT 5;

```

Message

1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0

1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0

Error Code: 1175. You are using safe update mode and you need to update a table without a WHERE that uses... 0.000 sec

3 row(s) returned

0.000 sec / 0.000 sec

0.000 sec / 0.000 sec

0.000 sec / 0.000 sec

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Administration Schemas

No object selected

SQL File 127

```

121 FROM Members m
122 LEFT JOIN Transactions t ON m.member_id = t.member_id
123 GROUP BY m.member_id, m.name
124 HAVING m.membership_date > '2020-12-31' OR COUNT(t.transaction_id) > 3;
125
126 -- 4. Sorting and aggregation
127 * SELECT * FROM Books ORDER BY title;
128 * SELECT m.member_id, m.name, COUNT(t.transaction_id) AS total_borrowed
129 FROM Members m
130 LEFT JOIN Transactions t ON m.member_id = t.member_id
131 GROUP BY m.member_id, m.name;
132
133 -- 5. Advanced aggregation
134 * SELECT category, COUNT(*) AS total_books FROM Books GROUP BY category;
135 * SELECT AVG(price) AS avg_price FROM Books;

```

Result Grid

book_id	title	author_id	category	isbn	published_date	price	available_copies
8	A Suitable Boy	6	Fiction	978-0-04-036032-4	1993-01-01	600.00	4
3	Pink-Foot Seagulls	2	Fiction	978-0-12-914830-0	2004-01-01	200.00	12
9	New Book	3	Science	ISBN0008	2018-01-01	450.00	2
7	New Book2	2	Fiction	ISBN0020	2018-01-01	150.00	0

Books 11 x

Output

Action Output

```

171 18:02:27 SELECT * FROM Books WHERE available_copies = 0 LIMIT 0, 1000;
172 18:05:34 SELECT m.member_id, m.name, COUNT(t.transaction_id) AS total_borrowed FROM Members m LEFT JOIN T...
173 18:06:39 SELECT m.member_id, m.name, COUNT(t.transaction_id) AS total_borrowed FROM Members m LEFT JOIN T...
174 18:06:45 SELECT * FROM Books ORDER BY title LIMIT 0, 1000;

```

Message

1 row(s) returned

Error Code: 1054. Unknown column 'membership\_date' in 'having clause'

Error Code: 1054. Unknown column 'membership\_date' in 'having clause'

3 row(s) returned

0.000 sec / 0.000 sec

0.000 sec / 0.000 sec

0.000 sec / 0.000 sec

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No object selected

SQL File 127

```

123 -- 2. Books published after 2015
124 * SELECT * FROM Books WHERE YEAR(published_date) > 2015;
125
126 -- Top 5 most expensive books
127 * SELECT * FROM Books ORDER BY price DESC;
128
129 -- Members who joined before 2022
130 * SELECT * FROM Members WHERE membership_date < '2022-01-01';
131
132 -- 3. Science books with price < 500
133 * SELECT * FROM Books WHERE category = 'Science' AND price < 500;
134
135 -- Books not available for borrowing
136 * SELECT * FROM Books WHERE available_copies = 0;
137

```

Result Grid

book_id	title	author_id	category	isbn	published_date	price	available_copies
7	New Book2	2	Fiction	ISBN0020	2018-01-01	150.00	0

Books 54 x

Output

Action Output

```

172 18:06:34 SELECT m.member_id, m.name, COUNT(t.transaction_id) AS total_borrowed FROM Members m LEFT JOIN T...
173 18:06:39 SELECT m.member_id, m.name, COUNT(t.transaction_id) AS total_borrowed FROM Members m LEFT JOIN T...
174 18:06:45 SELECT * FROM Books ORDER BY price LIMIT 5, 1000;
175 18:07:13 SELECT * FROM Books WHERE available_copies = 0 LIMIT 0, 1000;

```

Message

Error Code: 1054. Unknown column 'membership\_date' in 'having clause'

Error Code: 1054. Unknown column 'membership\_date' in 'having clause'

3 row(s) returned

0.000 sec / 0.000 sec

0.000 sec / 0.000 sec

0.000 sec / 0.000 sec

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Administration Schemas

No object selected

library\_management SQL File 12'

```
144 -- 4 Books sorted alphabetically
145 -- SELECT * FROM Books ORDER BY title ASC;
146
147 -- Number of books borrowed by each member
148 -- SELECT m.member_id, m.name, COUNT(t.transaction_id) AS total_borrowed
149 -- FROM Members m
150 -- LEFT JOIN Transactions t ON m.member_id = t.member_id
151 -- GROUP BY m.member_id, m.name;
152
153 -- Group books by category and show total count
154 -- SELECT category, COUNT(*) AS total_books FROM Books GROUP BY category;
155
156 -- 5. Total number of books in each category
```

Result Grid

book_id	title	author_id	category	isbn	published_date	price	available_copies
6	A Suitable Boy	6	Fiction	978-0-06-078632-6	1993-01-01	600.00	4
2	Five Heart Beaters	2	Fiction	978-0-12-911830-6	2004-01-01	200.00	12
8	New Book	3	Science	ISBN008	2018-01-01	400.00	2
9	New Book	1	Science	ISBN009	2018-01-01	500.00	2
7	New Book2	2	Fiction	ISBN0010	2018-01-01	300.00	0

Books 95 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
173	18.06.39	SELECT * FROM Books ORDER BY title ASC LIMIT 0, 1000	Error Code: 1054. Unknown column 'membership_date' in 'having clause'	0.000 sec / 0.000 sec
174	18.06.45	SELECT * FROM Books ORDER BY title ASC LIMIT 0, 1000	9 row(s) returned	0.000 sec / 0.000 sec
175	18.07.13	SELECT * FROM Books WHERE available_copies = 0 LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
176	18.07.58	SELECT * FROM Books ORDER BY title ASC LIMIT 0, 1000	9 row(s) returned	0.000 sec / 0.000 sec

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No object selected

library\_management SQL File 12'

```
147
148
149 -- 4 Books sorted alphabetically
150 -- SELECT * FROM Books ORDER BY title ASC;
151
152 -- Number of books borrowed by each member
153 -- SELECT m.member_id, m.name, COUNT(t.transaction_id) AS total_borrowed
154 -- FROM Members m
155 -- LEFT JOIN Transactions t ON m.member_id = t.member_id
156 -- GROUP BY m.member_id, m.name;
157
158 -- Group books by category and show total count
159 -- SELECT category, COUNT(*) AS total_books FROM Books GROUP BY category;
160
161 -- 5. Total number of books in each category
```

Result Grid

member_id	name	total_borrowed
1	Priya Sharma	1
2	Rahul Verma	1
3	Ananya Patel	1
4	Arun Singh	1
5	Sneha Reddy	1

Result 56 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
174	18.06.45	SELECT * FROM Books ORDER BY title ASC LIMIT 0, 1000	9 row(s) returned	0.000 sec / 0.000 sec
175	18.07.13	SELECT * FROM Books WHERE available_copies = 0 LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
176	18.07.58	SELECT * FROM Books ORDER BY title ASC LIMIT 0, 1000	9 row(s) returned	0.000 sec / 0.000 sec
177	18.08.23	SELECT m.member_id, m.name, COUNT(t.transaction_id) AS total_borrowed FROM Members m LEFT JOIN Transactions t ON m.member_id = t.member_id GROUP BY m.member_id, m.name	7 row(s) returned	0.000 sec / 0.000 sec

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No object selected

library\_management SQL File 12'

```
147
148
149 -- 4 Books sorted alphabetically
150 -- SELECT * FROM Books ORDER BY title ASC;
151
152 -- Number of books borrowed by each member
153 -- SELECT m.member_id, m.name, COUNT(t.transaction_id) AS total_borrowed
154 -- FROM Members m
155 -- LEFT JOIN Transactions t ON m.member_id = t.member_id
156 -- GROUP BY m.member_id, m.name;
157
158 -- Group books by category and show total count
159 -- SELECT category, COUNT(*) AS total_books FROM Books GROUP BY category;
160
161 -- 5. Total number of books in each category
```

Result Grid

category	total_books
Fiction	5
Mythology	1
Children	1
Science	2

Result 57 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
175	18.07.13	SELECT * FROM Books WHERE available_copies = 0 LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
176	18.07.58	SELECT * FROM Books ORDER BY title ASC LIMIT 0, 1000	9 row(s) returned	0.000 sec / 0.000 sec
177	18.08.23	SELECT m.member_id, m.name, COUNT(t.transaction_id) AS total_borrowed FROM Members m LEFT JOIN Transactions t ON m.member_id = t.member_id GROUP BY m.member_id, m.name	7 row(s) returned	0.000 sec / 0.000 sec
178	18.08.48	SELECT category, COUNT(*) AS total_books FROM Books GROUP BY category LIMIT 0, 1000	4 row(s) returned	0.000 sec / 0.000 sec

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Information

No object selected

SQL File 12

```

159 SELECT category, COUNT(*) AS total_books FROM Books GROUP BY category;
160
161 -- 5. Total number of books in each category
162 SELECT category, COUNT(*) AS total_books FROM Books GROUP BY category;
163
164 -- Average price of books
165 SELECT AVG(price) AS avg_price FROM Books;
166
167 -- Most borrowed book
168 SELECT b.book_id, b.title, COUNT(t.transaction_id) AS borrow_count
169 FROM Books b
170 JOIN Transactions t ON b.book_id = t.book_id
171 GROUP BY b.book_id, b.title
172 ORDER BY borrow_count DESC
173 LIMIT 1;

```

Result Grid

avg_price
1400.000000

Output

Action Output

Time	Action	Message	Duration / Fetch
176 18:07:58	SELECT FROM Books ORDER BY title ASC LIMIT 0, 1000	9 rows returned	0.000 sec / 0.000 sec
177 18:08:23	SELECT n.member_id, n.name, COUNT(t.transaction_id) AS total_borrowed FROM Members n LEFT JOIN Tr...	7 rows returned	0.000 sec / 0.000 sec
178 18:08:48	SELECT category, COUNT(*) AS total_books FROM Books GROUP BY category LIMIT 0, 1000	4 rows returned	0.000 sec / 0.000 sec
179 18:09:08	SELECT AVG(price) AS avg_price FROM Books LIMIT 0, 1000	1 rows returned	0.000 sec / 0.000 sec
180 18:09:29	SELECT b.book_id, b.title, COUNT(t.transaction_id) AS borrow_count FROM Books b JOIN Transactions t ON...	1 rows returned	0.000 sec / 0.000 sec

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Information

No object selected

SQL File 12

```

165 SELECT AVG(price) AS avg_price FROM Books;
166
167 -- Most borrowed book
168 SELECT b.book_id, b.title, COUNT(t.transaction_id) AS borrow_count
169 FROM Books b
170 JOIN Transactions t ON b.book_id = t.book_id
171 GROUP BY b.book_id, b.title
172 ORDER BY borrow_count DESC
173 LIMIT 1;
174
175
176 -- Total fines collected
177 SELECT SUM(fine_amount) AS total_fines FROM Transactions;
178
179 -- 6. Foreign Keys

```

Result Grid

book_id	title	borrow_count
1	The God of Small Things	1

Output

Action Output

Time	Action	Message	Duration / Fetch
177 18:08:23	SELECT n.member_id, n.name, COUNT(t.transaction_id) AS total_borrowed FROM Members n LEFT JOIN Tr...	7 rows returned	0.000 sec / 0.000 sec
178 18:08:48	SELECT category, COUNT(*) AS total_books FROM Books GROUP BY category LIMIT 0, 1000	4 rows returned	0.000 sec / 0.000 sec
179 18:09:08	SELECT AVG(price) AS avg_price FROM Books LIMIT 0, 1000	1 rows returned	0.000 sec / 0.000 sec
180 18:09:29	SELECT b.book_id, b.title, COUNT(t.transaction_id) AS borrow_count FROM Books b JOIN Transactions t ON...	1 rows returned	0.000 sec / 0.000 sec

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Information

No object selected

SQL File 12

```

174
175 -- Total Fines collected
176 SELECT SUM(fine_amount) AS total_fines FROM Transactions;
177
178 -- 6. Foreign Keys
179
180 -- Link Books to Authors
181 ALTER TABLE Books
182 ADD CONSTRAINT fk_books_authors
183 FOREIGN KEY (author_id) REFERENCES Authors (author_id);
184
185 -- Link Transactions to Members
186 ALTER TABLE Transactions
187 ADD CONSTRAINT fk_transactions_members

```

Result Grid

total_fines
115.00

Output

Action Output

Time	Action	Message	Duration / Fetch
178 18:08:48	SELECT category, COUNT(*) AS total_books FROM Books GROUP BY category LIMIT 0, 1000	4 rows returned	0.000 sec / 0.000 sec
179 18:09:08	SELECT AVG(price) AS avg_price FROM Books LIMIT 0, 1000	1 rows returned	0.000 sec / 0.000 sec
180 18:09:29	SELECT b.book_id, b.title, COUNT(t.transaction_id) AS borrow_count FROM Books b JOIN Transactions t ON...	1 rows returned	0.000 sec / 0.000 sec
181 18:10:14	SELECT SUM(fine_amount) AS total_fines FROM Transactions LIMIT 0, 1000	1 rows returned	0.000 sec / 0.000 sec

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Administration Schemas Information

No object selected

Object Info Session

Library management SQL File 12'

```
198 FOREIGN KEY (member_id) REFERENCES Members(member_id);
199
200 -- Link Transactions to Books
201 ALTER TABLE Transactions
202 ADD CONSTRAINT FK_transactions_books
203 FOREIGN KEY (book_id) REFERENCES Books(book_id);
204
205 -- 7. INNER JOIN: books with their author names
206 SELECT b.book_id, b.title, a.name AS author_name
207 FROM Books b
208 INNER JOIN Authors a ON b.author_id = a.author_id;
209
210 -- LEFT JOIN: members and any books they borrowed
211 SELECT a.member_id, a.name, t.transaction_id, t.book_id
212 FROM Members m
213 LEFT JOIN Transactions t ON m.member_id = t.member_id;
```

Result Grid

book_id	title	author_name
1	The God of Small Things	Arundhati Roy
2	Five Point Someone	Chetan Bhagat
3	The Invention of Solitude	Marcelo Piñero
4	The Blue Umbrella	Rashmi Suri
5	The Namesake	Jhumpa Lahiri

Result 61 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
180	18:09:29	SELECT b.book_id, b.title, COUNT(t.transaction_id) AS borrow_count FROM Books b JOIN Transactions t ON b.author_id = t.author_id;	1 row(s) returned	0.000 sec / 0.000 sec
181	18:10:14	SELECT SUM(t.transaction_id) AS total_transactions FROM Transactions LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
182	18:10:41	ALTER TABLE Books ADD CONSTRAINT FK_books_authors FOREIGN KEY (author_id) REFERENCES Authors (author_id);	9 row(s) affected Records: 9 Duplicates: 0 Warnings: 0	0.047 sec
183	18:10:52	SELECT b.book_id, b.title, a.name AS author_name FROM Books b INNER JOIN Authors a ON b.author_id = a.author_id;	9 row(s) returned	0.000 sec / 0.000 sec
184	18:11:07	SELECT m.member_id, m.name, t.transaction_id, t.book_id FROM Members m LEFT JOIN Transactions t ON m.member_id = t.member_id;	7 row(s) returned	0.000 sec / 0.000 sec

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No object selected

Object Info Session

Library management SQL File 12'

```
198 FROM Books b
199 INNER JOIN Authors a ON b.author_id = a.author_id;
200
201 -- LEFT JOIN: members and any books they borrowed
202 SELECT a.member_id, a.name, t.transaction_id, t.book_id
203 FROM Members m
204 LEFT JOIN Transactions t ON m.member_id = t.member_id;
205
206 -- RIGHT JOIN: books that haven't been borrowed
207 SELECT b.book_id, b.title
208 FROM Transactions t
209 RIGHT JOIN Books b ON t.transaction_id = b.transaction_id
210 WHERE t.transaction_id IS NULL;
211
212 -- FULL OUTER JOIN equivalent: members who NEVER borrowed
```

Result Grid

member_id	name	transaction_id	book_id
1	Priya Sharma	1	1
2	Rahul Verma	2	3
3	Ananya Patel	3	5
4	Arun Singh	4	2
5	Sneha Reddy	5	6

Result 62 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
181	18:10:14	SELECT SUM(t.transaction_id) AS total_transactions FROM Transactions LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
182	18:10:41	ALTER TABLE Books ADD CONSTRAINT FK_books_authors FOREIGN KEY (author_id) REFERENCES Authors (author_id);	9 row(s) affected Records: 9 Duplicates: 0 Warnings: 0	0.047 sec
183	18:10:52	SELECT b.book_id, b.title, a.name AS author_name FROM Books b INNER JOIN Authors a ON b.author_id = a.author_id;	9 row(s) returned	0.000 sec / 0.000 sec
184	18:11:07	SELECT m.member_id, m.name, t.transaction_id, t.book_id FROM Members m LEFT JOIN Transactions t ON m.member_id = t.member_id;	7 row(s) returned	0.000 sec / 0.000 sec

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No object selected

Object Info Session

Library management SQL File 12'

```
210 WHERE t.transaction_id IS NULL;
211
212 -- FULL OUTER JOIN equivalent: members who NEVER borrowed
213 SELECT m.*
214 FROM Members m
215 LEFT JOIN Transactions t ON m.member_id = t.member_id
216 WHERE t.transaction_id IS NULL;
217
218
219 -- 8. Books borrowed by members who registered AFTER 2022
220 SELECT DISTINCT b.*
221 FROM Books b
222 JOIN Transactions t ON b.book_id = t.transaction_id
223 WHERE t.member_id IN (
224 SELECT member_id
225 FROM Members
226 WHERE registration_date >= '2022-01-01');
```

Result Grid

member_id	name	email	phone_number	membership_date
7	New Member	newmember@example.com	9999999999	2024-08-01

Result 64 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
183	18:10:52	SELECT b.book_id, b.title, a.name AS author_name FROM Books b INNER JOIN Authors a ON b.author_id = a.author_id;	9 row(s) returned	0.000 sec / 0.000 sec
184	18:11:07	SELECT m.member_id, m.name, t.transaction_id, t.book_id FROM Members m LEFT JOIN Transactions t ON m.member_id = t.member_id;	7 row(s) returned	0.000 sec / 0.000 sec
185	18:11:20	SELECT b.book_id, b.title FROM Transactions t RIGHT JOIN Books b ON t.transaction_id = b.transaction_id WHERE t.transaction_id IS NULL;	3 row(s) returned	0.000 sec / 0.000 sec
186	18:11:24	SELECT m.* FROM Members m LEFT JOIN Transactions t ON m.member_id = t.transaction_id WHERE t.transaction_id IS NULL;	1 row(s) returned	0.000 sec / 0.000 sec

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No object selected

SQL File 12\*

```

216 WHERE t.transaction_id IS NULL)
217
218
219 -- 6. Books borrowed by members who registered AFTER 2022
220 SELECT DISTINCT b.*
221 FROM Books b
222 JOIN Transactions t ON b.book_id = t.book_id
223 WHERE t.member_id IN (
224   SELECT member_id
225   FROM Members
226   WHERE membership_date > '2022-12-31')
227
228
229 -- Host borrowed book using a subquery
230 SELECT *

```

Result Grid

book_id	title	author_id	category	isbn	published_date	price	available_copies
5	A Suitable Boy	6	Fiction	978-0-04-179612-0	1993-01-01	400.00	4
4	The Blue Umbrella	4	Children	978-0-12-01490-0	1980-01-01	150.00	15

Result 63 x

Output

Action Output

#	Time	Action	Message	Duration / Feat
184	18:11:07	SELECT member_id, name, transaction_id, book_id FROM Members LEFT JOIN Transactions t ON ...	7 rows returned	0.000 sec / 0.000 sec
185	18:11:20	SELECT b.book_id, b.title FROM Transactions t RIGHT JOIN Books b ON t.book_id = b.book_id WHERE t...	3 rows returned	0.000 sec / 0.000 sec
186	18:11:24	SELECT m.* FROM Members m LEFT JOIN Transactions t ON m.member_id = t.member_id WHERE t.transac...	1 row returned	0.000 sec / 0.000 sec
187	18:12:45	SELECT DISTINCT b.* FROM Books b JOIN Transactions t ON b.book_id = t.book_id WHERE t.member_id ...	2 rows returned	0.000 sec / 0.000 sec

Object Info Session

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MySQL Workbench

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Information

No object selected

SQL File 12\*

```

228
229 -- Host borrowed book using a subquery
230 SELECT *
231 FROM (
232   SELECT b.book_id, b.title, COUNT(t.transaction_id) AS borrow_count
233   FROM Books b
234   JOIN Transactions t ON b.book_id = t.book_id
235   GROUP BY b.book_id, b.title
236 ) AS x
237 ORDER BY borrow_count DESC
238 LIMIT 11
239
240 -- Members who have never borrowed a book (subquery style)
241 SELECT *
242 FROM Members

```

Result Grid

book_id	title	borrow_count
1	The God of Small Things	1

Result 66 x

Output

Action Output

#	Time	Action	Message	Duration / Feat
185	18:11:20	SELECT b.book_id, b.title FROM Transactions t RIGHT JOIN Books b ON t.book_id = b.book_id WHERE t...	3 rows returned	0.000 sec / 0.000 sec
187	18:12:45	SELECT DISTINCT b.* FROM Books b JOIN Transactions t ON b.book_id = t.book_id WHERE t.member_id ...	2 rows returned	0.000 sec / 0.000 sec
188	18:13:49	SELECT * FROM ( SELECT b.book_id, b.title, COUNT(t.transaction_id) AS borrow_count FROM Books b...	1 row returned	0.000 sec / 0.000 sec

Object Info Session

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Administration Schemas

Information

No object selected

SQL File 12\*

```

259
260 -- Trim whitespace from author names
261 SELECT TRIM(name) AS trimmed_name FROM Authors;
262
263 -- Replace missing email with 'Not Provided'
264 SELECT name, IFNULL(email, 'Not Provided') AS email_display FROM Members;
265
266 -- 11. Rank books by number of times borrowed
267 SELECT book_id, title, borrow_count, RANK() OVER (ORDER BY borrow_count DESC) AS borrow_rank
268 FROM (
269   SELECT b.book_id, b.title, COUNT(t.transaction_id) AS borrow_count
270   FROM Books b
271   LEFT JOIN Transactions t ON b.book_id = t.book_id
272   GROUP BY b.book_id, b.title
273 ) AS x

```

Result Grid

book_id	title	borrow_count	borrow_rank
1	The God of Small Things	1	1
2	Five Point Someone	1	1
3	The Immortals of Meluha	1	1
4	The Blue Umbrella	1	1
5	The Namesake	1	1

Result 72 x

Output

Action Output

#	Time	Action	Message	Duration / Feat
192	18:16:10	SELECT member_id, name, CASE WHEN EXISTS ( SELECT 1 FROM Tra... ORDER BY borrow_month...	7 rows returned	0.000 sec / 0.000 sec
193	18:16:38	SELECT borrow_month, total_borrowed, AVG(total_borrowed) OVER (ORDER BY borrow_month...	Err Code 1067: Window "unnamed window" with RANGE N PRECEDING-FOLLOWING frame requires ex...	0.000 sec
194	18:16:48	SELECT member_id, borrow_date, daily_count, SUM(daily_count) OVER PARTITION BY member_id ORDER...	6 rows returned	0.000 sec / 0.000 sec
195	18:17:11	SELECT book_id, title, borrow_count, RANK() OVER ORDER BY borrow_count DESC AS borrow_rank FRO...	9 rows returned	0.000 sec / 0.000 sec

Object Info Session

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Administration Schemas Information

No object selected

library\_management SQL File 12

```
268 FROM (
269   SELECT b.book_id, b.title, COUNT(t.transaction_id) AS borrow_count
270   FROM Books b
271   LEFT JOIN Transactions t ON b.book_id = t.book_id
272   GROUP BY b.book_id, b.title
273 ) AS x1;
274
275 -- Cumulative number of books borrowed per member (over time)
276 SELECT member_id, borrow_date, daily_count, SUM(daily_count) OVER (PARTITION BY member_id ORDER BY borrow_date) AS cumulative_borrowed
277 FROM (
278   SELECT member_id, borrow_date, COUNT(*) AS daily_count
279   FROM Transactions
280   GROUP BY member_id, borrow_date
281 ) AS t
282 ORDER BY member_id, borrow_date;
```

Result Grid

member_id	borrow_date	daily_count	cumulative_borrowed
1	2024-01-10	1	1
2	2024-01-15	1	1
3	2024-01-12	1	1
4	2024-01-18	1	1
5	2024-01-20	1	1

Output

Action Output

#	Time	Action	Message	Duration / Fetch
191	18:15:50	SELECT b.book_id, b.title, b.published_date, CASE WHEN YEAR(b.published_date) > 2020 THEN ...	9 rows(s) returned	0.000 sec / 0.000 sec
192	18:16:13	SELECT member_id, m.name, CASE WHEN EXISTS ( SELECT 1 FROM Tra...	7 rows(s) returned	0.000 sec / 0.000 sec
193	18:16:39	SELECT borrow_month, total_borrowed, AVG(total_borrowed) OVER (... ORDER BY borrow_month ...	Error Code 3587: Window "unnamed window" with RANGE N PRECEDING,FOLLOWING frame requires es...	0.000 sec / 0.000 sec
194	18:16:48	SELECT member_id, borrow_date, daily_count, SUM(daily_count) OVER (PARTITION BY member_id ORDER...	6 rows(s) returned	0.000 sec / 0.000 sec

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Search

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Administration Schemas Information

No object selected

library\_management SQL File 12

```
298 -- 32. Membership_Status: Active if borrowed in last 6 months, else Inactive
299 SELECT m.member_id, m.name,
300 CASE
301   WHEN EXISTS (
302     SELECT 1
303     FROM Transactions t
304     WHERE t.member_id = m.member_id
305           AND t.borrow_date >= DATE_SUB(CURRENT_DATE(), INTERVAL 6 MONTH)
306   ) THEN 'Active'
307   ELSE 'Inactive'
308   END AS Membership_Status
309 FROM Members m;
310
311 -- Categorize books by publication year
312 SELECT b.book_id, b.title, b.published_date,
313 CASE
314   WHEN YEAR(b.published_date) > 2020 THEN 'New Arrivals'
315   WHEN YEAR(b.published_date) < 2000 THEN 'Classic'
316   ELSE 'Regular'
317 END AS Book_Category
318 FROM Books b;
```

Result Grid

member_id	name	Membership_Status
1	Priya Sharma	Inactive
2	Rahul Verma	Inactive
3	Ananya Patel	Inactive
4	Aarav Singh	Inactive
5	Sneha Reddy	Inactive

Output

Action Output

#	Time	Action	Message	Duration / Fetch
189	18:14:09	SELECT * FROM Members WHERE member_id NOT IN ( SELECT DISTINCT member_id FROM Transac...	1 row(s) returned	0.000 sec / 0.000 sec
190	18:15:01	SELECT transaction_id, DATE_FORMAT(borrow_date, '%d-%m-%Y') AS borrow_date_formatted FROM Transa...	6 rows(s) returned	0.000 sec / 0.000 sec
191	18:15:01	SELECT b.book_id, b.title, b.published_date, CASE WHEN YEAR(b.published_date) > 2020 THEN ...	9 rows(s) returned	0.000 sec / 0.000 sec
192	18:16:13	SELECT member_id, m.name, CASE WHEN EXISTS ( SELECT 1 FROM Tra...	7 rows(s) returned	0.000 sec / 0.000 sec

Object Info Session

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No object selected

library\_management SQL File 12

```
303 SELECT 1
304 FROM Transactions t
305 WHERE t.member_id = m.member_id
306       AND t.borrow_date >= DATE_SUB(CURRENT_DATE(), INTERVAL 6 MONTH)
307 ) THEN 'Active'
308 ELSE 'Inactive'
309 END AS Membership_Status
310 FROM Members m;
311
312 -- Categorize books by publication year
313 SELECT b.book_id, b.title, b.published_date,
314 CASE
315   WHEN YEAR(b.published_date) > 2020 THEN 'New Arrivals'
316   WHEN YEAR(b.published_date) < 2000 THEN 'Classic'
317   ELSE 'Regular'
318 END AS Book_Category
319 FROM Books b;
```

Result Grid

book_id	title	published_date	Book_Category
1	The God of Small Things	1997-01-01	Classic
2	Five Point Someone	2004-01-01	Regular
3	The Immortals of Meluha	2010-01-01	Regular
4	The Blue Umbrella	1980-01-01	Classic
5	The Namesake	2003-01-01	Regular

Output

Action Output

#	Time	Action	Message	Duration / Fetch
188	18:13:49	SELECT * FROM ( SELECT b.book_id, b.title, COUNT(t.transaction_id) AS borrow_count FROM Books b...	1 row(s) returned	0.000 sec / 0.000 sec
189	18:14:09	SELECT * FROM Members WHERE member_id NOT IN ( SELECT DISTINCT member_id FROM Transac...	1 row(s) returned	0.000 sec / 0.000 sec
190	18:15:01	SELECT transaction_id, DATE_FORMAT(borrow_date, '%d-%m-%Y') AS borrow_date_formatted FROM Transa...	6 rows(s) returned	0.000 sec / 0.000 sec
191	18:15:01	SELECT b.book_id, b.title, b.published_date, CASE WHEN YEAR(b.published_date) > 2020 THEN ...	9 rows(s) returned	0.000 sec / 0.000 sec

Object Info Session

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