

Create a database named library and following TABLES in the database:

1. Branch
2. Employee
3. Books
4. Customer
5. IssueStatus
6. ReturnStatus

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Schemas

No object selected

SQL File 3* SQL File 4* SQL File 5*

```
1 • create database library;
2 • use library;
3 • ⓧ create table Branch (
4     Branch_no int primary key,
5     Manager_Id varchar(10),
6     Branch_address varchar(100),
7     Contact_no varchar(15)
8 );
9
10 • ⓧ create table Employee (
11     Emp_Id int primary key,
12     Emp_name varchar(20),
13     Position varchar(20),
14     Salary decimal(10, 2),
15     Branch_no int,
16     foreign key (Branch_no) references Branch(Branch_no)
17 );
18
```

Output:

#	Time	Action	Message	Duration / Fetch
6	04:33:57	create table Books (ISBN varchar(20) primary key, Book_title varchar(250), ...)	0 row(s) affected	0.016 sec
7	04:34:11	create table Customer (Customer_Id int primary key, Customer_name varchar(2...)	0 row(s) affected	0.015 sec
8	04:34:32	create table IssueStatus (Issue_Id int primary key, Issued_cust int, Issued_b...)	0 row(s) affected	0.016 sec

Object Info Session

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Schemas

No object selected

SQL File 3* SQL File 4* SQL File 5*

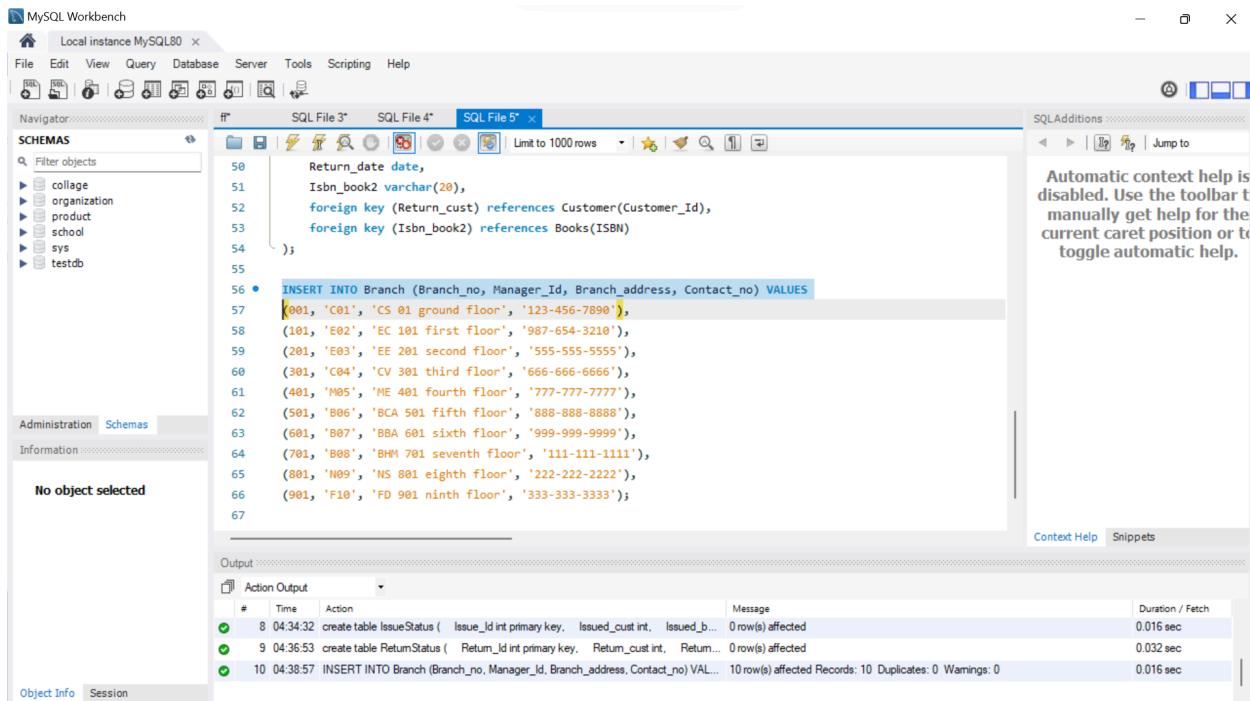
```
29 • ⓧ create table Customer (
30     Customer_Id int primary key,
31     Customer_name varchar(25),
32     Customer_address varchar(100),
33     Reg_date date
34 );
35
36 • ⓧ create table IssueStatus (
37     Issue_Id int primary key,
38     Issued_cust int,
39     Issued_book_name varchar(100),
40     Issue_date date,
41     Isbn_book varchar(20),
42     foreign key (Issued_cust) references Customer(Customer_Id),
43     foreign key (Isbn_book) references Books(ISBN)
44 );
45
46
```

Output:

#	Time	Action	Message	Duration / Fetch
6	04:33:57	create table Books (ISBN varchar(20) primary key, Book_title varchar(250), ...)	0 row(s) affected	0.016 sec
7	04:34:11	create table Customer (Customer_Id int primary key, Customer_name varchar(2...)	0 row(s) affected	0.015 sec
8	04:34:32	create table IssueStatus (Issue_Id int primary key, Issued_cust int, Issued_b...)	0 row(s) affected	0.016 sec

Object Info Session

INSERT INTO Branch (Branch_no, Manager_Id, Branch_address, Contact_no) VALUES



```

MySQL Workbench - Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
Navigator: Schemas SQL File 3* SQL File 4* SQL File 5* Limit to 1000 rows
schemas
collage organization product school sys testdb
50
51
52
53
54
55
56 • INSERT INTO Branch (Branch_no, Manager_Id, Branch_address, Contact_no) VALUES
57 (001, 'C01', 'CS 01 ground floor', '123-456-7890'),
58 (101, 'E02', 'EC 101 first floor', '987-654-3210'),
59 (201, 'E03', 'EE 201 second floor', '555-555-5555'),
60 (301, 'C04', 'CV 301 third floor', '666-666-6666'),
61 (401, 'M05', 'ME 401 fourth floor', '777-777-7777'),
62 (501, 'B06', 'BCA 501 fifth floor', '888-888-8888'),
63 (601, 'B07', 'BBA 601 sixth floor', '999-999-9999'),
64 (701, 'B08', 'BHM 701 seventh floor', '111-111-1111'),
65 (801, 'N09', 'NS 801 eighth floor', '222-222-2222'),
66 (901, 'F10', 'FD 901 ninth floor', '333-333-3333');
67

```

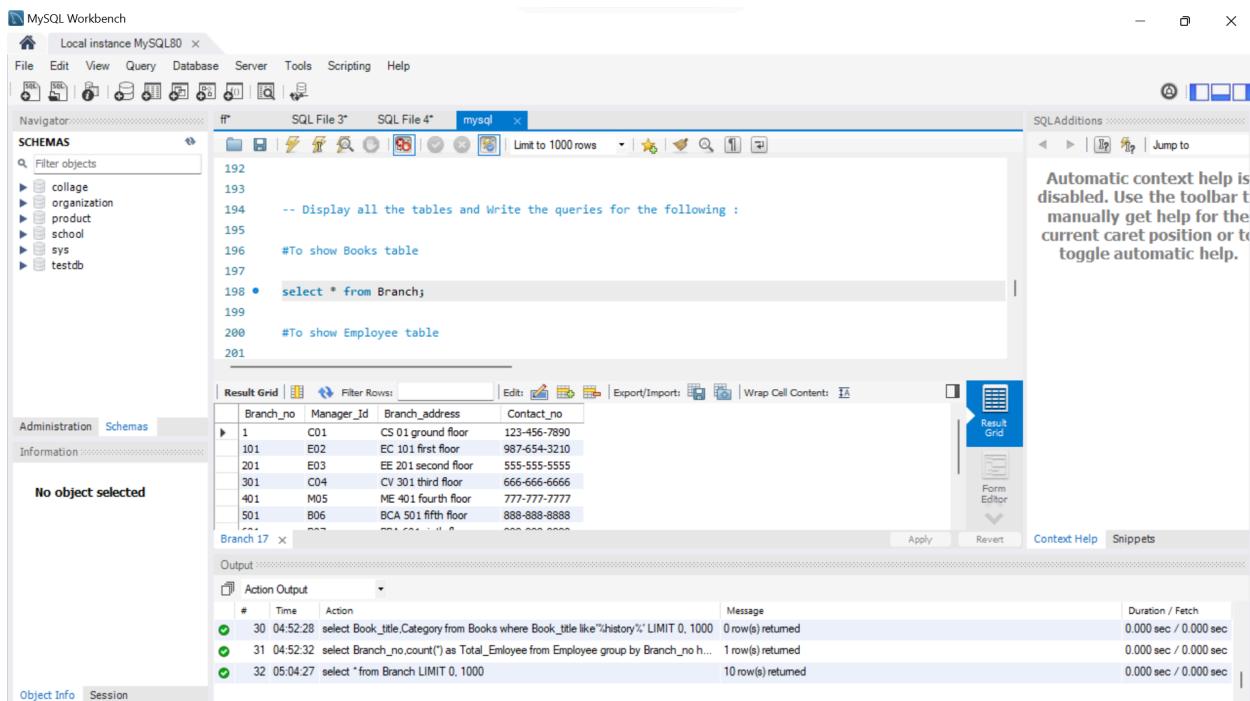
Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Output:

#	Time	Action	Message	Duration / Fetch
8	04:34:32	create table IssueStatus (Issue_Id int primary key, Issued_cust int, Issued_b... 0 row(s) affected		0.016 sec
9	04:36:53	create table ReturnStatus (Return_Id int primary key, Return_cust int, Return... 0 row(s) affected		0.032 sec
10	04:38:57	INSERT INTO Branch (Branch_no, Manager_Id, Branch_address, Contact_no) VAL... 10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0		0.016 sec

Insert values into all branches

-- Display all the tables and Write the queries for the following :



```

MySQL Workbench - Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
Navigator: Schemas SQL File 3* SQL File 4* mysql Limit to 1000 rows
schemas
collage organization product school sys testdb
192
193
194 -- Display all the tables and Write the queries for the following :
195
196 #To show Books table
197
198 • select * from Branch;
199
200 #To show Employee table
201

```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Result Grid | Filter Rows: Edit: Export/Import: Wrap Cell Content: Apply Revert

Branch_no	Manager_Id	Branch_address	Contact_no
1	C01	CS 01 ground floor	123-456-7890
101	E02	EC 101 first floor	987-654-3210
201	E03	EE 201 second floor	555-555-5555
301	C04	CV 301 third floor	666-666-6666
401	M05	ME 401 fourth floor	777-777-7777
501	B06	BCA 501 fifth floor	888-888-8888
601	B07	BBA 601 sixth floor	999-999-9999
701	B08	BHM 701 seventh floor	111-111-1111
801	N09	NS 801 eighth floor	222-222-2222
901	F10	FD 901 ninth floor	333-333-3333

Output:

#	Time	Action	Message	Duration / Fetch
30	04:52:28	select Book_title,Category from Books where Book_title like '%history%' LIMIT 0, 1000	0 row(s) returned	0.000 sec / 0.000 sec
31	04:52:32	select Branch_no, count(*) as Total_Employee from Employee group by Branch_no having count(*) > 5	1 row(s) returned	0.000 sec / 0.000 sec
32	05:04:27	select * from Branch LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

SCHEMAS

- collage
- organization
- product
- school
- sys
- testdb

SQL File 3* SQL File 4* mysql

```

198 • select * from Branch;
199
200 #To show Employee table
201
202 • select * from Employee;
203
204 #To show Books table
205
206 • select * from Books;
207

```

Result Grid | Filter Rows: Edit: Export/Import: Wrap Cell Content: Result Grid

ISBN	Book_title	Category	Rental_Price	Status	Author	Publisher
9780132121360	Database Sys Concepts	BCA	417.00	yes	Abraham Silberschatz, Henry F. Korth, S. Sudar...	McGraw-Hill
9780132280821	Fund of Thermodynamics	ME	822.00	yes	Richard E. Sonntag, Claus Borgnakke, Gordon J...	Wiley
9780132543031	Comm Sys Engineering	EC	522.00	yes	John G. Proakis, Masoud Salehi	Pearson
9780133750033	Microelectronic Circuits	EE	318.00	yes	Adel S. Sedra, Kenneth C. Smith	Oxford Univ
9780134670942	Computer Networking	BCA	319.00	no	James F. Kurose, Keith W. Ross	Pearson

Books 18 x

Output:

#	Time	Action	Message	Duration / Fetch
31	04:52:32	select * from Branch_no.count() as Total_Employee from Employee group by Branch_no h...	1 row(s) returned	0.000 sec / 0.000 sec
32	05:04:27	select * from Branch LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec
33	05:04:45	select * from Books LIMIT 0, 1000	23 row(s) returned	0.000 sec / 0.000 sec

Context Help Snippets

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

SCHEMAS

- collage
- organization
- product
- school
- sys
- testdb

SQL File 3* SQL File 4* mysql

```

207
208 #To show IssueStatus table
209
210 • select * from IssueStatus;
211
212 #To show ReturnStatus table
213
214 • select * from ReturnStatus;
215
216 • select Book title,Category,Rental price

```

Result Grid | Filter Rows: Edit: Export/Import: Wrap Cell Content: Result Grid

Issue_Id	Issued_cust	Issued_book_name	Issue_date	Isbn_book
401	301	AI: Modern Approach	2023-01-15	9780262032933
402	303	Intro to Algorithms	2023-02-20	9780262033848
403	305	Comm Sys Engineering	2023-03-25	9780132543031
404	307	Electronic Comm Sys	2023-04-30	9789339221003
405	309	Electric Circuits	2023-05-05	978119235382
406	311	Microelectronic Circuits	2023-06-10	9780133760033

IssueStatus 19 x

Output:

#	Time	Action	Message	Duration / Fetch
32	05:04:27	select * from Branch LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec
33	05:04:45	select * from Books LIMIT 0, 1000	23 row(s) returned	0.000 sec / 0.000 sec
34	05:05:02	select * from IssueStatus LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec

Context Help Snippets

-- 1. Retrieve the book title, category, and rental price of all available books.

MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

SCHEMAS

Filter objects

- collage
- organization
- product
- school
- sys
- testdb

SQL File 3* SQL File 4* mysql

```

213
214 • select * from ReturnStatus;
215
216 • select Book_title,Category,Rental_price
217   from Books
218   where status='Yes';
219
220 • select Emp_name,Salary
221   from Employee
222   order by Salary desc;

```

Result Grid | Filter Rows: Export: Wrap Cell Content: □

Book_title	Category	Rental_price
Database Sys Concepts	BCA	417.00
Fund of Thermodynamics	ME	822.00
Comm Sys Engineering	EC	522.00
Microelectronic Circuits	EE	318.00
Eng Mech: Statics	CV	520.00
AI: Modern Approach	CS	425.00
...

Books 20 ×

Result Grid Form Editor

No object selected

Object Info Session

Output:

Action Output

#	Time	Action	Message	Duration / Fetch
33	05:04:45	select * from Books LIMIT 0, 1000	23 row(s) returned	0.000 sec / 0.000 sec
34	05:05:02	select * from IssueStatus LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec
35	05:06:06	select Book_title,Category,Rental_price from Books where status='Yes' LIMIT 0, 1000	20 row(s) returned	0.000 sec / 0.000 sec

Context Help Snippets

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

-- 2. List the employee names and their respective salaries in descending order of salary.

MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

SCHEMAS

Filter objects

- collage
- organization
- product
- school
- sys
- testdb

SQL File 3* SQL File 4* mysql

```

216 • select Book_title,Category,Rental_price
217   from Books
218   where status='Yes';
219
220 • select Emp_name,Salary
221   from Employee
222   order by Salary desc;
223
224
225 • select Book title,Customer name

```

Result Grid | Filter Rows: Export: Wrap Cell Content: □

Emp_name	Salary
Amit	75000.00
Varun	72000.00
Riya	65000.00
Maya	63000.00
Kiran	62000.00
Siddharth	62000.00
...	...

Employee 21 ×

Result Grid Form Editor

No object selected

Object Info Session

Output:

Action Output

#	Time	Action	Message	Duration / Fetch
34	05:05:02	select * from IssueStatus LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec
35	05:06:06	select Book_title,Category,Rental_price from Books where status='Yes' LIMIT 0, 1000	20 row(s) returned	0.000 sec / 0.000 sec
36	05:06:43	select Emp_name,Salary from Employee order by Salary desc LIMIT 0, 1000	28 row(s) returned	0.000 sec / 0.000 sec

Context Help Snippets

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

- 3. Retrieve the book titles and the corresponding customers who have issued those books.
- 4. Display the total count of books in each category.
- 5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.
- 6. List the customer names who registered before 2022-01-01 and have not issued any books yet.
- 7. Display the branch numbers and the total count of employees in each branch.
- 8. Display the names of customers who have issued books in the month of June 2023.
- 9. Retrieve book_title from book table containing history.
- 10. Retrieve the branch numbers along with the count of employees for branches having more than 5 employees

MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

SCHEMAS

- collage
- organization
- product
- school
- sys
- testdb

SQL File 3* SQL File 4* mysql

```

222     order by Salary desc;
223
224
225 •   select Book_title,Customer_name
226   from IssueStatus i
227   join Books b
228   on i.Issn_book=b.ISBN
229   join Customer c
230   on i.Issued_cust=c.Customer_Id;
231

```

Result Grid | Filter Rows: Export: Wrap Cell Content: Result Grid

Book_title	Customer_name
AI: Modern Approach	Rahul
Intro to Algorithms	Ravi
Comm Sys Engineering	Arjun
Electronic Comm Sys	Vikram
Electric Circuits	Nikhil
Microelectronic Circuits	Manish

Result 22 ×

Output:

Action Output

#	Time	Action	Message	Duration / Fetch
35	05.06.06	select Book_title,Category,Rental_price from Books where status='Yes' LIMIT 0, 1000	20 row(s) returned	0.000 sec / 0.000 sec
36	05.06.43	select Emp_name,Salary from Employee order by Salary desc LIMIT 0, 1000	28 row(s) returned	0.000 sec / 0.000 sec
37	05.13.14	select Book_title,Customer_name from IssueStatus i join Books b on i.Issn_book=... join Customer c on i.Issued_cust=c.Customer_Id;	8 row(s) returned	0.000 sec / 0.000 sec

Result Only Context Help Snippets

MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

SCHEMAS

- collage
- organization
- product
- school
- sys
- testdb

SQL File 3* SQL File 4* mysql

```

228   on i.Issn_book=b.ISBN
229   join Customer c
230   on i.Issued_cust=c.Customer_Id;
231
232
233 •   select Category,count(*) as Total_Book
234   from Books
235   group by Category;
236
237

```

Result Grid | Filter Rows: Export: Wrap Cell Content: Result Grid

Category	Total_Book
BCA	2
ME	3
EC	2
EE	3
CV	3
CS	2

Result 23 ×

Output:

Action Output

#	Time	Action	Message	Duration / Fetch
36	05.06.43	select Emp_name,Salary from Employee order by Salary desc LIMIT 0, 1000	28 row(s) returned	0.000 sec / 0.000 sec
37	05.13.14	select Book_title,Customer_name from IssueStatus i join Books b on i.Issn_book=... join Customer c on i.Issued_cust=c.Customer_Id;	8 row(s) returned	0.000 sec / 0.000 sec
38	05.13.40	select Category.count(*) as Total_Book from Books group by Category LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec

Result Only Context Help Snippets

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

SCHEMAS: collage, organization, product, school, sys, testdb

SQL File 3*: mysql

```

237
238 • select Execute the statement under the keyboard cursor
from Employee
239
240 where Salary>50000.00;
241
242
243
244 • select Customer_name,Reg_date
from Customer
245
246 where Reg_date<'2022-01-01';

```

Result Grid: Emp_name, Position, Salary

Emp_name	Position	Salary
Amit	Lb Mgr	75000.00
Varun	Lb Mgr	72000.00
Riya	Sr Libr	65000.00
Maya	Sr Libr	63000.00
Kiran	Sr Libr	62000.00
Siddharth	Sr Libr	62000.00

Employee 24 x

Output:

Action Output

#	Time	Action	Message	Duration / Fetch
37	05:13:14	select Book_title,Customer_name from IssueStatus i join Books b on i.lisbn_book=b.lisbn	8 row(s) returned	0.000 sec / 0.000 sec
38	05:13:40	select Category,count(*) as Total_Book from Books group by Category LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec
39	05:14:01	select Emp_name,Position,Salary from Employee where Salary>50000.00 LIMIT 0, ...	13 row(s) returned	0.000 sec / 0.000 sec

Result Grid

Form Editor

Context Help Snippets

Read Only

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

SCHEMAS: collage, organization, product, school, sys, testdb

SQL File 3*: mysql

```

240 where Salary>50000.00;
241 Execute the statement under the keyboard cursor
242
243
244 • select Customer_name,Reg_date
from Customer
245
246 where Reg_date<'2022-01-01'
and Customer_Id not in(select Issued_cust from IssueStatus);
247
248 -- 7. Display the branch numbers and the total count of employees in each branch.

```

Result Grid: Customer_name, Reg_date

Customer_name	Reg_date
Sneha	2021-03-15
Priya	2021-05-20
Anita	2021-07-30
Divya	2021-09-10
Kavita	2021-11-20

Customer 26 x

Output:

Action Output

#	Time	Action	Message	Duration / Fetch
39	05:14:01	select Emp_name,Position,Salary from Employee where Salary>50000.00 LIMIT 0, ...	13 row(s) returned	0.000 sec / 0.000 sec
40	05:14:27	select Customer_name,Reg_date from Customer where Reg_date<'2022-01-01' and Customer_Id not in(select Issued_cust from IssueStatus)	5 row(s) returned	0.015 sec / 0.000 sec
41	05:14:28	select Customer_name,Reg_date from Customer where Reg_date<'2022-01-01' and Customer_Id not in(select Issued_cust from IssueStatus)	5 row(s) returned	0.000 sec / 0.000 sec

Result Grid

Form Editor

Context Help Snippets

Read Only

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

SCHEMAS: collage, organization, product, school, sys, testdb

SQL File 3*: mysql

```

246 where Reg_date<'2022-01-01'
247 and Customer_Id not in(select Issued_cust from IssueStatus);
248
249 -- 7. Display the branch numbers and the total count of employees in each branch.
250
251 • select Branch_no,count(*) as Total_Employee
252 from Employee
253 group by Branch_no;
254
255 -- 8. Display the names of customers who have issued books in the month of June 2023.

```

Result Grid: Branch_no, Total_Employee

Branch_no	Total_Employee
1	7
101	2
201	3
301	2
401	3
501	2
...	

Output: Action Output

#	Time	Action	Message	Duration / Fetch
40	05:14:27	select Customer_name,Reg_date from Customer where Reg_date<'2022-01-01' and ...	5 row(s) returned	0.015 sec / 0.000 sec
41	05:14:28	select Customer_name,Reg_date from Customer where Reg_date<'2022-01-01' and ...	5 row(s) returned	0.000 sec / 0.000 sec
42	05:14:43	select Branch_no,count(*) as Total_Employee from Employee group by Branch_no ...	10 row(s) returned	0.000 sec / 0.000 sec

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

SCHEMAS: collage, organization, product, school, sys, testdb

SQL File 3*: mysql

```

252 from Employee
253 group by Branch_no; Commit the current transaction.
NOTE: all query tabs in the same connection share the same transaction. To have independent transactions, you must open a new connection.
254
255 -- 8. Display the names of customers who have issued books in the month of June 2023.
256
257 • select Customer_Id,Customer_name,Issue_date
258 from Customer c join IssueStatus i
259 on c.Customer_Id=i.Issued_cust
260 where Issue_date between '2023-06-01' and '2023-06-30';
261

```

Result Grid: Customer_Id, Customer_name, Issue_date

Customer_Id	Customer_name	Issue_date
311	Manish	2023-06-10

Output: Action Output

#	Time	Action	Message	Duration / Fetch
41	05:14:28	select Customer_name,Reg_date from Customer where Reg_date<'2022-01-01' and ...	5 row(s) returned	0.000 sec / 0.000 sec
42	05:14:43	select Branch_no,count(*) as Total_Employee from Employee group by Branch_no ...	10 row(s) returned	0.000 sec / 0.000 sec
43	05:15:04	select Customer_Id,Customer_name,Issue_date from Customer c join IssueStatus i o ...	1 row(s) returned	0.000 sec / 0.000 sec

MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

SCHEMAS

- collage
- organization
- product
- school
- sys
- testdb

SQL File 3* SQL File 4* mysql

```

264 • select Book_title,Category
from Books
where Book_title like '%history%';

265
266
267
268 -- 10.Retrieve the branch numbers along with the count of employees for branches having more than 5 employ
269
270 • select Branch_no,count(*) as Total_Employee
from Employee
group by Branch_no
having count(*)>5;

```

Result Grid | Filter Rows: Export: Wrap Cell Content: Book_title Category

Books 29 ×

Output:

Action Output	#	Time	Action	Message	Duration / Fetch
42 05:14:43			select Branch_no,count(*) as Total_Employee from Employee group by Branch_no ...	10 row(s) returned	0.000 sec / 0.000 sec
43 05:15:04			select Customer_Id,Customer_name,Issue_date from Customer c join IssueStatus i o...	1 row(s) returned	0.000 sec / 0.000 sec
44 05:15:20			select Book_title,Category from Books where Book_title like '%history%' LIMIT 0, 1000	0 row(s) returned	0.000 sec / 0.000 sec

No object selected

Object Info Session

MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator: Schemas

SCHEMAS

- collage
- organization
- product
- school
- sys
- testdb

SQL File 3* SQL File 4* mysql

```

265 from Books
where Book_title like '%history%';

266
267
268 -- 10.Retrieve the branch numbers along with the count of employees for branches having more than 5 employ
269
270 • select Branch_no,count(*) as Total_Employee
from Employee
group by Branch_no
having count(*)>5;

```

Result Grid | Filter Rows: Export: Wrap Cell Content: Branch_no Total_Employee

Result 30 ×

Output:

Action Output	#	Time	Action	Message	Duration / Fetch
43 05:15:04			select Customer_Id,Customer_name,Issue_date from Customer c join IssueStatus i o...	1 row(s) returned	0.000 sec / 0.000 sec
44 05:15:20			select Book_title,Category from Books where Book_title like '%history%' LIMIT 0, 1000	0 row(s) returned	0.000 sec / 0.000 sec
45 05:15:31			select Branch_no,count(*) as Total_Employee from Employee group by Branch_no h...	1 row(s) returned	0.000 sec / 0.000 sec

No object selected

Object Info Session