

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

library

- Tables
 - books
 - branch
 - customer
 - employee
 - issuestatus
 - returnstatus
- Views
- Stored Procedures
- Functions
- organisation
- product

Administration Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
1 # Create a Database called 'Library'
2 CREATE DATABASE library;
3 USE library;
4
5 # create table "Branch"
6 CREATE TABLE Branch
7 (
8   Branch_no VARCHAR(10) PRIMARY KEY,
9   Manager_id VARCHAR(10),
10  Branch_address VARCHAR(30),
11  Contact_no VARCHAR(15)
12 );
13 DESC branch;
14
15 # Create table "Employee"
16 CREATE TABLE Employee
17 (
18   Emp_id VARCHAR(10) PRIMARY KEY,
19   Emp_name VARCHAR(30),
20   Emp_salary VARCHAR(10)
```

Step-01
Creating Database for our project

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	13:40:41	USE library	0 row(s) affected	0.000 sec

Object Info Session

MySQL Workbench

Local instance MySQL80 x

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Administration Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem x

Limit to 1000 rows

```
7 (
8   Branch_no VARCHAR(10) PRIMARY KEY,
9   Manager_id VARCHAR(10),
10  Branch_address VARCHAR(30),
11  Contact_no VARCHAR(15)
12 );
13 DESC branch;
14
```

Step-02
Creating the table "Branch"

Result Grid

Field	Type	Null	Key	Default	Extra
Branch_no	varchar(10)	NO	PRI	NULL	
Manager_id	varchar(10)	YES		NULL	
Branch_address	varchar(30)	YES		NULL	
Contact_no	varchar(15)	YES		NULL	

Result 30 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	19:40:41	USE library	0 row(s) affected	0.000 sec
2	19:43:47	DESC branch	4 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

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Filter objects

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Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
17 {
18   Emp_id VARCHAR(10) PRIMARY KEY,
19   Emp_name VARCHAR(30),
20   Position VARCHAR(30),
21   Salary DECIMAL(10,2)
22 };
23 DESC employee;
24
```

Step-03
Creating the table "Employee"

Result Grid

Field	Type	Null	Key	Default	Extra
Emp_id	varchar(10)	NO	FRI	NULL	
Emp_name	varchar(30)	YES		NULL	
Position	varchar(30)	YES		NULL	
Salary	decimal(10,2)	YES		NULL	
branch_no	varchar(10)	YES	MUL	NULL	

Result 39

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓ 1	19:40:41	USE library	0 row(s) affected	0.000 sec
✓ 2	19:43:47	DESC branch	4 row(s) returned	0.000 sec / 0.000 sec
✓ 3	19:44:25	DESC employee	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

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Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
27 {
28 Customer_Id VARCHAR(10) PRIMARY KEY,
29 Customer_name VARCHAR(30),
30 Customer_address VARCHAR(30),
31 Reg_date DATE
32 }
33 DESC customer;
34
```

Step-04
Creating the table "Customer"

Result Grid

Field	Type	Null	Key	Default	Extra
Customer_Id	varchar(10)	NO	PRI	NULL	
Customer_name	varchar(30)	YES		NULL	
Customer_address	varchar(30)	YES		NULL	
Reg_date	date	YES		NULL	

Result 40

Output

Action Output

#	Time	Action	Message	Duration / fetch
2	19:43:47	DESC branch	4 row(s) returned	0.000 sec / 0.000 sec
3	19:44:25	DESC employee	5 row(s) returned	0.000 sec / 0.000 sec
4	19:44:50	DESC customer	4 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

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Navigator SQL File 13 LibraryManagementSystem

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No object selected

SQL File 13

```
40 Issued_book_name VARCHAR(50),
41 Issue_date DATE,
42 Isbn_book VARCHAR(15),
43 FOREIGN KEY (Issued_cust) REFERENCES customer(Customer_id) on DELETE CASCADE,
44 FOREIGN KEY (Isbn_book) REFERENCES books(ISBN) on DELETE CASCADE
45 );
46 DESC issuestatus;
47 ALTER TABLE issuestatus MODIFY COLUMN Issued book name VARCHAR(80);
```

Step-05
Creating the table "Issuse Status"

Result Grid

Field	Type	Null	Key	Default	Extra
Issue_Id	varchar(10)	NO	PRI		
Issued_cust	varchar(30)	YES	MUL		
Issued_book_name	varchar(80)	YES			
Issue_date	date	YES			
Isbn_book	varchar(25)	YES	MUL		

Result 41

Output

Action Output

#	Time	Action	Message	Duration / Fetch
3	19:44:25	DESC employee	5 row(s) returned	0.000 sec / 0.000 sec
4	19:44:50	DESC customer	4 row(s) returned	0.000 sec / 0.000 sec
5	19:45:53	DESC issuestatus	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

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Navigator: Schemas

Filter objects

library

Tables

- books
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Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
54 Return_cust VARCHAR(30);
55 Return_book_name VARCHAR(50);
56 Return_date DATE;
57 isbn_book2 VARCHAR(15);
58 FOREIGN KEY (isbn_book2) REFERENCES books(ISBN) ON DELETE CASCADE;
59 );
60 DESC returnstatus;
61 ALTER TABLE returnstatus MODIFY COLUMN Return book name VARCHAR(80);
```

Step-06
Creating the table "Return Status"

Result Grid

Field	Type	Null	Key	Default	Extra
Return_id	varchar(10)	NO	PRI		
Return_cust	varchar(30)	YES			
Return_book_name	varchar(80)	YES			
Return_date	date	YES			
isbn_book2	varchar(25)	YES	MUL		

Result 42

Output

Action Output

#	Time	Action	Message	Duration / Fetch
4	19:44:50	DESC customer	4 row(s) returned	0.000 sec / 0.000 sec
5	19:45:53	DESC issuestatus	5 row(s) returned	0.000 sec / 0.000 sec
6	19:46:27	DESC returnstatus	5 row(s) returned	0.000 sec / 0.000 sec

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Administration Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem

69 Category VARCHAR(30),
70 Rental_Price DECIMAL(10,2),
71 Status ENUM('Yes', 'No'),
72 Author VARCHAR(30),
73 Publisher VARCHAR(30)
74);
75 DESC Books;
76 alter TABLE books MODIFY COLUMN ISBN VARCHAR(25);

Step-07
Creating the table "Books"

Result Grid

Field	Type	Null	Key	Default	Extra
ISBN	varchar(25)	NO	PR		
Book_title	varchar(80)	YES			
Category	varchar(30)	YES			
Rental_Price	decimal(10,2)	YES			
Status	enum('Yes','No')	YES			
Author	varchar(30)	YES			
Publisher	varchar(30)	YES			

Result 43

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	19:45:53	DESC issuestatus	5 row(s) returned	0.000 sec / 0.000 sec
6	19:46:27	DESC returnstatus	5 row(s) returned	0.000 sec / 0.000 sec
7	19:47:01	DESC Books	7 row(s) returned	0.016 sec / 0.000 sec

Object Info Session

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- organisation
- product

Administration Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
69 Category VARCHAR(30),
70 Rental_Price DECIMAL(10,2),
71 Status ENUM('Yes', 'No'),
72 Author VARCHAR(30),
73 Publisher VARCHAR(30)
74 );
75 DESC Books;
76 alter TABLE books MODIFY COLUMN ISBN VARCHAR(25);
```

Result Grid

Field	Type	Null	Key	Default	Extra
ISBN	varchar(25)	NO	PRI		
Book_title	varchar(30)	YES			
Category	varchar(30)	YES			
Rental_Price	decimal(10,2)	YES			
Status	enum('Yes', 'No')	YES			
Author	varchar(30)	YES			
Publisher	varchar(30)	YES			

Result 43

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	19:45:53	DESC issuestatus	5 row(s) returned	0.000 sec / 0.000 sec
6	19:46:27	DESC returnstatus	5 row(s) returned	0.000 sec / 0.000 sec
7	19:47:01	DESC Books	7 row(s) returned	0.016 sec / 0.000 sec

Object Info Session

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Filter objects

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Administration Schemas

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
73 Publisher VARCHAR(30)
74 );
75 DESC Books;
76 alter TABLE books MODIFY COLUMN ISBN VARCHAR(25);
77 alter TABLE books MODIFY COLUMN Book_title VARCHAR(80);
78
79 SHOW TABLES;
80
```

Result Grid

Filter Rows: Export: Wrap Cell Content:

Tables_in_library

- books
- branch
- customer
- employee
- issuestatus
- returnstatus

#Show all tables

Result 44

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
6	19:46:27	DESC returnstatus	5 row(s) returned	0.000 sec / 0.000 sec
7	19:47:01	DESC Books	7 row(s) returned	0.016 sec / 0.000 sec
8	19:48:53	SHOW TABLES	6 row(s) returned	0.016 sec / 0.000 sec

Object Info Session

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Navigator SQL File 13 LibraryManagementSystem Limit to 1000 rows

SCHEMAS

Filter objects

library

- Tables
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Administration Schemas

No object selected

```
82 INSERT INTO branch VALUES
83 ('B001', 'M101', '123 Main St', '+919099988676'),
84 ('B002', 'M102', '456 Elm St', '+919099988677'),
85 ('B003', 'M103', '789 Oak St', '+919099988678'),
86 ('B004', 'M104', '567 Pine St', '+919099988679'),
87 ('B005', 'M105', '890 Maple St', '+919099988680');
88 SELECT * FROM branch;
89
```

Result Grid

Branch_no	Manager_id	Branch_address	Contact_no
8001	M101	123 Main St	+919099988676
8002	M102	456 Elm St	+919099988677
8003	M103	789 Oak St	+919099988678
8004	M104	567 Pine St	+919099988679
8005	M105	890 Maple St	+919099988680

branch 45

Output

Action Output

#	Time	Action	Message	Duration / Pech
7	19:47:01	DESC Books	7 row(s) returned	0.016 sec / 0.000 sec
8	19:48:53	SHOW TABLES	6 row(s) returned	0.016 sec / 0.000 sec
9	19:49:25	SELECT * FROM branch LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec

Step-08
Insert Values into each tables

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

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Administration Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem x

Link to 1000 rows

```
95 ('E105', 'Sarah Brown', 'Assistant', 42000.00),
96 ('E106', 'Michelle Ramirez', 'Assistant', 43000.00),
97 ('E107', 'Michael Thompson', 'Manager', 62000.00),
98 ('E108', 'Jessica Taylor', 'Clerk', 46000.00),
99 ('E109', 'Daniel Anderson', 'Librarian', 57000.00),
100 ('E110', 'Laura Martinez', 'Assistant', 41000.00),
101 ('E111', 'Christopher Lee', 'Manager', 65000.00);
102 • SELECT * FROM employee;
```

Result Grid

Emp_id	Emp_name	Position	Salary	branch_no
E101	John Doe	Manager	60000.00	8001
E102	Jane Smith	Clerk	45000.00	8001
E103	Mike Johnson	Librarian	55000.00	8001
E104	Emily Davis	Assistant	40000.00	8001
E105	Sarah Brown	Assistant	42000.00	8002
E106	Michelle Ramirez	Assistant	43000.00	8003
E107	Michael Thompson	Manager	62000.00	8002
E108	Jessica Taylor	Clerk	46000.00	8002
E109	Daniel Anderson	Librarian	57000.00	8002
E110	Laura Martinez	Assistant	41000.00	8004
E111	Christopher Lee	Manager	65000.00	8003

employee 46 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
8	19:48:53	SHOW TABLES	6 row(s) returned	0.016 sec / 0.000 sec
9	19:49:25	SELECT * FROM branch LIMIT 0.1000	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

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Filter objects

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No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
127 ('978-0-393-05081-8', 'A People's History of the United States', 'History', 9.00, 'yes', 'Howard Zinn', 'Harper Perennial'),
128 ('978-0-19-280551-1', 'The Guns of August', 'History', 7.00, 'yes', 'Barbara W. Tuchman', 'Oxford University Press'),
129 ('978-0-307-58837-1', 'Sapiens: A Brief History of Humankind', 'History', 8.00, 'yes', 'Yuval Noah Harari', 'Harper Perennial'),
130 ('978-0-375-41398-8', 'The Diary of a Young Girl', 'History', 6.50, 'yes', 'Anne Frank', 'Bantam'),
131 ('978-0-14-044930-3', 'The Histories', 'History', 5.50, 'yes', 'Herodotus', 'Penguin Classics'),
132 ('978-0-393-91257-8', 'Guns, Germs, and Steel: The Fates of Human Societies', 'History', 7.00, 'yes', 'Jared Diamond', 'W. W. Norton & Company'),
133 ('978-0-7432-7357-1', '1491: New Revelations of the Americas Before Columbus', 'History', 6.50, 'yes', 'Charles C. Mann', 'Vintage Books');
134 SELECT * FROM books;
```

Inserting book details

ISBN	Book_title	Category	Rental_Price	Status	Author	Publisher
978-0-09-957807-9	A Game of Thrones	Fantasy	7.50	Yes	George R.R. Martin	Bantam
978-0-14-044930-3	The Histories	History	5.50	Yes	Herodotus	Penguin Classics
978-0-14-118776-1	One Hundred Years of Solitude	Literary Fiction	6.50	Yes	Gabriel Garcia Marquez	Penguin Books
978-0-141-44171-6	Jane Eyre	Classic	4.00	No	Charlotte Bronte	Penguin Classics
978-0-19-280551-1	The Guns of August	History	7.00	Yes	Barbara W. Tuchman	Oxford University Press
978-0-307-37840-1	The Alchemist	Fiction	2.50	Yes	Paulo Coelho	HarperOne
978-0-307-58837-1	Sapiens: A Brief History of Humankind	History	8.00	No	Yuval Noah Harari	Harper Perennial
978-0-330-25864-8	Animal Farm	Classic	5.50	Yes	George Orwell	Penguin Books
978-0-375-41398-8	The Diary of a Young Girl	History	6.50	Yes	Anne Frank	Bantam
978-0-393-05081-8	A People's History of the United States	History	9.00	Yes	Howard Zinn	Harper Perennial
978-0-393-91257-8	Guns, Germs, and Steel: The Fates of...	History	7.00	Yes	Jared Diamond	W. W. Norton & Comp...

books 48

Output

Action Output

#	Time	Action	Message	Duration / Fetch
11	19:51:08	SELECT * FROM customer LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec
12	19:51:38	SELECT * FROM books LIMIT 0, 1000	16 row(s) returned	0.000 sec / 0.000 sec

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Administration Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
137
138 INSERT INTO IssueStatus VALUES
139 ('IS101', 'C101', 'The Catcher in the Rye', '2023-05-01', '978-0-553-29698-2'),
140 ('IS102', 'C102', 'The Da Vinci Code', '2023-05-02', '978-0-7432-4722-4'),
141 ('IS103', 'C103', '1491: New Revelations of the Americas Before Columbus', '2023-05-03', '978-0-7432-7357-1'),
142 ('IS104', 'C104', 'Sapiens: A Brief History of Humankind', '2023-05-04', '978-0-307-58837-1'),
143 ('IS105', 'C105', 'The Diary of a Young Girl', '2023-05-05', '978-0-375-41398-8');
144 SELECT * FROM issuestatus;
```

Result Grid

Issue_id	Issued_cust	Issued_book_name	Issue_date	Isbn_book
IS101	C101	The Catcher in the Rye	2023-05-01	978-0-553-29698-2
IS102	C102	The Da Vinci Code	2023-05-02	978-0-7432-4722-4
IS103	C103	1491: New Revelations of the Americas Before ...	2023-05-03	978-0-7432-7357-1
IS104	C104	Sapiens: A Brief History of Humankind	2023-05-04	978-0-307-58837-1
IS105	C105	The Diary of a Young Girl	2023-05-05	978-0-375-41398-8

issuestatus 49

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓ 12	13:51:38	SELECT * FROM books LIMIT 0,1000	16 row(s) returned	0.000 sec / 0.000 sec
✓ 13	13:52:14	SELECT * FROM issuestatus LIMIT 0,1000	5 row(s) returned	0.000 sec / 0.000 sec

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Administration Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
145
146 INSERT INTO ReturnStatus VALUES
147 ('R5101', 'C101', 'The Catcher in the Rye', '2023-06-06', '978-0-553-29698-2'),
148 ('R5102', 'C102', 'The Da Vinci Code', '2023-06-07', '978-0-7432-4712-4'),
149 ('R5103', 'C105', 'The Diary of a Young Girl', '2023-06-08', '978-0-375-41398-8'),
150 ('R5104', 'C108', 'The Histories', '2023-06-09', '978-0-14-044930-3'),
151 ('R5105', 'C110', 'A Game of Thrones', '2023-06-10', '978-0-09-957807-9');
152 SELECT * FROM returnstatus;
```

Result Grid

Return_id	Return_cust	Return_book_name	Return_date	isbn_book2
R5101	C101	The Catcher in the Rye	2023-06-06	978-0-553-29698-2
R5102	C102	The Da Vinci Code	2023-06-07	978-0-7432-4722-4
R5103	C105	The Diary of a Young Girl	2023-06-08	978-0-375-41398-8
R5104	C108	The Histories	2023-06-09	978-0-14-044930-3
R5105	C110	A Game of Thrones	2023-06-10	978-0-09-957807-9
NULL	NULL	NULL	NULL	NULL

returnstatus 50

Output

Action Output

#	Time	Action	Message	Duration / Fetch
13	19:52:14	SELECT * FROM issuestatus LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
14	19:52:54	SELECT * FROM returnstatus LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec

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No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
154
155
156 /*Queries*/
157
158 # 1. Retrieve the book title, category, and rental price of all available books.
159 SELECT book_title, category, rental_price FROM books WHERE Status = 'Yes';
```

Result Grid

book_title	category	rental_price
A Game of Thrones	Fantasy	7.50
The Histories	History	5.50
One Hundred Years of Solitude	Literary Fiction	6.50
The Guns of August	History	7.00
The Alchemist	Fiction	2.50
Animal Farm	Classic	5.50
The Diary of a Young Girl	History	6.50
A People's History of the United States	History	9.00
Guns, Germs, and Steel: The Fates of Human S...	History	7.00
The Great Gatsby	Classic	8.00
The Catcher in the Rye	Classic	7.00
Harry Potter and the Sorcerer's Stone	Fantasy	7.00
The Da Vinci Code	Mystery	8.00

books 51

Output

Action Output

#	Time	Action	Message	Duration / Fetch
14	19:52:54	SELECT * FROM returnstatus LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
15	19:53:27	SELECT book_title, category, rental_price FROM books WHERE Status = 'Yes' LIMIT 0, 1000	13 row(s) returned	0.000 sec / 0.000 sec

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

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No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
154
155
156 /*Queries*/
157
158 # 1. Retrieve the book title, category, and rental price of all available books.
159 SELECT book_title, category, rental_price FROM books WHERE Status = 'Yes';
```

Result Grid

book_title	category	rental_price
A Game of Thrones	Fantasy	7.50
The Histories	History	5.50
One Hundred Years of Solitude	Literary Fiction	6.50
The Guns of August	History	7.00
The Alchemist	Fiction	2.50
Animal Farm	Classic	5.50
The Diary of a Young Girl	History	6.50
A People's History of the United States	History	9.00
Guns, Germs, and Steel: The Fates of Human S...	History	7.00
The Great Gatsby	Classic	8.00
The Catcher in the Rye	Classic	7.00
Harry Potter and the Sorcerer's Stone	Fantasy	7.00
The Da Vinci Code	Mystery	8.00

books 51

Output

Action Output

#	Time	Action	Message	Duration / Fetch
14	19:52:54	SELECT * FROM returnstatus LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
15	19:53:27	SELECT book_title, category, rental_price FROM books WHERE Status = 'Yes' LIMIT 0, 1000	13 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

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

Filter objects

library

Tables

books

branch

customer

employee

Issuestatus

returnstatus

Views

Stored Procedures

Functions

organisation

product

Administration

Schemas

Information

No object selected

SQL File 13

LibraryManagementSystem

Limit to 1000 rows

157

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

159 SELECT book_title, category, rental_price FROM books WHERE Status = 'Yes';

160

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

162 SELECT emp_name, salary FROM employee ORDER BY Salary DESC;

Result Grid

Filter Rows:

Exports:

Wrap Cell Content:

emp_name salary

Christopher Lee 65000.00

Michael Thompson 62000.00

John Doe 60000.00

Daniel Anderson 57000.00

Mike Johnson 55000.00

Jessica Taylor 46000.00

Jane Smith 45000.00

Michele Ramirez 43000.00

Sarah Brown 42000.00

Laura Martinez 41000.00

Emily Davis 40000.00

employee S2

Read Only

Output

Action Output

Time Action Message Duration / Fetch

15 19:53:27 SELECT book_title, category, rental_price FROM books WHERE Status = 'Yes' LIMIT 0, 1000 13 row(s) returned 0.000 sec / 0.000 sec

16 19:54:26 SELECT emp_name, salary FROM employee ORDER BY Salary DESC LIMIT 0, 1000 11 row(s) returned 0.000 sec / 0.000 sec

3. Retrieve the book titles and the corresponding customers who have issued those books

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

library

Tables

books

branch

customer

employee

issuestatus

returnstatus

Views

Stored Procedures

Functions

organisation

product

Administration Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
161 # 2. List the employee names and their respective salaries in descending order of salary.
162 SELECT emp_name, salary FROM employee ORDER BY salary DESC;
163
164 # 3. Retrieve the book titles and the corresponding customers who have issued those books.
165 SELECT issuestatus.Issued_book_name, customer.Customer_name FROM issuestatus INNER JOIN
166 customer ON issuestatus.Issued_cust = customer.Customer_Id;
```

Result Grid

Issued_book_name	Customer_name
The Catcher in the Rye	Alice Johnson
The Da Vinci Code	Bob Smith
1491: New Revelations of the Americas Before ...	Carol Davis
Sapiens: A Brief History of Humankind	Dave Wilson
The Diary of a Young Girl	Eve Brown

Result 53

Output

Action Output

#	Time	Action	Message	Duration / Fetch
16	19:54:26	SELECT emp_name, salary FROM employee ORDER BY Salary DESC LIMIT 0,1000	11 row(s) returned	0.000 sec / 0.000 sec
17	19:55:04	SELECT issuestatus.Issued_book_name, customer.Customer_name FROM issuestatus INN...	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

4. Display the total count of books in each category.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

library

- books
- branch
- customer
- employee
- issuestatus
- returnstatus

Views

Stored Procedures

Functions

organisation

product

Administration

Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
164 # 3. Retrieve the book titles and the corresponding customers who have issued those books.
165 SELECT issuestatus.Issued_book_name, customer.Customer_name FROM issuestatus INNER JOIN
166 customer ON issuestatus.Issued_cust = customer.Customer_Id;
167
168 # 4. Display the total count of books in each category.
169 SELECT Category, COUNT(Book_title) FROM books GROUP BY Category;
```

Result Grid

Category	COUNT(Book_title)
Fantasy	2
History	7
Literary Fiction	1
Classic	4
Fiction	1
Mystery	1

Result 54

Output

Action Output

#	Time	Action	Message	Duration / Fetch
17	19:55:04	SELECT issuestatus.Issued_book_name, customer.Customer_name FROM issuestatus INN...	5 row(s) returned	0.000 sec / 0.000 sec
18	19:56:07	SELECT Category, COUNT(Book_title) FROM books GROUP BY Category LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec

Object Info

Session

5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

library

- Tables
 - books
 - branch
 - customer
 - employee
 - issuestatus
 - returnstatus
- Views
- Stored Procedures
- Functions
- organisation
- product

Administration Schemas

Information

No object selected

SQLFile 13 LibraryManagementSystem

Limit to 1000 rows

```
167
168 # 4. Display the total count of books in each category.
169 • SELECT Category, COUNT(Book_title) FROM books GROUP BY Category;
170
171 # 5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.
172 • SELECT emp_name, position FROM employee WHERE Salary > 50000;
```

Result Grid

emp_name	position
John Doe	Manager
Mike Johnson	Librarian
Michael Thompson	Manager
Daniel Anderson	Librarian
Christopher Lee	Manager

employee 55

Output

Action Output

#	Time	Action	Message	Duration / Fetch
13	19:56:07	SELECT Category, COUNT(Book_title) FROM books GROUP BY Category LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec
13	19:56:47	SELECT emp_name, position FROM employee WHERE Salary > 50000 LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

6. List the customer names who registered before 2022-01-01 and have not issued any books yet.

The screenshot shows the MySQL Workbench interface. The SQL Editor contains two queries. The first query is: `SELECT emp_name, position FROM employee WHERE Salary > 50000;`. The second query is: `SELECT customer_name FROM customer WHERE Reg_date < '2022-01-01' AND Customer_Id NOT IN (SELECT issued_cust FROM issuestatus);`. The Results Grid shows the results of the second query, displaying three rows of customer names: Frank Thomas, Grace Taylor, and Herry Anderson. The Action Output pane at the bottom shows the execution of both queries, with the first query returning 5 rows and the second query returning 3 rows.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

library

Tables

books

branch

customer

employee

issuestatus

returnstatus

Views

Stored Procedures

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organisation

product

Administration Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

171 # 5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.

172 • SELECT emp_name, position FROM employee WHERE Salary > 50000;

173

174 # 6. List the customer names who registered before 2022-01-01 and have not issued any books yet.

175 • SELECT customer_name FROM customer WHERE Reg_date < '2022-01-01' AND Customer_Id NOT IN

176 (SELECT issued_cust FROM issuestatus);

177

Result Grid

Filter Rows: Exports Wrap Cell Contents

customer_name
Frank Thomas
Grace Taylor
Herry Anderson

customer 56

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
19	19:55:47	SELECT emp_name, position FROM employee WHERE Salary > 50000 LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
20	19:57:59	SELECT customer_name FROM customer WHERE Reg_date < '2022-01-01' AND Customer...	3 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

library

- Tables
 - books
 - branch
 - customer
 - employee
 - issuestatus
 - returnstatus
- Views
- Stored Procedures
- Functions
- organisation
- product

Administration Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
177
178 # 7. Display the branch numbers and the total count of employees in each branch.
179 * ALTER TABLE employee ADD COLUMN branch_no VARCHAR(10);
180 * ALTER TABLE employee ADD CONSTRAINT FOREIGN KEY (branch_no)
181 * REFERENCES branch(branch_no);
182 * DESC employee;
183
184 * UPDATE employee SET branch_no = 'B001' WHERE emp_id = 'E101';
185 * UPDATE employee SET branch_no = 'B001' WHERE emp_id = 'E102';
186 * UPDATE employee SET branch_no = 'B001' WHERE emp_id = 'E103';
187 * UPDATE employee SET branch_no = 'B001' WHERE emp_id = 'E104';
188 * UPDATE employee SET branch_no = 'B002' WHERE emp_id = 'E105';
189 * UPDATE employee SET branch_no = 'B003' WHERE emp_id = 'E106';
190 * UPDATE employee SET branch_no = 'B002' WHERE emp_id = 'E107';
191 * UPDATE employee SET branch_no = 'B002' WHERE emp_id = 'E108';
192 * UPDATE employee SET branch_no = 'B002' WHERE emp_id = 'E109';
193 * UPDATE employee SET branch_no = 'B004' WHERE emp_id = 'E110';
194 * UPDATE employee SET branch_no = 'B003' WHERE emp_id = 'E111';
195
196 * SELECT * FROM employee;
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
19	19:58:47	SELECT emp_name, position FROM employee WHERE Salary > 50000 LIMIT 0,1000	5 row(s) returned	0.000 sec / 0.000 sec
20	19:57:59	SELECT customer_name FROM customer WHERE Reg_date < '2022-01-01' AND Customer...	3 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Add a new column, 'Branch_no', to the 'employee' table to store the branch number for each employee working at a specific branch

7. Display the branch numbers and the total count of employees in each branch.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator SQL File 13 LibraryManagementSystem

SCHEMAS

Filter objects

library

- Tables
 - books
 - branch
 - customer
 - employee
 - issuestatus
 - returnstatus
- Views
- Stored Procedures
- Functions
- organisation
- product
- Administration
- Schemas

Information

No object selected

193 • UPDATE employee SET branch_no = '8004' WHERE emp_id = 'E110';

194 • UPDATE employee SET branch_no = '8003' WHERE emp_id = 'E111';

195

196 • SELECT * FROM employees;

197

198 • SELECT branch_no, COUNT(emp_id) FROM employee GROUP BY branch_no;

Result Grid

branch_no	COUNT(emp_id)
8001	4
8002	4
8003	2
8004	1

Result 57

Output

Action Output

#	Time	Action	Message	Duration / Fetch
20	19:57:59	SELECT customer_name FROM customer WHERE Reg_date < '2022-01-01' AND Customer...	3 row(s) returned	0.000 sec / 0.000 sec
21	20:00:00	SELECT branch_no, COUNT(emp_id) FROM employee GROUP BY branch_no LIMIT 0. 1000	4 row(s) returned	0.000 sec / 0.000 sec

8. Display the names of customers who have issued books in the month of June 2023.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

library

- Tables
 - books
 - branch
 - customer
 - employee
 - issuestatus
 - returnstatus
- Views
- Stored Procedures
- Functions
- organisation
- product

Administration Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
198 SELECT branch_no, COUNT(emp_id) FROM employee GROUP BY branch_no;
199
200 # 8. Display the names of customers who have issued books in the month of June 2023.
201 SELECT customer.Customer_name FROM customer INNER JOIN issuestatus ON
202 customer.Customer_Id = issuestatus.Issued_cust WHERE issuestatus.Issue_date >= '2023-06-01' AND
203 issuestatus.Issue_date <= '2023-06-30';
```

Result Grid

Filter Rows: Export: Wrap Cell Content:

Customer_name

Result 58

Output

Action Output

#	Time	Action	Message	Duration / Fetch
21	20:00:00	SELECT branch_no, COUNT(emp_id) FROM employee GROUP BY branch_no LIMIT 0, 1000	4 row(s) returned	0.000 sec / 0.000 sec
22	20:00:50	SELECT customer.Customer_name FROM customer INNER JOIN issuestatus ON customer...	0 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

9. Retrieve book_title from book table containing history.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

library

Tables

- books
- branch
- customer
- employee
- issuestatus
- returnstatus

Views

Stored Procedures

Functions

organisation

product

Administration Schemas

Information

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
201 • SELECT customer.Customer_name FROM customer INNER JOIN issuestatus ON
202 customer.Customer_Id = issuestatus.Issued_cust WHERE issuestatus.Issue_date >= '2023-06-01' AND
203 issuestatus.Issue_date <= '2023-06-30';
204
205 # 9. Retrieve book title from book table containing 'history'.
206 • SELECT book_title FROM books WHERE Category = 'history';
```

Result Grid

Filter Rows:

Export:

Wrap Cell Content: 15

book_title
The Histories
The Guns of August
Sapiens: A Brief History of Humankind
The Diary of a Young Girl
A People's History of the United States
Guns, Germs, and Steel: The Fates of Human S...
1491: New Revelations of the Americas Before ...

books 59

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓	22 20:00:50	SELECT customer.Customer_name FROM customer INNER JOIN issuestatus ON customer...	0 row(s) returned	0.000 sec / 0.000 sec
✓	23 20:01:45	SELECT book_title FROM books WHERE Category = 'history' LIMIT 0, 1000	7 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

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

Filter objects

library

- Tables
 - books
 - branch
 - customer
 - employee
 - issuestatus
 - returnstatus
- Views
- Stored Procedures
- Functions
- organisation
- product
- Administration
- Schemas

No object selected

SQL File 13 LibraryManagementSystem

Limit to 1000 rows

```
207
208 # 10.Retrieve the branch numbers along with the count of employees for branches having more than 5 employees.
209 SELECT branch_no, COUNT(emp_id) FROM employee GROUP BY branch_no HAVING COUNT(Emp_id) > 5;
210
211
212 # End
213
```

Result Grid

branch_no	COUNT(emp_id)
-----------	---------------

Output

Result 60

Read Only

Action Output

#	Time	Action	Message	Duration / Fetch
23	20:01:45	SELECT book_title FROM books WHERE Category = 'history' LIMIT 0,1000	7 row(s) returned	0.000 sec / 0.000 sec
24	20:02:25	SELECT branch_no, COUNT(emp_id) FROM employee GROUP BY branch_no HAVING CO...	0 row(s) returned	0.000 sec / 0.000 sec

Object Info Session