LIBRARY MANAGEMENT SYSTEM

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

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

Attributes for the tables:

1. Branch : Branch_no - Set as PRIMARY KEY, Manager_Id , Branch_address , Contact_no

2. Employee : Emp_Id – Set as PRIMARY KEY, Emp_name, Position, Salary, Branch_no - Set as FOREIGN KEY and it refer Branch_no in Branch table

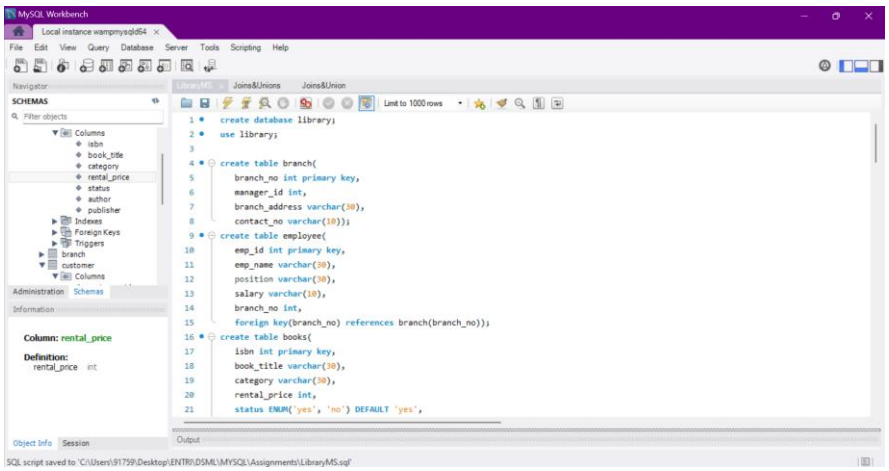
3. Books : ISBN - Set as PRIMARY KEY, Book_title, Category, Rental_Price, Status [Give yes if book available and no if book not available], Author, Publisher

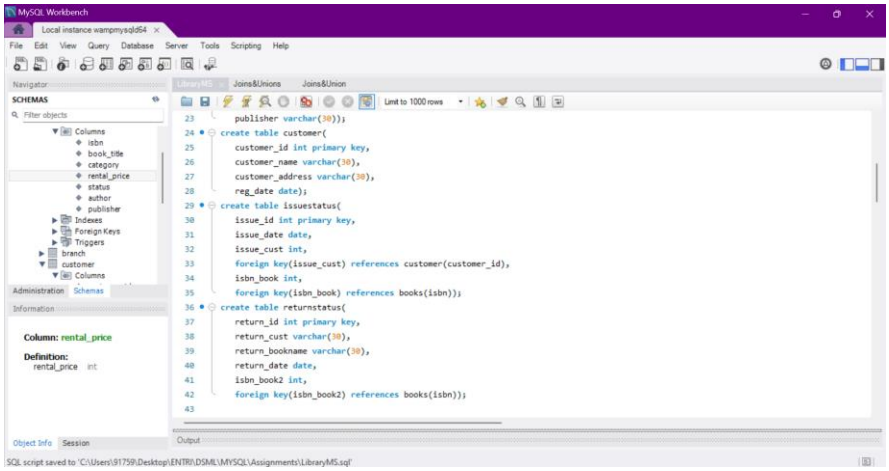
4. Customer: Customer_Id - Set as PRIMARY KEY, Customer_name, Customer_address, Reg_date

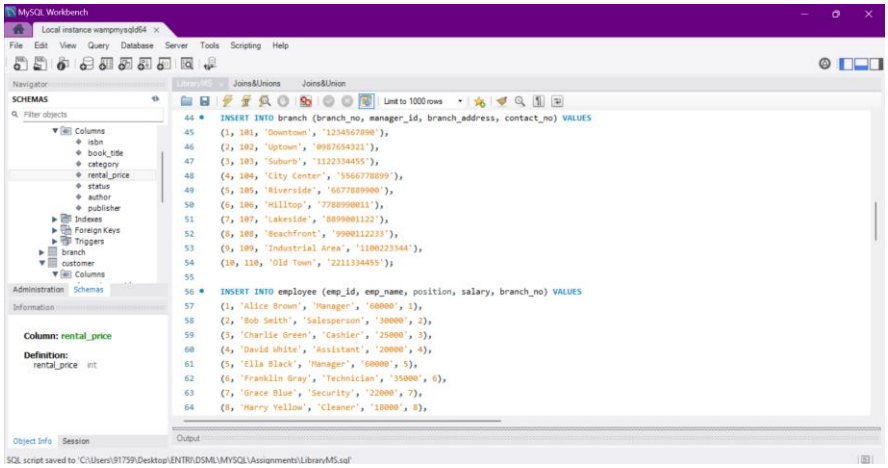
5. IssueStatus: Issue_Id - Set as PRIMARY KEY, Issued_cust – Set as FOREIGN KEY and it refer customer_id in CUSTOMER table, Issue_date, Isbn_book – Set as FOREIGN KEY and it should refer isbn in BOOKS table

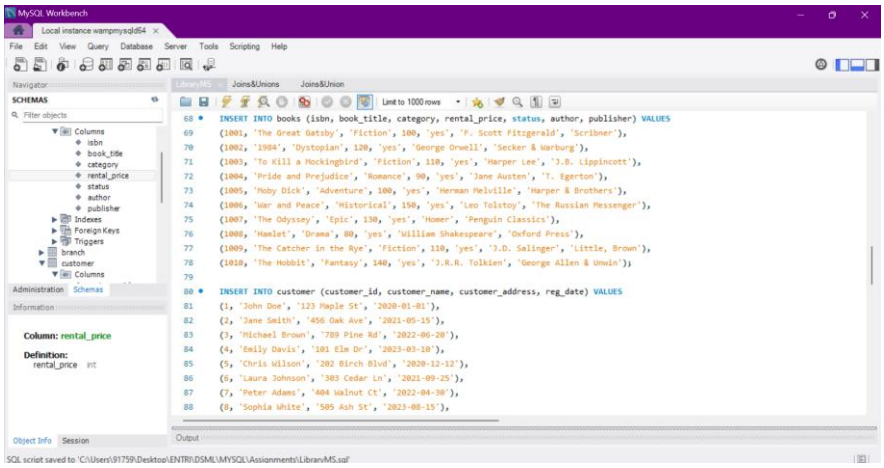
6. ReturnStatus: Return_Id - Set as PRIMARY KEY, Return_cust, Return_book_name, Return_date, Isbn_book2 - Set as FOREIGN KEY and it should refer isbn in BOOKS table

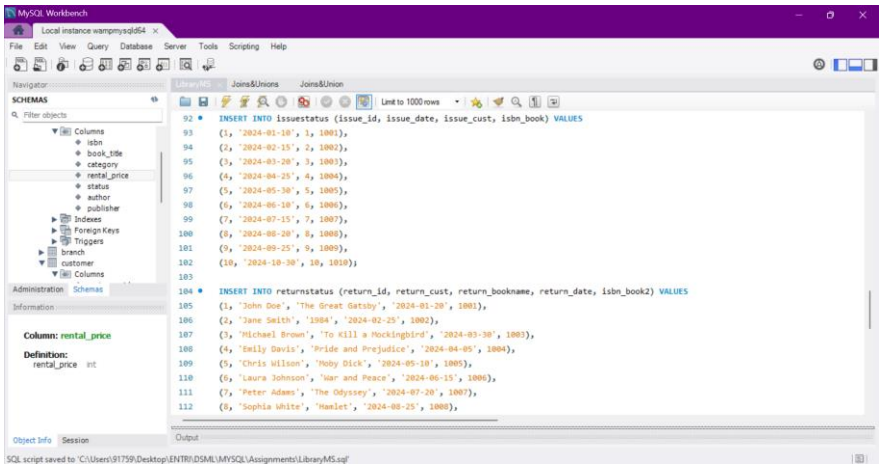
Display all the tables

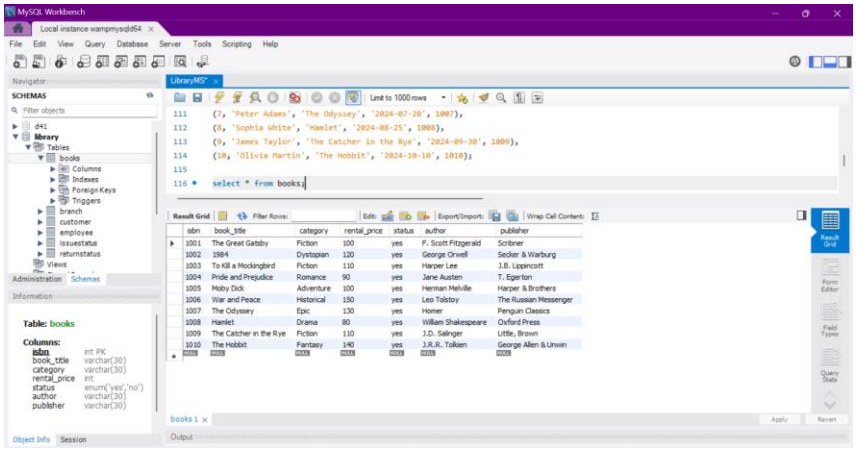


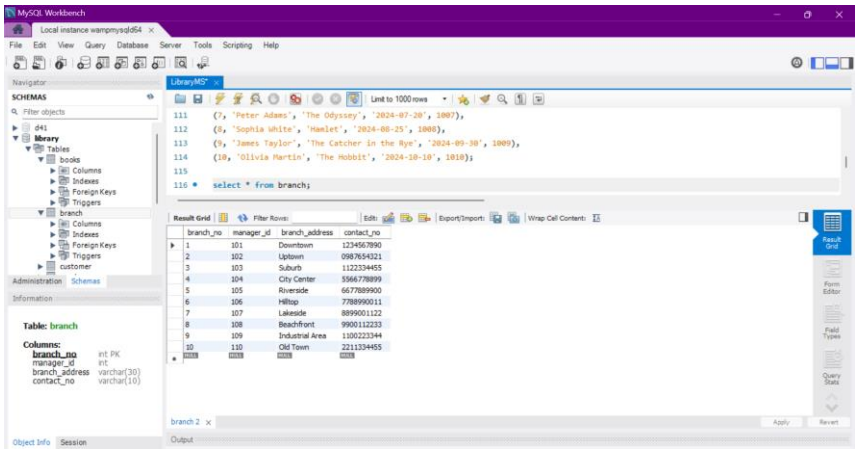


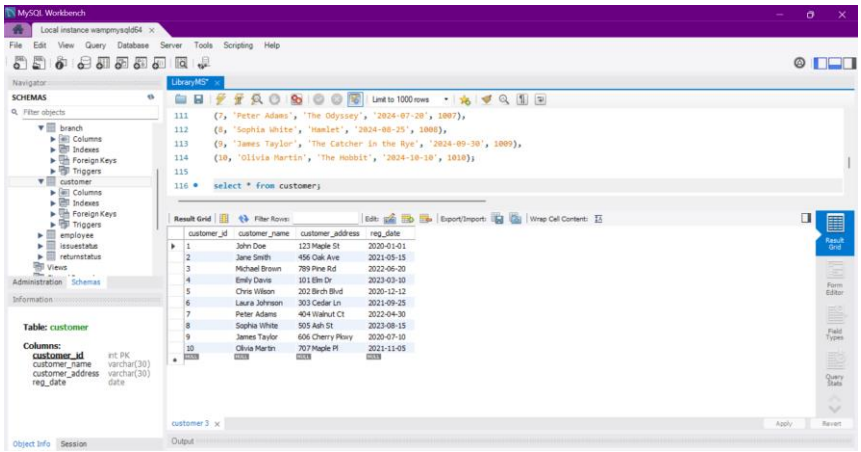

MySQL Workbench
Local instance wampmysqld64
File Edit View Query Database Server Tools Scripting Help
SCHEMAS
Column: rental_price
Definition:
rental_price int
INSERT INTO branch (branch_no, manager_id, branch_address, contact_no) VALUES
(1, 101, 'Downtown', '1234567890'),
(2, 102, 'Uptown', '0987654321'),
(3, 103, 'Suburb', '1122334455'),
(4, 104, 'City Center', '5566778899'),
(5, 105, 'Riverside', '6677889900'),
(6, 106, 'Hilltop', '7788990011'),
(7, 107, 'Lakeside', '8899001122'),
(8, 108, 'Beachfront', '9900112233'),
(9, 109, 'Industrial Area', '1100223344'),
(10, 110, 'Old Town', '2211334455');
INSERT INTO employee (emp_id, emp_name, position, salary, branch_no) VALUES
(1, 'Alice Brown', 'Manager', '60000', 1),
(2, 'Bob Smith', 'Salesperson', '30000', 2),
(3, 'Charlie Green', 'Cashier', '25000', 3),
(4, 'David White', 'Assistant', '20000', 4),
(5, 'Ella Black', 'Manager', '60000', 5),
(6, 'Franklin Gray', 'Technician', '35000', 6),
(7, 'Grace Blue', 'Security', '22000', 7),
(8, 'Harry Yellow', 'Cleaner', '18000', 8),
SQL script saved to 'C:\Users\91759\Desktop\ENTRI\DSML\MYSQL\Assignments\LibraryMS.sql'

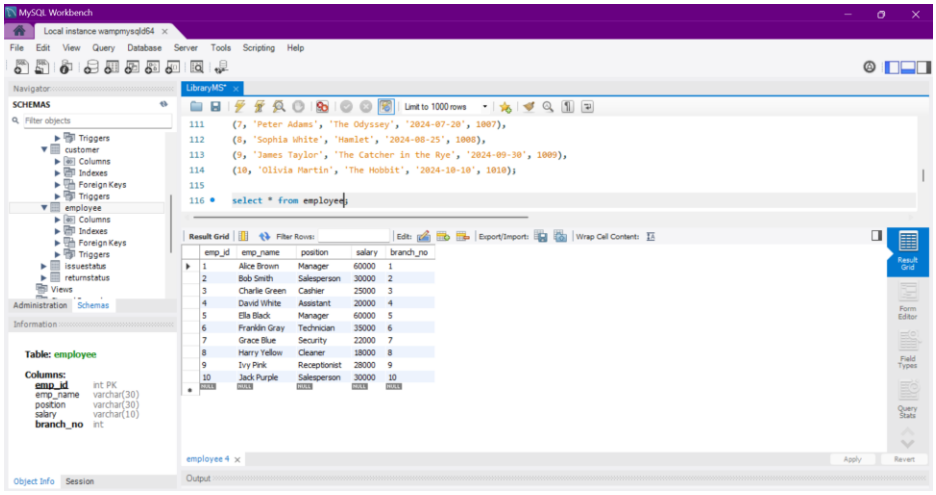

MySQL Workbench
Local instance wampmysqld64
File Edit View Query Database Server Tools Scripting Help
SCHEMAS
Column: rental_price
Definition:
rental_price int
INSERT INTO books (isbn, book_title, category, rental_price, status, author, publisher) VALUES
(1001, 'The Great Gatsby', 'Fiction', 100, 'yes', 'F. Scott Fitzgerald', 'Scribner'),
(1002, '1984', 'Dystopian', 120, 'yes', 'George Orwell', 'Secker & Warburg'),
(1003, 'To Kill a Mockingbird', 'Fiction', 110, 'yes', 'Harper Lee', 'J.B. Lippincott'),
(1004, 'Pride and Prejudice', 'Romance', 90, 'yes', 'Jane Austen', 'T. Egerton'),
(1005, 'Moby Dick', 'Adventure', 100, 'yes', 'Herman Melville', 'Harper & Brothers'),
(1006, 'War and Peace', 'Historical', 150, 'yes', 'Leo Tolstoy', 'The Russian Messenger'),
(1007, 'The Odyssey', 'Epic', 130, 'yes', 'Homer', 'Penguin Classics'),
(1008, 'Hamlet', 'Drama', 80, 'yes', 'William Shakespeare', 'Oxford Press'),
(1009, 'The Catcher in the Rye', 'Fiction', 110, 'yes', 'J.D. Salinger', 'Little, Brown'),
(1010, 'The Hobbit', 'Fantasy', 140, 'yes', 'J.R.R. Tolkien', 'George Allen & Unwin');
INSERT INTO customer (customer_id, customer_name, customer_address, reg_date) VALUES
(1, 'John Doe', '123 Maple St', '2020-01-01'),
(2, 'Jane Smith', '456 Oak Ave', '2021-05-15'),
(3, 'Michael Brown', '789 Pine Rd', '2022-06-20'),
(4, 'Emily Davis', '101 Elm Dr', '2023-03-10'),
(5, 'Chris Wilson', '202 Birch Blvd', '2020-12-12'),
(6, 'Laura Johnson', '303 Cedar Ln', '2021-09-25'),
(7, 'Peter Adams', '404 Walnut Ct', '2022-04-30'),
(8, 'Sophia White', '505 Ash St', '2023-08-15'),
SQL script saved to 'C:\Users\91759\Desktop\ENTRI\DSML\MYSQL\Assignments\LibraryMS.sql'

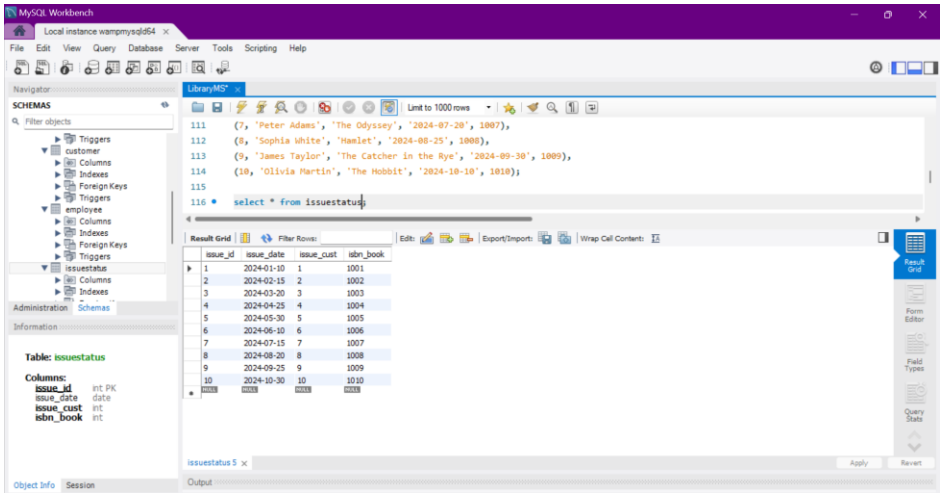

MySQL Workbench
Local instance wampmysqld64
File Edit View Query Database Server Tools Scripting Help
SCHEMAS
Column: rental_price
Definition:
rental_price int
INSERT INTO issuestatus (issue_id, issue_date, issue_cust, isbn_book) VALUES
(1, '2024-01-10', 1, 1001),
(2, '2024-02-15', 2, 1002),
(3, '2024-03-20', 3, 1003),
(4, '2024-04-25', 4, 1004),
(5, '2024-05-30', 5, 1005),
(6, '2024-06-10', 6, 1006),
(7, '2024-07-15', 7, 1007),
(8, '2024-08-20', 8, 1008),
(9, '2024-09-25', 9, 1009),
(10, '2024-10-30', 10, 1010);
INSERT INTO returnstatus (return_id, return_cust, return_bookname, return_date, isbn_book2) VALUES
(1, 'John Doe', 'The Great Gatsby', '2024-01-20', 1001),
(2, 'Jane Smith', '1984', '2024-02-25', 1002),
(3, 'Michael Brown', 'To Kill a Mockingbird', '2024-03-30', 1003),
(4, 'Emily Davis', 'Pride and Prejudice', '2024-04-05', 1004),
(5, 'Chris Wilson', 'Moby Dick', '2024-05-10', 1005),
(6, 'Laura Johnson', 'War and Peace', '2024-06-15', 1006),
(7, 'Peter Adams', 'The Odyssey', '2024-07-20', 1007),
(8, 'Sophia White', 'Hamlet', '2024-08-25', 1008),
SQL script saved to 'C:\Users\91759\Desktop\ENTRI\DSML\MYSQL\Assignments\LibraryMS.sql'

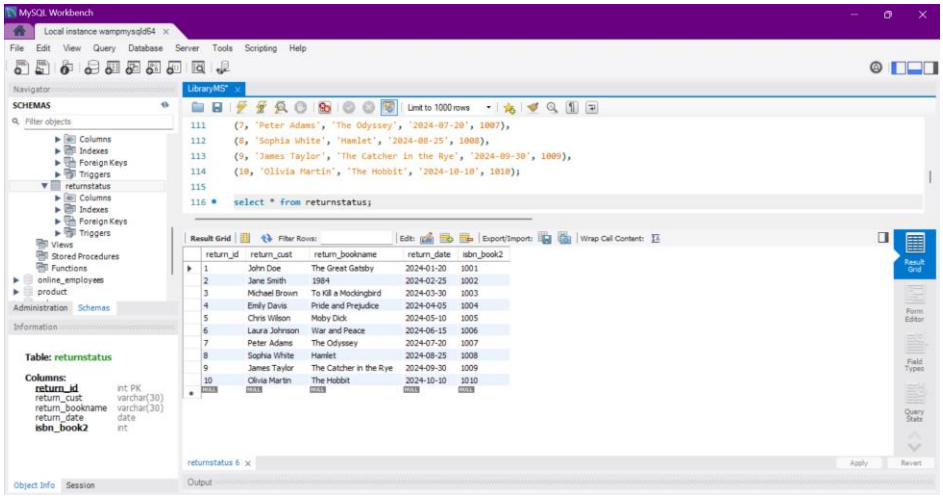

MySQL Workbench
Local instance wampmysqld64
File Edit View Query Database Server Tools Scripting Help
LibraryMS*
111 (7, 'Peter Adams', 'The Odyssey', '2024-07-20', 1007),
112 (8, 'Sophia White', 'Hamlet', '2024-08-25', 1008),
113 (9, 'James Taylor', 'The Catcher in the Rye', '2024-09-30', 1009),
114 (10, 'Olivia Martin', 'The Hobbit', '2024-10-10', 1010);
116 select * from books;
Table: books
Columns:
isbn int PK
book_title varchar(30)
category varchar(30)
rental_price int
status enum('yes','no')
author varchar(30)
publisher varchar(30)


MySQL Workbench
Local instance wampmysqld64
LibraryMS*
111 (7, 'Peter Adams', 'The Odyssey', '2024-07-20', 1007),
112 (8, 'Sophia White', 'Hamlet', '2024-08-25', 1008),
113 (9, 'James Taylor', 'The Catcher in the Rye', '2024-09-30', 1009),
114 (10, 'Olivia Martin', 'The Hobbit', '2024-10-10', 1010);
116 select * from branch;
Table: branch
Columns:
branch_no int PK
manager_id int
branch_address varchar(30)
contact_no varchar(10)

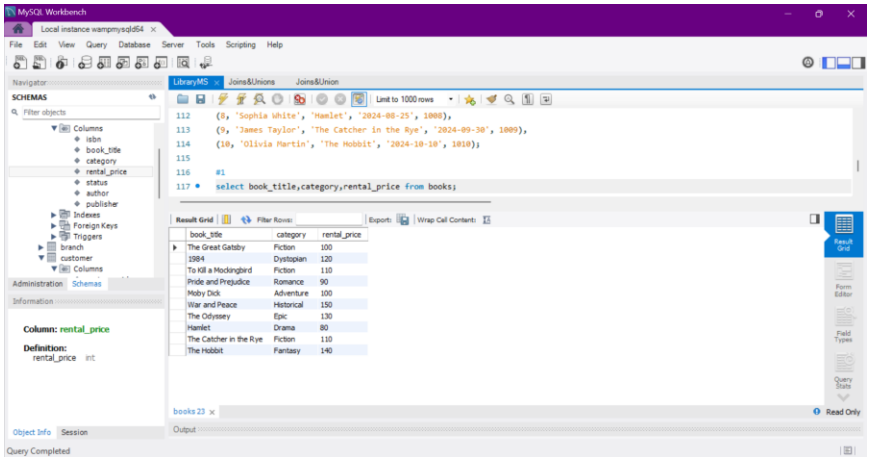

MySQL Workbench
Local instance wampmysqld64
LibraryMS*
111 (7, 'Peter Adams', 'The Odyssey', '2024-07-20', 1007),
112 (8, 'Sophia White', 'Hamlet', '2024-08-25', 1008),
113 (9, 'James Taylor', 'The Catcher in the Rye', '2024-09-30', 1009),
114 (10, 'Olivia Martin', 'The Hobbit', '2024-10-10', 1010);
116 select * from customer;
Table: customer
Columns:
customer_id int PK
customer_name varchar(30)
customer_address varchar(30)
reg_date date


MySQL Workbench
Local instance wampmysqld64
File Edit View Query Database Server Tools Scripting Help
SCHEMAS
LibraryMS*
111 (7, 'Peter Adams', 'The Odyssey', '2024-07-20', 1007),
112 (8, 'Sophia White', 'Hamlet', '2024-08-25', 1008),
113 (9, 'James Taylor', 'The Catcher in the Rye', '2024-09-30', 1009),
114 (10, 'Olivia Martin', 'The Hobbit', '2024-10-10', 1010);
116 select * from employee;
emp_id emp_name position salary branch_no
1 Alice Brown Manager 60000 1
2 Bob Smith Salesperson 30000 2
3 Charlie Green Cashier 25000 3
4 David White Assistant 20000 4
5 Ella Black Manager 60000 5
6 Franklin Gray Technician 35000 6
7 Grace Blue Security 22000 7
8 Harry Yellow Cleaner 18000 8
9 Ivy Pink Receptionist 28000 9
10 Jack Purple Salesperson 30000 10
Table: employee
Columns:
emp_id int PK
emp_name varchar(30)
position varchar(30)
salary varchar(10)
branch_no int

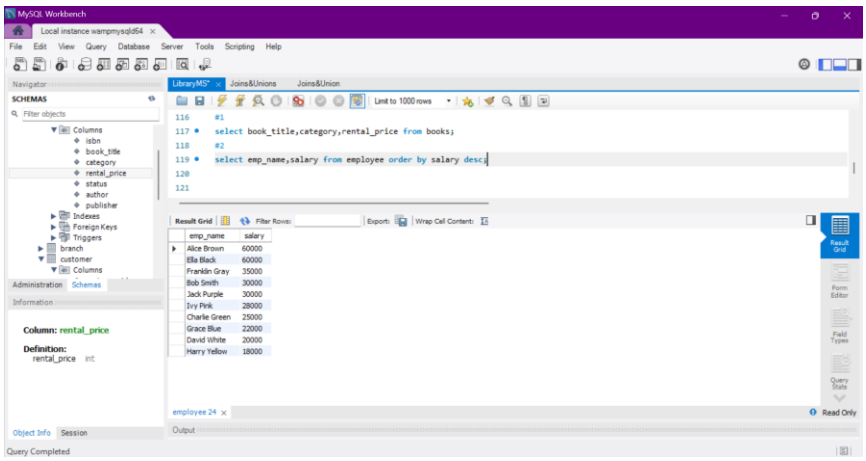

MySQL Workbench
Local instance wampmysqld64
File Edit View Query Database Server Tools Scripting Help
SCHEMAS
LibraryMS*
111 (7, 'Peter Adams', 'The Odyssey', '2024-07-20', 1007),
112 (8, 'Sophia White', 'Hamlet', '2024-08-25', 1008),
113 (9, 'James Taylor', 'The Catcher in the Rye', '2024-09-30', 1009),
114 (10, 'Olivia Martin', 'The Hobbit', '2024-10-10', 1010);
116 select * from issuestatus;
issue_id issue_date issue_cust isbn_book
1 2024-01-10 1 1001
2 2024-02-15 2 1002
3 2024-03-20 3 1003
4 2024-04-25 4 1004
5 2024-05-30 5 1005
6 2024-06-10 6 1006
7 2024-07-15 7 1007
8 2024-08-20 8 1008
9 2024-09-25 9 1009
10 2024-10-30 10 1010
Table: issuestatus
Columns:
issue_id int PK
issue_date date
issue_cust int
isbn_book int


MySQL Workbench
Local instance wampmysqld64
File Edit View Query Database Server Tools Scripting Help
SCHEMAS
LibraryMS*
111 (7, 'Peter Adams', 'The Odyssey', '2024-07-20', 1007),
112 (8, 'Sophia White', 'Hamlet', '2024-08-25', 1008),
113 (9, 'James Taylor', 'The Catcher in the Rye', '2024-09-30', 1009),
114 (10, 'Olivia Martin', 'The Hobbit', '2024-10-10', 1010);
116 select * from returnstatus;
return_id return_cust return_bookname return_date isbn_book2
1 John Doe The Great Gatsby 2024-01-20 1001
2 Jane Smith 1984 2024-02-25 1002
3 Michael Brown To Kill a Mockingbird 2024-03-30 1003
4 Emily Davis Pride and Prejudice 2024-04-05 1004
5 Chris Wilson Moby Dick 2024-05-10 1005
6 Laura Johnson War and Peace 2024-06-15 1006
7 Peter Adams The Odyssey 2024-07-20 1007
8 Sophia White Hamlet 2024-08-25 1008
9 James Taylor The Catcher in the Rye 2024-09-30 1009
10 Olivia Martin The Hobbit 2024-10-10 1010
Table: returnstatus
Columns:
return_id int PK
return_cust varchar(30)
return_bookname varchar(30)
return_date date
isbn_book2 int

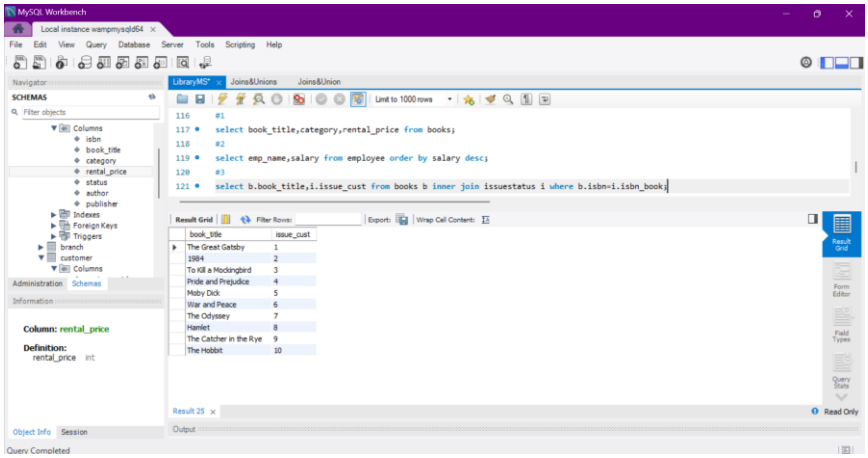
1. Retrieve the book title, category, and rental price of all available books.



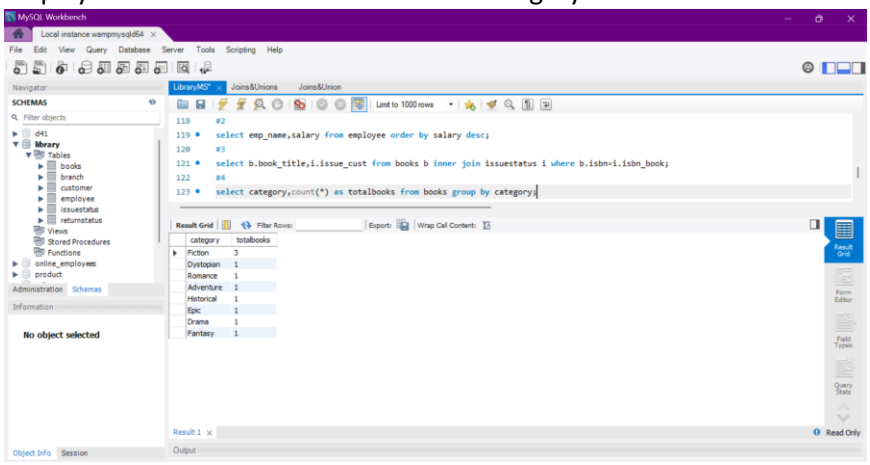
2. List the employee names and their respective salaries in descending order of salary.



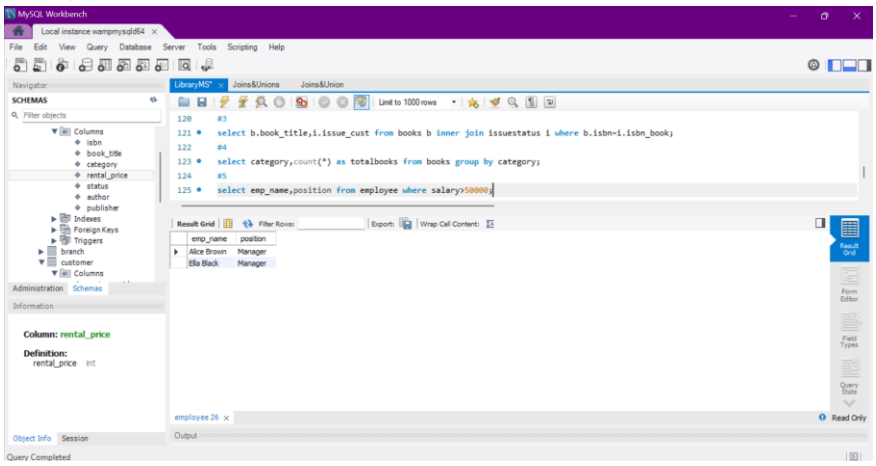
3. Retrieve the book titles and the corresponding customers who have issued those books.



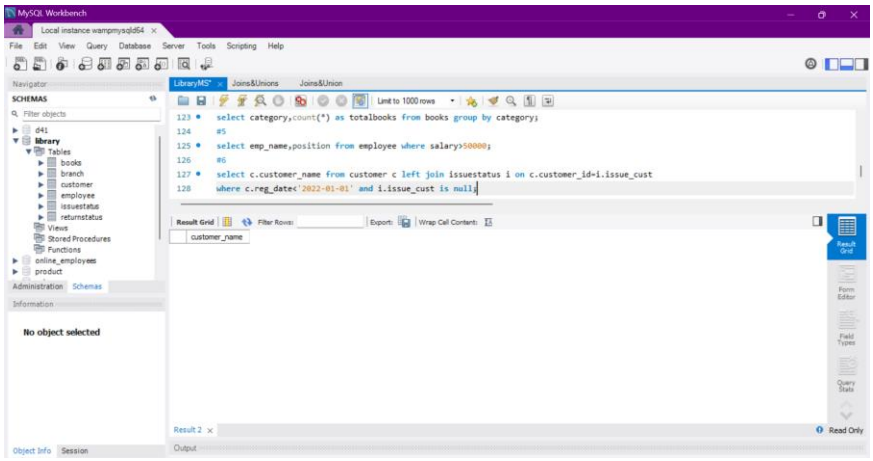
4. Display the total count of books in each category.



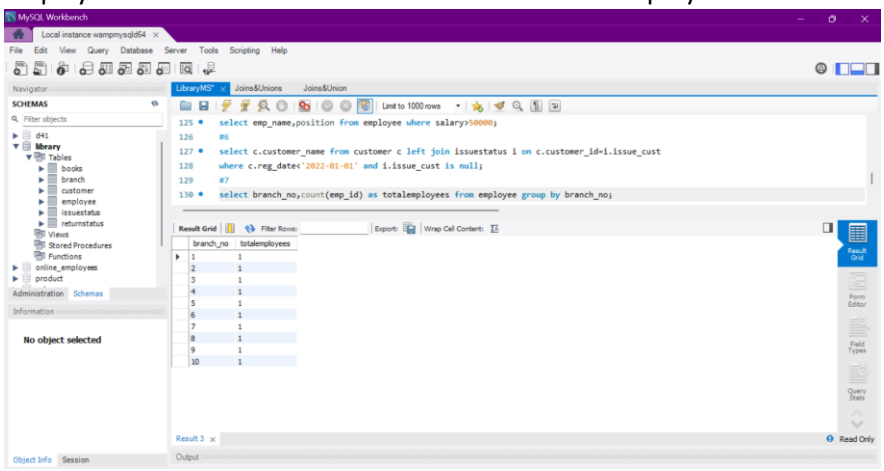
5. Retrieve the employee names and their positions for the employees whose salaries are above Rs.50,000.



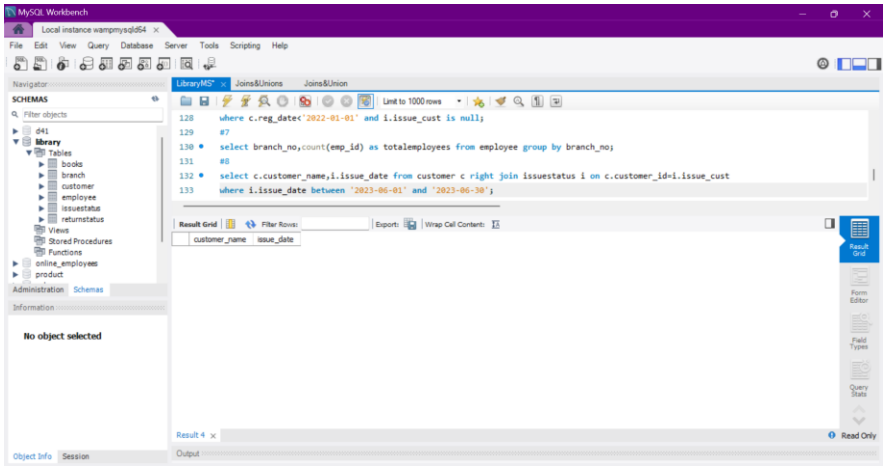
6. List the customer names who registered before 2022-01-01 and have not issued any books yet.



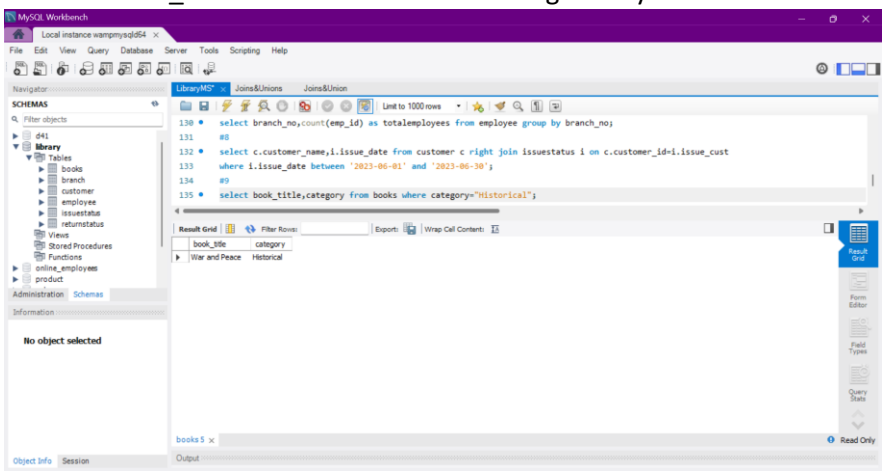
7. Display the branch numbers and the total count of employees in each branch.



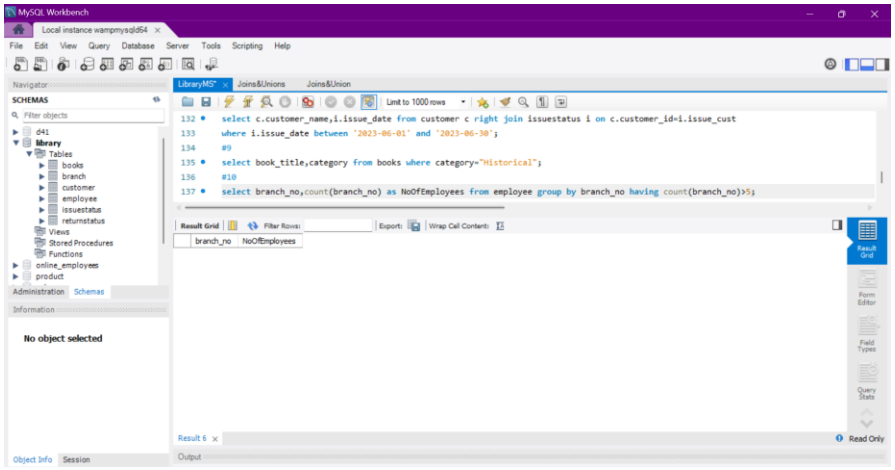
8. Display the names of customers who have issued books in the month of June 2023.



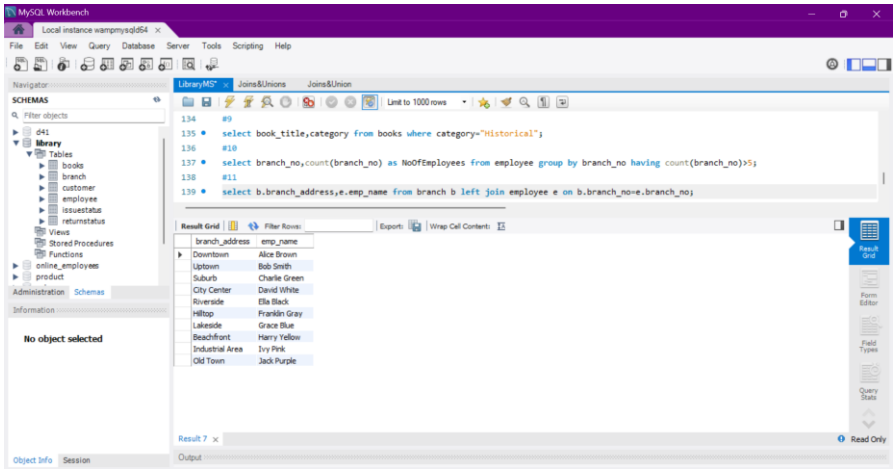
9. Retrieve book_title from book table containing history.



10. Retrieve the branch numbers along with the count of employees for branches having more than 5 employees.



11. Retrieve the names of employees who manage branches and their respective branch addresses.



12. Display the names of customers who have issued books with a rental price higher than Rs. 25.