

# UE18CS252 - DATABASE MANAGEMENT SYSTEMS -

## ASSIGNMENT 4

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SECTION - 4-'A'

Q.1 List all books sorting by authors and title

Query -

```
SELECT BOOK.Title,BOOK_AUTHORS.Author_name
FROM BOOK,BOOK_AUTHORS
WHERE BOOK.Book_id = BOOK_AUTHORS.Book_id
ORDER BY BOOK.Title ASC,BOOK_AUTHORS.Author_name ASC;
```

Output Screenshot -

The screenshot displays the MySQL Workbench interface. The left sidebar shows the 'SCHEMAS' panel with the 'library' database selected. The main editor window contains a SQL query: `SELECT BOOK.Title,BOOK_AUTHORS.Author_name FROM BOOK,BOOK_AUTHORS WHERE BOOK.Book_id = BOOK_AUTHORS.Book_id ORDER BY BOOK.Title ASC,BOOK_AUTHORS.Author_name ASC;`. Below the query editor, the 'Result Grid' shows the output of the query, displaying a table with columns 'Title' and 'Author\_name'. The results are as follows:

Title	Author_name
Harry Potter	J.K. Rowling
How Starbucks Saved My Life	Michael Gates Gill
The Holdout	Mia Sosa
Vendetta Road	Jay Aaseng
War and Peace	Leo Tolstoy

At the bottom of the interface, the 'Output' panel shows the execution details: 'Action Output' with a message 'SELECT BOOK.Title,BOOK\_AUTHORS.Author\_name FROM BOOK\_AUTHORS,BOOK WHER...' and '5 row(s) returned'.

Q.2 List all the books in the library by publisher and title

Query -

```
SELECT BOOK.Publisher_name,BOOK.Title
FROM BOOK
```

Output Screenshot -

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with the 'library' schema selected. The main editor window shows a SQL query: `SELECT Publisher_name, Title FROM BOOK`. The 'Result Grid' tab is active, displaying the following data:

Publisher_name	Title
Penguin Random House	Harry Potter
HarperCollins	The Holdout
WP BOOKS	War and Peace
Macmillan Publishers	Vendetta Road
Avery Publishing	How Starbucks Saved My Life

The bottom status bar shows the execution time as 0.000 sec / 0.000 sec.

Q.3 For each branch print the number of copies of each book. Sort by branch id, publisher then book title

Query -

```
SELECT LIBRARY_BRANCH.Branch_name,BOOK.Title,BOOK_COPIES.No_copies
FROM LIBRARY_BRANCH,BOOK,BOOK_COPIES
WHERE LIBRARY_BRANCH.Branch_id = BOOK_COPIES.Branch_id AND BOOK.Book_id =
BOOK_COPIES.Book_id
ORDER BY LIBRARY_BRANCH.Branch_id ASC , BOOK.Publisher_name;
```

Output Screenshot -

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' panel with the 'library' schema selected. The main editor window contains a SQL query:
 

```

SELECT LIBRARY_BRANCH.Branch_name,BOOK.Title,BOOK_COPIES.No_copies
FROM LIBRARY_BRANCH,BOOK,BOOK_COPIES
WHERE LIBRARY_BRANCH.Branch_id = BOOK_COPIES.Branch_id AND BOOK.Book_id = BOOK_COPIES.Book_id
ORDER BY LIBRARY_BRANCH.Branch_id ASC , BOOK.Publisher_name;
  
```

 The 'Result Grid' at the bottom shows the query results:
 

Branch_name	Title	No_copies
Central	How Starbucks Saved My Life	20
Central	Vendetta Road	12
Central	Harry Potter	5
Vijayanagar	How Starbucks Saved My Life	7
Vijayanagar	The Holdout	11
Vijayanagar	Vendetta Road	54
Vijayanagar	Harry Potter	10
Vijayanagar	War and Peace	35
Banashankari	How Starbucks Saved My Life	3
Banashankari	The Holdout	25
Banashankari	Harry Potter	12
Banashankari	War and Peace	40

 The bottom status bar shows the query execution log with three actions:
 

- 1 00:00:31 SELECT BOOK.Title,BOOK\_AUTHORS.Author\_name FROM BOOK\_AUTHORS,BOOK WHERE... 5 row(s) returned 0.000 sec / 0.000 sec
- 2 00:00:52 SELECT Publisher\_name,Title FROM BOOK LIMIT 0, 1000 5 row(s) returned 0.000 sec / 0.000 sec
- 3 00:03:17 SELECT LIBRARY\_BRANCH.Branch\_name,BOOK.Title,BOOK\_COPIES.No\_copies FROM LIB... 12 row(s) returned 0.000 sec / 0.000 sec

## Query-

```

SELECT LIBRARY_BRANCH.Branch_name,BOOK.Title,BOOK_COPIES.No_copies
FROM LIBRARY_BRANCH,BOOK,BOOK_COPIES
WHERE LIBRARY_BRANCH.Branch_id = BOOK_COPIES.Branch_id AND BOOK.Book_id =
BOOK_COPIES.Book_id
ORDER BY BOOK.Title;
  
```

## Output Screenshot -

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL query:

```

SELECT LIBRARY_BRANCH.Branch_name,BOOK.Title,BOOK_COPIES.No_copies
FROM LIBRARY_BRANCH,BOOK,BOOK_COPIES
WHERE LIBRARY_BRANCH.Branch_id = BOOK_COPIES.Branch_id AND BOOK.Book_id = BOOK_COPIES.Book_id
ORDER BY BOOK.Title;

```

The query results are displayed in the Result Grid:

Branch_name	Title	No_copies
Central	Harry Potter	5
Vijayanagar	Harry Potter	10
Banashankari	Harry Potter	12
Central	How Starbucks Saved My Life	20
Vijayanagar	How Starbucks Saved My Life	7
Banashankari	How Starbucks Saved My Life	3
Vijayanagar	The Holdout	11
Banashankari	The Holdout	25
Central	Vendetta Road	12
Vijayanagar	Vendetta Road	54
Vijayanagar	War and Peace	35
Banashankari	War and Peace	40

The Action Output pane shows the execution of the query:

#	Time	Action	Message	Duration / Fetch
2	00:00:52	SELECT Publisher_name,Title FROM BOOK LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
3	00:03:17	SELECT LIBRARY_BRANCH.Branch_name,BOOK.Title,BOOK_COPIES.No_copies FROM LI...	12 row(s) returned	0.000 sec / 0.000 sec
4	00:03:49	SELECT LIBRARY_BRANCH.Branch_name,BOOK.Title,BOOK_COPIES.No_copies FROM LI...	12 row(s) returned	0.015 sec / 0.000 sec

Q.4 How many copies of the book titled Harry Potter are owned by the library branch whose name is 'Vijayanagar'?

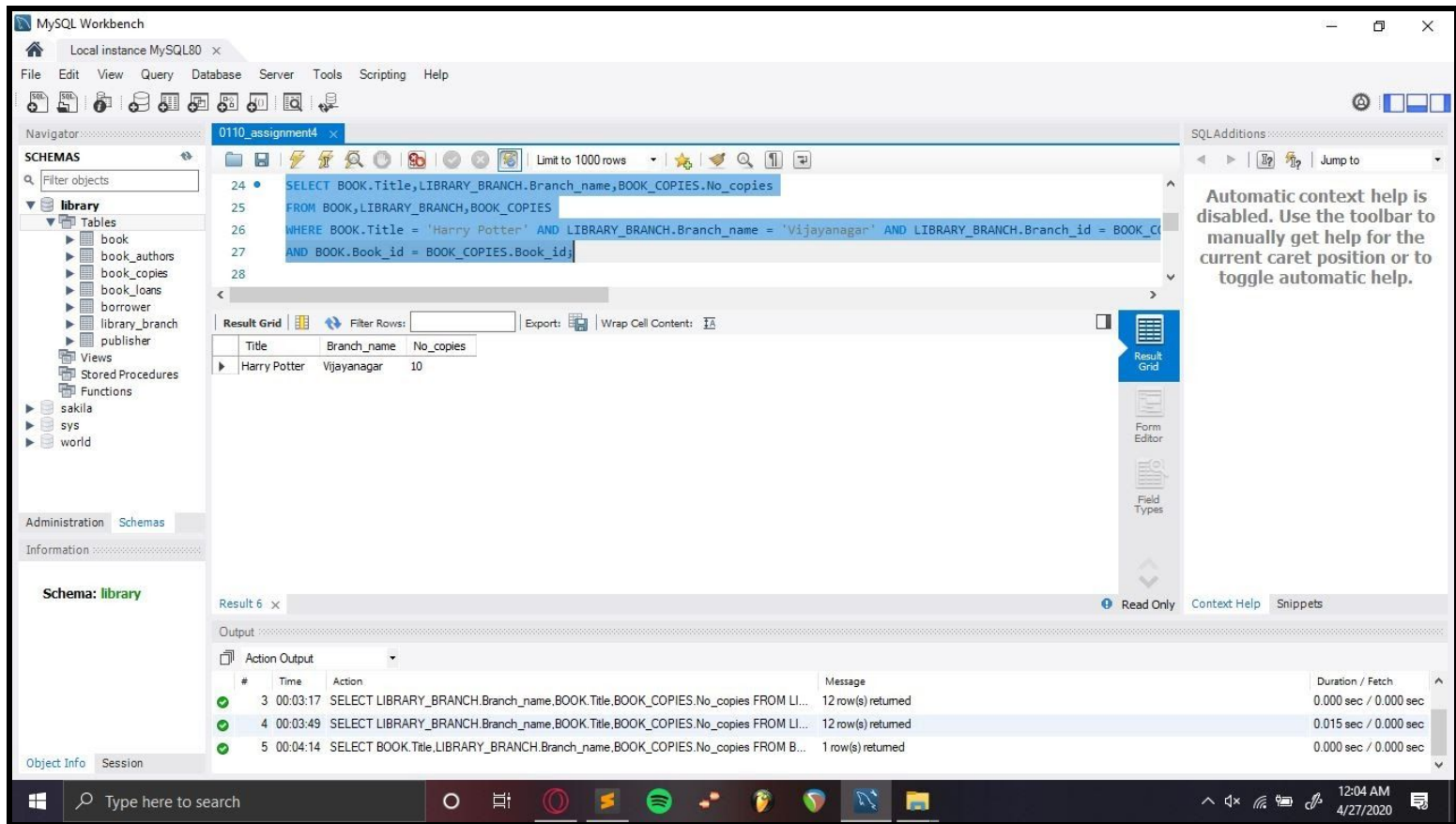
Query -

```

SELECT BOOK_COPIES.No_copies,BOOK.Title,LIBRARY_BRANCH.Branch_name
FROM BOOK_COPIES,BOOK,LIBRARY_BRANCH
WHERE BOOK.Title = 'Harry Potter' AND LIBRARY_BRANCH.Branch_name = 'Vijayanagar' AND
LIBRARY_BRANCH.Branch_id = BOOK_COPIES.Branch_id
AND BOOK.Book_id = BOOK_COPIES.Book_id;

```

Output Screenshot -



Q.5 How many copies of the book titled War and Peace are owned by each library branch?

Query -

/\* UPDATING and setting is necessary here ? \*/

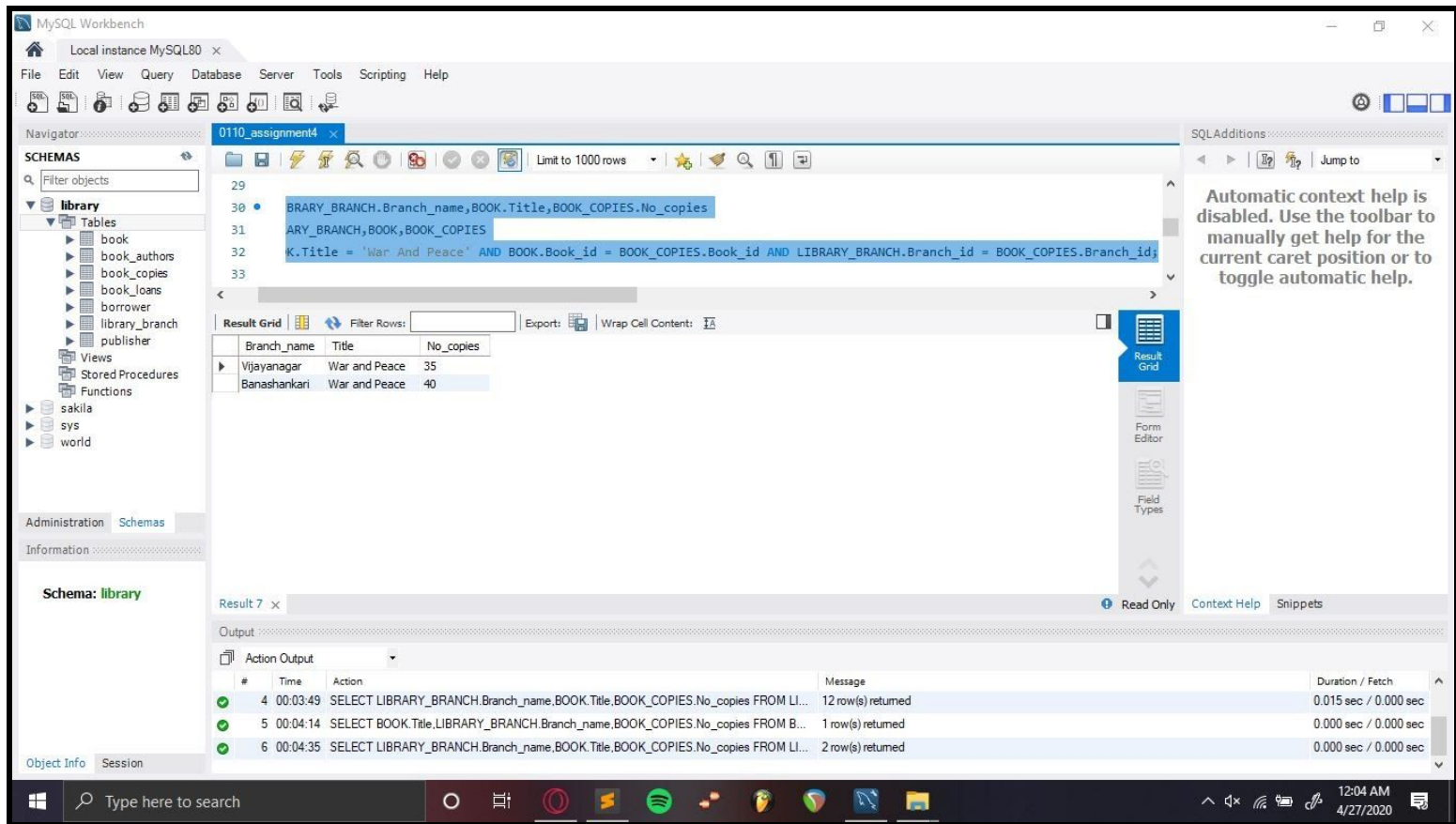
```

SELECT LIBRARY_BRANCH.Branch_name, BOOK.Title, BOOK_COPIES.No_copies
FROM LIBRARY_BRANCH, BOOK, BOOK_COPIES
WHERE BOOK.Title = 'War And Peace' AND BOOK.Book_id = BOOK_COPIES.Book_id AND
LIBRARY_BRANCH.Branch_id = BOOK_COPIES.Branch_id;

```

Output Screenshot -





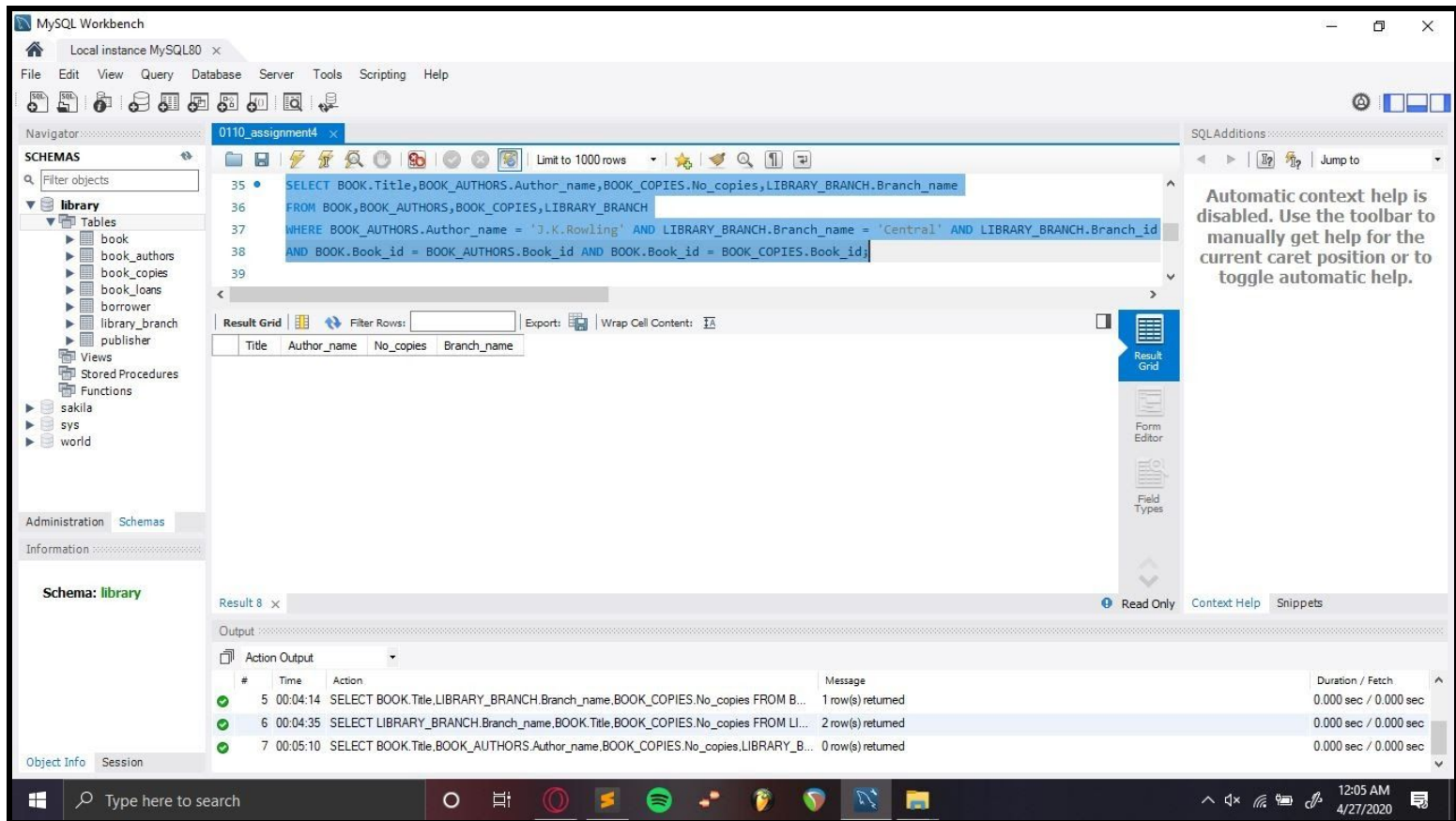
Q.6 For each book authored (or co-authored) by J. K. Rowling, retrieve the title and the number of copies owned by the library branch whose name is Central

Query -

/\* UPDATING and setting is necessary here ? \*/

```
SELECT
BOOK.Title, BOOK_AUTHORS.Author_name, BOOK_COPIES.No_copies, LIBRARY_BRANCH.Branch_name
FROM BOOK, BOOK_AUTHORS, BOOK_COPIES, LIBRARY_BRANCH
WHERE BOOK_AUTHORS.Author_name = 'J.K.Rowling' AND LIBRARY_BRANCH.Branch_name = 'Central' AND
LIBRARY_BRANCH.Branch_id = BOOK_COPIES.Branch_id
AND BOOK.Book_id = BOOK_AUTHORS.Book_id AND BOOK.Book_id = BOOK_COPIES.Book_id;
```

Output Screenshot -



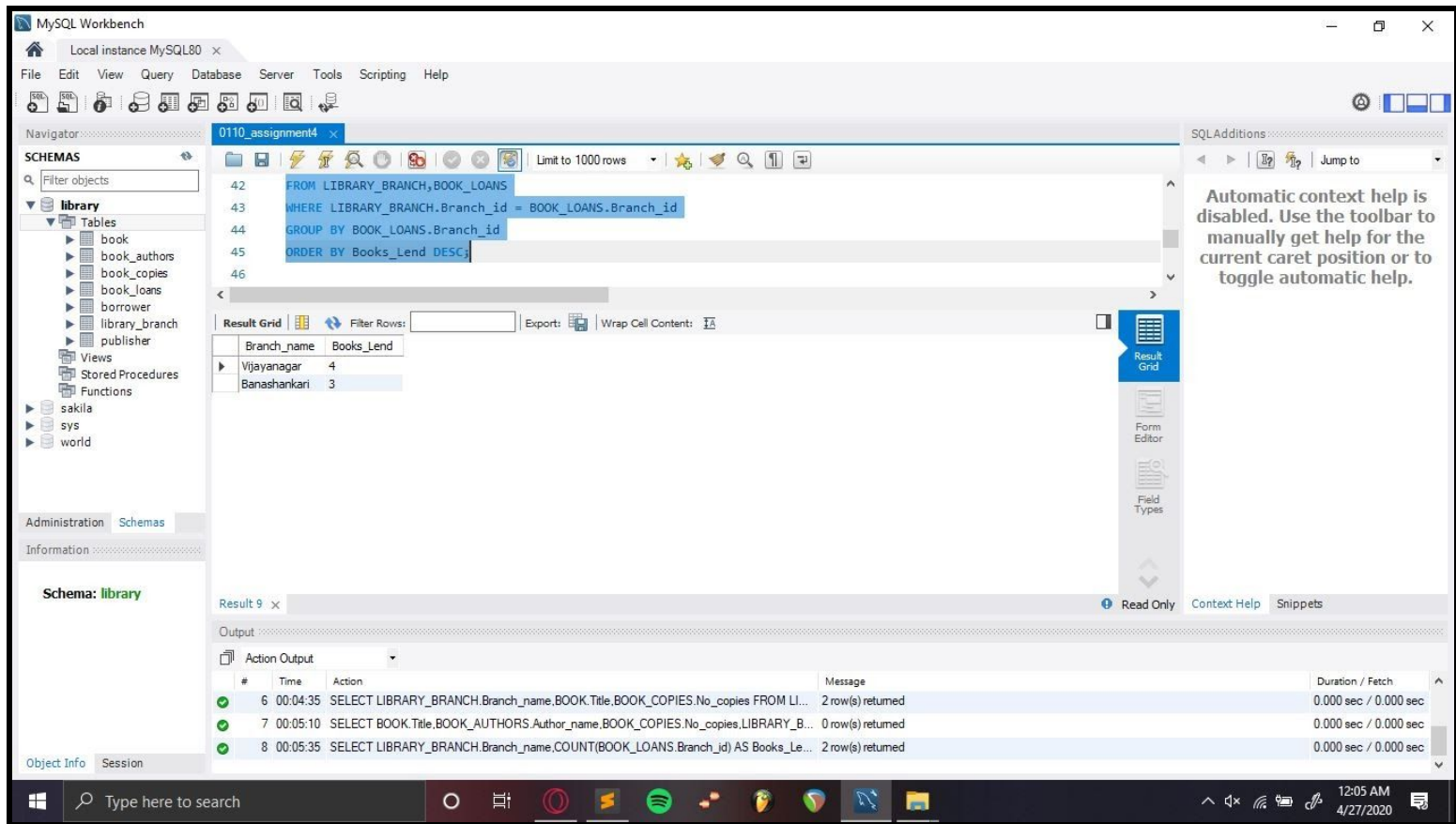
Q.7 For each library branch, retrieve the branch name and the total number of books loaned out from that branch. Sort it in descending order of total number of books and branch name

Query -

```

SELECT LIBRARY_BRANCH.Branch_name,COUNT(BOOK_LOANS.Branch_id) AS Books_Lend
FROM LIBRARY_BRANCH,BOOK_LOANS
WHERE LIBRARY_BRANCH.Branch_id = BOOK_LOANS.Branch_id
GROUP BY BOOK_LOANS.Branch_id
ORDER BY Books_Lend DESC;
  
```

Output Screenshot -



Q.8 For each book that is loaned out from the Vijayanagar branch and whose Due\_date is today, retrieve the book title, the borrower's name, and the borrower's address

Query -

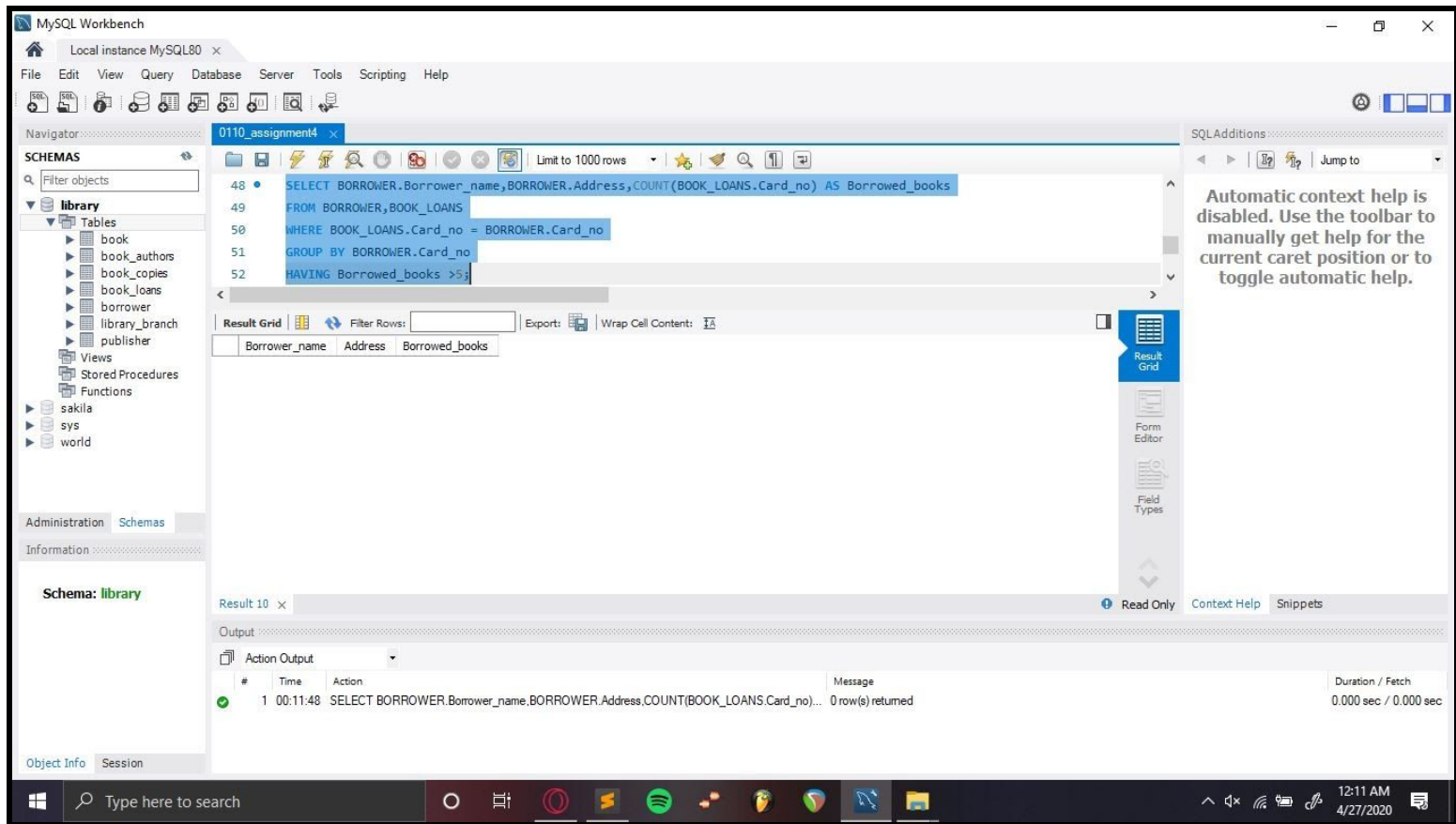
```

SELECT BORROWER.Borrower_name,BORROWER.Address,COUNT(BOOK_LOANS.Card_no) AS
Borrowed_books
FROM BORROWER,BOOK_LOANS
WHERE BOOK_LOANS.Card_no = BORROWER.Card_no
GROUP BY BORROWER.Card_no
HAVING Borrowed_books >5;

```

Output Screenshot -





Q.9 For each book that is loaned out from the Vijayanagar branch and whose Due\_date is today, retrieve the book title, the borrower's name, and the borrower's address

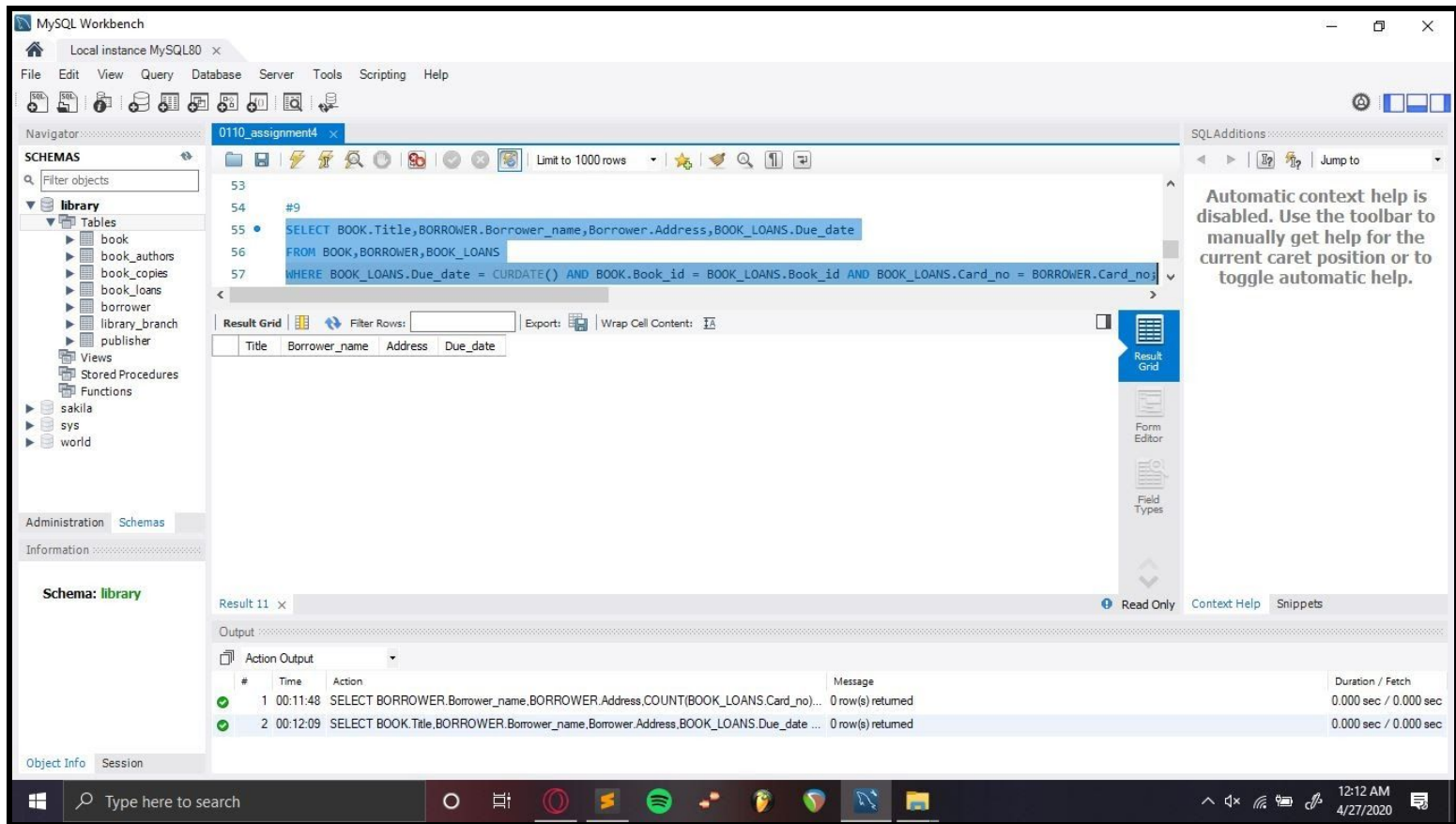
Query -

```

SELECT BOOK.Title, BORROWER.Borrower_name, Borrower.Address, BOOK_LOANS.Due_date
FROM BOOK, BORROWER, BOOK_LOANS
WHERE LIBRARY_BRANCH.Branch_name = 'Vijayanagar' AND BOOK_LOANS.Due_date = CURDATE() AND
BOOK.Book_id = BOOK_LOANS.Book_id AND BOOK_LOANS.Card_no = BORROWER.Card_no;

```

Output Screenshot -



Q.10 Retrieve the names of all borrowers who do not have any books checked out

Query -

```

SELECT BORROWER.Borrower_name
FROM BORROWER,BOOK_LOANS
WHERE BORROWER.Card_no NOT IN
  (SELECT BOOK_LOANS.Card_no
   FROM BOOK_LOANS
   GROUP BY BORROWER.Card_no)
GROUP BY BORROWER.Borrower_name;
  
```

Output Screenshot -

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

0110\_assignment4\*

Limit to 1000 rows

55 • SELECT BOOK.Title,BORROWER.Borrower\_name,Borrower.Address,BOOK\_LOANS.Due\_date  
56 FROM BOOK,BORROWER,BOOK\_LOANS  
57 WHERE BOOK\_LOANS.Due\_date = CURDATE() AND BOOK.Book\_id = BOOK\_LOANS.Book\_id AND BOOK\_LOANS.Card\_no = BORROWER.Card\_no;  
58  
59 #16

Result Grid

Filter Rows: Export: Wrap Cell Content:

Borrower\_name

Result Grid

Form Editor

Field Types

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

Schema: library

Administration Schemas

Information

Result 12 x

Read Only Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓ 1	00:11:48	SELECT BORROWER.Borrower_name,BORROWER.Address,COUNT(BOOK_LOANS.Card_no)...	0 row(s) returned	0.000 sec / 0.000 sec
✓ 2	00:12:09	SELECT BOOK.Title,BORROWER.Borrower_name,Borrower.Address,BOOK_LOANS.Due_date ...	0 row(s) returned	0.000 sec / 0.000 sec
✓ 3	00:12:32	SELECT BORROWER.Borrower_name FROM BORROWER,BOOK_LOANS WHERE BORRO...	0 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Type here to search

12:12 AM 4/27/2020