

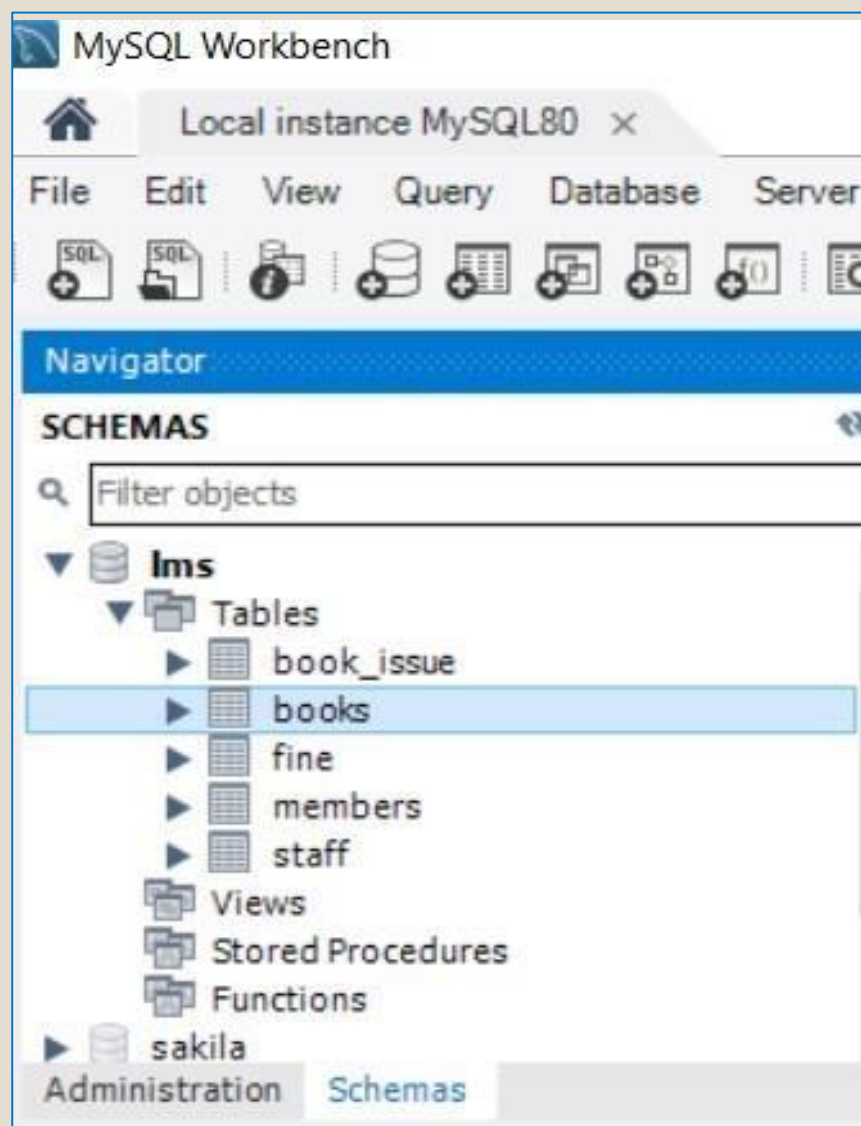
SQL ASSIGNMENT

LIBRARY MANAGEMENT SYSTEM

Library Management System

Library Management System is intended to Automate the library activities such as creating a new member, giving books to the members, maintaining the details of available books. This also helps the librarians by providing information such as total copies available each book, list of books that belong to a particular category, books taken by members, the date on which they took that particular book, expected date of return, late due fees, membership details etc.

Created Schema *lms* with the following tables



Tables

Information

Table: books

Columns:

book_id	int PK
bk_title	varchar(100)
bk_edition	varchar(45)
bk_author	varchar(45)
bk_publisher	varchar(45)
bk_copies	varchar(45)
bk_cost	int
bk_remarks	varchar(45)
bk_category	varchar(45)
rack_num	int

Information

Table: members

Columns:

Memberid	int PK
Name	varchar(45)
Email	varchar(45)
Address	varchar(200)
Mem_type	varchar(45)

Information

Table: book_issue

Columns:

issue_id	varchar(45) PK
book_id	varchar(45)
bk_title	varchar(45)
mem_id	varchar(45)
staff_id	varchar(45)
issue_date	date
due_date	date
date_returned	date

Information

Table: staff

Columns:

staff_id	varchar(45) PK
staff_name	varchar(45)
staff_phno	varchar(45)
staff_email	varchar(45)
staff_pwd	varchar(45)

Information

Table: fine

Columns:

Member_id	int
fineamount	int

Describe tables:

SQL File 6* x

Limit to 1

1 • Desc books

Result Grid Filter Rows: Export:

	Field	Type	Null	Key	Default
►	book_id	int	NO	PRI	NULL
	bk_title	varchar(100)	NO		NULL
	bk_edition	varchar(45)	YES		NULL
	bk_author	varchar(45)	YES		NULL
	bk_publisher	varchar(45)	YES		NULL
	bk_copies	varchar(45)	YES		NULL
	bk_cost	int	YES		NULL
	bk_remarks	varchar(45)	YES		NULL
	bk_category	varchar(45)	YES		NULL
	rack_num	int	YES		NULL

SQL File 6* x

1 • Desc book_issue;

Result Grid Filter Rows: Export:

	Field	Type	Null	Key	Default
►	issue_id	varchar(45)	NO	PRI	NULL
	book_id	varchar(45)	NO	UNI	NULL
	mem_id	varchar(45)	NO	UNI	NULL
	staff_id	varchar(45)	NO		NULL
	issue_date	date	NO		NULL
	due_date	date	NO		NULL
	date_returned	date	YES		NULL

SQL File 6* x

1 • Desc members;

Result Grid | Filter Rows: | Export:

	Field	Type	Null	Key	Default
▶	Memberid	int	NO	PRI	NULL
	Name	varchar(45)	NO		NULL
	Email	varchar(45)	NO	UNI	NULL
	Address	varchar(200)	NO	UNI	NULL
	Mem_type	varchar(45)	NO		NULL

SQL File 6* x

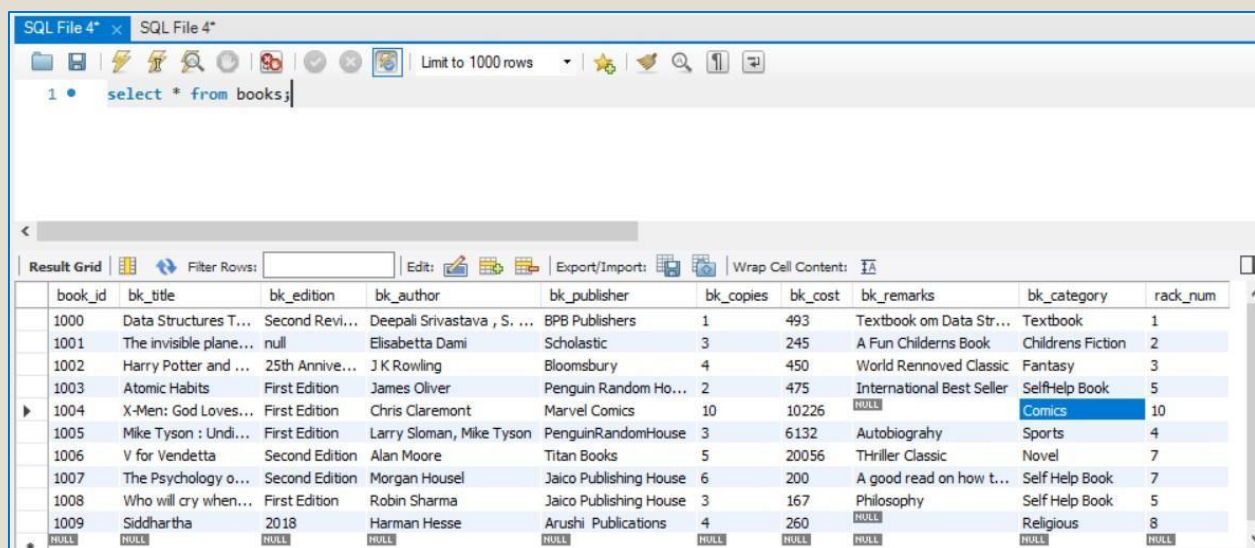
1 • Desc staff;

Result Grid | Filter Rows: | Export:

	Field	Type	Null	Key	Default
▶	staff_id	varchar(45)	NO	PRI	NULL
	staff_name	varchar(45)	YES		NULL
	staff_phno	varchar(45)	YES	UNI	NULL
	staff_email	varchar(45)	YES	UNI	NULL
	staff_pwd	varchar(45)	YES	UNI	NULL

Queries

i) Display all records in the table books





The screenshot shows a SQL IDE window titled "SQL File 4*" with a toolbar and a query editor. The query editor contains the SQL statement `select * from books;`. Below the query editor is a "Result Grid" showing the results of the query. The grid has 10 columns: `book_id`, `bk_title`, `bk_edition`, `bk_author`, `bk_publisher`, `bk_copies`, `bk_cost`, `bk_remarks`, `bk_category`, and `rack_num`. The results are displayed in a table with 10 rows. The first row is highlighted in blue. The last row contains null values.

book_id	bk_title	bk_edition	bk_author	bk_publisher	bk_copies	bk_cost	bk_remarks	bk_category	rack_num
1000	Data Structures T...	Second Revi...	Deepali Srivastava , S. ...	BPB Publishers	1	493	Textbook om Data Str...	Textbook	1
1001	The invisible plane...	null	Elisabetta Dami	Scholastic	3	245	A Fun Childerns Book	Childrens Fiction	2
1002	Harry Potter and ...	25th Annive...	J K Rowling	Bloomsbury	4	450	World Rennovd Classic	Fantasy	3
1003	Atomic Habits	First Edition	James Oliver	Penguin Random Ho...	2	475	International Best Seller	Self-Help Book	5
1004	X-Men: God Loves...	First Edition	Chris Claremont	Marvel Comics	10	10226	NULL	Comics	10
1005	Mike Tyson : Undi...	First Edition	Larry Sloman, Mike Tyson	PenguinRandomHouse	3	6132	Autobiograhny	Sports	4
1006	V for Vendetta	Second Edition	Alan Moore	Titan Books	5	20056	Thriller Classic	Novel	7
1007	The Psychology o...	Second Edition	Morgan Housel	Jaico Publishing House	6	200	A good read on how t...	Self Help Book	7
1008	Who will cry when...	First Edition	Robin Sharma	Jaico Publishing House	3	167	Philosophy	Self Help Book	5
1009	Siddhartha	2018	Harman Hesse	Arushi Publications	4	260	NULL	Religious	8
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Display all records in the table members


Result Grid







Filter Rows:


Edit:








Export/Import:





	Memberid	Name	Email	Address	Mem_type
▶	100	ARUN	arun@email.com	House No:2, KP Street , CHENNAI	Temporary
	101	AMIT	amit@email.com	House No:5, LS Street , Kochi	Temporary
	102	ALAN	alan@email.com	Knights 5 A , Imperial Gardens , Kochi	Temporary
	103	ADWAIT	adwait@email.com	6 A , Parkland Apartments , Kochi	Permanent
	104	ANJANA	anjana@email.com	7 B , Meryl Apartments , Kochi	Permanent
	105	AKHILA	akhila@email.com	8 B , Eden City , Kolkata	Permanent
•	NULL	NULL	NULL	NULL	NULL

iii)Display all records in the table staff

SQL File 6*

1 • select *from staff;

Result Grid

Filter Rows:

Edit:

E

	staff_id	staff_name	staff_phno	staff_email	staff_pwd
▶	105	ram	1256	ram@email.com	ram123
	123	Priya	1234	priya@email.com	abs123
	131	rani	1721	rani@email.com	rani123
	151	sita	1356	sita@email.com	sita123
	501	rahul	5678	rahul@email.com	rahul123
•	NULL	NULL	NULL	NULL	NULL

- iv) Display all records in the table book_issue

```
SQL File 6* x
1 • select * from book_issue;
```

	issue_id	book_id	mem_id	staff_id	issue_date	due_date	date_returned
	2000	1003	100	105	2023-05-17	2023-05-23	2023-05-23
	2001	1001	101	123	2023-05-18	2023-05-25	2023-05-23
▶	2003	1007	105	123	2023-05-10	2023-05-17	2023-05-20
★	NULL	NULL	NULL	NULL	NULL	NULL	NULL

- v) Display the memberid, name and mem_type of members having “Permanent” membership.

```
SQL File 6* x
1 select Memberid, Name, Mem_type
2 from members
3 where Mem_type = 'Permanent';
```

	Memberid	Name	Mem_type
▶	103	ADWAIT	Permanent
	104	ANJANA	Permanent
	105	AKHILA	Permanent
★	NULL	NULL	NULL

- vi) Display the book_id, title and author of the books whose author name begins with 'A'

The screenshot shows a SQL query editor window titled "SQL File 6*" with a toolbar at the top. The query is as follows:

```
1 • select book_id,bk_author,bk_title
2   from books
3   where bk_author like 'A%';
```

Below the query editor is a "Result Grid" section. It includes a "Filter Rows:" input field and an "Edit:" button. The result grid displays the following data:

	book_id	bk_author	bk_title
▶	1006	Alan Moore	V for Vendetta
•	NULL	NULL	NULL

- vii) Display the total number of Comics books available in library

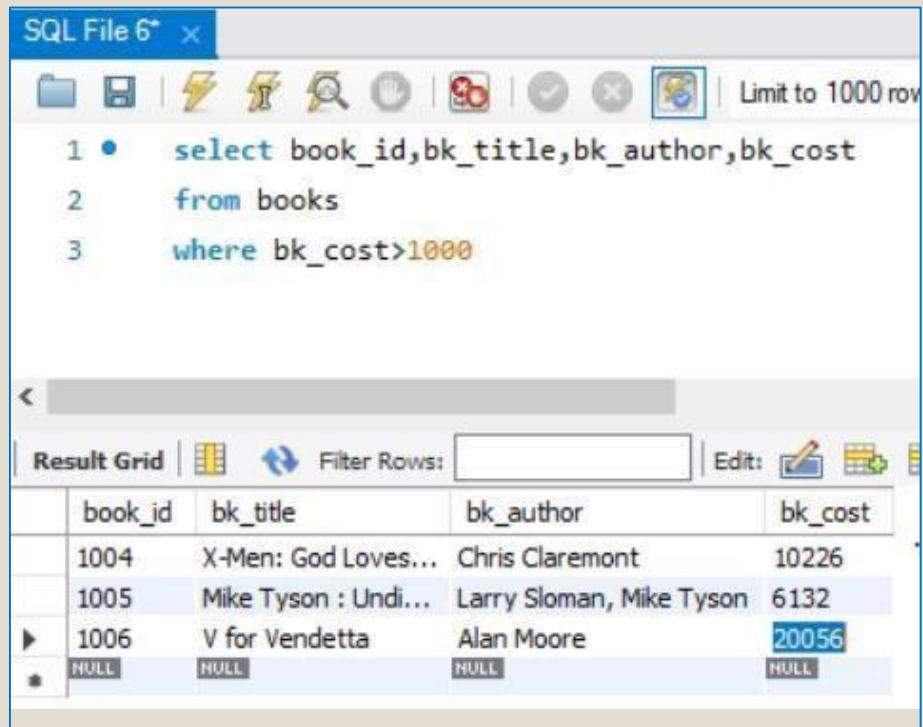
The screenshot shows a SQL query editor window titled "SQL File 6*" with a toolbar at the top. The query is as follows:

```
1 • select count(bk_category)
2   from books
3   where bk_category = 'Comics';
```

Below the query editor is a "Result Grid" section. It includes a "Filter Rows:" input field and an "Export:" button. The result grid displays the following data:

	count(bk_category)
▶	1

- viii) Display the book_id, title and author of the books whose price is above Rs.1000.



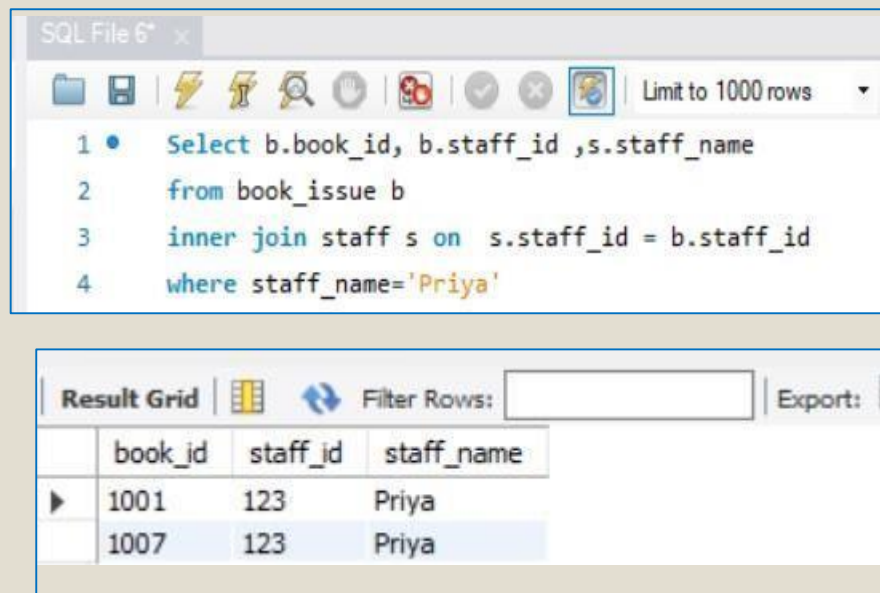
The screenshot shows an SQL IDE window titled "SQL File 6* x". The query editor contains the following SQL query:

```
1 • select book_id,bk_title,bk_author,bk_cost
2 from books
3 where bk_cost>1000
```

Below the query editor, the "Result Grid" tab is active, displaying the results of the query. The results are shown in a table with the following columns: book_id, bk_title, bk_author, and bk_cost. The table contains three rows of data, with the third row (book_id 1006) highlighted in blue. The first two rows have their bk_cost values (10226 and 6132) highlighted in blue. The third row has its bk_cost value (20056) highlighted in blue. The fourth row is a summary row with NULL values for all columns.

book_id	bk_title	bk_author	bk_cost
1004	X-Men: God Loves...	Chris Claremont	10226
1005	Mike Tyson : Undi...	Larry Sloman, Mike Tyson	6132
1006	V for Vendetta	Alan Moore	20056
NULL	NULL	NULL	NULL

- ix) the book_id and staff_id and staff_name of books issued by Priya



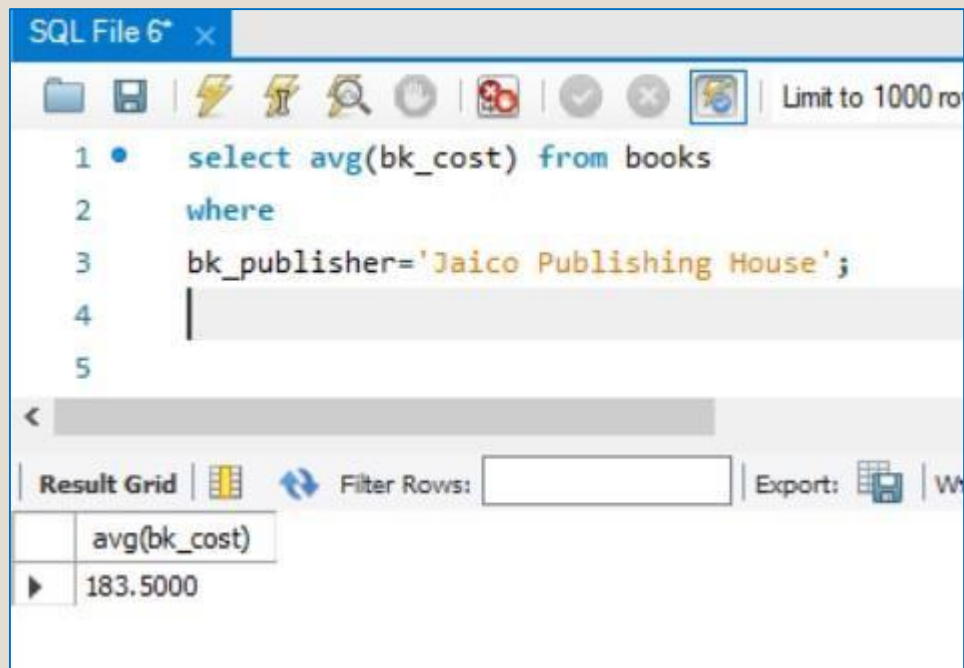
The screenshot shows a SQL query in a text editor window titled 'SQL File 6'. The query is as follows:

```
1 • Select b.book_id, b.staff_id ,s.staff_name
2   from book_issue b
3   inner join staff s on s.staff_id = b.staff_id
4   where staff_name='Priya'
```

Below the query, the 'Result Grid' is displayed, showing the results of the query. The grid has four columns: book_id, staff_id, and staff_name. There are two rows of data.

	book_id	staff_id	staff_name
▶	1001	123	Priya
	1007	123	Priya

- x) Calculate the average price of books published by Jaico Publishing House



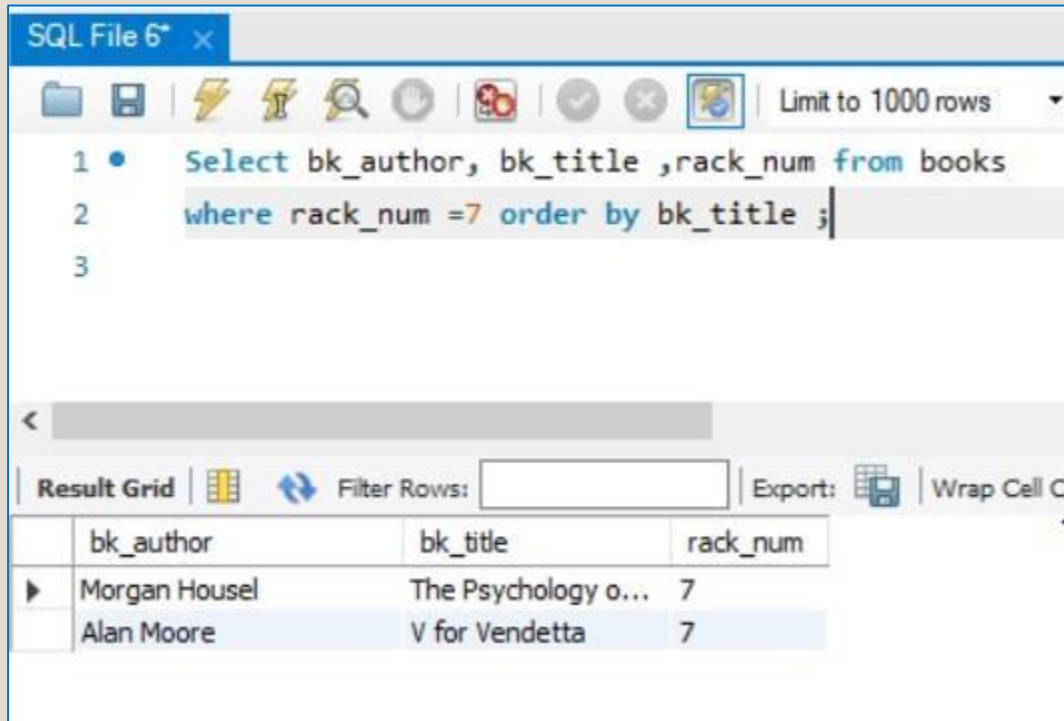
The screenshot shows a SQL query in a text editor window titled 'SQL File 6'. The query is as follows:

```
1 • select avg(bk_cost) from books
2   where
3   bk_publisher='Jaico Publishing House';
4   |
5
```

Below the query, the 'Result Grid' is displayed, showing the results of the query. The grid has one column: avg(bk_cost). There is one row of data.

	avg(bk_cost)
▶	183.5000

- xi) the book author , book title and rack number of the books which are placed in rack 7 and sort by book title in ascending order.

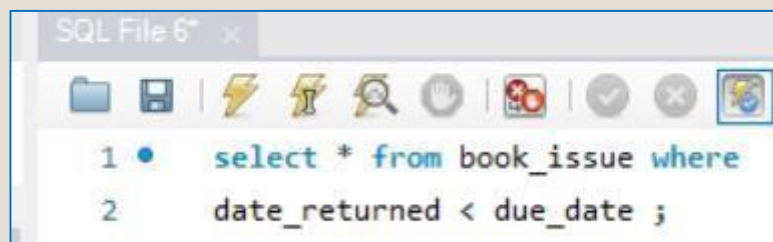


The screenshot shows a SQL query editor window titled "SQL File 6* x". The query is: `1 • select bk_author, bk_title ,rack_num from books`
`2 where rack_num =7 order by bk_title ;`
`3`

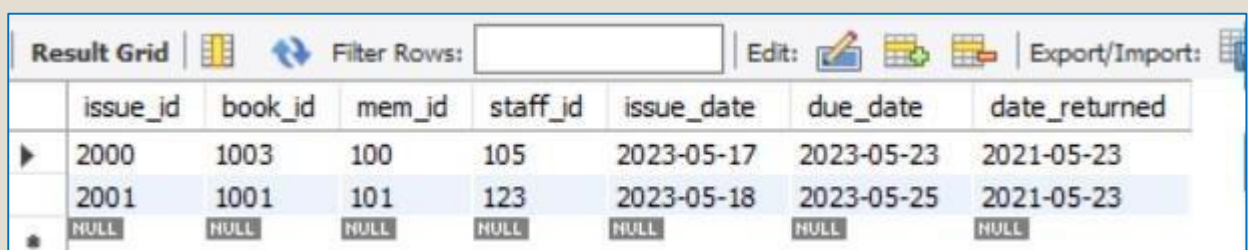
Below the query editor, there is a "Result Grid" section. It includes a "Filter Rows:" input field and an "Export:" button. The results are displayed in a table with columns: `bk_author`, `bk_title`, and `rack_num`.

	bk_author	bk_title	rack_num
▶	Morgan Housel	The Psychology o...	7
	Alan Moore	V for Vendetta	7

- xii) Display the details from book_issue for those members who have returned the books before the due date.



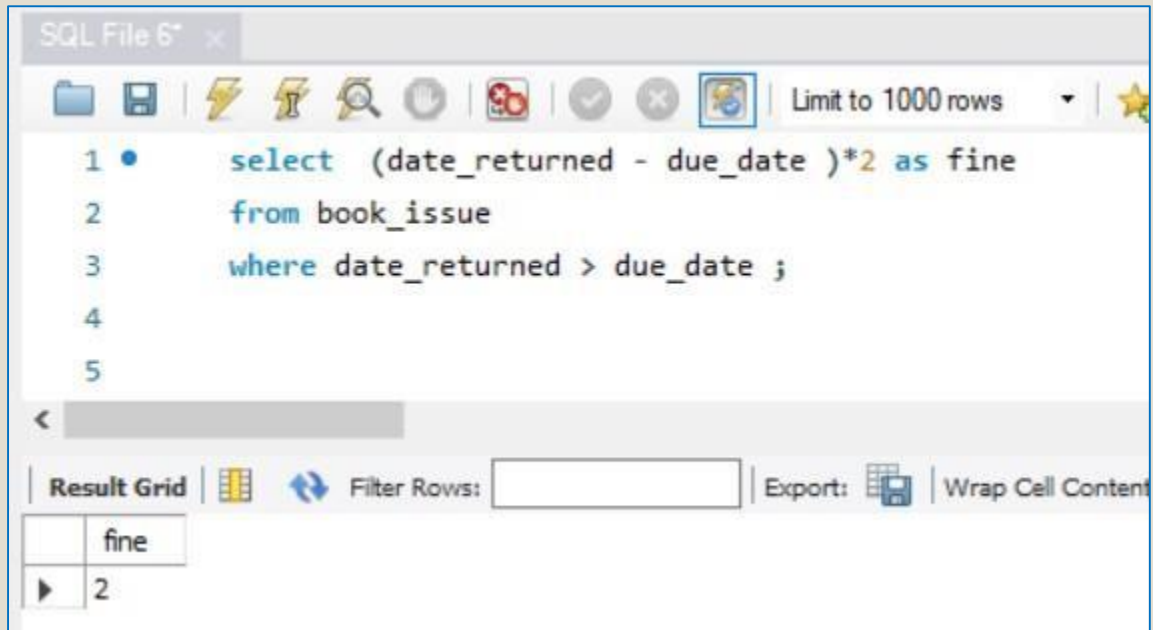
The screenshot shows a SQL query editor window titled "SQL File 6* x". The query is: `1 • select * from book_issue where`
`2 date_returned < due_date ;`



The screenshot shows the "Result Grid" section of the SQL editor. It includes a "Filter Rows:" input field and an "Edit:" button. The results are displayed in a table with columns: `issue_id`, `book_id`, `mem_id`, `staff_id`, `issue_date`, `due_date`, and `date_returned`.

	issue_id	book_id	mem_id	staff_id	issue_date	due_date	date_returned
▶	2000	1003	100	105	2023-05-17	2023-05-23	2021-05-23
	2001	1001	101	123	2023-05-18	2023-05-25	2021-05-23
•	NULL	NULL	NULL	NULL	NULL	NULL	NULL

- xiii) fine incurred by the member whose date_returned has passed due date where fine for each day is Rs 2



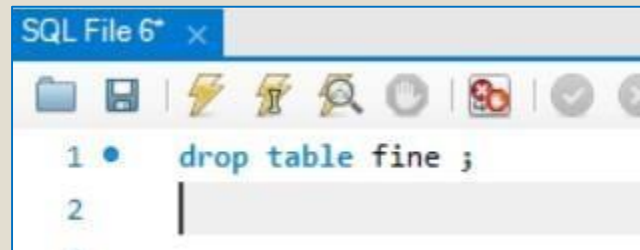
The screenshot shows a SQL editor window titled "SQL File 6*" with a toolbar and a "Limit to 1000 rows" dropdown. The SQL query is as follows:

```
1 • select (date_returned - due_date ) * 2 as fine
2 from book_issue
3 where date_returned > due_date ;
4
5
```

Below the query editor, there is a "Result Grid" section with a "Filter Rows:" input field and an "Export:" button. The result grid displays the following data:

	fine
▶	2

- xiv) Delete table fine



The screenshot shows a SQL editor window titled "SQL File 6*" with a toolbar. The SQL query is as follows:

```
1 • drop table fine ;
2
```