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1) Write two stored Procedures relevant to your database.

A)

Procedure 1 :-

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL code:

```
USE Library  
  
CREATE PROCEDURE select_all_get_id @id INT AS  
SELECT  
from author_  
WHERE author_id>@id  
  
select_all_get_id 3
```

The Results pane displays the output of the query, showing a table with columns: author_id, author_name, and no_of_books. The data is as follows:

author_id	author_name	no_of_books
4	rio	2
5	mali	2
6	chandra	2
7	lohith	2
8	Bhanupriya	6
9	Lohith	8
10	Koushik	5
11	Sohail	9
12	Greeshma	7
13	Malikarjun	4
14	Pavith	9
15	Suman	5
16	Priya	9
17	Vishwa	7
18	xhith	4

The status bar at the bottom indicates "Query executed successfully." and "LAPTOP-01M7FIT (15.0 RTM) LAPTOP-01M7FIT(user (67)) Library 00:00:00 15 rows".

Procedure 2 :-

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL code:

```
CREATE PROCEDURE Selectall__contains @string varchar(20)  
as  
SELECT * FROM books_ WHERE books_.BOOK_NAME LIKE concat('%',@string,'%')  
  
Selectall__contains 'a'
```

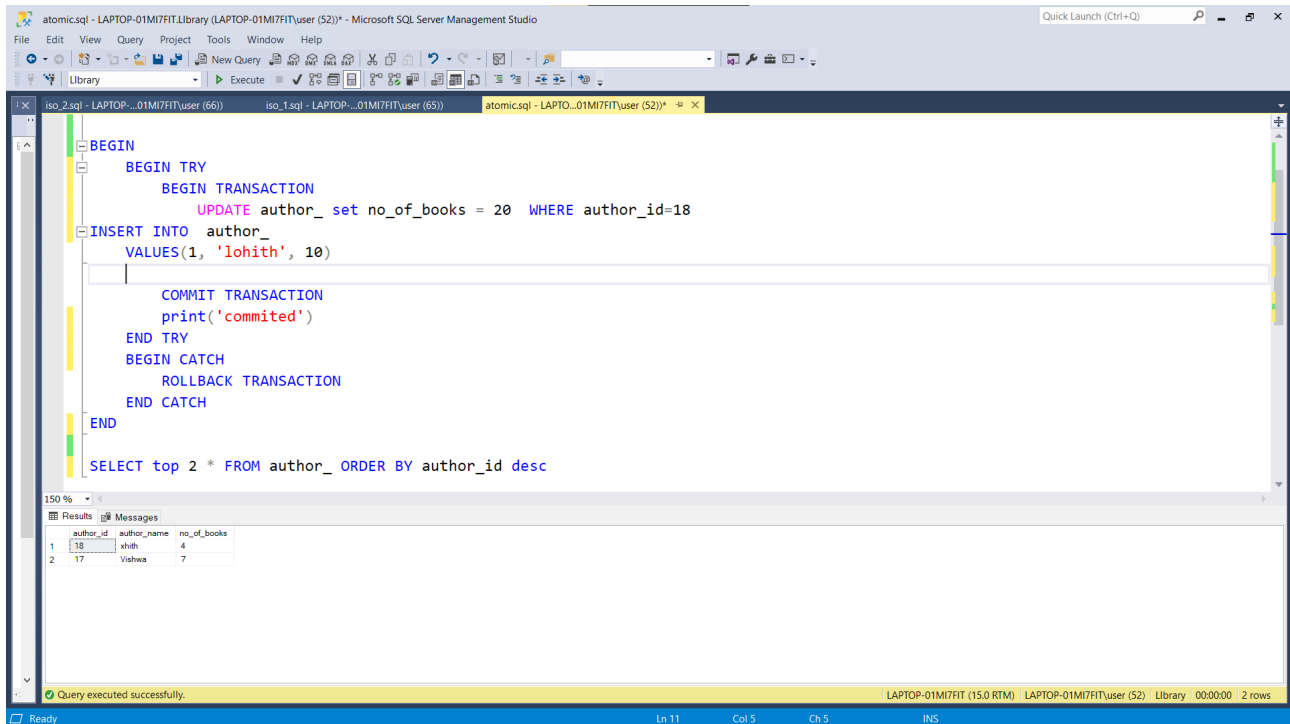
The Results pane displays the output of the query, showing a table with columns: ID, BOOK_NAME, author_id, PRICE, barcode_, category, no_of_issues, published_year, and bought_year. The data is as follows:

ID	BOOK_NAME	author_id	PRICE	barcode_	category	no_of_issues	published_year	bought_year
1	Naturel Disaster	1	1000	2938476	209	12	2010	2012
2	In the Dark	1	567	98567	405	23	2011	2012
3	Caught up	4	1070	89456	708	45	2012	2013
4	Leave me alone	6	988	875342346	134	6	2016	2016
5	My Band	7	890	764563	122	5	2010	2012
6	Fantasy Girl	8	799	432693	342	4	2001	2012
7	No Flaws	15	679	45631	564	11	2002	2004
8	Caught up	4	1070	456358	879	75	1994	2012
9	Leave me alone	6	988	8563425	234	13	2010	2012
10	My Band	7	890	65476	323	12	1996	2020
11	Fantasy Girl	8	799	79678	567	12	1996	2020
12	No Flaws	9	679	345476	343	13	2010	2012
13	ALONE	9	1000	1111	0	1	2002	2020

The status bar at the bottom indicates "Query executed successfully." and "LAPTOP-01M7FIT (15.0 RTM) LAPTOP-01M7FIT(user (67)) Library 00:00:00 13 rows".

2) Write a transaction to illustrate atomicity (related to your database)

A)



The screenshot shows the Microsoft SQL Server Management Studio interface. The main window displays a SQL script for a transaction. The script is as follows:

```
BEGIN
BEGIN TRY
    BEGIN TRANSACTION
        UPDATE author_ set no_of_books = 20 WHERE author_id=18
    INSERT INTO author_
        VALUES(1, 'lohith', 10)

    COMMIT TRANSACTION
    print('committed')
END TRY
BEGIN CATCH
    ROLLBACK TRANSACTION
END CATCH
END

SELECT top 2 * FROM author_ ORDER BY author_id desc
```

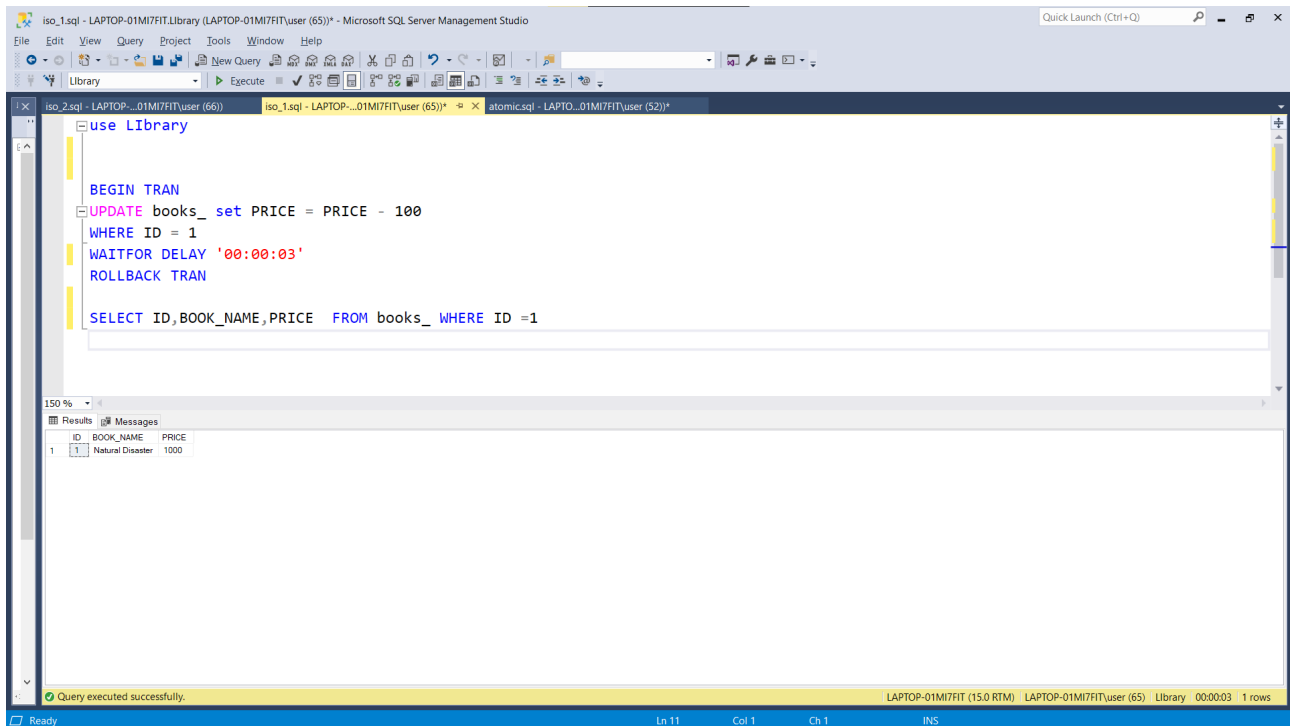
Below the script, the 'Results' pane shows the output of the query. It contains a table with 3 columns: author_id, author_name, and no_of_books. The table has 2 rows of data:

author_id	author_name	no_of_books
18	lohit	4
17	Vishwa	7

The status bar at the bottom indicates 'Query executed successfully.' and '2 rows'.

3) Write a transaction to illustrate isolation level. It can be on commit or uncommit read

A)



The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL script:

```
use Library

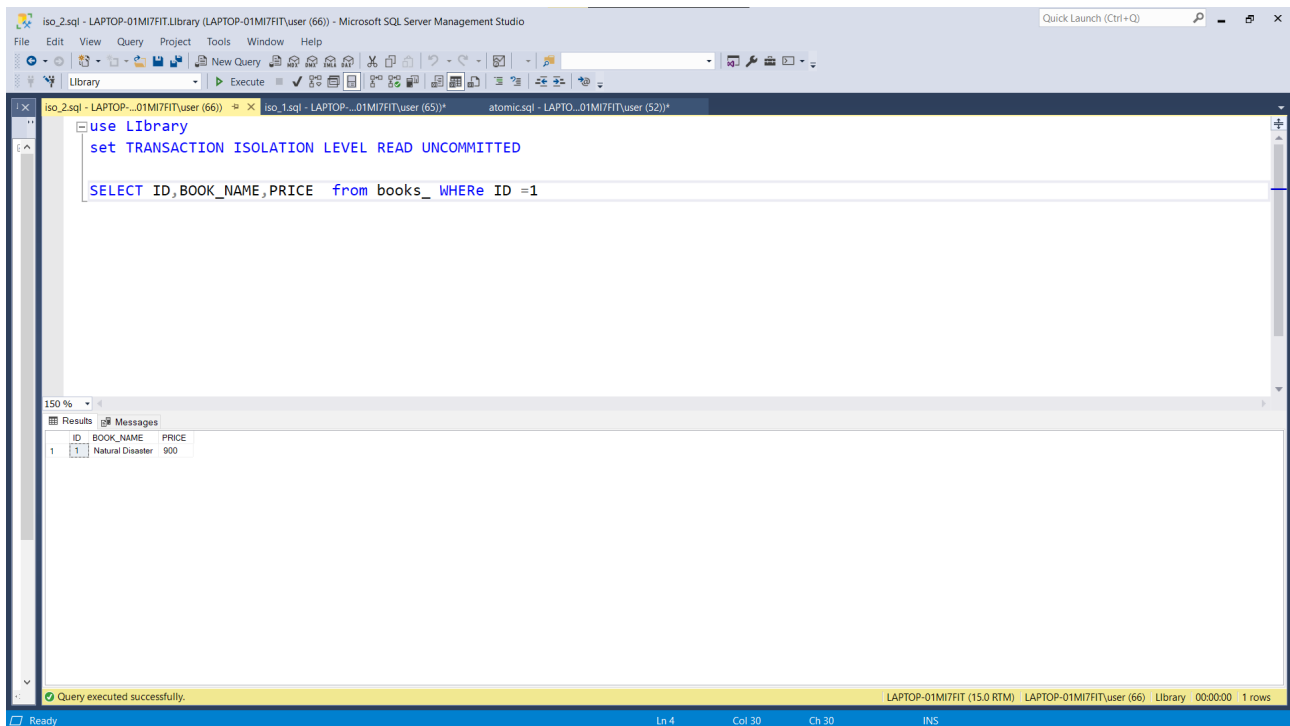
BEGIN TRAN
UPDATE books_ set PRICE = PRICE - 100
WHERE ID = 1
WAITFOR DELAY '00:00:03'
ROLLBACK TRAN

SELECT ID,BOOK_NAME,PRICE FROM books_ WHERE ID =1
```

The Results pane displays the output of the final SELECT statement:

ID	BOOK_NAME	PRICE
1	Natural Disaster	1000

The status bar at the bottom indicates "Query executed successfully." and "LAPTOP-01M7FIT (15.0 RTM) LAPTOP-01M7FIT\user (65) Library 00:00:03 1 rows".



The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL script:

```
use Library

set TRANSACTION ISOLATION LEVEL READ UNCOMMITTED

SELECT ID,BOOK_NAME,PRICE from books_ WHERE ID =1
```

The Results pane displays the output of the final SELECT statement:

ID	BOOK_NAME	PRICE
1	Natural Disaster	900

The status bar at the bottom indicates "Query executed successfully." and "LAPTOP-01M7FIT (15.0 RTM) LAPTOP-01M7FIT\user (66) Library 00:00:00 1 rows".