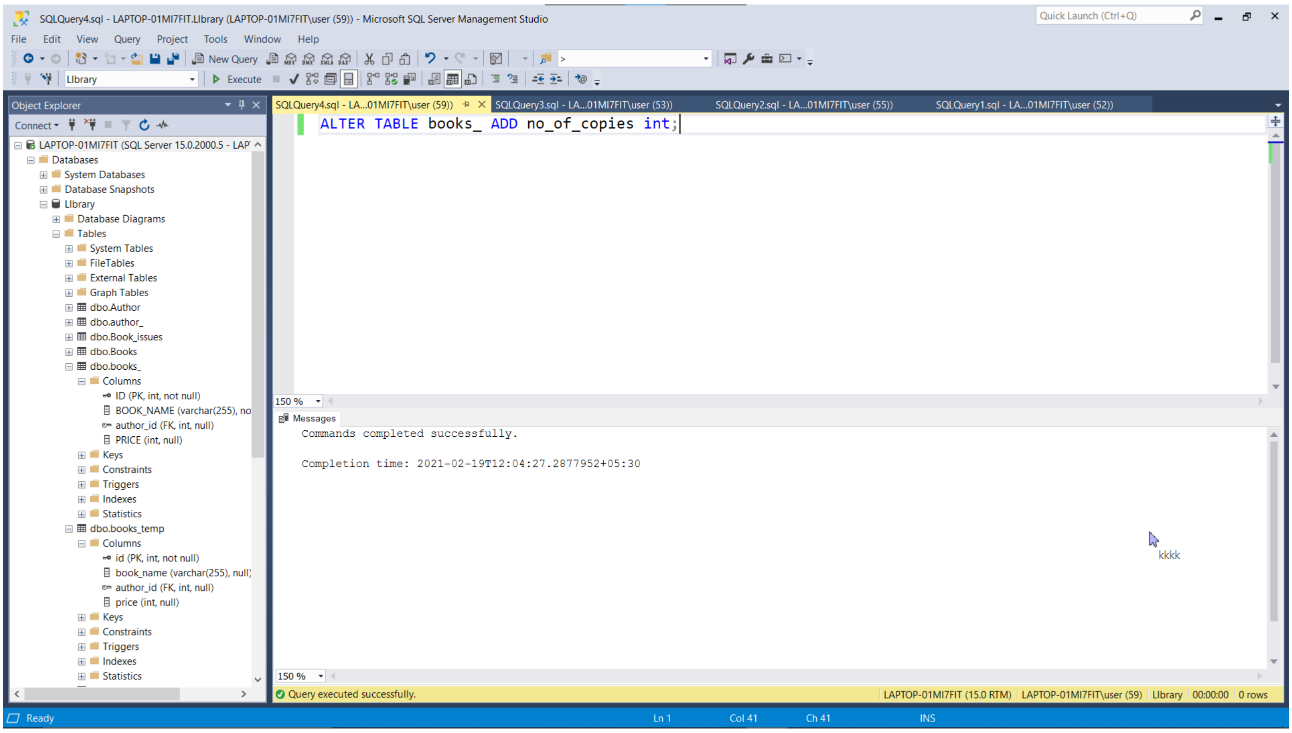
Group - 7

1)Add, Modify and Delete Column using Alter Command

i)ADD
Command ; - ALTER TABLE books_ ADD no.of_copies int;
Output:-



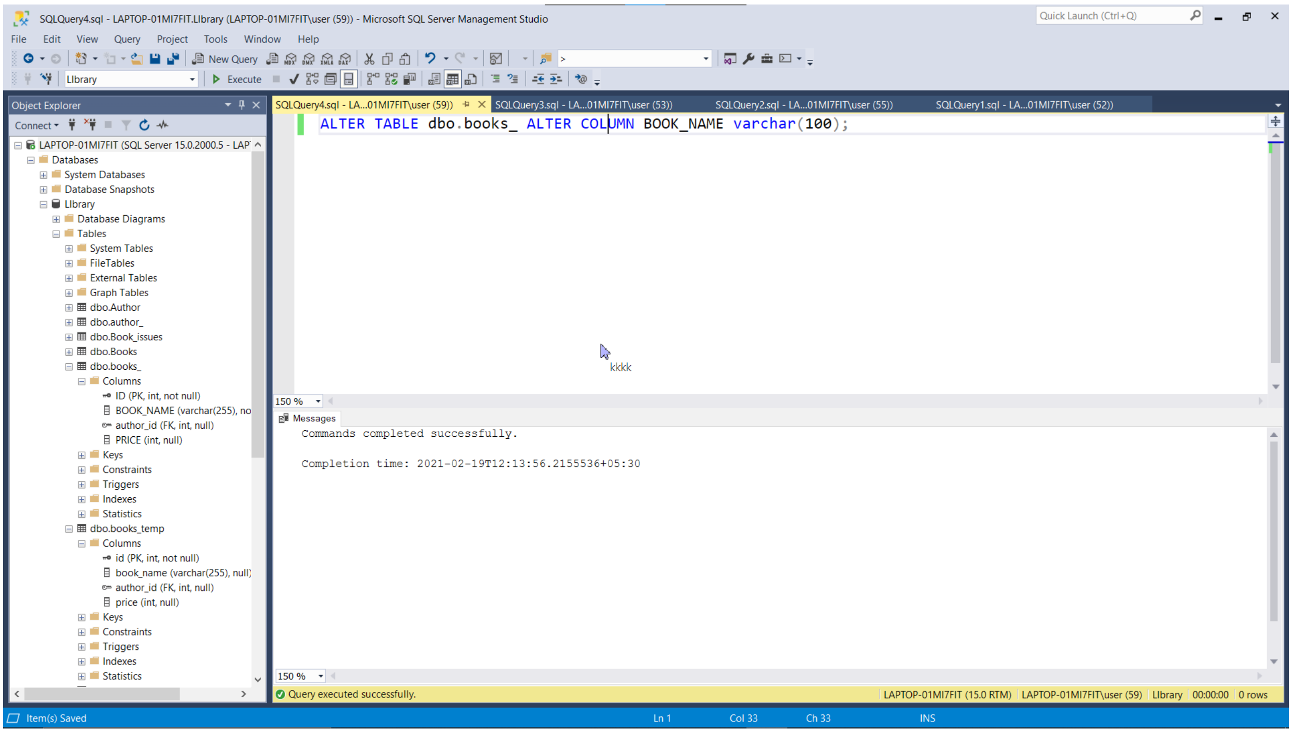
```
ALTER TABLE books_ ADD no_of_copies int;
```

```
Commands completed successfully.

Completion time: 2021-02-19T12:04:27.2877952+05:30
```

SQLQuery4.sql - LAPTOP-01MI7FIT.Library (LAPTOP-01MI7FIT\user (59)) - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Library
Execute
Object Explorer
Connect
SQLQuery4.sql - LA...01MI7FIT\user (59))
SQLQuery3.sql - LA...01MI7FIT\user (53))
SQLQuery2.sql - LA...01MI7FIT\user (55))
SQLQuery1.sql - LA...01MI7FIT\user (52))
LAPTOP-01MI7FIT (SQL Server 15.0.2000.5 - LAP
Databases
System Databases
Database Snapshots
Library
Database Diagrams
Tables
System Tables
FileTables
External Tables
Graph Tables
dbo.Author
dbo.author_
dbo.Book_issues
dbo.Books
dbo.books_
Columns
ID (PK, int, not null)
BOOK_NAME (varchar(255), no
author_id (FK, int, null)
PRICE (int, null)
Keys
Constraints
Triggers
Indexes
Statistics
dbo.books_temp
Columns
id (PK, int, not null)
book_name (varchar(255), null)
author_id (FK, int, null)
price (int, null)
Keys
Constraints
Triggers
Indexes
Statistics
150 %
Messages
kkkk
Query executed successfully.
LAPTOP-01MI7FIT (15.0 RTM)
LAPTOP-01MI7FIT\user (59)
Library
00:00:00
0 rows
Ready
Ln 1
Col 41
Ch 41
INS

ii)MODIFY

Commmand :- ALTER TABLEdbo.books_ ALTER COLUMN BOOK_NAME varchar(100);
OUTPUT:-



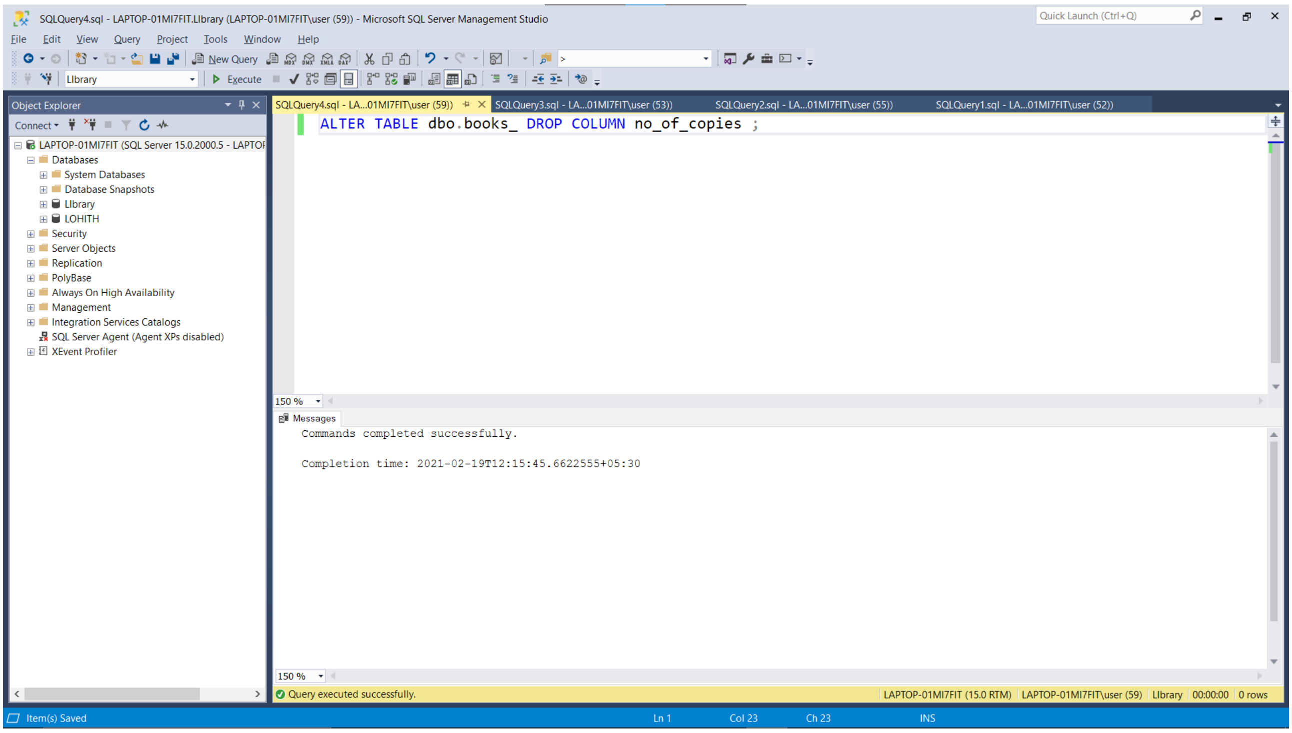
```
ALTER TABLE dbo.books_ ALTER COLUMN BOOK_NAME varchar(100);
```

```
Commands completed successfully.

Completion time: 2021-02-19T12:13:56.2155536+05:30
```

SQLQuery4.sql - LAPTOP-01MI7FIT.Library (LAPTOP-01MI7FIT\user (59)) - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Library
Execute
Object Explorer
Connect
SQLQuery4.sql - LA...01MI7FIT\user (59))
SQLQuery3.sql - LA...01MI7FIT\user (53))
SQLQuery2.sql - LA...01MI7FIT\user (55))
SQLQuery1.sql - LA...01MI7FIT\user (52))
LAPTOP-01MI7FIT (SQL Server 15.0.2000.5 - LAP
Databases
System Databases
Database Snapshots
Library
Database Diagrams
Tables
System Tables
FileTables
External Tables
Graph Tables
dbo.Author
dbo.author_
dbo.Book_issues
dbo.Books
dbo.books_
Columns
ID (PK, int, not null)
BOOK_NAME (varchar(255), no
author_id (FK, int, null)
PRICE (int, null)
Keys
Constraints
Triggers
Indexes
Statistics
dbo.books_temp
Columns
id (PK, int, not null)
book_name (varchar(255), null)
author_id (FK, int, null)
price (int, null)
Keys
Constraints
Triggers
Indexes
Statistics
kkkk
150 %
Messages
Query executed successfully.
LAPTOP-01MI7FIT (15.0 RTM)
LAPTOP-01MI7FIT\user (59)
Library
00:00:00
0 rows
Item(s) Saved
Ln 1
Col 33
Ch 33
INS

iii) DELETE

COMMAND ;- ALTER TABLE dbo.books DROP COLUMN no_of_copies;


SQLQuery4.sql - LAPTOP-01MI7FIT.Library (LAPTOP-01MI7FIT\user (59)) - Microsoft SQL Server Management Studio
File Edit View Query Project Tools Window Help
New Query
Library
Execute
Object Explorer
Connect
LAPTOP-01MI7FIT (SQL Server 15.0.2000.5 - LAPTOP
Databases
System Databases
Database Snapshots
Library
LOHITH
Security
Server Objects
Replication
PolyBase
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
SQLQuery4.sql - LA...01MI7FIT\user (59))
SQLQuery3.sql - LA...01MI7FIT\user (53))
SQLQuery2.sql - LA...01MI7FIT\user (55))
SQLQuery1.sql - LA...01MI7FIT\user (52))
150 %
Messages
Query executed successfully.
LAPTOP-01MI7FIT (15.0 RTM) LAPTOP-01MI7FIT\user (59) Library 00:00:00 0 rows
Item(s) Saved
Ln 1 Col 23 Ch 23 INS

```
ALTER TABLE dbo.books_ DROP COLUMN no_of_copies ;
```

```
Commands completed successfully.

Completion time: 2021-02-19T12:15:45.6622555+05:30
```

OUTPUT : -

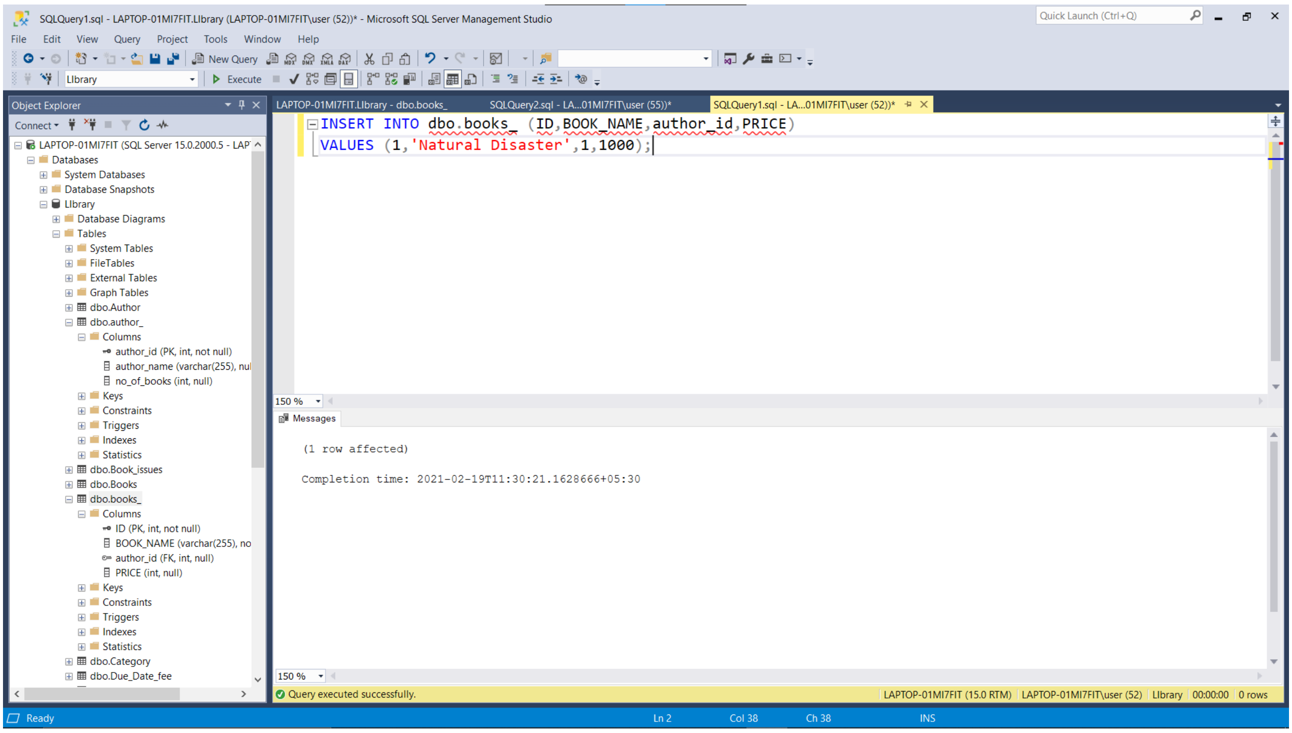
2)

Insert 20 Employees Data into all the tables. Use all the 3 methods that I have showcased

i)

command ;-
```
INSERT INTO dbo.books_ (ID,BOOK_NAME,author_id,PRICE)
VALUES (1,'Natural Disaster',1,1000)
```

OUTPUT:-


SQLQuery1.sql - LAPTOP-01MI7FIT.Library (LAPTOP-01MI7FIT\user (52))* - Microsoft SQL Server Management Studio
File Edit View Query Project Tools Window Help
New Query
Library
Execute
Object Explorer
Connect
LAPTOP-01MI7FIT (SQL Server 15.0.2000.5 - LAP
Databases
System Databases
Database Snapshots
Library
Database Diagrams
Tables
System Tables
FileTables
External Tables
Graph Tables
dbo.Author
dbo.author_
Columns
author_id (PK, int, not null)
author_name (varchar(255), nul
no_of_books (int, null)
Keys
Constraints
Triggers
Indexes
Statistics
dbo.Book_issues
dbo.Books
dbo.books_
Columns
ID (PK, int, not null)
BOOK_NAME (varchar(255), no
author_id (FK, int, null)
PRICE (int, null)
Keys
Constraints
Triggers
Indexes
Statistics
dbo.Category
dbo.Due_Date_fee
LAPTOP-01MI7FIT.Library - dbo.books_
SQLQuery2.sql - LA...01MI7FIT\user (55))*
SQLQuery1.sql - LA...01MI7FIT\user (52))*
150 %
Messages
Query executed successfully.
LAPTOP-01MI7FIT (15.0 RTM) LAPTOP-01MI7FIT\user (52) Library 00:00:00 0 rows
Ready
Ln 2 Col 38 Ch 38 INS

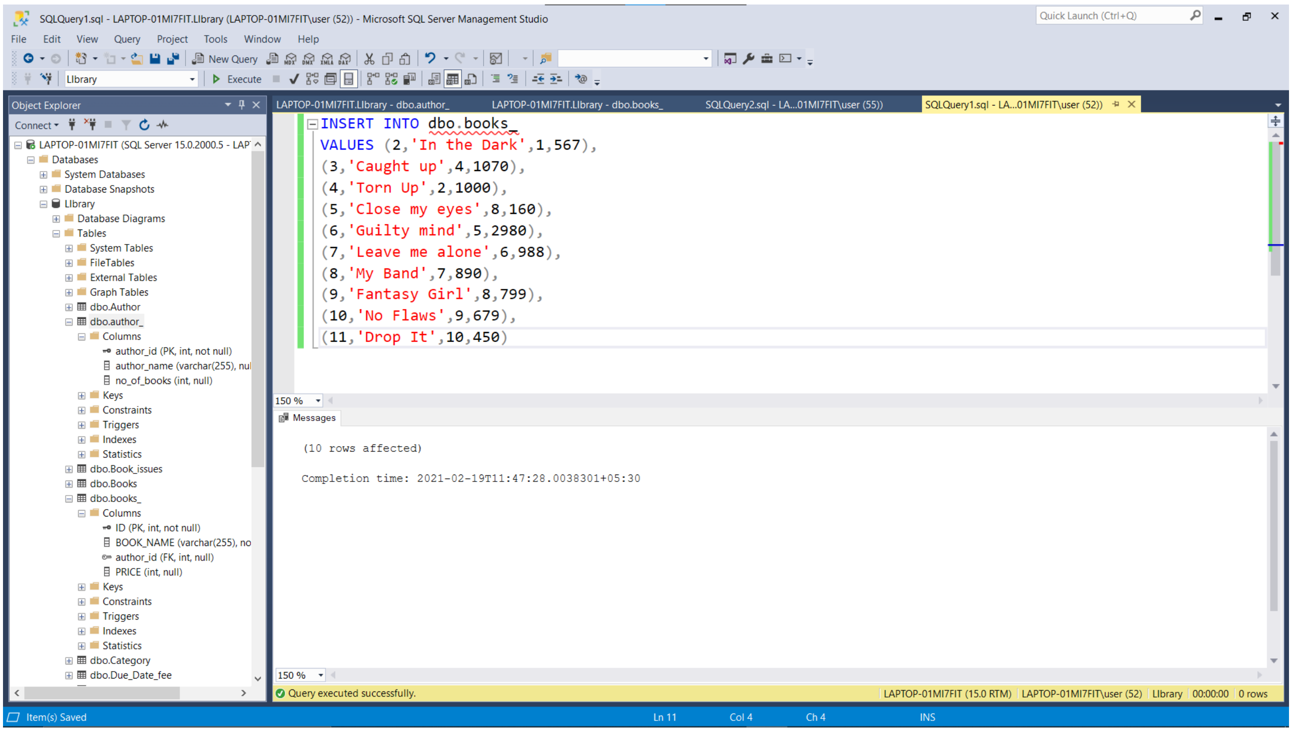
```
INSERT INTO dbo.books_ (ID,BOOK_NAME,author_id,PRICE)
VALUES (1,'Natural Disaster',1,1000);
```

```
(1 row affected)

Completion time: 2021-02-19T11:30:21.1628666+05:30
```

ii)

command ;- `INSERT INTO dbo.books_`

```
VALUES (2,'In the Dark',1,567),
(3,’Caught up’,4,1070),(4,’Torn Up’,2,1000),etc,
```


SQLQuery1.sql - LAPTOP-01MI7FIT.Library (LAPTOP-01MI7FIT\user (52)) - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Library
Execute
Object Explorer
Connect
LAPTOP-01MI7FIT (SQL Server 15.0.2000.5 - LAP
Databases
System Databases
Database Snapshots
Library
Database Diagrams
Tables
System Tables
FileTables
External Tables
Graph Tables
dbo.Author
dbo.author_
Columns
author_id (PK, int, not null)
author_name (varchar(255), nul
no_of_books (int, null)
Keys
Constraints
Triggers
Indexes
Statistics
dbo.Book_issues
dbo.Books
dbo.books_
Columns
ID (PK, int, not null)
BOOK_NAME (varchar(255), no
author_id (FK, int, null)
PRICE (int, null)
Keys
Constraints
Triggers
Indexes
Statistics
dbo.Category
dbo.Due_Date_fee
LAPTOP-01MI7FIT.Library - dbo.author_
LAPTOP-01MI7FIT.Library - dbo.books_
SQLQuery2.sql - LA...01MI7FIT\user (55))
SQLQuery1.sql - LA...01MI7FIT\user (52))
150 %
Messages
LAPTOP-01MI7FIT (15.0 RTM) | LAPTOP-01MI7FIT\user (52) | Library | 00:00:00 | 0 rows
Item(s) Saved
Ln 11 Col 4 Ch 4 INS

```
INSERT INTO dbo.books_
VALUES (2,'In the Dark',1,567),
(3,'Caught up',4,1070),
(4,'Torn Up',2,1000),
(5,'Close my eyes',8,160),
(6,'Guilty mind',5,2980),
(7,'Leave me alone',6,988),
(8,'My Band',7,890),
(9,'Fantasy Girl',8,799),
(10,'No Flaws',9,679),
(11,'Drop It',10,450)
```

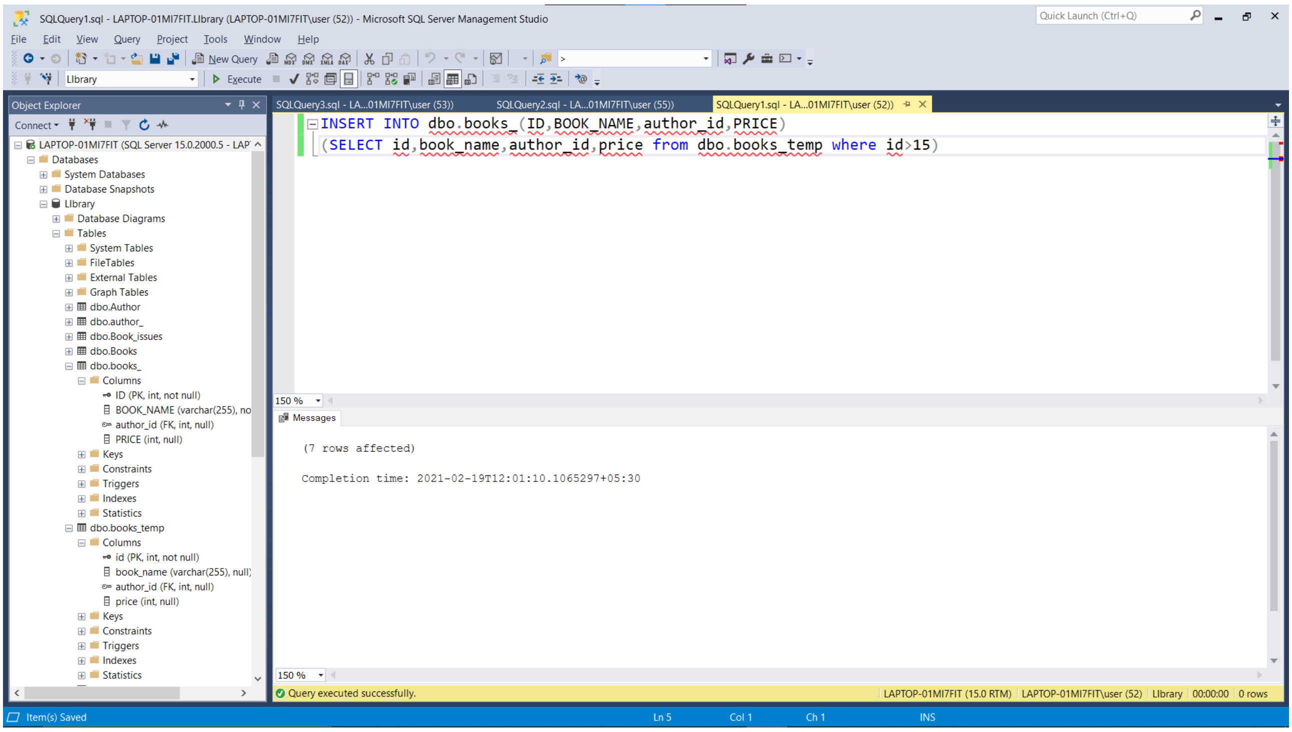
```
(10 rows affected)

Completion time: 2021-02-19T11:47:28.0038301+05:30
```

Query executed successfully.

iii)

command ;- INSERT INTO dbo.books (ID,BOOK_NAME,author_id,PRICE)
(select id,book_name,author_id,price from dbo.books_temp where id>15)

OUTPUT:-


SQLQuery1.sql - LAPTOP-01MI7FIT.Library (LAPTOP-01MI7FIT\user (52)) - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Library
Execute
Object Explorer
Connect
LAPTOP-01MI7FIT (SQL Server 15.0.2000.5 - LAP
Databases
System Databases
Database Snapshots
Library
Database Diagrams
Tables
System Tables
FileTables
External Tables
Graph Tables
dbo.Author
dbo.author_
dbo.Book_issues
dbo.Books
dbo.books_
Columns
ID (PK, int, not null)
BOOK_NAME (varchar(255), no
author_id (FK, int, null)
PRICE (int, null)
Keys
Constraints
Triggers
Indexes
Statistics
dbo.books_temp
Columns
id (PK, int, not null)
book_name (varchar(255), null)
author_id (FK, int, null)
price (int, null)
Keys
Constraints
Triggers
Indexes
Statistics
SQLQuery3.sql - LA...01MI7FIT\user (53))
SQLQuery2.sql - LA...01MI7FIT\user (55))
SQLQuery1.sql - LA...01MI7FIT\user (52))
150 %
Messages
LAPTOP-01MI7FIT (15.0 RTM) | LAPTOP-01MI7FIT\user (52) | Library | 00:00:00 | 0 rows
Item(s) Saved
Ln 5 Col 1 Ch 1 INS

```
INSERT INTO dbo.books_(ID,BOOK_NAME,author_id,PRICE)
(SELECT id,book_name,author_id,price from dbo.books_temp where id>15)
```

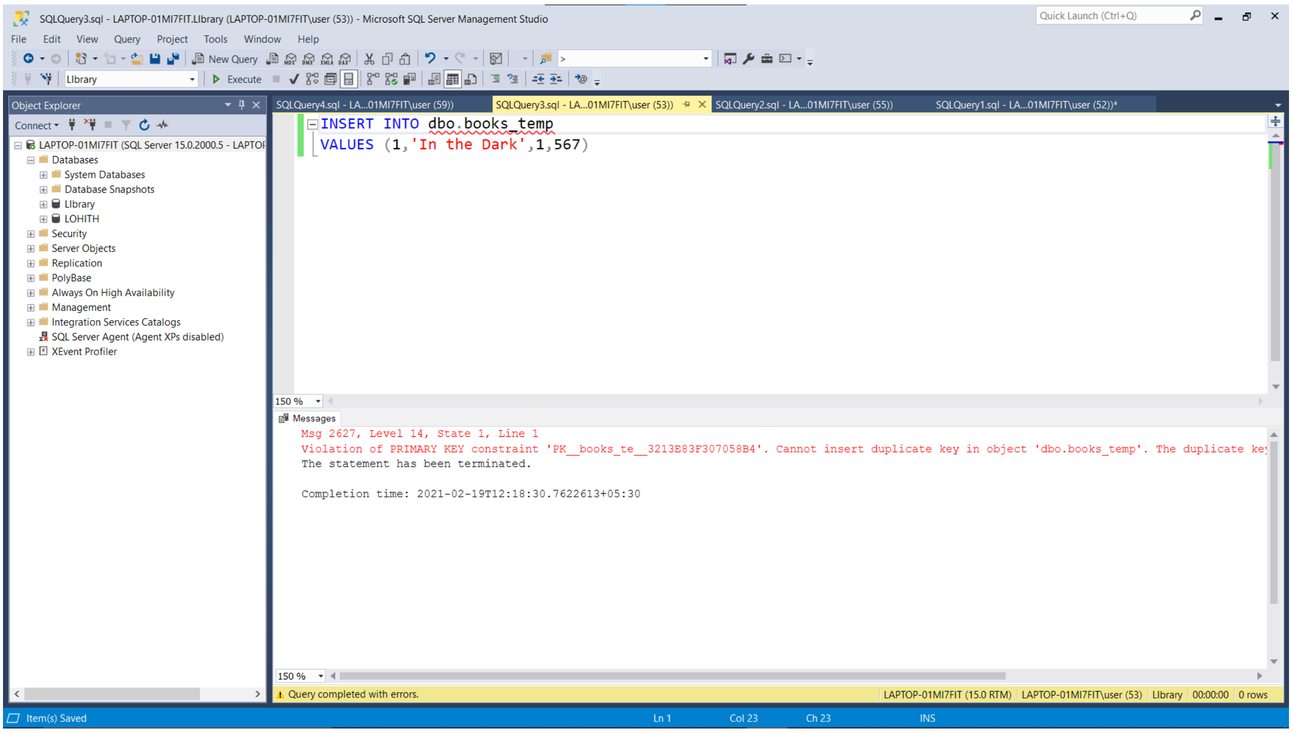
```
(7 rows affected)

Completion time: 2021-02-19T12:01:10.1065297+05:30
```

Query executed successfully.

3)
Show Violation of Primary Key, Unique Not Null and default key constraints through insertion.
i)
command ;-

```
INSERT INTO dbo.books_temp
VALUES (1,'In the Dark',1,567)
```

OUTPUT:-



```
INSERT INTO dbo.books_temp
VALUES (1,'In the Dark',1,567)
```

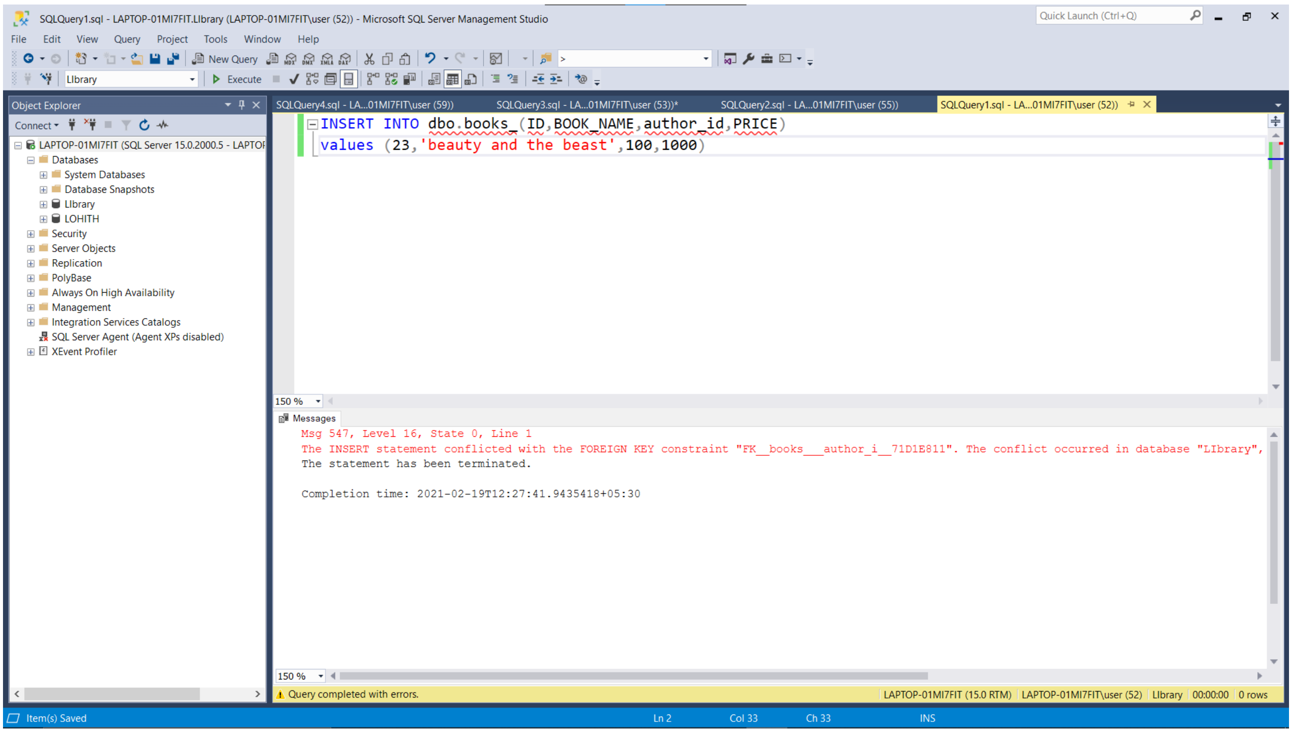
```
Msg 2627, Level 14, State 1, Line 1
Violation of PRIMARY KEY constraint 'PK__books_te__3213E83F307058B4'. Cannot insert duplicate key in object 'dbo.books_temp'. The duplicate key
The statement has been terminated.

Completion time: 2021-02-19T12:18:30.7622613+05:30
```

SQLQuery3.sql - LAPTOP-01MI7FIT.Library (LAPTOP-01MI7FIT\user (53)) - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
Library
Execute
Object Explorer
Connect
LAPTOP-01MI7FIT (SQL Server 15.0.2000.5 - LAPTOP
Databases
System Databases
Database Snapshots
Library
LOHITH
Security
Server Objects
Replication
PolyBase
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
SQLQuery4.sql - LA...01MI7FIT\user (59))
SQLQuery3.sql - LA...01MI7FIT\user (53))
SQLQuery2.sql - LA...01MI7FIT\user (55))
SQLQuery1.sql - LA...01MI7FIT\user (52))*
150 %
Messages
Query completed with errors.
LAPTOP-01MI7FIT (15.0 RTM) LAPTOP-01MI7FIT\user (53) Library 00:00:00 0 rows
Item(s) Saved
Ln 1 Col 23 Ch 23 INS

ii)
command: -

INSERT INTO dbo.booKs (ID,BOOK_NAME,author_id,PRICE)
values(23,’beauty and the beast’)

OUTPUT:-

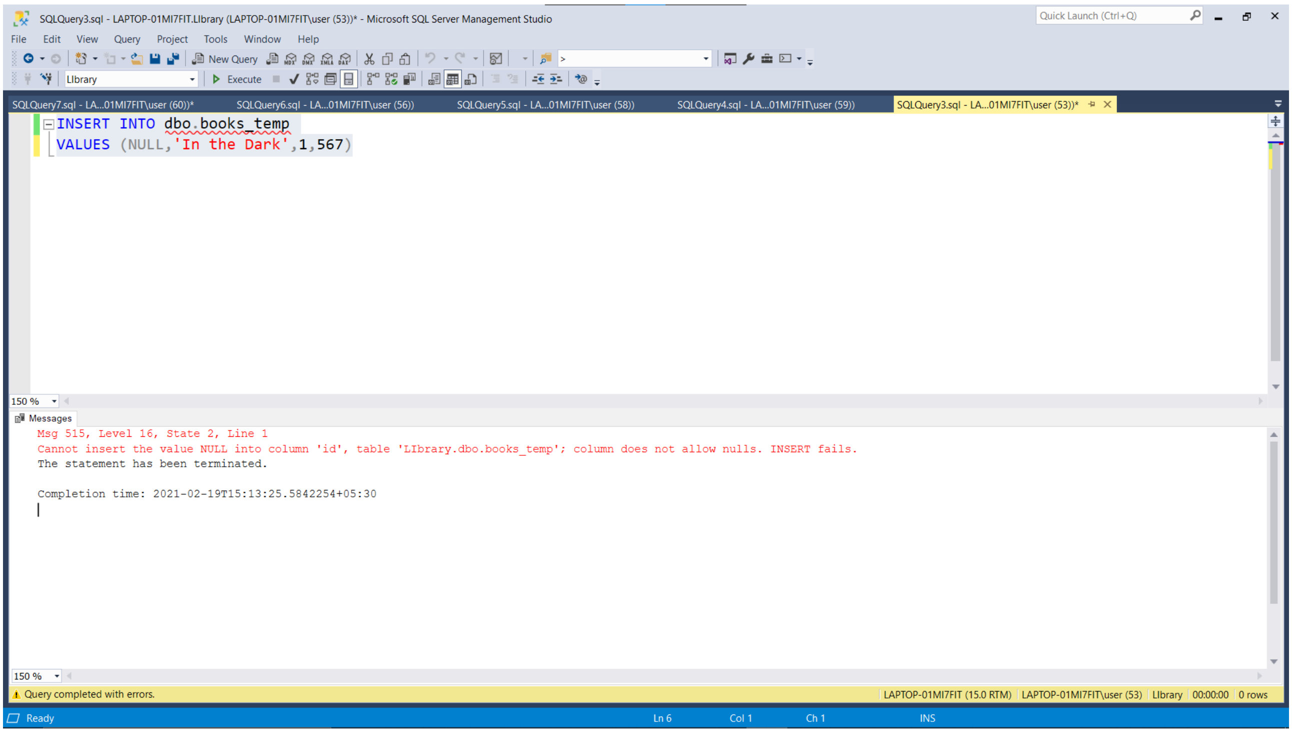


```
INSERT INTO dbo.books_(ID,BOOK_NAME,author_id,PRICE)
values (23,'beauty and the beast',100,1000)
```

```
Msg 547, Level 16, State 0, Line 1
The INSERT statement conflicted with the FOREIGN KEY constraint "FK__books__author_i__71D1E811". The conflict occurred in database "LIbrary",
The statement has been terminated.

Completion time: 2021-02-19T12:27:41.9435418+05:30
```

iii) command ;- `INSERT INTO dbo.books_temp`
`VALUES (NULL,'In the Dark',1,567)`

OUTPUT :-



```
INSERT INTO dbo.books_temp
VALUES (NULL,'In the Dark',1,567)
```

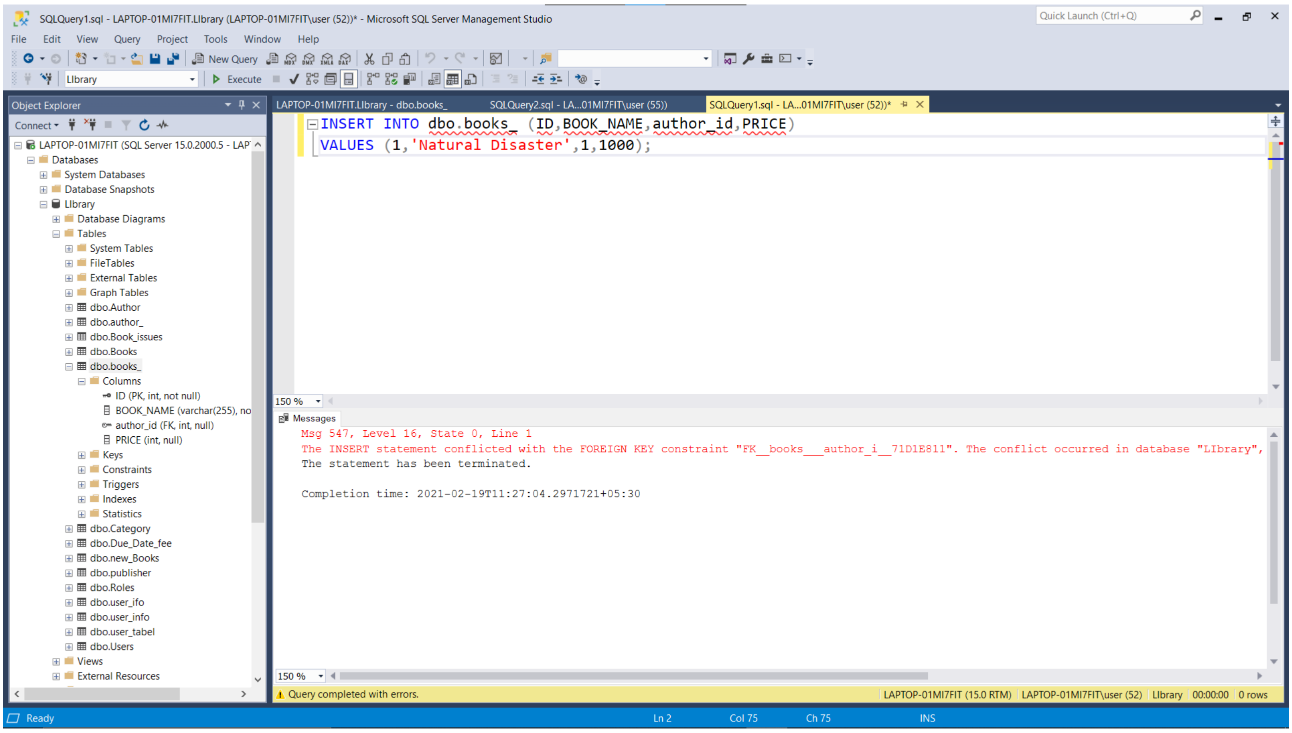
```
Msg 515, Level 16, State 2, Line 1
Cannot insert the value NULL into column 'id', table 'LIbrary.dbo.books_temp'; column does not allow nulls. INSERT fails.
The statement has been terminated.

Completion time: 2021-02-19T15:13:25.5842254+05:30
```

4)

Insert tuples into the table and see how foreign key constraint works if you try to insert into dependent table first.

Command ;-

INSERT INTO dbo.books_ (ID,BOOK_NAME,author_id,PRICE)
values(1,’Natural Disaster,1,1000);
OUTPUT:-



```
INSERT INTO dbo.books_ (ID,BOOK_NAME,author_id,PRICE)
VALUES (1,'Natural Disaster',1,1000);
```

```
Msg 547, Level 16, State 0, Line 1
The INSERT statement conflicted with the FOREIGN KEY constraint "FK__books___author_i__71D1E811". The conflict occurred in database "LIbrary",
The statement has been terminated.

Completion time: 2021-02-19T11:27:04.2971721+05:30
```

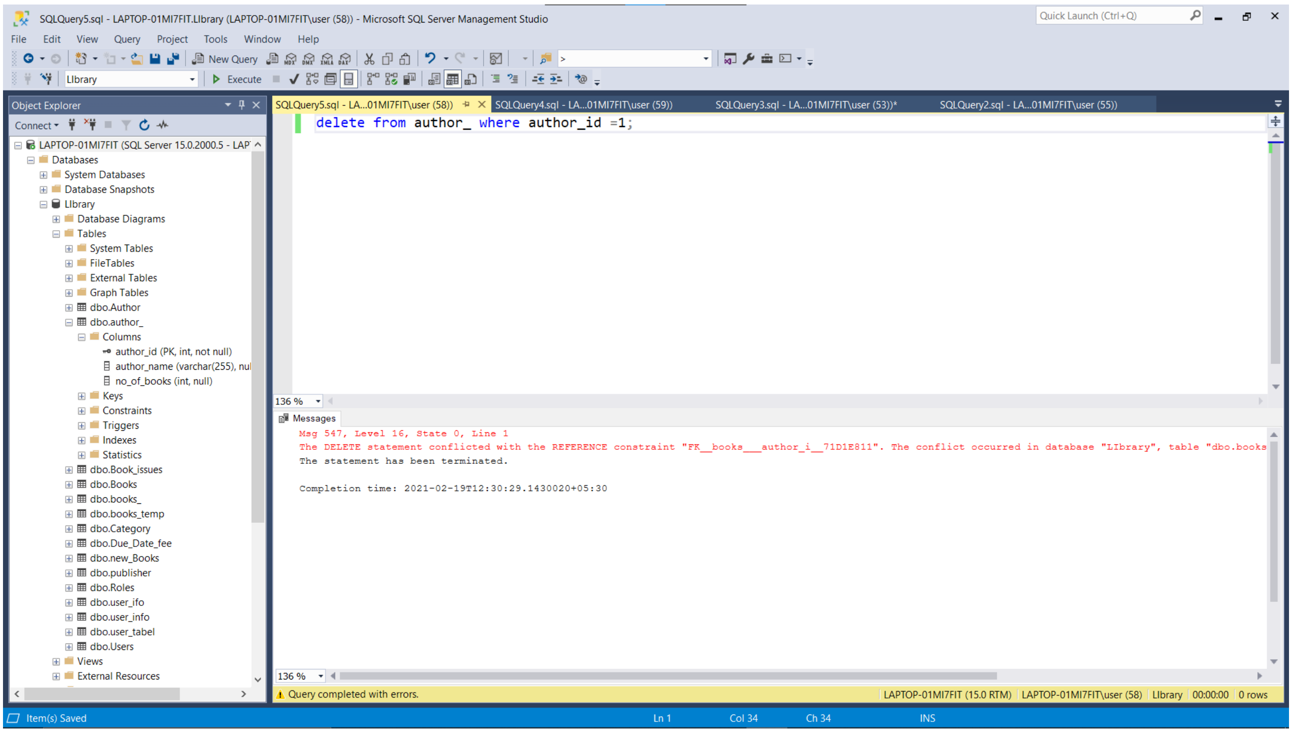
SQLQuery1.sql - LAPTOP-01MI7FIT.LIbrary (LAPTOP-01MI7FIT\user (52))* - Microsoft SQL Server Management Studio
Object Explorer
LAPTOP-01MI7FIT.LIbrary - dbo.books_
SQLQuery2.sql - LA...01MI7FIT\user (55))
SQLQuery1.sql - LA...01MI7FIT\user (52))*
Messages
Query completed with errors.
LAPTOP-01MI7FIT (15.0 RTM) | LAPTOP-01MI7FIT\user (52) | LIbrary | 00:00:00 | 0 rows
Ready
Ln 2
Col 75
Ch 75
INS

5)
Show Violation of Foreign Key Constraint when you try to delete from a base table. If you get an error explain why deletion gives an error

command ;-

delete from author_ where author_id = 1;

OUTPUT :-



```
delete from author_ where author_id =1;
```

```
Msg 547, Level 16, State 0, Line 1
The DELETE statement conflicted with the REFERENCE constraint "FK__books___author_i__71D1E811". The conflict occurred in database "LIbrary", table "dbo.books
The statement has been terminated.

Completion time: 2021-02-19T12:30:29.1430020+05:30
```

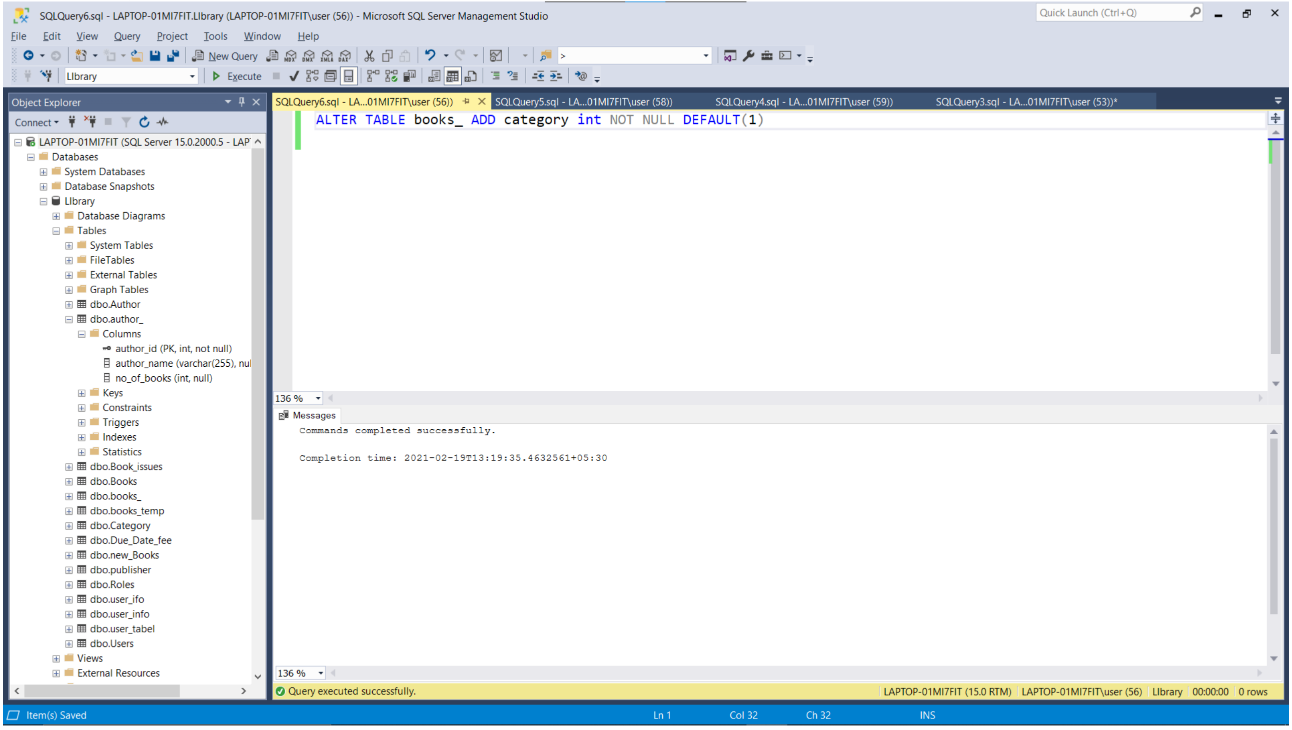
Query completed with errors.
LAPTOP-01MI7FIT (15.0 RTM) | LAPTOP-01MI7FIT\user (58) | LIbrary | 00:00:00 | 0 rows

7)Add a column which has default value.

command:-

ALTER TABLE books_ ADD category int NOT NULL DEFAULT(1)

OUTPUT;-



```
ALTER TABLE books_ ADD category int NOT NULL DEFAULT(1)
```

```
Commands completed successfully.

Completion time: 2021-02-19T13:19:35.4632561+05:30
```

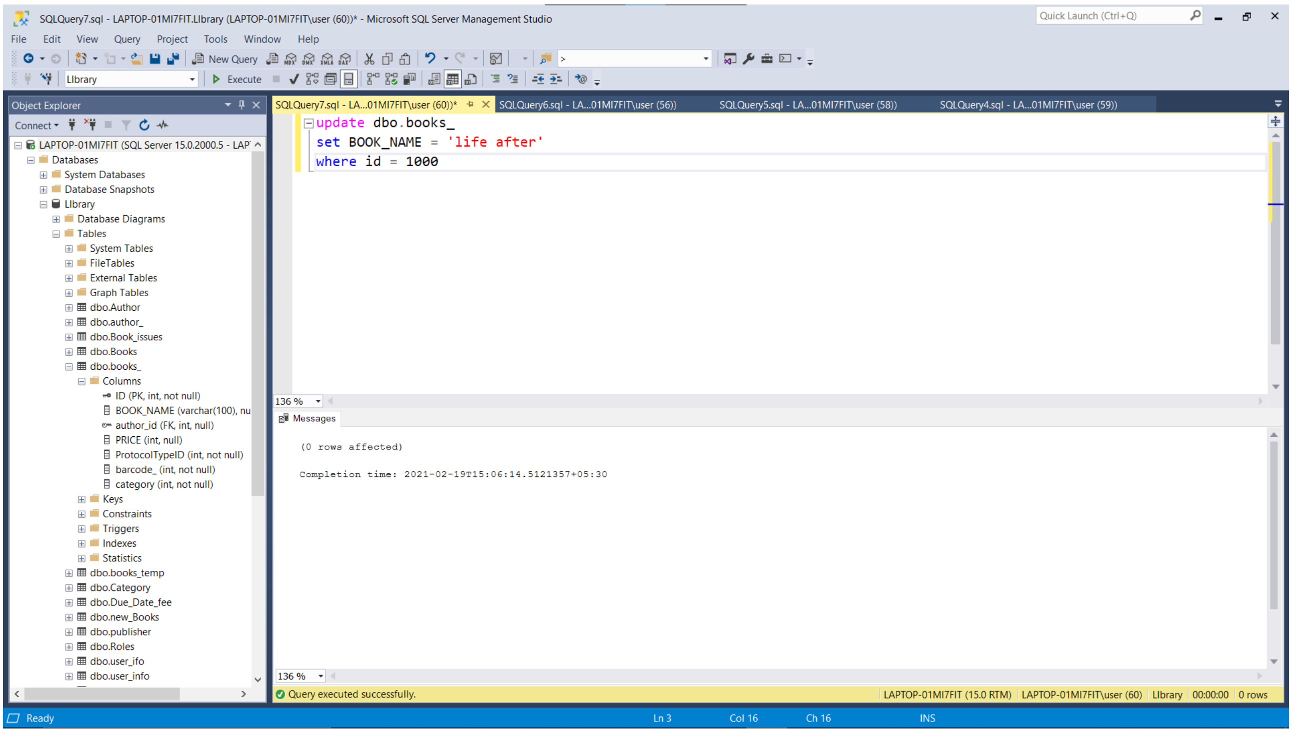
Query executed successfully.
LAPTOP-01MI7FIT (15.0 RTM) | LAPTOP-01MI7FIT\user (56) | LIbrary | 00:00:00 | 0 rows

6)Try to update a non-existing entity data and check for error.

command ;-

```
update dbo.books_
set BOOK_NAME = ‘life after’
where id = 1000
```

OUTPUT:-



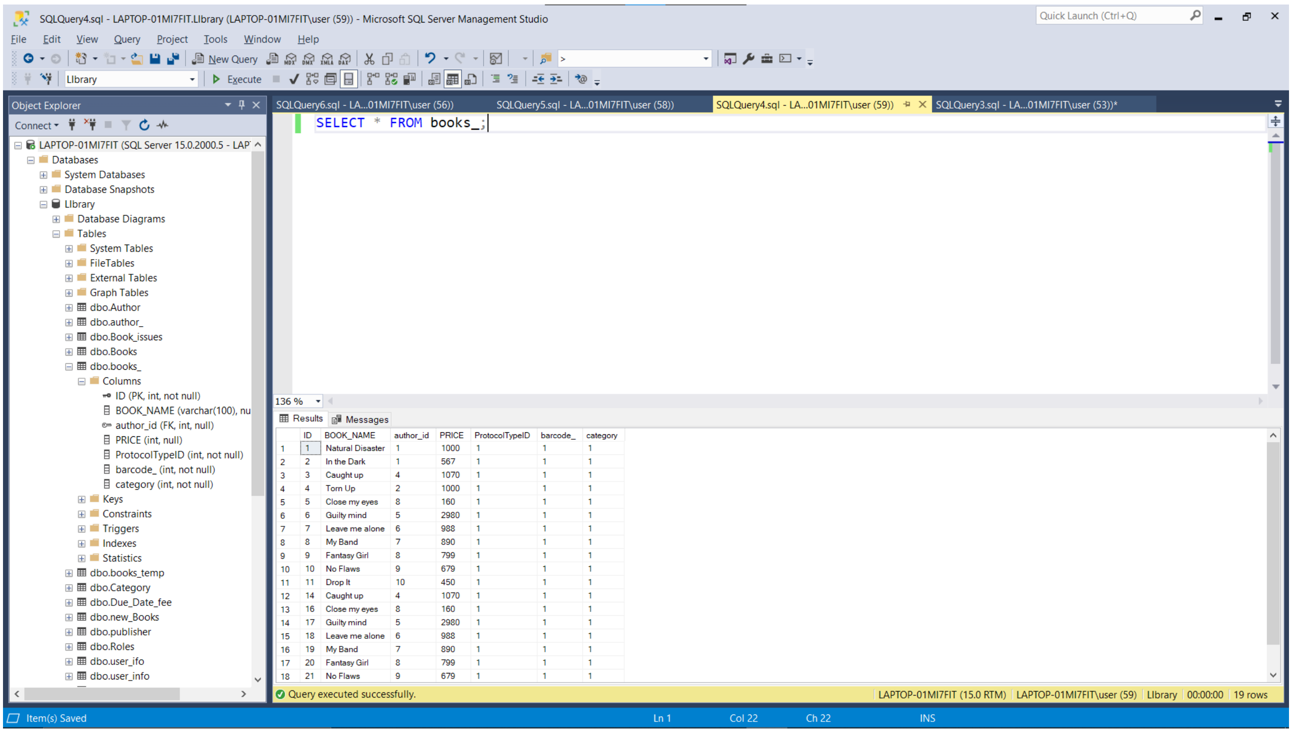
```
update dbo.books_
set BOOK_NAME = 'life after'
where id = 1000
```

```
(0 rows affected)

Completion time: 2021-02-19T15:06:14.5121357+05:30
```

Query executed successfully.

8)
5 Simple Select queries to retrieve data from your database.

i)
command ;- `SELECT * FROM books_;`
OUTPUT:-


SQLQuery4.sql - LAPTOP-01MI7FIT.Library (LAPTOP-01MI7FIT\user (59)) - Microsoft SQL Server Management Studio

```sql
SELECT * FROM books_;
```

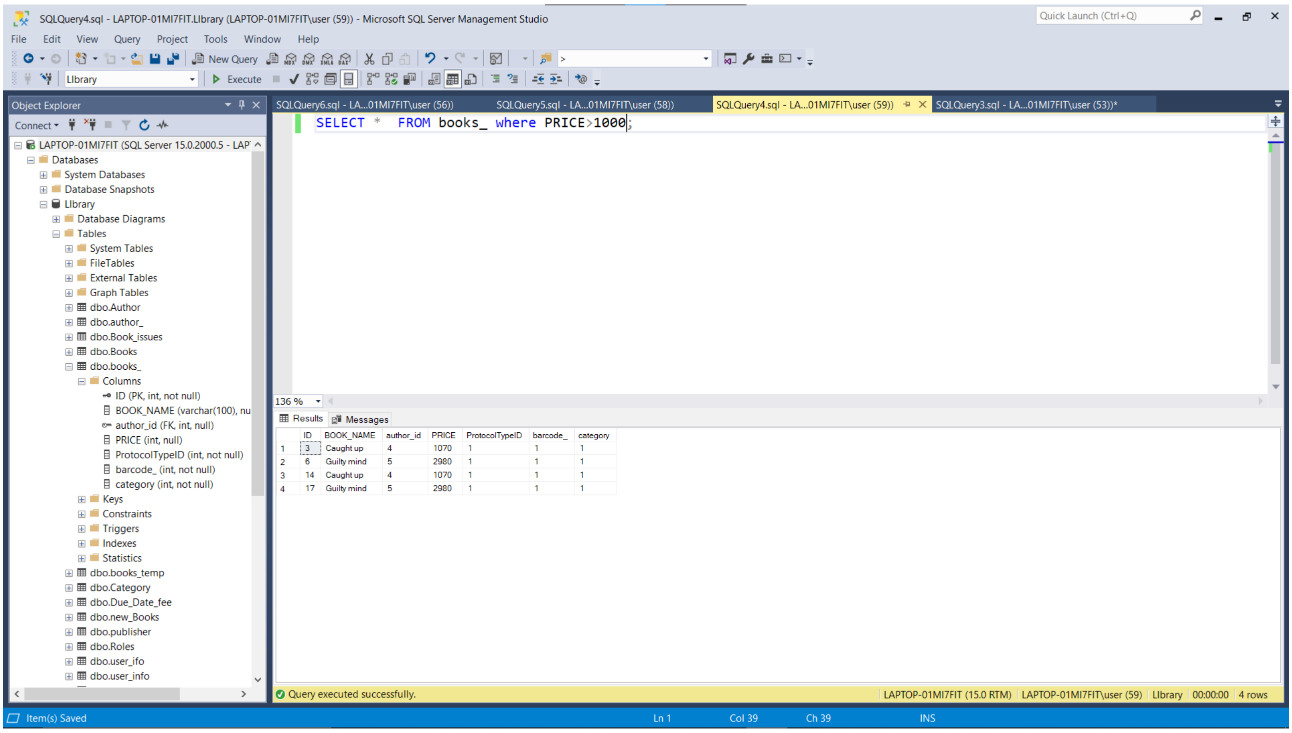
	ID	BOOK_NAME	author_id	PRICE	ProtocolTypeID	barcode_	category
1	1	Natural Disaster	1	1000	1	1	1
2	2	In the Dark	1	567	1	1	1
3	3	Caught up	4	1070	1	1	1
4	4	Torn Up	2	1000	1	1	1
5	5	Close my eyes	8	160	1	1	1
6	6	Guilty mind	5	2980	1	1	1
7	7	Leave me alone	6	988	1	1	1
8	8	My Band	7	890	1	1	1
9	9	Fantasy Girl	8	799	1	1	1
10	10	No Flaws	9	679	1	1	1
11	11	Drop It	10	450	1	1	1
12	14	Caught up	4	1070	1	1	1
13	16	Close my eyes	8	160	1	1	1
14	17	Guilty mind	5	2980	1	1	1
15	18	Leave me alone	6	988	1	1	1
16	19	My Band	7	890	1	1	1
17	20	Fantasy Girl	8	799	1	1	1
18	21	No Flaws	9	679	1	1	1

Query executed successfully. LAPTOP-01MI7FIT (15.0 RTM) LAPTOP-01MI7FIT\user (59) Library 00:00:00 19 rows

ii)
command ;-

```sql
SELECT *  FROM books_ where PRICE>1000;
```

OUTPUT:-


SQLQuery4.sql - LAPTOP-01MI7FIT.Library (LAPTOP-01MI7FIT\user (59)) - Microsoft SQL Server Management Studio

```sql
SELECT * FROM books_ where PRICE>1000;
```

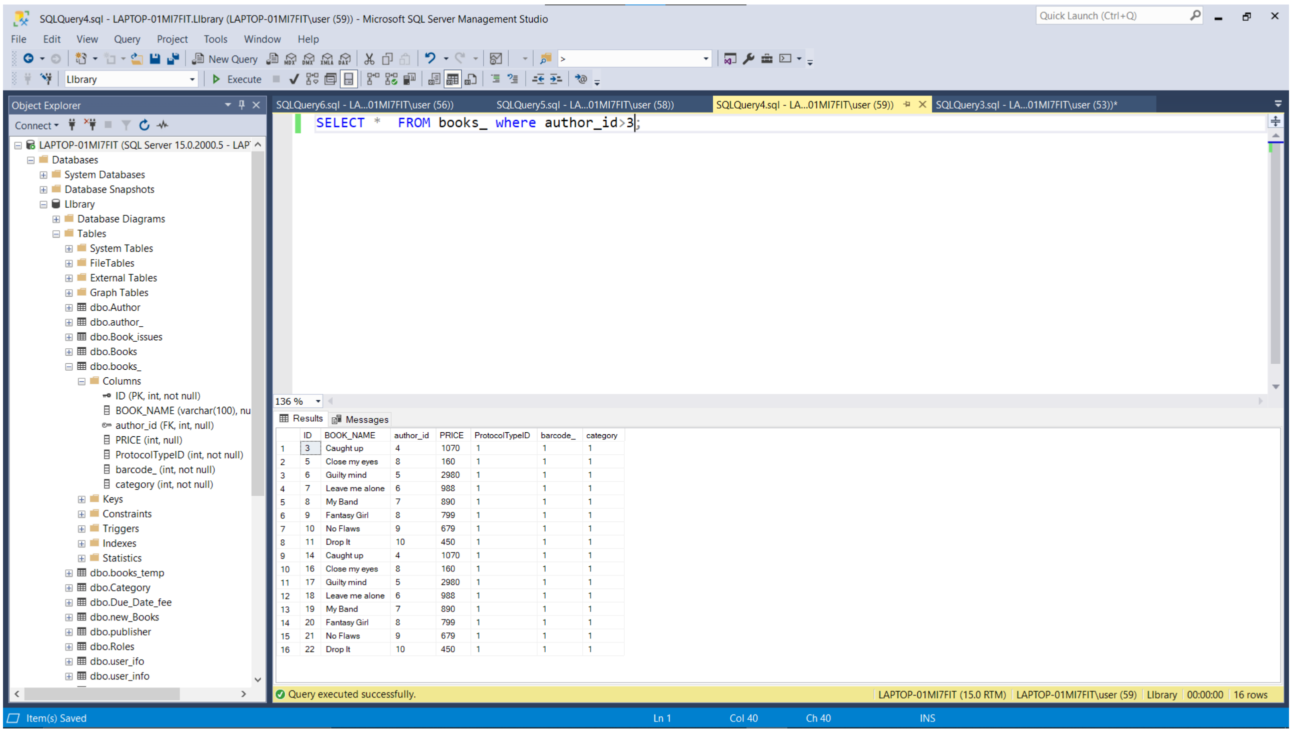
	ID	BOOK_NAME	author_id	PRICE	ProtocolTypeID	barcode_	category
1	3	Caught up	4	1070	1	1	1
2	6	Guilty mind	5	2980	1	1	1
3	14	Caught up	4	1070	1	1	1
4	17	Guilty mind	5	2980	1	1	1

Query executed successfully. LAPTOP-01MI7FIT (15.0 RTM) LAPTOP-01MI7FIT\user (59) Library 00:00:00 4 rows

iii)
commmand ;-

```sql
SELECT *  FROM books_ where author_id>3;
```

OUTPUT:-



```
SELECT *  FROM books_ where author_id>3;
```

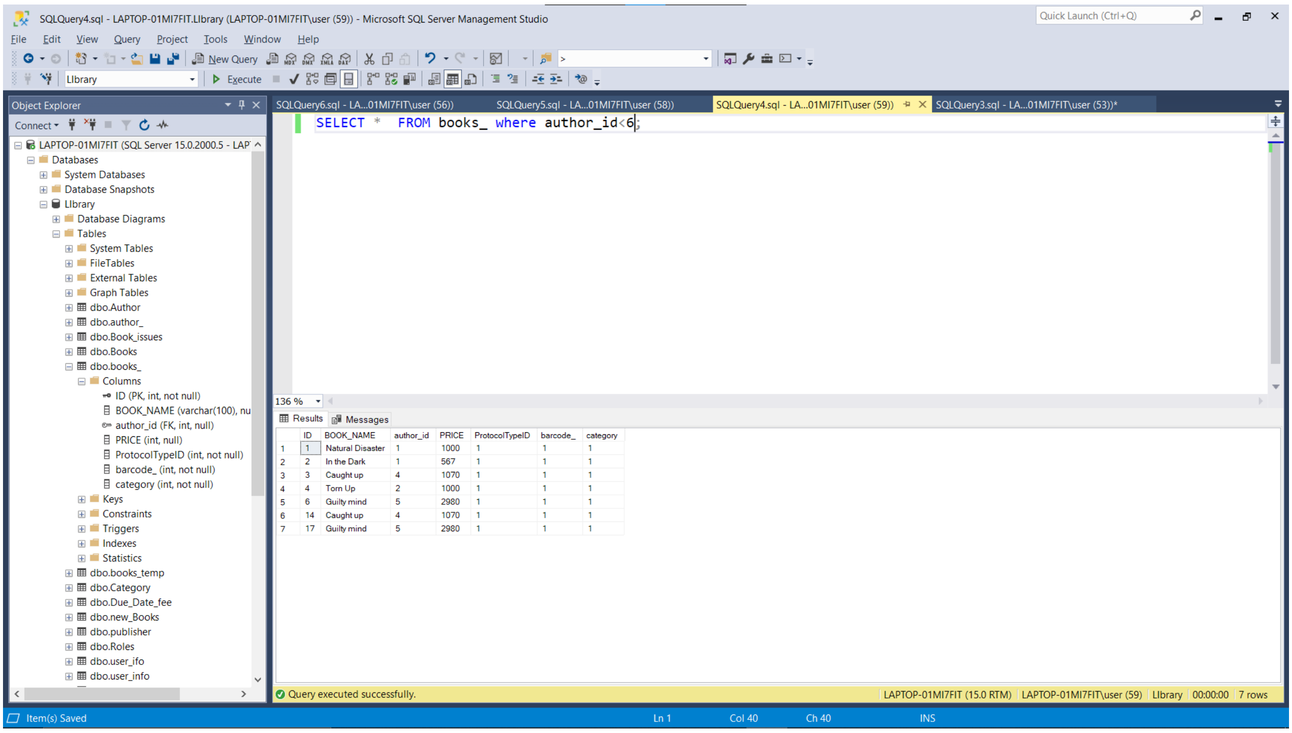
	ID	BOOK_NAME	author_id	PRICE	ProtocolTypeID	barcode_	category
1	3	Caught up	4	1070	1	1	1
2	5	Close my eyes	8	160	1	1	1
3	6	Guilty mind	5	2980	1	1	1
4	7	Leave me alone	6	988	1	1	1
5	8	My Band	7	890	1	1	1
6	9	Fantasy Girl	8	799	1	1	1
7	10	No Flaws	9	679	1	1	1
8	11	Drop It	10	450	1	1	1
9	14	Caught up	4	1070	1	1	1
10	16	Close my eyes	8	160	1	1	1
11	17	Guilty mind	5	2980	1	1	1
12	18	Leave me alone	6	988	1	1	1
13	19	My Band	7	890	1	1	1
14	20	Fantasy Girl	8	799	1	1	1
15	21	No Flaws	9	679	1	1	1
16	22	Drop It	10	450	1	1	1

Query executed successfully. LAPTOP-01MI7FIT (15.0 RTM) LAPTOP-01MI7FIT\user (59) Library 00:00:00 16 rows

iv)
command ;-

```
SELECT *  FROM books_ where author_id<6;
```

OUTPUT:-



```
SELECT *  FROM books_ where author_id<6;
```

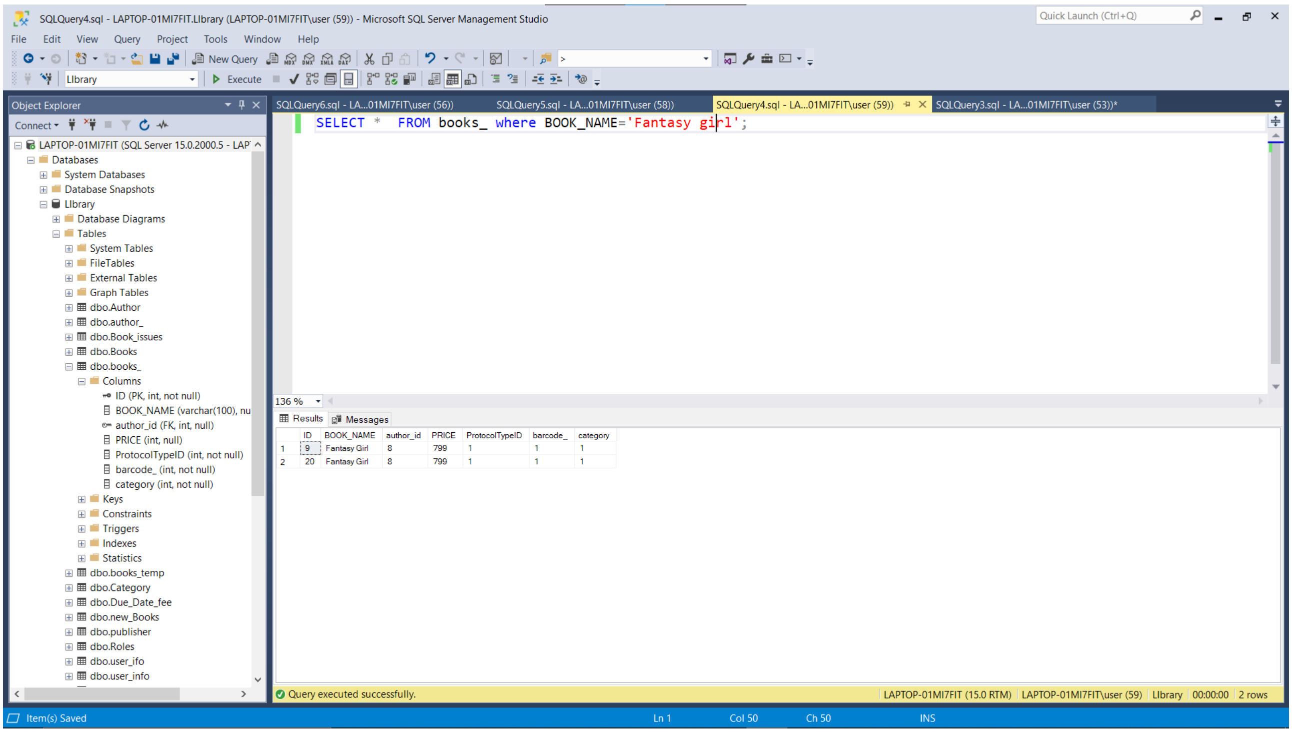
	ID	BOOK_NAME	author_id	PRICE	ProtocolTypeID	barcode_	category
1	1	Natural Disaster	1	1000	1	1	1
2	2	In the Dark	1	567	1	1	1
3	3	Caught up	4	1070	1	1	1
4	4	Torn Up	2	1000	1	1	1
5	6	Guilty mind	5	2980	1	1	1
6	14	Caught up	4	1070	1	1	1
7	17	Guilty mind	5	2980	1	1	1

Query executed successfully. LAPTOP-01MI7FIT (15.0 RTM) LAPTOP-01MI7FIT\user (59) Library 00:00:00 7 rows

v)
command ;-

```
SELECT *  FROM books_ where BOOK_NAME='Fantasy girl';
```

OUTPUT:-



```
SELECT *  FROM books_ where BOOK_NAME='Fantasy girl';
```

	ID	BOOK_NAME	author_id	PRICE	ProtocolTypeID	barcode_	category
1	9	Fantasy Girl	8	799	1	1	1
2	20	Fantasy Girl	8	799	1	1	1

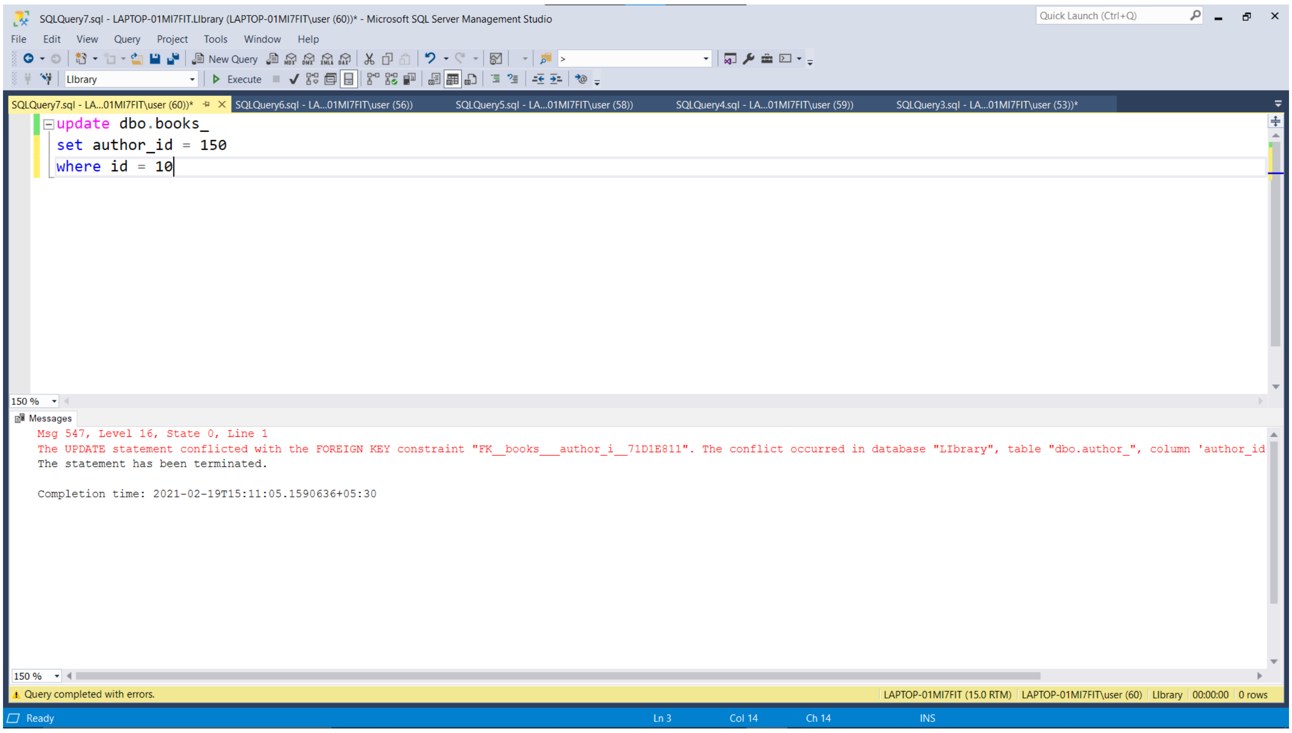
Query executed successfully. LAPTOP-01MI7FIT (15.0 RTM) LAPTOP-01MI7FIT\user (59) Library 00:00:00 2 rows

9)
Show how Foreign key constraint effects Updating a dependent table when value is not existing and in Base table where the value is referred and you want to update it.

Command ;-

```
update dbo.books_
set author_id = 150
where id = 10
```

OUTPUT :-



```
update dbo.books_
set author_id = 150
where id = 10
```

```
Msg 547, Level 16, State 0, Line 1
The UPDATE statement conflicted with the FOREIGN KEY constraint "FK__books___author_i__71D1E811". The conflict occurred in database "LIbrary", table "dbo.author_", column 'author_id
The statement has been terminated.

Completion time: 2021-02-19T15:11:05.1590636+05:30
```

SQLQuery7.sql - LAPTOP-01MI7FIT.LIbrary (LAPTOP-01MI7FIT\user (60))* - Microsoft SQL Server Management Studio
Quick Launch (Ctrl+Q)
File Edit View Query Project Tools Window Help
New Query
LIbrary
Execute
SQLQuery7.sql - LA...01MI7FIT\user (60))*
SQLQuery6.sql - LA...01MI7FIT\user (56))
SQLQuery5.sql - LA...01MI7FIT\user (58))
SQLQuery4.sql - LA...01MI7FIT\user (59))
SQLQuery3.sql - LA...01MI7FIT\user (53))*
150 %
Messages
Query completed with errors.
LAPTOP-01MI7FIT (15.0 RTM) | LAPTOP-01MI7FIT\user (60) | LIbrary | 00:00:00 | 0 rows
Ready
Ln 3
Col 14
Ch 14
INS