

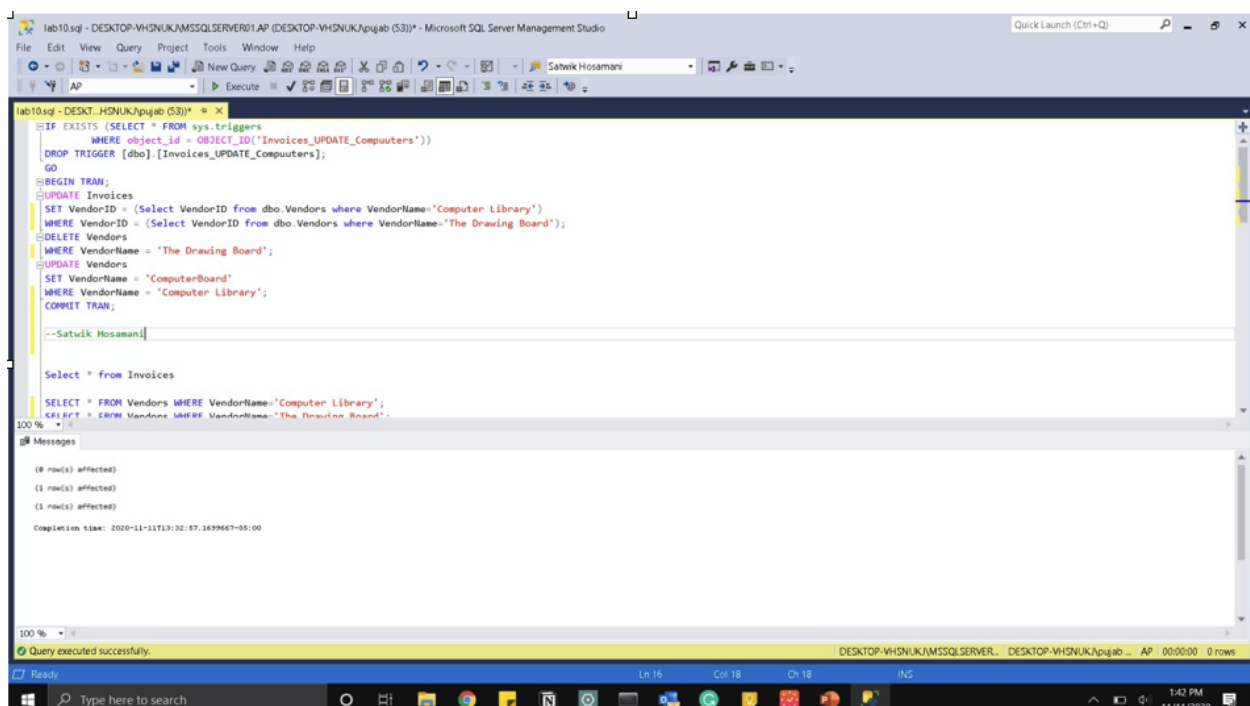
LAB- 10: - Transactions, Locking

1. Solution:

Here is a set of action queries coded as a transaction to reflect the following change:” The Drawing Board” has been purchased by “Computer Library” Corporation and the new company is named “ComputerBoard” and it renames one of the vendors and then deletes the other after updating the VendorID column in the Invoices table.

```
IF EXISTS (SELECT * FROM sys.triggers
           WHERE object_id = OBJECT_ID('Invoices_UPDATE_Computers'))
DROP TRIGGER [dbo].[Invoices_UPDATE_Computers];
GO
BEGIN TRAN;
UPDATE Invoices
SET VendorID = (Select VendorID from dbo.Vendors where VendorName = 'Computer
Library')
WHERE VendorID = (Select VendorID from dbo.vendors where VendorName = 'The
Drawing Board');
DELETE Vendors
WHERE VendorName = 'The Drawing Board';
UPDATE Vendors
SET VendorName = 'ComputerBoard'
WHERE VendorName = 'Computer Library';
COMMIT TRAN;
```

Here is the attached screenshot of the above query.

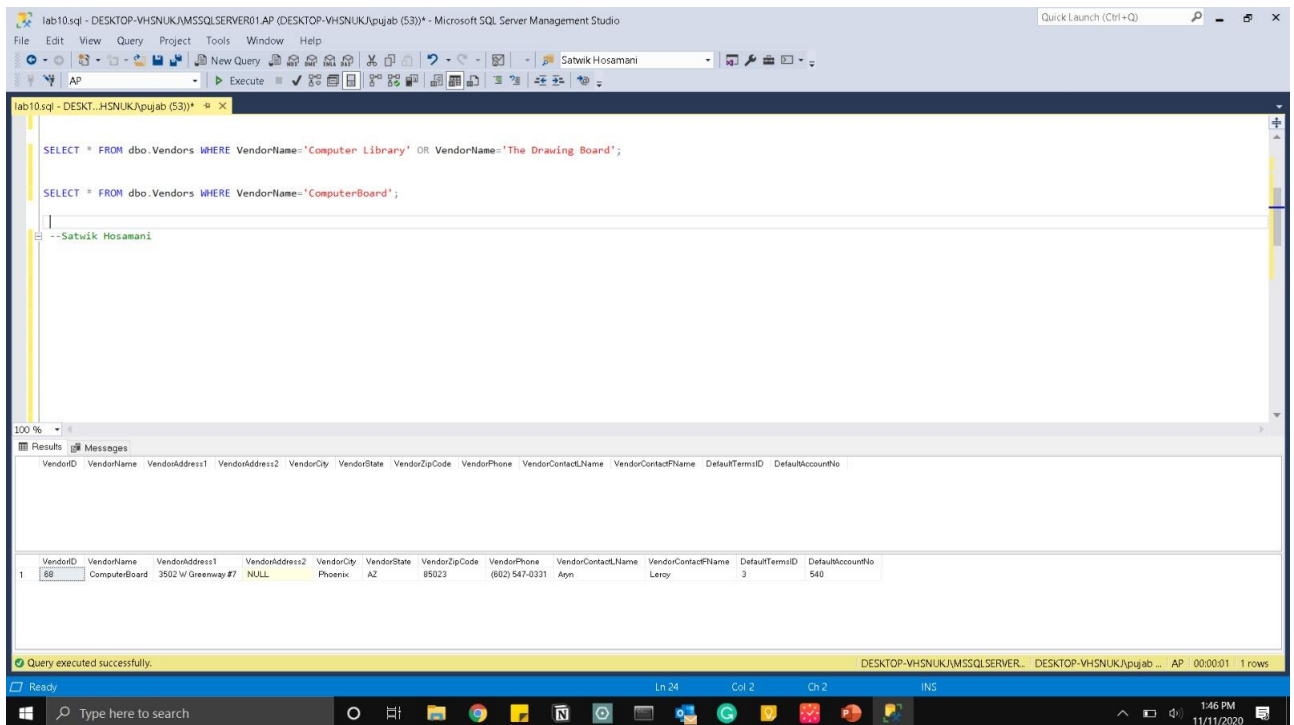


Here is a SELECT statement that verifies the result

```
SELECT * FROM dbo.Vendors WHERE VendorName='Computer Library' OR  
VendorName= 'The Drawing Board' ;
```

```
SELECT * FROM dbo.Vendors WHERE VendorName='ComputerBoard';
```

Here is the attached screenshot of the above query and VendorName is changed to Computer Board



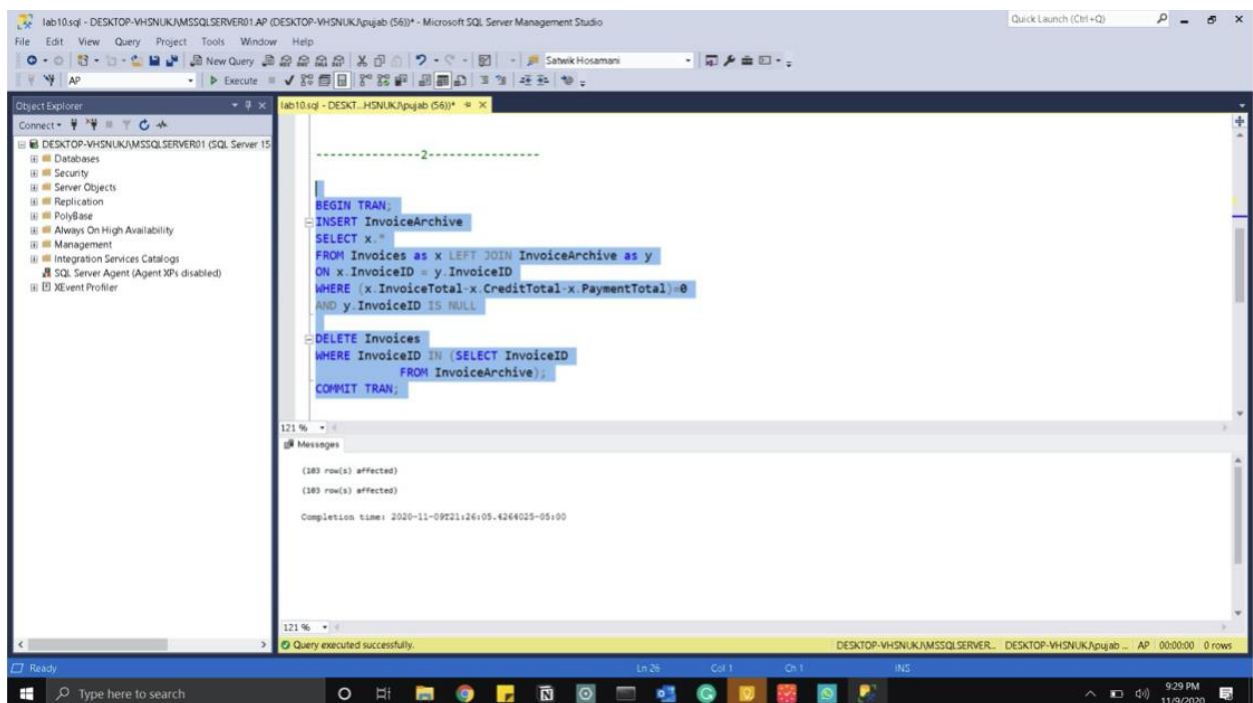
2. Sol:

Here is a set of action queries coded as a transaction to move rows from the Invoices table to the InvoiceArchive table. It inserts all paid invoices from Invoices into InvoiceArchive table, but only if the invoice doesn't already exist in the InvoiceArchive table and then, deletes all paid invoices from the Invoices table, but only if the invoice exists in the InvoiceArchive table.

```
BEGIN TRAN;
INSERT InvoiceArchive
SELECT x.*
FROM Invoices as x LEFT JOIN InvoiceArchive as y
ON x.InvoiceID = y.InvoiceID
WHERE (x.InvoiceTotal-x.CreditTotal-x.PaymentTotal)=0
AND y.InvoiceID IS NULL

DELETE Invoices
WHERE InvoiceID IN (SELECT InvoiceID
FROM InvoiceArchive);
COMMIT TRAN;
```

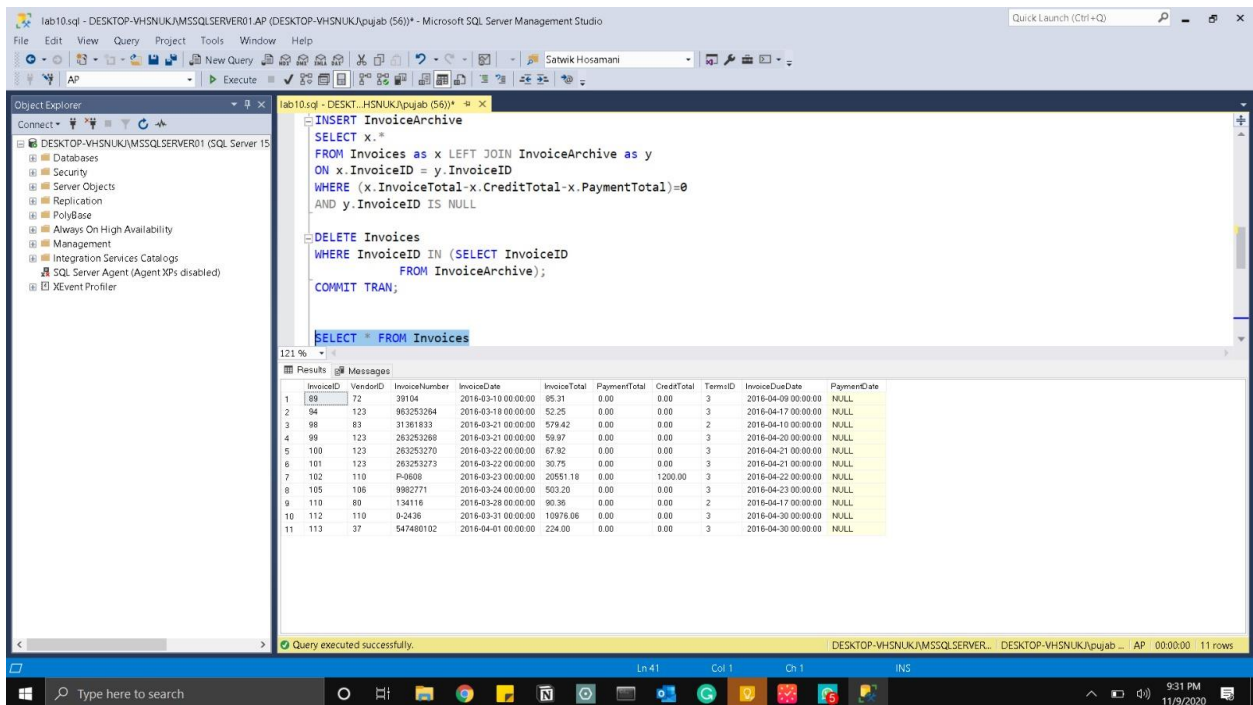
Here is the attached screenshot of the above query and in total **103 rows are affected**.



Here is a select statement that verifies the results and shows no of rows in Invoices Table.

SELECT * FROM Invoices;

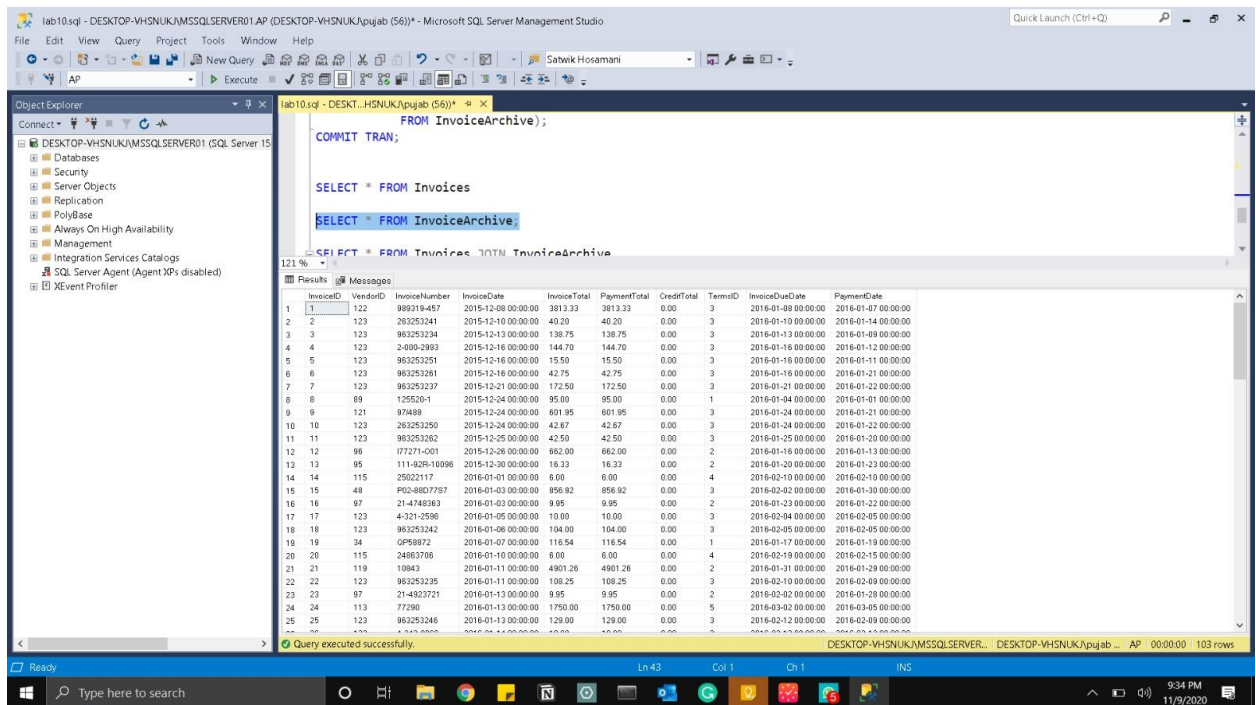
Here is the attached screenshot of the above SELECT and there are 11 rows in Invoices table.



Here is a select statement that verifies the results and shows no of rows in InvoiceArchive Table.

SELECT * FROM InvoiceArchive;

Here is the attached screenshot of the above SELECT and there are 103 rows in InvoiceArchive table.



Here is a select statement that verifies the results and shows no of rows we get when we join Invoices and InvoiceArchive Table.

```

SELECT * FROM Invoices JOIN InvoiceArchive
ON Invoices.InvoiceID = InvoiceArchive.InvoiceID;

```

Here is the attached screenshot of the above query and there are ZERO rows in common between Invoices and InvoiceArchive table.

