

Lab 10: Transactions, Locking

Use AP database throughout.

1. Write a set of action queries coded as a transaction to reflect the following change: “The Drawing Board” has been purchased by “Computer Library” and the new company is named ‘ComputerBoard’. Rename one of the vendors and delete the other after updating the VendorID column in the Invoices table. Use SELECT statement to verify the results.

The screenshot displays the Microsoft SQL Server Management Studio interface. The Object Explorer on the left shows the 'AP' database structure, including tables like 'dbo.Invoices' and 'dbo.Vendors'. The main query window contains the following T-SQL script:

```
USE AP
GO

SELECT *
FROM Vendors
WHERE VendorName = 'The Drawing Board';

BEGIN TRAN;
UPDATE Vendors
SET VendorName = 'ComputerBoard'
WHERE VendorID = 65;
DELETE Vendors
WHERE VendorID=65;
COMMIT TRAN;

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

The Results pane at the bottom shows the output of the final SELECT statement, displaying a single row for VendorID 65, which has been renamed to 'ComputerBoard'.

VendorID	VendorName	VendorAddress1	VendorAddress2	VendorCity	VendorState	VendorZipCode	VendorPhone	VendorContactLName	VendorContactFName
65	ComputerBoard	P0 Box 4758		Carol Stream	IL	60197	NULL	Mckayla	Jeffery

A status bar at the bottom indicates: "Query executed successfully. DESKTOP-PTHKBA0 (15.0 RTM) DESKTOP-PTHKBA0\lyq (67) AP 00:00:00 1 rows".

2. Write a set of action queries coded as a transaction to move rows from the Invoices table to the InvoiceArchive table. Insert all paid invoices from Invoices into InvoiceArchive, but only if the invoice doesn't already exist in the InvoiceArchive table. Then, delete all paid invoices from the Invoices table, but only if the invoice exists in the InvoiceArchive table. Use SELECT statement to verify the results.

The screenshot shows the Microsoft SQL Server Management Studio interface. The left pane displays the Object Explorer with the database 'AP' selected. The central pane shows a SQL query window with the following code:

```
USE AP
GO
SELECT* FROM InvoiceArchive;

BEGIN TRAN;
INSERT INTO InvoiceArchive
SELECT * FROM Invoices
WHERE Invoices.InvoiceTotal - CreditTotal - PaymentTotal = 0
AND InvoiceID NOT IN ( SELECT InvoiceID FROM InvoiceArchive);
DELETE Invoices
WHERE Invoices.InvoiceTotal - CreditTotal - PaymentTotal = 0
AND InvoiceID IN ( SELECT InvoiceID FROM InvoiceArchive);
COMMIT TRAN;

SELECT* FROM InvoiceArchive;
```

The bottom pane shows the results of the query, displaying 114 rows in the InvoiceArchive table. The status bar at the bottom indicates 'Query executed successfully. DESKTOP-PTHKBA0 (15.0 RTM) DESKTOP-PTHKBA0\lyq (52) AP 00:00:00 114 rows'.

InvoiceID	VendorID	InvoiceNumber	InvoiceDate	InvoiceTotal	PaymentTotal	CreditTotal	TermsID	InvoiceDueDate	PaymentDate
101	123	263253273	2016-03-22 00:00:00	30.75	0.00	0.00	3	2016-04-21 00:00:00	NULL
102	110	P-0608	2016-03-23 00:00:00	20551.18	0.00	1200.00	3	2016-04-22 00:00:00	NULL
105	106	9982771	2016-03-24 00:00:00	503.20	0.00	0.00	3	2016-04-23 00:00:00	NULL
89	72	39104	2016-03-10 00:00:00	85.31	0.00	0.00	3	2016-04-09 00:00:00	NULL
94	123	963253264	2016-03-18 00:00:00	52.25	0.00	0.00	3	2016-04-17 00:00:00	NULL
98	83	31361833	2016-03-21 00:00:00	579.42	0.00	0.00	2	2016-04-10 00:00:00	NULL
99	123	263253268	2016-03-21 00:00:00	59.97	0.00	0.00	3	2016-04-20 00:00:00	NULL
100	123	263253270	2016-03-22 00:00:00	67.92	0.00	0.00	3	2016-04-21 00:00:00	NULL
101	123	263253273	2016-03-22 00:00:00	30.75	0.00	0.00	3	2016-04-21 00:00:00	NULL
102	110	P-0608	2016-03-23 00:00:00	20551.18	0.00	1200.00	3	2016-04-22 00:00:00	NULL
105	106	9982771	2016-03-24 00:00:00	503.20	0.00	0.00	3	2016-04-23 00:00:00	NULL

As you could see in the screenshot, before the insert statement here are 11 rows and after the statement here are 114 rows in InvoiceArchive Table.