

**ADDITIONAL COMMENTS ARE UNDER THE SCREENSHOT**

1. USE AP;

```
SELECT *
INTO VendorsCopy
FROM Vendors;
```

```
SELECT *
INTO InvoicesCopy
FROM Invoices;
```

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left shows the database structure for 'DESKTOP-UP37904\SOLEXPRESS' (SQL Server 14.0.1000 - DESKTOP-UP37904). The 'AP' database is selected. The 'Tables' node under AP contains 'Vendors' and 'Invoices'. The 'Messages' pane at the bottom shows the results of the executed queries.

```
--Create two tables VendorsCopy and InvoicesCopy from Vendors and Invoices table respectively using select into statement.
USE AP;
SELECT *
INTO VendorsCopy
FROM Vendors;
SELECT *
INTO InvoicesCopy
FROM Invoices;
```

(122 rows affected)
(114 rows affected)

Compilation time: 2020-02-10T20:59:45.6397659-05:00

Query executed successfully.

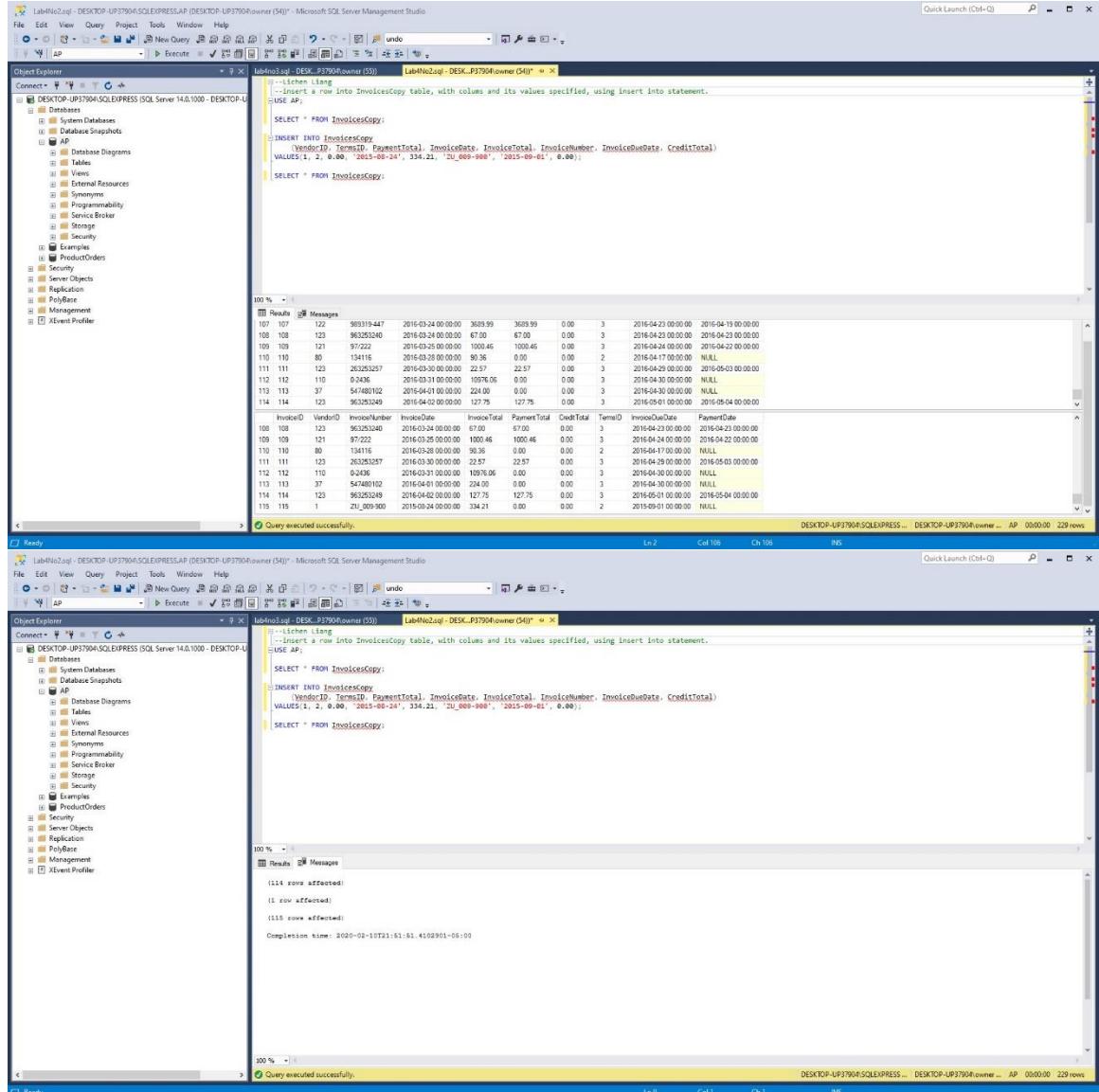
This creates a copy of the table. Only the columns and data are copied. Not the attributes such as primary key, foreign key, indexes, etc.

## 2. USE AP;

```
SELECT * FROM InvoicesCopy;
```

```
INSERT INTO InvoicesCopy
    (VendorID, TermsID, PaymentTotal, InvoiceDate, InvoiceTotal, InvoiceNumber, InvoiceDueDate,
     CreditTotal)
VALUES(1, 2, 0.00, '2015-08-24', 334.21, 'ZU_009-900', '2015-09-01', 0.00);
```

```
SELECT * FROM InvoicesCopy;
```



The values are inserted into the row in corresponding to the column names, so the order matters. We don't need to insert InvoiceID. It's the primary key.

### 3. USE AP;

```
SELECT * FROM VendorsCopy;
```

```
UPDATE VendorsCopy
SET DefaultAccountNo = 530
WHERE DefaultAccountNo = 521;
```

```
SELECT * FROM VendorsCopy;
```

VendorID	VendorName	VendorAddress1	VendorAddress2	VendorCity	VendorState	VendorZipCode	VendorPhone	VendorContactName	VendorContactName	DefaultTermID	DefaultAccountNo
1	US Postal Service	APO, St. Louis, Window Services	PO Box 7005	Madison	WI	53707	(800) 555-1205	Alberto	Francesco	1	552
2	National Information Data Ctr	PO Box 9621		Washington	DC	20090	(800) 555-0950	Ivan	Anne	3	540
3	Register Of Copyrights	Library Of Congress		Washington	DC	20590		Laura	Laura	3	403
4	Jedediah Books	1990 Westwood Blvd Ste 260	NULL	Los Angeles	CA	90025	(800) 555-0725	Quinn	Kennice	3	572
5	Newbridge Book Club	3000 Crystal Drive	NULL	Washington	NJ	07098	(800) 555-9985	Meredith	Meredith	4	394
6	California Chamber Of Commerce	3255 Remond Cr	NULL	Sacramento	CA	95827	(916) 555-5670	Neuro	Anton	3	572
7	Tower's Adventures' Mailing Svcs	Kevin Mender	3441 W MacArthur Blvd	Santa Ana	CA	97054		Meagan	Ted	3	540
8	BFI Industries	PO Box 3969	NULL	Fresno	CA	93702	(559) 555-1051	Kaleigh	Erick	3	530
9	Pacific Gas & Electric	Box 52001	NULL	San Francisco	CA	94152	(800) 555-6001	Kathryn	Kathryn	3	521
10	Robbins Mobile Lock And Key	4689 N Fresno	NULL	Fresno	CA	93703	(559) 555-5105	Leah	Bill	2	523
11	Bill Marin Electric Inc	4533 E Home	NULL	Fresno	CA	93718	(559) 555-9999	Mayte	Katelin	2	523
12	City Of Fresno	PO Box 2059	NULL	Fresno	CA	93718		Kendall	3	574	

Query executed successfully.

DESKTOP-UP37904\SQLEXPRESS .. DESKTOP-UP37904\owner .. AP 08/00/00 244 rows

VendorID	VendorName	VendorAddress1	VendorAddress2	VendorCity	VendorState	VendorZipCode	VendorPhone	VendorContactName	VendorContactName	DefaultTermID	DefaultAccountNo
1	US Postal Service	APO, St. Louis, Window Services	PO Box 7005	Madison	WI	53707	(800) 555-1205	Alberto	Francesco	1	552
2	National Information Data Ctr	PO Box 9621	NULL	Washington	DC	20090	(800) 555-0950	Ivan	Anne	3	540
3	Register Of Copyrights	Library Of Congress	NULL	Washington	DC	20590		Laura	Laura	3	403
4	Jedediah Books	1990 Westwood Blvd Ste 260	NULL	Los Angeles	CA	90025	(800) 555-0725	Quinn	Kennice	3	572
5	Newbridge Book Club	3000 Crystal Drive	NULL	Washington	DC	20590	(800) 555-9985	Meredith	Meredith	4	394
6	California Chamber Of Commerce	3255 Remond Cr	NULL	Sacramento	CA	95827	(916) 555-5670	Neuro	Anton	3	572
7	Tower's Adventures' Mailing Svcs	Kevin Mender	3441 W MacArthur Blvd	Santa Ana	CA	97054		Meagan	Ted	3	540
8	BFI Industries	PO Box 3969	NULL	Fresno	CA	93702	(559) 555-1051	Kaleigh	Erick	3	530
9	Pacific Gas & Electric	Box 52001	NULL	San Francisco	CA	94152	(800) 555-6001	Anthro	Kathryn	3	530
10	Robbins Mobile Lock And Key	4689 N Fresno	NULL	Fresno	CA	93703	(559) 555-5105	Leah	Bill	2	523
11	Bill Marin Electric Inc	4533 E Home	NULL	Fresno	CA	93718	(559) 555-9999	Mayte	Katelin	2	523
12	City Of Fresno	PO Box 2059	NULL	Fresno	CA	93718		Kendall	3	574	

Query executed successfully.

DESKTOP-UP37904\SQLEXPRESS .. DESKTOP-UP37904\owner .. AP 08/00/00 244 rows

VendorID	VendorName	VendorAddress1	VendorAddress2	VendorCity	VendorState	VendorZipCode	VendorPhone	VendorContactName	VendorContactName	DefaultTermID	DefaultAccountNo
1	US Postal Service	APO, St. Louis, Window Services	PO Box 7005	Madison	WI	53707	(800) 555-1205	Alberto	Francesco	1	552
2	National Information Data Ctr	PO Box 9621	NULL	Washington	DC	20090	(800) 555-0950	Ivan	Anne	3	540
3	Register Of Copyrights	Library Of Congress	NULL	Washington	DC	20590		Laura	Laura	3	403
4	Jedediah Books	1990 Westwood Blvd Ste 260	NULL	Los Angeles	CA	90025	(800) 555-0725	Quinn	Kennice	3	572
5	Newbridge Book Club	3000 Crystal Drive	NULL	Washington	DC	20590	(800) 555-9985	Meredith	Meredith	4	394
6	California Chamber Of Commerce	3255 Remond Cr	NULL	Sacramento	CA	95827	(916) 555-5670	Neuro	Anton	3	572
7	Tower's Adventures' Mailing Svcs	Kevin Mender	3441 W MacArthur Blvd	Santa Ana	CA	97054		Meagan	Ted	3	540
8	BFI Industries	PO Box 3969	NULL	Fresno	CA	93702	(559) 555-1051	Kaleigh	Erick	3	530
9	Pacific Gas & Electric	Box 52001	NULL	San Francisco	CA	94152	(800) 555-6001	Anthro	Kathryn	3	530
10	Robbins Mobile Lock And Key	4689 N Fresno	NULL	Fresno	CA	93703	(559) 555-5105	Leah	Bill	2	523
11	Bill Marin Electric Inc	4533 E Home	NULL	Fresno	CA	93718	(559) 555-9999	Mayte	Katelin	2	523
12	City Of Fresno	PO Box 2059	NULL	Fresno	CA	93718		Kendall	3	574	

Query executed successfully.

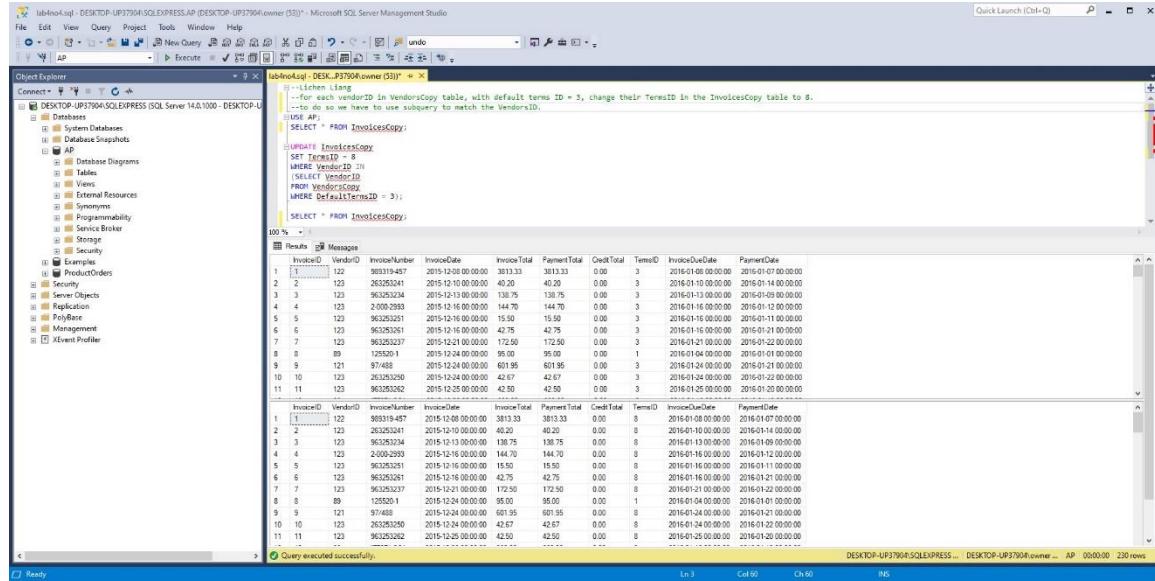
DESKTOP-UP37904\SQLEXPRESS .. DESKTOP-UP37904\owner .. AP 08/00/00 244 rows

First, we find the rows with default account number = 521 using WHERE statement, then using SET to update the entry.

4. USE AP;  
 SELECT \* FROM InvoicesCopy;

```
UPDATE InvoicesCopy
SET TermsID = 8
WHERE VendorID IN
    (SELECT VendorID
     FROM VendorsCopy
     WHERE DefaultTermsID = 3);
```

SELECT \* FROM InvoicesCopy;

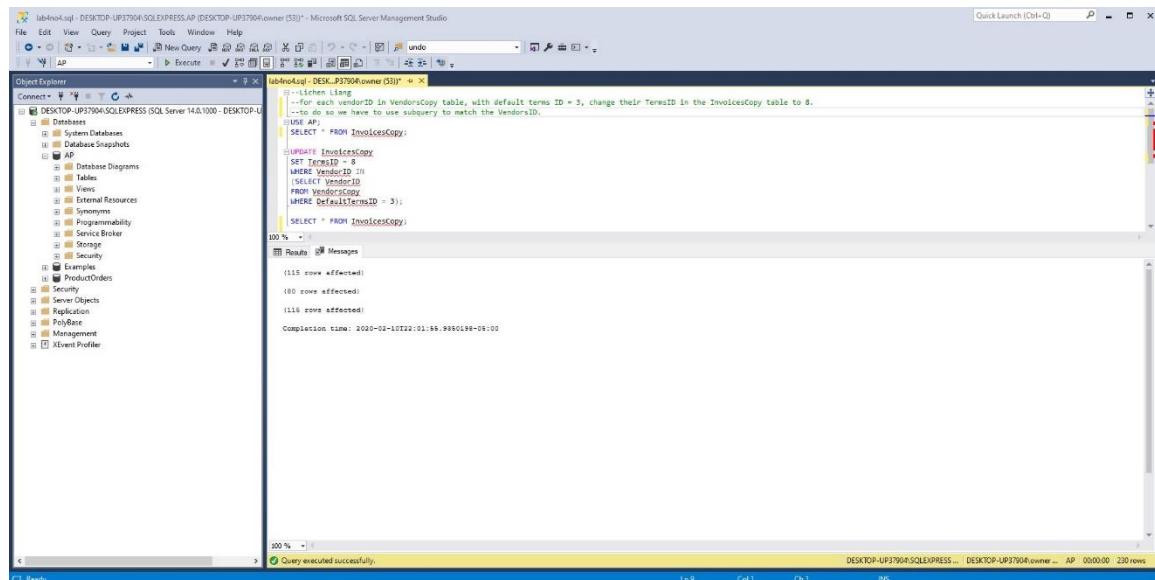


```
-- for each vendorID in VendorsCopy table, with default terms ID = 3, change their TermsID in the InvoicesCopy table to 8.
-- so do we have to use subquery to match the VendorID.

SELECT * FROM InvoicesCopy
UPDATE InvoicesCopy
SET TermsID = 8
WHERE VendorID IN
    (SELECT VendorID
     FROM VendorsCopy
     WHERE DefaultTermsID = 3);

SELECT * FROM InvoicesCopy
```

InvoiceID	VendorID	InvoiceNumber	InvoiceDate	InvoiceTotal	PaymentTotal	CreditTotal	TermID	InvoiceDueDate	PaymentDate
1	122	89519-457	2015-12-00 00:00:00	301.23	301.23	0.00	3	2016-01-01 00:00:00	2016-01-10 00:00:00
2	123	263253241	2015-12-10 00:00:00	40.20	40.20	0.00	3	2016-01-01 00:00:00	2016-01-14 00:00:00
3	123	963253234	2015-12-10 00:00:00	138.75	138.75	0.00	3	2016-01-13 00:00:00	2016-01-09 00:00:00
4	123	2002993	2015-12-16 00:00:00	144.70	144.70	0.00	3	2016-01-16 00:00:00	2016-01-12 00:00:00
5	123	963253251	2015-12-16 00:00:00	15.50	15.50	0.00	3	2016-01-16 00:00:00	2016-01-10 00:00:00
6	123	963253252	2015-12-16 00:00:00	42.75	42.75	0.00	3	2016-01-16 00:00:00	2016-01-11 00:00:00
7	123	963253237	2015-12-21 00:00:00	172.50	172.50	0.00	3	2016-01-21 00:00:00	2016-01-23 00:00:00
8	89	12520201	2015-12-24 00:00:00	95.00	95.00	0.00	1	2016-01-04 00:00:00	2016-01-01 00:00:00
9	121	97488	2015-12-24 00:00:00	601.95	601.95	0.00	3	2016-01-24 00:00:00	2016-01-21 00:00:00
10	123	263253250	2015-12-24 00:00:00	42.67	42.67	0.00	3	2016-01-24 00:00:00	2016-01-22 00:00:00
11	123	963253252	2015-12-25 00:00:00	42.50	42.50	0.00	3	2016-01-25 00:00:00	2016-01-20 00:00:00



```
-- for each vendorID in VendorsCopy table, with default terms ID = 3, change their TermsID in the InvoicesCopy table to 8.
-- so do we have to use subquery to match the VendorID.

SELECT * FROM InvoicesCopy
UPDATE InvoicesCopy
SET TermsID = 8
WHERE VendorID IN
    (SELECT VendorID
     FROM VendorsCopy
     WHERE DefaultTermsID = 3);

SELECT * FROM InvoicesCopy
```

InvoiceID	VendorID	InvoiceNumber	InvoiceDate	InvoiceTotal	PaymentTotal	CreditTotal	TermID	InvoiceDueDate	PaymentDate
1	122	89519-457	2015-12-00 00:00:00	381.33	381.33	0.00	8	2016-01-08 00:00:00	2016-01-07 00:00:00
2	123	263253241	2015-12-10 00:00:00	40.20	40.20	0.00	8	2016-01-08 00:00:00	2016-01-08 00:00:00
3	123	963253234	2015-12-10 00:00:00	181.75	181.75	0.00	8	2016-01-11 00:00:00	2016-01-09 00:00:00
4	123	2002993	2015-12-16 00:00:00	144.70	144.70	0.00	8	2016-01-16 00:00:00	2016-01-12 00:00:00
5	123	963253251	2015-12-16 00:00:00	15.50	15.50	0.00	8	2016-01-16 00:00:00	2016-01-10 00:00:00
6	123	963253252	2015-12-16 00:00:00	42.75	42.75	0.00	8	2016-01-16 00:00:00	2016-01-11 00:00:00
7	123	963253237	2015-12-21 00:00:00	172.50	172.50	0.00	8	2016-01-21 00:00:00	2016-01-22 00:00:00
8	89	12520201	2015-12-24 00:00:00	95.00	95.00	0.00	8	2016-01-24 00:00:00	2016-01-23 00:00:00
9	121	97488	2015-12-24 00:00:00	601.95	601.95	0.00	8	2016-01-24 00:00:00	2016-01-21 00:00:00
10	123	263253250	2015-12-24 00:00:00	42.67	42.67	0.00	8	2016-01-24 00:00:00	2016-01-22 00:00:00
11	123	963253252	2015-12-25 00:00:00	42.50	42.50	0.00	8	2016-01-25 00:00:00	2016-01-20 00:00:00

The subquery returns all vendorIDs with default terms ID =3, then using this VendorID, SET all the TermsID to 8 in another table.

5. USE AP;  
 SELECT \* FROM VendorsCopy;

DELETE VendorsCopy  
 WHERE VendorCity = 'Washington';

SELECT \* FROM VendorsCopy;

VendorID	VendorName	VendorAddress1	VendorAddress2	VendorCity	VendorState	VendorZipCode	VendorPhone	VendorContactName	VendorContactName	DefaultTermID	DefaultAccountNo
1	US Postal Service	APO St. Window Services	PO Box 7005	Madison	WI	53707	(800) 555-1205	Alberto	Francisco	1	552
2	National Information Data Ctr	PO Box 96521	NULL	Washington	DC	20090	(801) 555-8550	Irvin	Ariza	3	540
3	Regent of Copyrights	Library Of Congress	NULL	Washington	DC	20589	NULL	Liane	Lukas	3	403
4	Jobtrak	1980 N Wetwood Blvd Ste 260	NULL	Los Angeles	CA	90025	(800) 555-8725	Quinn	Kendall	3	572
5	Small Business Club	3000 Northgate Drive	NULL	Weston	FL	33327	(800) 555-9980	Michelle	April	4	574
6	California Chamber Of Commerce	3255 Ralston Cr	NULL	Sacramento	CA	95827	(916) 555-5673	Mauri	Annan	3	572
7	Tower Advertiser's Mailing Svcs	3431 W MacArthur Blvd	Suite Aria	CA	97205	NULL	Meagan	Ted	3	540	
8	BFI Industries	PO Box 9369	NULL	Fresno	CA	93792	(559) 555-1551	Kaleigh	Erick	3	530
9	Pacific Gas & Electric	Box 52001	NULL	San Francisco	CA	94152	(800) 555-6001	Anthony	Kelllyn	3	530
10	Robbins Metal Lock And Key	4658 N Fresno	NULL	Fresno	CA	93725	(559) 555-9795	Leigh	Bill	2	523
11	1111 11th Street Electric Inc	4658 N Fresno	NULL	Fresno	CA	93725	(559) 555-9108	Holiday	Katlin	2	523
12	City Of Fresno	PO Box 2093	NULL	Fresno	CA	93718	(559) 555-9999	Mayle	Kendall	3	574
13	Golden Eagle Insurance Co	PO Box 85326	NULL	San Diego	CA	92188	NULL	Blanca	Korish	3	590
14	Golden Eagle Insurance Co	PO Box 85326	NULL	San Diego	CA	92188	NULL	Blanca	Korish	3	590

Query executed successfully.

VendorID	VendorName	VendorAddress1	VendorAddress2	VendorCity	VendorState	VendorZipCode	VendorPhone	VendorContactName	VendorContactName	DefaultTermID	DefaultAccountNo
1	US Postal Service	APO St. Window Services	PO Box 7005	Madison	WI	53707	(800) 555-1205	Alberto	Francisco	1	552

(1 row affected)

Query executed successfully.

First find all entries using WHERE statement such that VendorCity is Washington, then delete this entry using DELETE statement.

## 6. USE AP;

```
SELECT * FROM VendorsCopy;
```

```
DELETE VendorsCopy
WHERE VendorCity NOT IN
    (SELECT DISTINCT VendorCity
    FROM VendorsCopy AS V, InvoicesCopy AS I
    WHERE V.VendorID = I.VendorID);
```

```
SELECT * FROM VendorsCopy;
```

```
--Lichen Liang
--If a VendorCity with its Vendor ID exists in both VendorsCopy and InvoicesCopy, then that vendor must have ever sent an invoice in that city.
--So excluding this, we can delete the rest by looking for Vendorcities that are not in the previous condition.

USE AP;
SELECT * FROM VendorsCopy;

DELETE VendorsCopy
WHERE VendorCity NOT IN
    (SELECT DISTINCT VendorCity
    FROM VendorsCopy AS V, InvoicesCopy AS I
    WHERE V.VendorID = I.VendorID);

SELECT * FROM VendorsCopy;
```

VendorID	VendorName	VendorAddress1	VendorAddress2	VendorCity	VendorState	VendorZipCode	VendorPhone	VendorContactName	VendorContactName	DefaultTermID	DefaultAccountNo
1	US Postal Service	APO, St. Window Services	PO Box 7005	Madison	WI	53707	(800) 555-1205	Abelto	Francesco	1	552
2	Jenkins	1990 Newwood Blvd Ste 260	NULL	Los Angeles	CA	90023	(800) 555-0725	Quinn	Kenne	3	572
3	California Chamber Of Commerce	3255 Fairview Dr	NULL	Sacramento	CA	95827	(916) 555-5670	Maure	Anton	3	572
4	7th Avenue Advertisers Mailing Svcs	3441 W MacArthur Blvd	Ste A	Fresno	CA	93754	(800) 555-5680	Teddy	Teddy	3	572
5	BFI Industries	PO Box 6959	NULL	Fresno	CA	93782	(559) 555-1551	Kaleigh	Erik	3	530
6	BFI Gas & Electric	Box 52001	NULL	San Francisco	CA	94152	(800) 555-6081	Anthony	Kethyn	3	530
7	Robbins Metal Lock And Key	4683 E Fresno	NULL	Fresno	CA	93728	(559) 555-9375	Leigh	Bill	2	523
8	Bill Marvin Electric Inc	4503 E Home	NULL	Fresno	CA	93703	(559) 555-5105	Hodewy	Katlin	2	523
9	City Of Fresno	PO Box 2059	NULL	Fresno	CA	93770	(559) 555-9999	Misty	Kendall	3	574
10	Edwards Eagle Insurance Co	PO Box 2058	NULL	San Diego	CA	92152	(800) 555-5620	Bruno	Marvin	3	550
11	Express Inc.	4400 N First Street, Suite 100	NULL	Tampa	CA	93726	(559) 555-9580	Orion	Marvin	3	589
12	FBI	4400 N First Street, Suite 100	NULL	Tampa	CA	93719	(559) 555-9580	Orion	Orion	1	542

DESKTOP-UP37904\SOLEXPRESS... DESKTOP-UP37904\owner... AP 00:00:00 - 199 rows

```
--Lichen Liang
--If a VendorCity with its Vendor ID exists in both VendorsCopy and InvoicesCopy, then that vendor must have ever sent an invoice in that city.
--So excluding this, we can delete the rest by looking for Vendorcities that are not in the previous condition.

USE AP;
SELECT * FROM VendorsCopy;

DELETE VendorsCopy
WHERE VendorCity NOT IN
    (SELECT DISTINCT VendorCity
    FROM VendorsCopy AS V, InvoicesCopy AS I
    WHERE V.VendorID = I.VendorID);

SELECT * FROM VendorsCopy;
```

VendorID	VendorName	VendorAddress1	VendorAddress2	VendorCity	VendorState	VendorZipCode	VendorPhone	VendorContactName	VendorContactName	DefaultTermID	DefaultAccountNo
1	US Postal Service	APO, St. Window Services	PO Box 7005	Madison	WI	53707	(800) 555-1205	Abelto	Francesco	1	552
2	Jenkins	1990 Newwood Blvd Ste 260	NULL	Los Angeles	CA	90023	(800) 555-0725	Quinn	Kenne	3	572
3	California Chamber Of Commerce	3255 Fairview Cr	NULL	Sacramento	CA	95827	(916) 555-5670	Maure	Anton	3	572
4	BFI Industries	PO Box 6959	NULL	Fresno	CA	93782	(559) 555-1551	Kaleigh	Erik	3	530
5	BFI Gas & Electric	Box 52001	NULL	San Francisco	CA	94152	(800) 555-6081	Anthony	Kethyn	3	530
6	Robbins Metal Lock And Key	4683 E Fresno	NULL	Fresno	CA	93728	(559) 555-9375	Leigh	Bill	2	523
7	Bill Marvin Electric Inc	4503 E Home	NULL	Fresno	CA	93703	(559) 555-5105	Hodewy	Katlin	2	523
8	City Of Fresno	PO Box 2059	NULL	Fresno	CA	93770	(559) 555-9999	Misty	Kendall	3	574
9	Edwards Eagle Insurance Co	PO Box 2058	NULL	San Diego	CA	92152	(800) 555-5620	Bruno	Marvin	3	550
10	Express Inc.	4400 N First Street, Suite 100	NULL	Tampa	CA	93726	(559) 555-9580	Orion	Marvin	3	589
11	FBI	4400 N First Street, Suite 100	NULL	Tampa	CA	93719	(559) 555-9580	Orion	Orion	1	542

Completion time: 2020-02-10T22:17:16.1836928-06:00

DESKTOP-UP37904\SOLEXPRESS... DESKTOP-UP37904\owner... AP 00:00:00 - 199 rows

We need to use DISTINCT in the subquery to get non-duplicated value for VendorCity. The subquery gets the ones that have sent an invoice, then simply using NOT IN in the WHERE statement to filter the ones who have not sent an invoice.

## 7. USE AP;

```
SELECT
CAST(PaymentTotal AS decimal(20,4)) AS CASTDecimal,
CAST(PaymentTotal AS varchar) AS CASTVarchar,
CONVERT(decimal(20,4),PaymentTotal) AS CONVERTDecimal,
CONVERT(varchar,PaymentTotal,1) AS CONVERTVarchar
FROM Invoices;
```

```
--Lichen Lang
--practice cast and convert of money datatype
--First column: cast from money as decimal(20,4). I specified 20 characters, with 4 digits to the right of the decimal point.
--Second column: cast money as varchar. I named the column:CASTVarchar
--third column: converting from money to decimal, using CONVERT function with 'decimal(20,4)' which should give us a same output as first column. I named the column: CONVERTDecimal
--fourth column: converting from money to variable character using CONVERT function, with style 1 specified. I named the column: CONVERTVarchar

USE AP;
SELECT
CAST(PaymentTotal AS decimal(20,4)) AS CASTDecimal,
CAST(PaymentTotal AS varchar) AS CASTVarchar,
CONVERT(decimal(20,4),PaymentTotal) AS CONVERTDecimal,
CONVERT(varchar,PaymentTotal,1) AS CONVERTVarchar
FROM Invoices;
```

	CASTDecimal	CASTVarchar	CONVERTDecimal	CONVERTVarchar
1	3813.3300	3813.33	3813.3300	3813.33
2	40.2000	40.00	40.2000	40.20
3	138.7500	138.75	138.7500	138.75
4	144.7000	144.70	144.7000	144.70
5	153.0000	153.00	153.0000	153.00
6	42.7500	42.75	42.7500	42.75
7	172.5000	172.50	172.5000	172.50
8	95.0000	95.00	95.0000	95.00
9	601.9500	601.95	601.9500	601.95
10	42.6700	42.67	42.6700	42.67
11	16.3300	16.33	16.3300	16.33
12	692.0000	692.00	692.0000	692.00
13	16.3300	16.33	16.3300	16.33
14	6.0000	6.00	6.0000	6.00
15	856.9200	856.92	856.9200	856.92
16	9.9500	9.95	9.9500	9.95
17	... n.nnnn	... n.n	... n.nnnn	... n.nnnn

Query executed successfully.

## 8. USE AP;

```
SELECT
CAST(PaymentDate AS varchar) AS CASTVarchar,
CONVERT(varchar,PaymentDate,2) AS CONVERTVarchar2,
CONVERT(varchar,PaymentDate,10) AS CONVERTVarchar10,
CAST(PaymentDate AS real) AS CASTReal
FROM Invoices;
```

```
--Lichen Lang
--practice casting and converting date
--first column: cast from smalldatetime datatype to variable character using CAST function.
--second column: cast from smalldatetime to variable character using CONVERT function.
--there is two different types of date format here, Style 2 and style 10.
--fourth column: Casting to real expression. By default it's 0, which is maximum of 6 digits.

USE AP;
SELECT
CAST(PaymentDate AS varchar) AS CASTVarchar,
CONVERT(varchar,PaymentDate,2) AS CONVERTVarchar2,
CONVERT(varchar,PaymentDate,10) AS CONVERTVarchar10,
CAST(PaymentDate AS real) AS CASTReal
FROM Invoices;
```

	CASTVarchar	CONVERTVarchar2	CONVERTVarchar10	CASTReal
1	19-01-2004MM	19.01.07	01-01-16	42314
2	Jan 14 2016 12:00AM	16.01.14	01-14-16	42381
3	Jan 9 2016 12:00AM	16.01.09	01-09-16	42376
4	Jan 12 2016 12:00AM	16.01.12	01-12-16	42379
5	Jan 11 2016 12:00AM	16.01.11	01-11-16	42378
6	Jan 21 2016 12:00AM	16.01.21	01-21-16	42288
7	Jan 22 2016 12:00AM	16.01.22	01-22-16	42380
8	Jan 12 2016 12:00AM	16.01.01	01-01-16	42363
9	Jan 21 2016 12:00AM	16.01.21	01-21-16	42369
10	Jan 22 2016 12:00AM	16.01.22	01-22-16	42385
11	Jan 20 2016 12:00AM	16.01.01	01-01-16	42387
12	Jan 13 2016 12:00AM	16.01.13	01-13-16	42385
13	Jan 23 2016 12:00AM	16.01.23	01-23-16	42390
14	Feb 10 2016 12:00AM	16.02.10	02-10-16	43408
15	Jan 30 2016 12:00AM	16.01.30	01-30-16	42397
16	Jan 22 2016 12:00AM	16.01.22	01-22-16	42389
17	... n.mmm.yyyyAM	... n.n.n	... n.nnnn	... n.nnnn

Query executed successfully.

#### Remarks

In this lab we practiced data manipulation using UPDATE, SET, INSERT, DELETE, etc. Using the knowledge that we learned from class, we set up conditions, search requirements, and knowledge from previous labs to meets this lab's requirement. By comparing before and after using query, we can see the changes that has been done to a table.

We also practiced CAST and CONVERT functions to experience with different data types and know what are the limits, such as what will work and what will not work.

I think this lab is very efficient practice for lecture. The challenge would be more complicated and specific requirements.