

CHAPTER 5 CRUD OPERATIONS

1. Write an INSERT statement that adds this row to the Terms table:

terms_id: 6
terms_description: Net due 120 days
terms_due_days: 120

Use MySQL Workbench to review the column definitions for the Terms table, and include a column list with the required columns in the INSERT statement.

ANSWER:

use ap;

insert INTO terms

(terms_id, terms_description, terms_due_days)

VALUES

(6, 'Net due 120 days', 120)

The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' pane displays the 'ap' database with its tables. The 'terms' table is selected, and its structure is shown in the 'Table: terms' pane:

Columns:	
terms_id	int(11) AI PK
terms_description	varchar(50)
terms_due_days	int(11)

The 'Query 1' pane shows the following SQL statement:

```
1 use ap;
2 insert INTO terms
3 (terms_id, terms_description, terms_due_days)
4 VALUES
5 (6, 'Net due 120 days', 120)
```

The 'Output' pane shows the 'Action Output' table, which displays the execution results of the SQL statement:

#	Time	Action	Message
1	20:55:06	INSERT INTO terms (terms_id, terms_description, terms_due_days) VALUES (6, 'Net due 120 days', 120)	Error Code: 1046. No database select
2	20:55:21	use ap INSERT INTO terms (terms_id, terms_description, terms_due_days) VALUES (6, 'Net due 120 d...	Error Code: 1054. You have an error in
3	20:55:36	use ex INSERT INTO terms (terms_id, terms_description, terms_due_days) VALUES (6, 'Net due 120 d...	Error Code: 1054. You have an error in
4	20:56:07	use ex	0 row(s) affected
5	20:56:07	insert INTO terms (terms_id, terms_description, terms_due_days) VALUES (6, 'Net due 120 days', 120)	Error Code: 1146. Table 'ex.terms' doe
6	20:56:29	use ap	0 row(s) affected
7	20:56:29	insert INTO terms (terms_id, terms_description, terms_due_days) VALUES (6, 'Net due 120 days', 120)	1 row(s) affected
8	20:57:01	SELECT * FROM ap.terms LIMIT 0, 1000	6 row(s) returned

2. Write an UPDATE statement that modifies the row you just added to the Terms table. This statement should change the terms_description column to “Net due 125 days”, and it should change the terms_due_days column to 125.

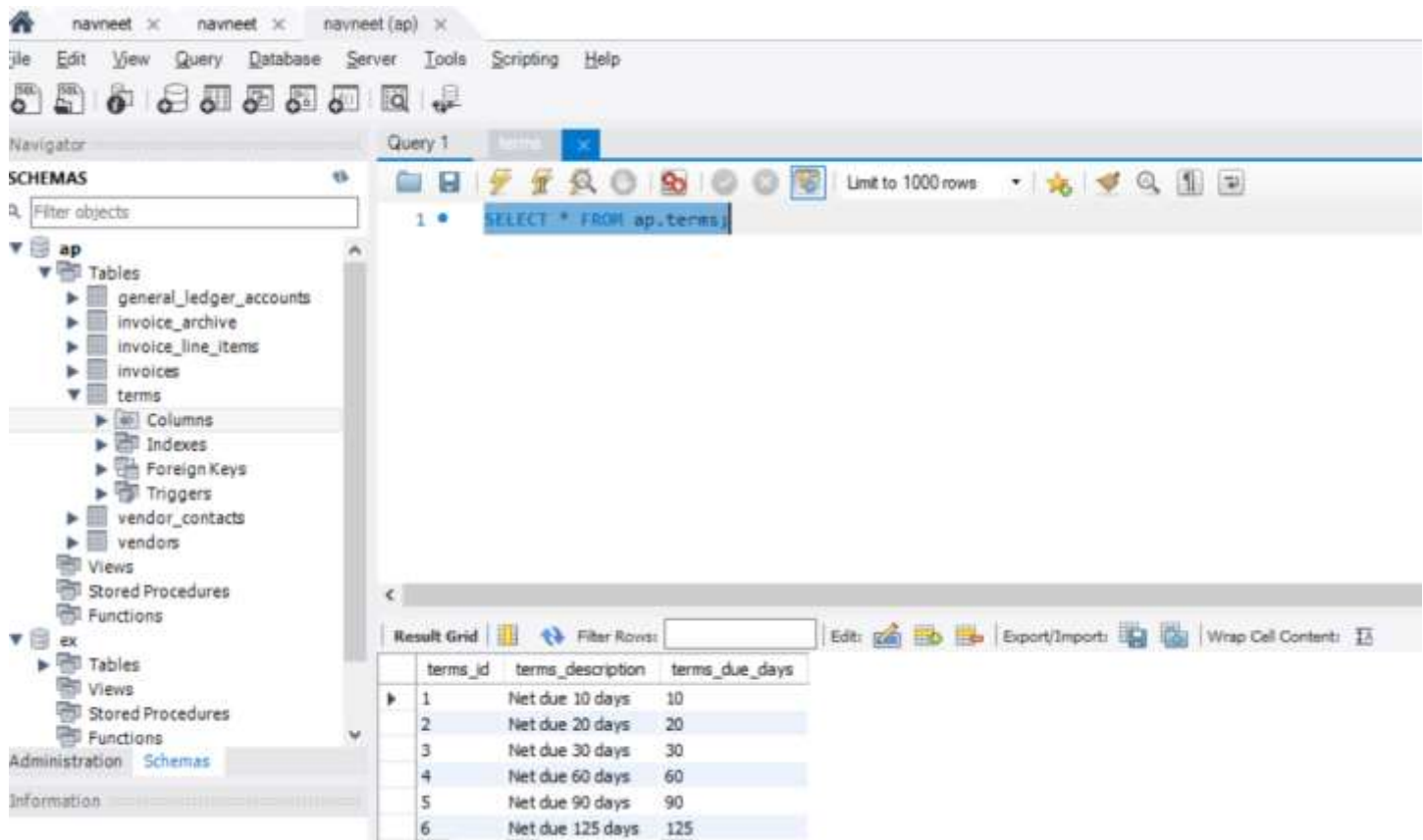
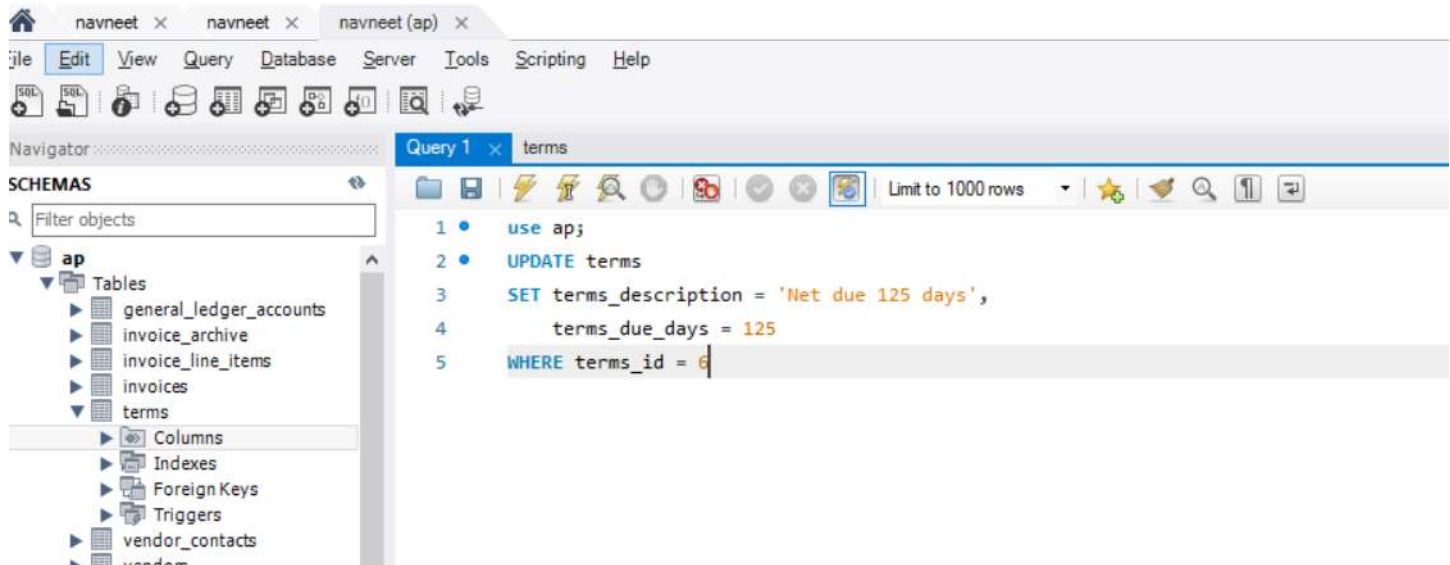
ANSWER:

UPDATE terms

SET terms_description = 'Net due 125 days',

terms_due_days = 125

WHERE terms_id = 6

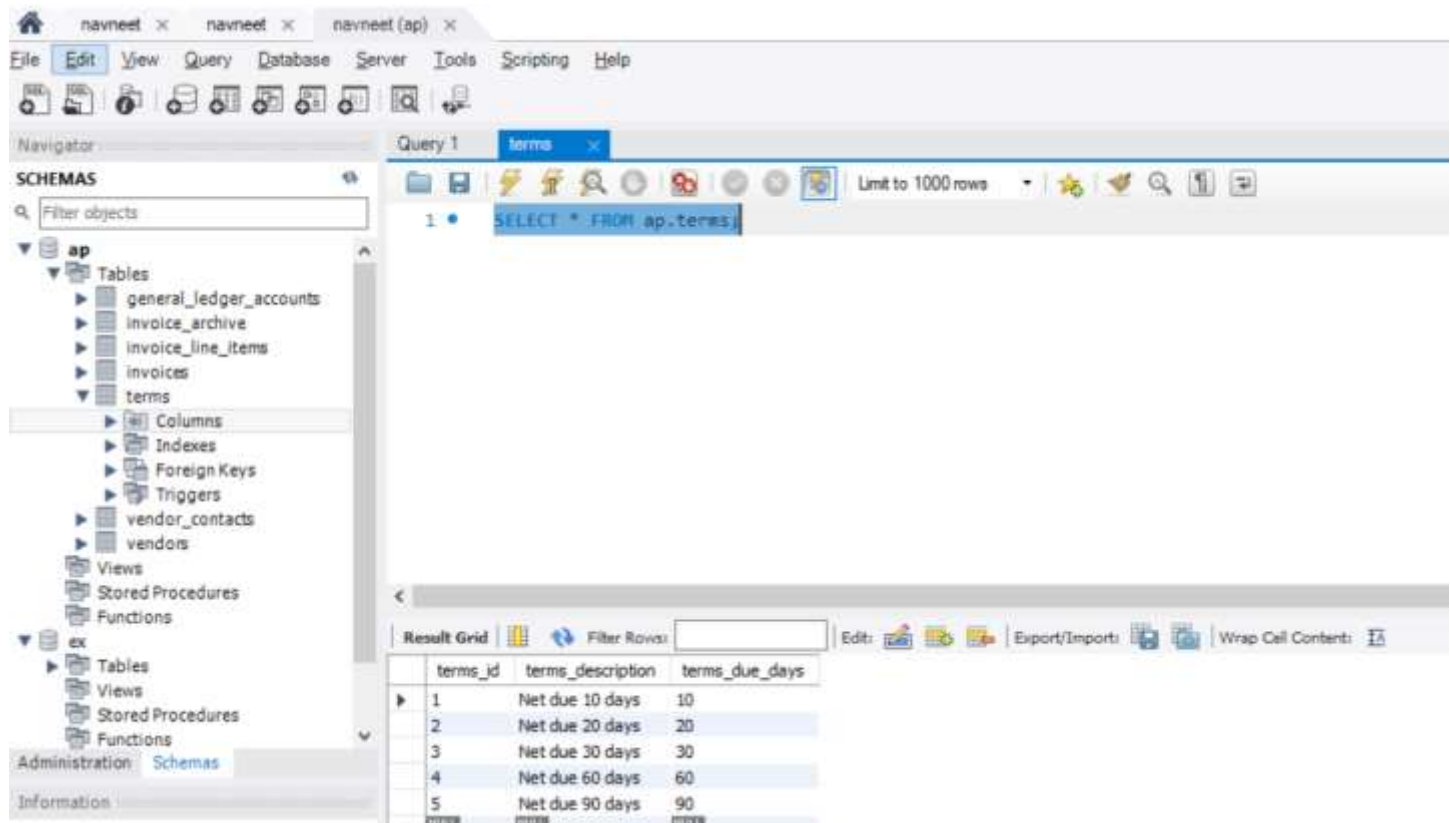
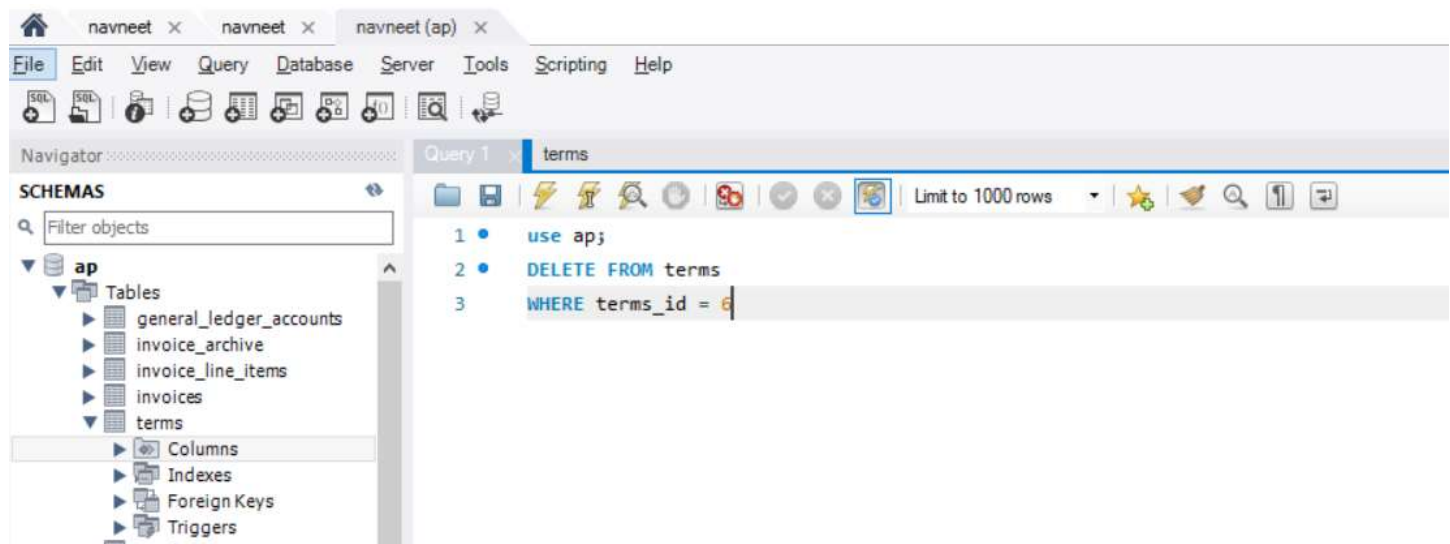


3. Write a DELETE statement that deletes the row you added to the Terms table in exercise 1.

ANSWER:

DELETE FROM terms

WHERE terms_id = 6



4. Write an INSERT statement that adds this row to the Invoices table:

invoice_id:	The next automatically generated ID
vendor_id:	32
invoice_number:	AX-014-027
invoice_date:	8/1/2014
invoice_total:	\$434.58
payment_total:	\$0.00
credit_total:	\$0.00
terms_id:	2
invoice_due_date:	8/31/2014
payment_date:	null

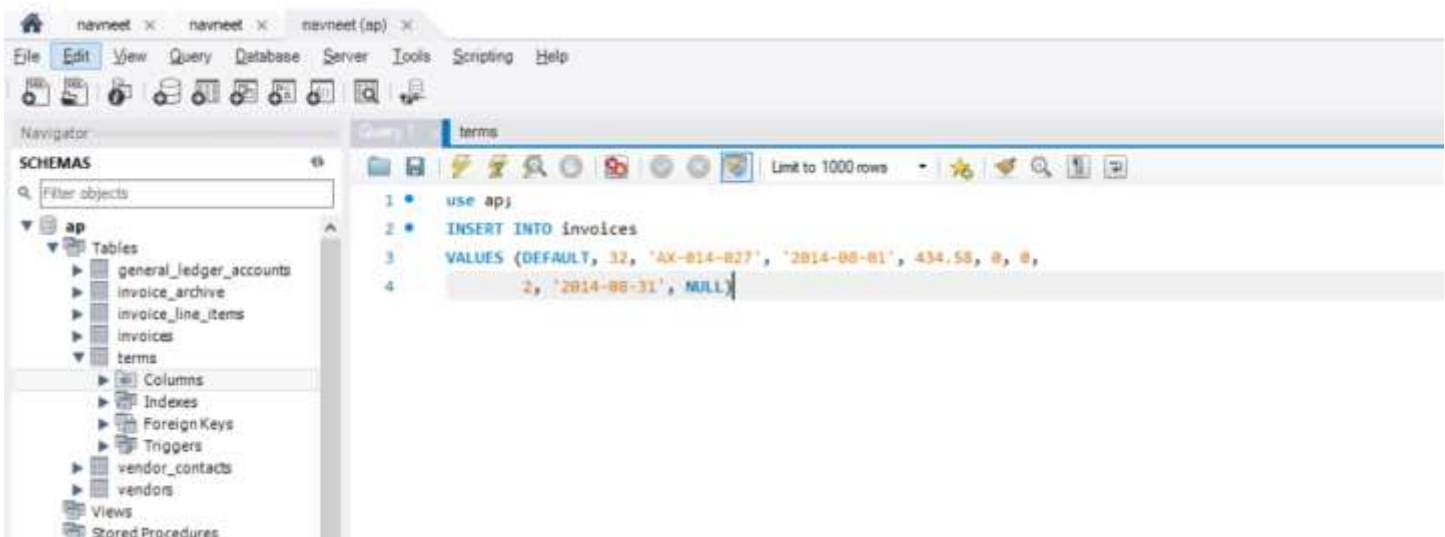
Write this statement without using a column list.

ANSWER:

```
INSERT INTO invoices
```

```
VALUES (DEFAULT, 32, 'AX-014-027', '2014-08-01', 434.58, 0, 0,
```

```
2, '2014-08-31', NULL)
```



Query 1: `SELECT * FROM ap.invoices;`

Result Grid:

invoice_id	vendor_id	invoice_number	invoice_date	invoice_total	payment_total	credit_total	terms_id	invoice_due_date	payment_date
110	80	134116	2014-07-28	90.36	0.00	0.00	2	2014-08-17	2014-08-17
111	123	263253257	2014-07-30	22.57	22.57	0.00	3	2014-08-29	2014-09-03
112	110	0-2436	2014-07-31	10976.06	0.00	0.00	3	2014-08-30	2014-08-30
113	37	547480102	2014-08-01	224.00	0.00	0.00	3	2014-08-31	2014-08-31
114	123	963253249	2014-08-02	127.75	127.75	0.00	3	2014-09-01	2014-09-04
115	32	AX-014-027	2014-08-01	434.58	0.00	0.00	2	2014-08-31	2014-08-31

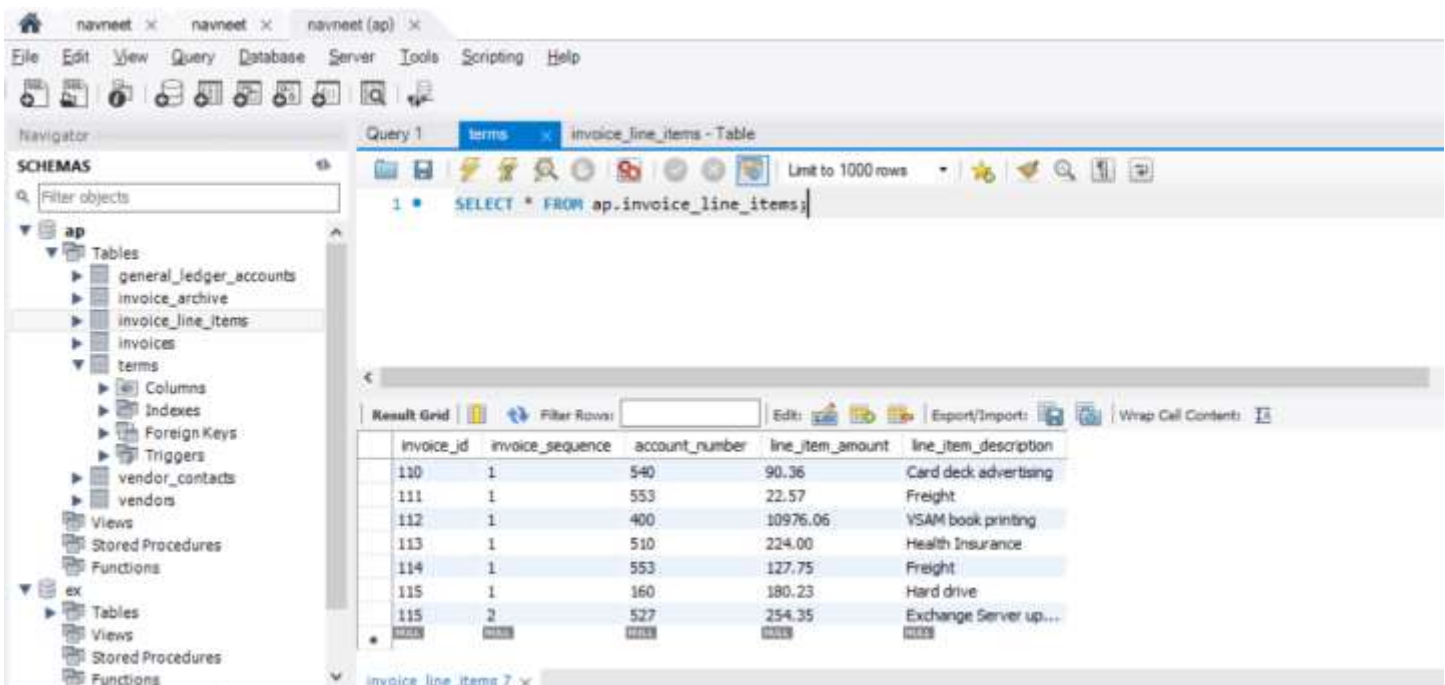
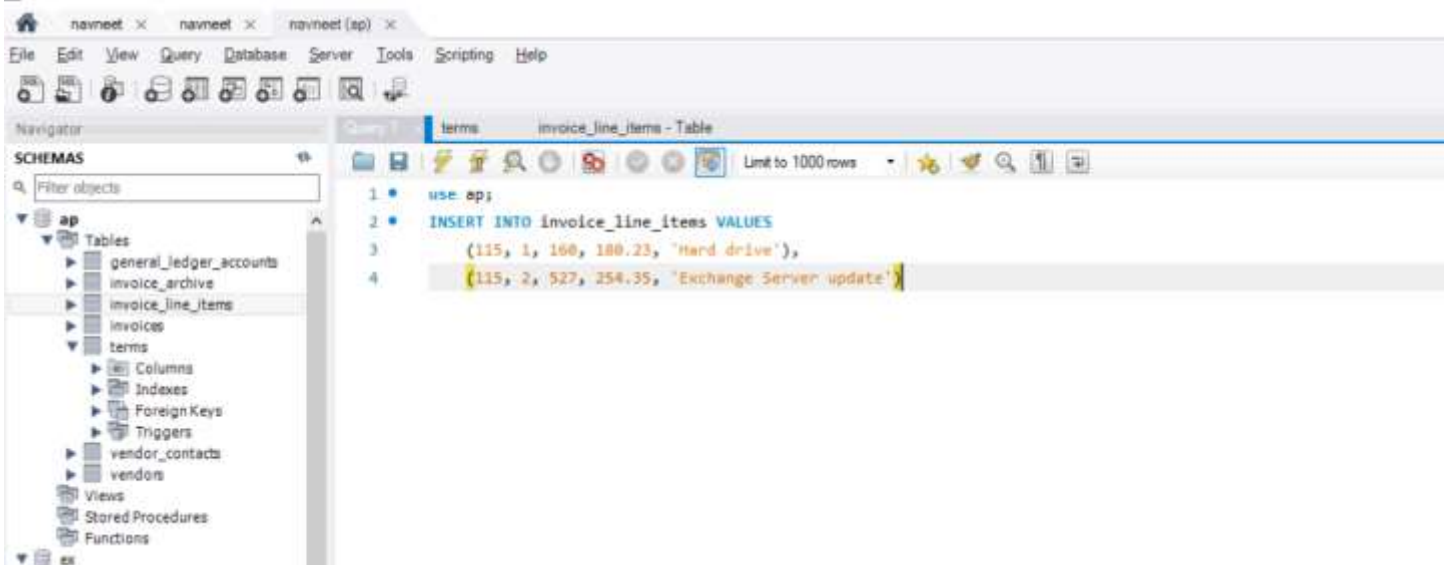
Table: **terms**

5. Write an INSERT statement that adds these rows to the Invoice_Line_Items table:

invoice_sequence:	1	2
account_number:	160	527
line_item_amount:	\$180.23	\$254.35
line_item_description:	Hard drive	Exchange Server update

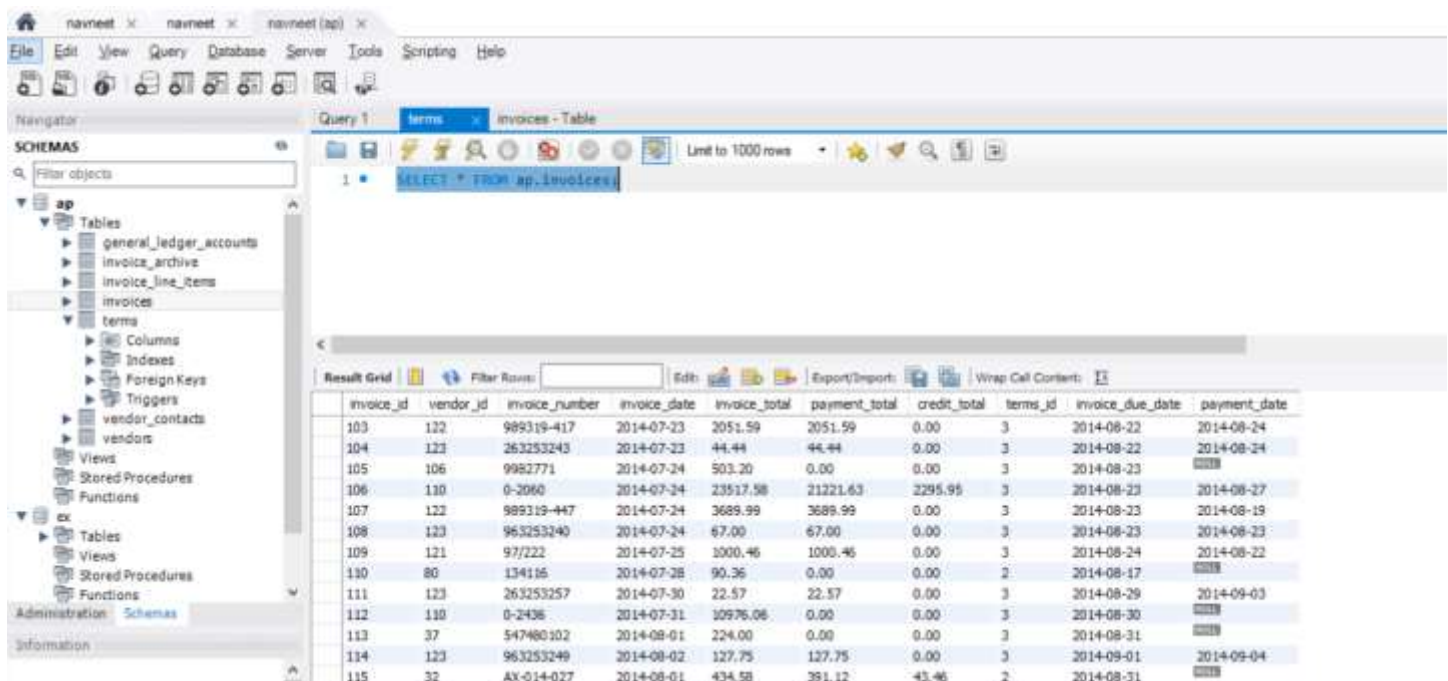
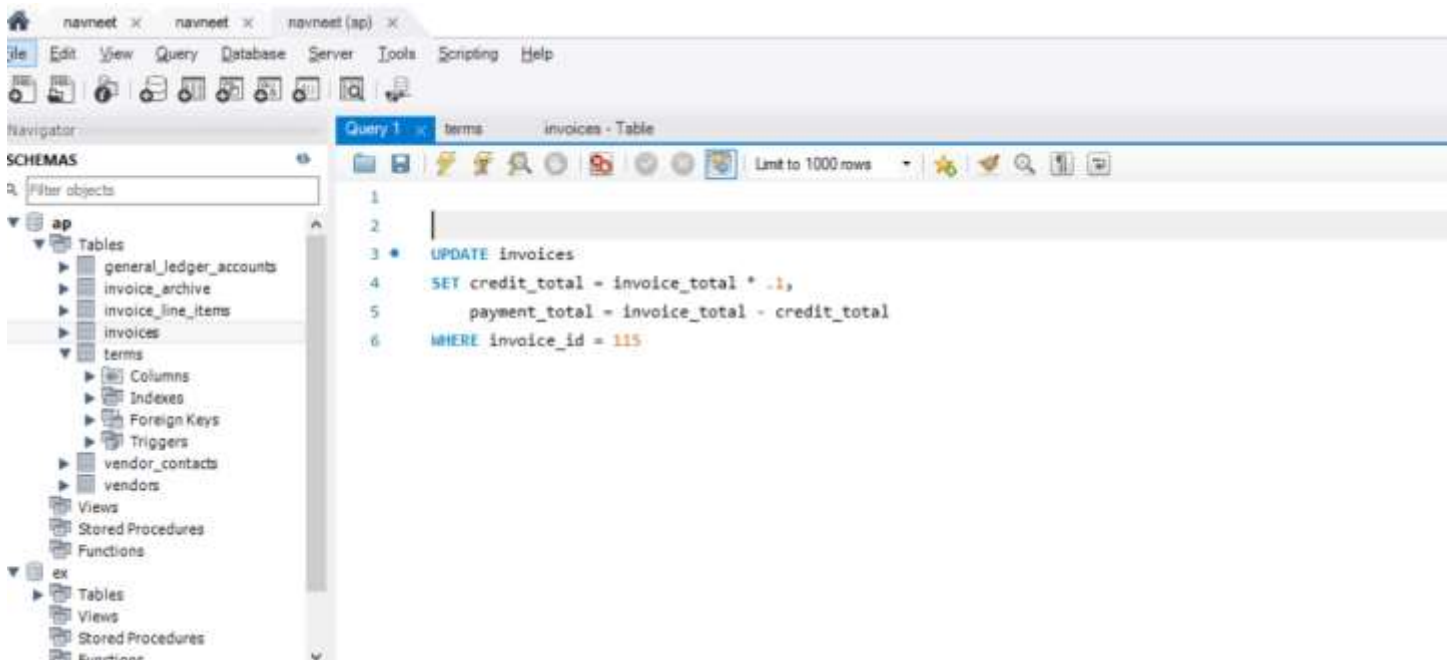
Set the invoice_id column of these two rows to the invoice ID that was generated by MySQL for the invoice you added in exercise 4.

ANSWER:



- Write an UPDATE statement that modifies the invoice you added in exercise 4. This statement should change the credit_total column so it's 10% of the invoice_total column, and it should change the payment_total column so the sum of the payment_total and credit_total columns are equal to the invoice_total column.

ANSWER:



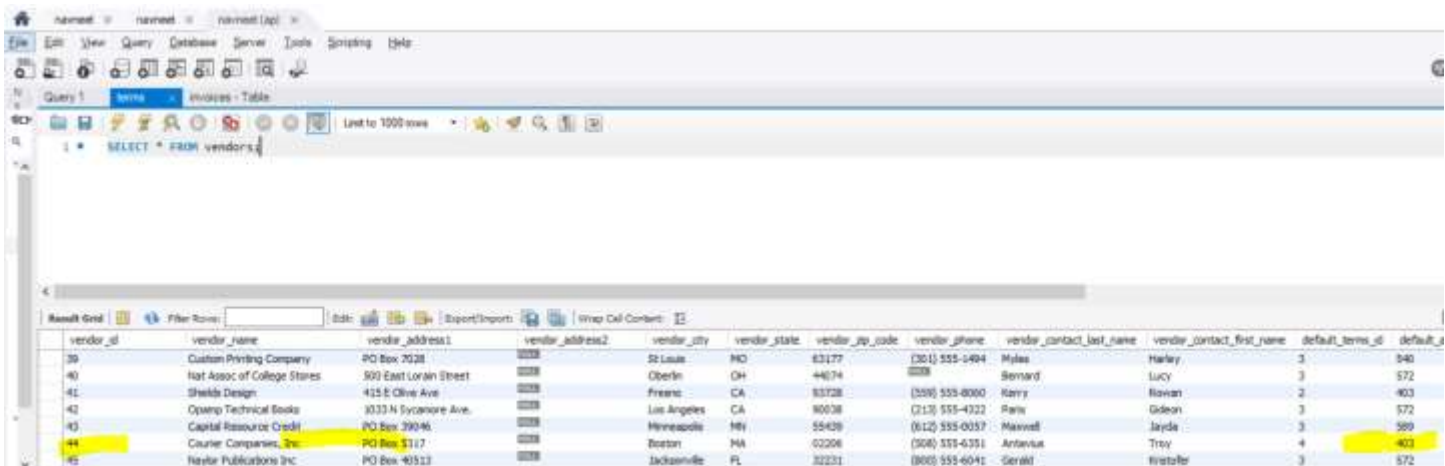
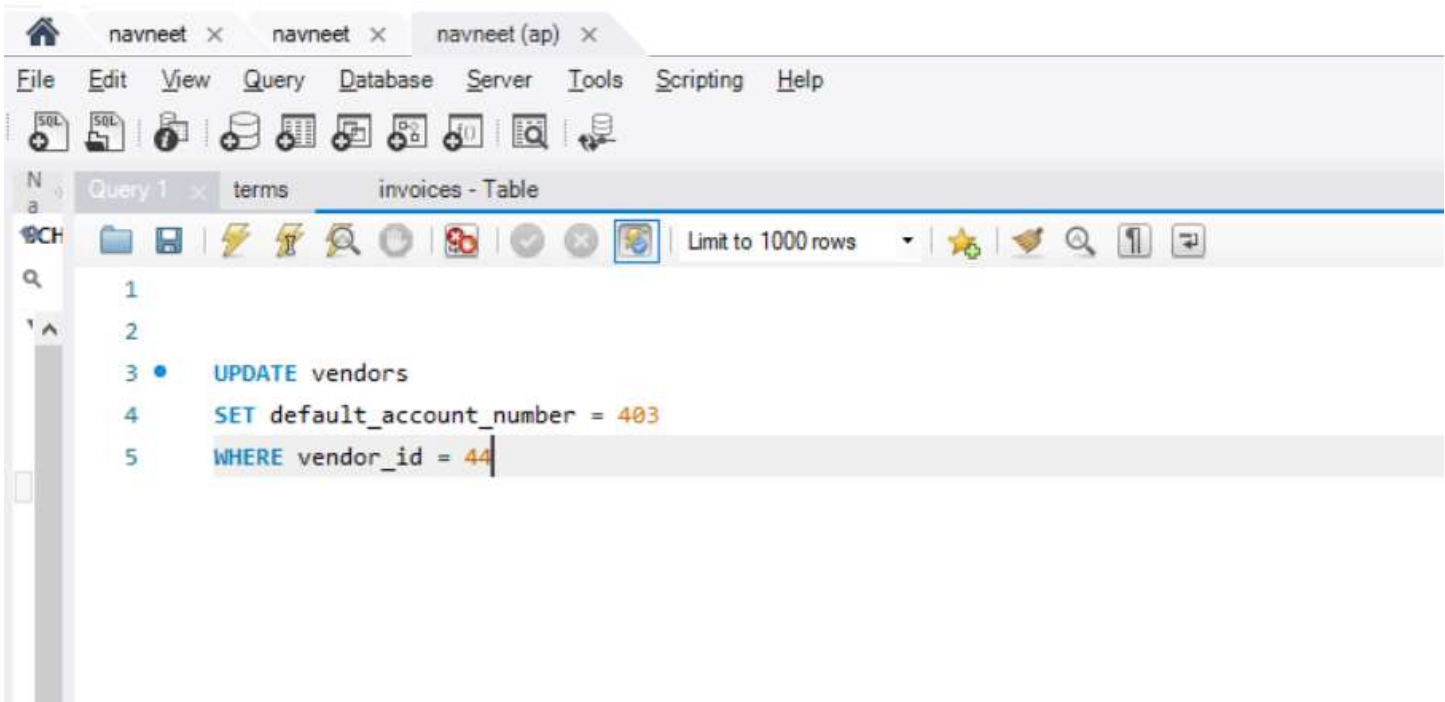
7. Write an UPDATE statement that modifies the Vendors table. Change the default_account_number column to 403 for the vendor with an ID of 44.

ANSWER:

UPDATE vendors

SET default_account_number = 403

WHERE vendor_id = 44



8. Write an UPDATE statement that modifies the Invoices table. Change the terms_id column to 2 for each invoice that's for a vendor with a default_terms_id of 2.

ANSWER:

UPDATE invoices

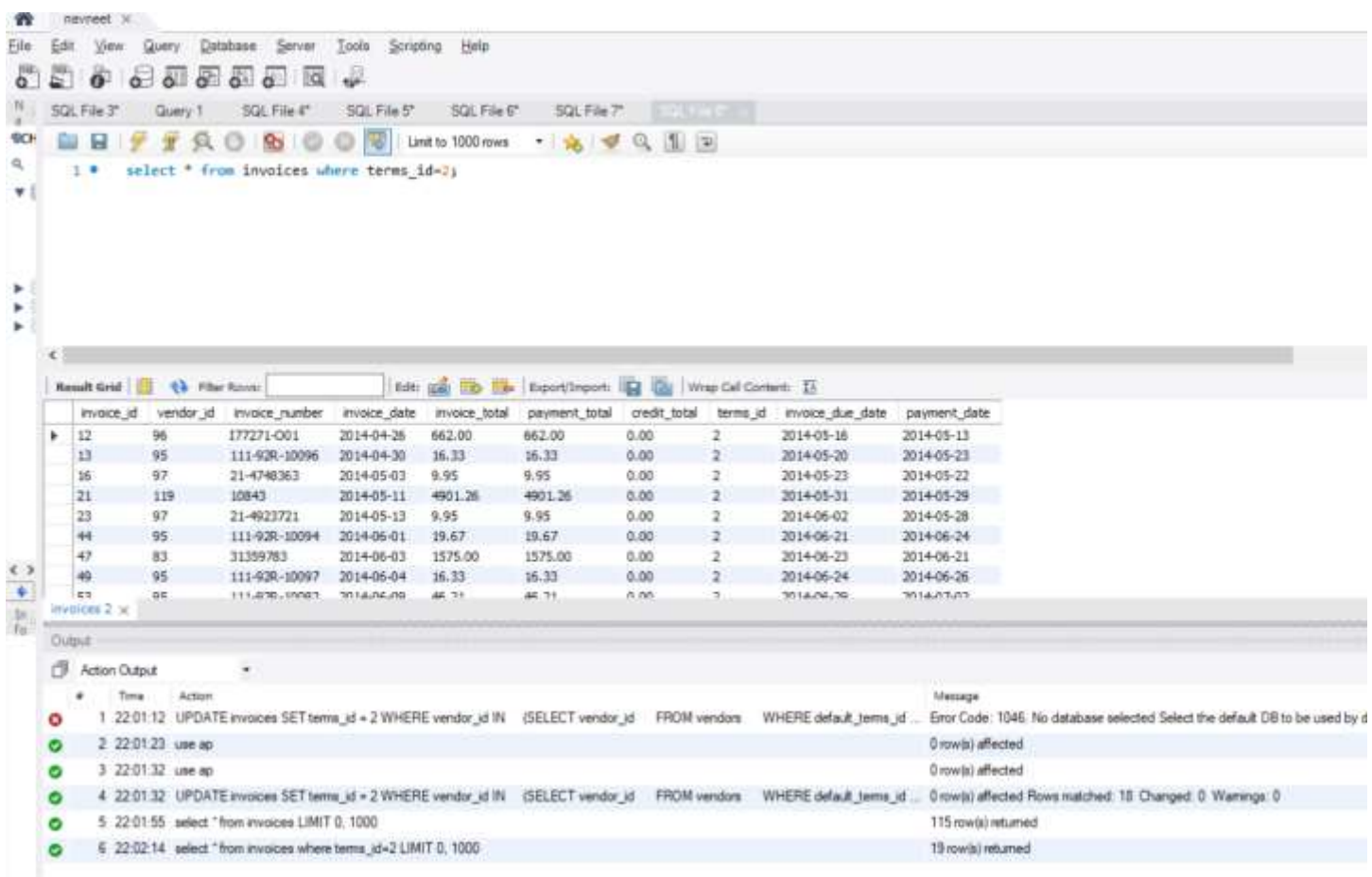
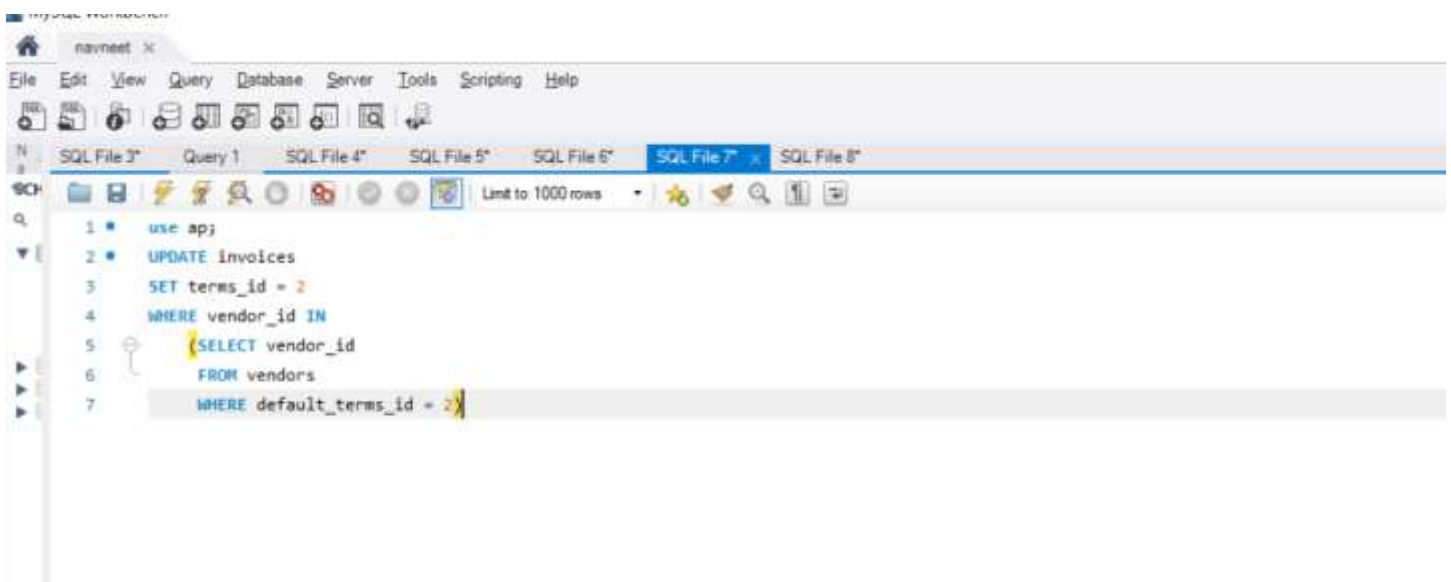
SET terms_id = 2

WHERE vendor_id IN

(SELECT vendor_id

FROM vendors

WHERE default_terms_id = 2)



- Write a DELETE statement that deletes the row that you added to the Invoices table in exercise 4. When you execute this statement, it will produce an error since the invoice has related rows in the Invoice_Line_Items table. To fix that, precede the DELETE statement with another DELETE statement that deletes the line items for this invoice. (Remember that to code two or more statements in a script, you must end each statement with a semicolon.)

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SQL File 1 Query 1 SQL File 4 SQL File 5 SQL File 6 SQL File 7 SQL File 8

Limit to 1000 rows

```
1
2  /*Foreign Key Constraint*/
3  * DELETE FROM invoices
4  WHERE invoice_id = 115;
5
6
7  /*Remove Foreign key Constraint Here*/
8  * DELETE FROM invoice_line_items
9  WHERE invoice_id = 115;
10
11 * select * from invoices ;
```

Output

Action Output

#	Time	Action	Message	Duration / Fetch
3	22:01:32	use ap	0 row(s) affected	0.000 sec
4	22:01:32	UPDATE invoices SET terms_id = 2 WHERE vendor_id IN (SELECT vendor_id FROM vendors WHERE default_terms_id = 2)	0 row(s) affected Rows matched: 18 Changed: 0 Warnings: 0	0.000 sec
5	22:01:55	select * from invoices LIMIT 0, 1000	115 row(s) returned	0.000 sec / 0.000
6	22:02:14	select * from invoices where terms_id=2 LIMIT 0, 1000	19 row(s) returned	0.000 sec / 0.000
7	22:06:03	DELETE FROM invoices WHERE invoice_id = 116	0 row(s) affected	0.000 sec
8	22:07:15	select * from invoices LIMIT 0, 1000	115 row(s) returned	0.000 sec / 0.000
9	22:07:53	DELETE FROM invoices WHERE invoice_id = 115	Error Code: 1451. Cannot delete or update a parent row: a foreign key constraint fails ('ap', 'invoice_line_items', CONSTRAINT lin...	0.110 sec
10	22:08:24	DELETE FROM invoice_line_items WHERE invoice_id = 115	2 row(s) affected	0.125 sec
11	22:08:30	DELETE FROM invoices WHERE invoice_id = 115	1 row(s) affected	0.140 sec