

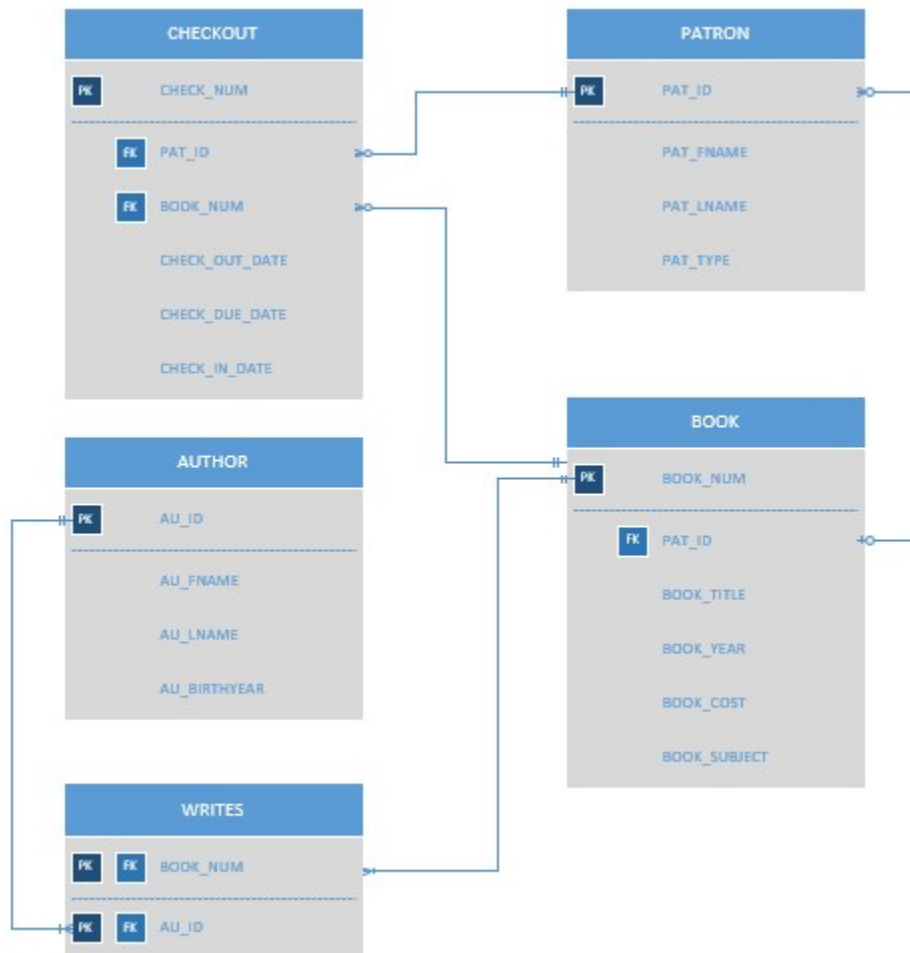
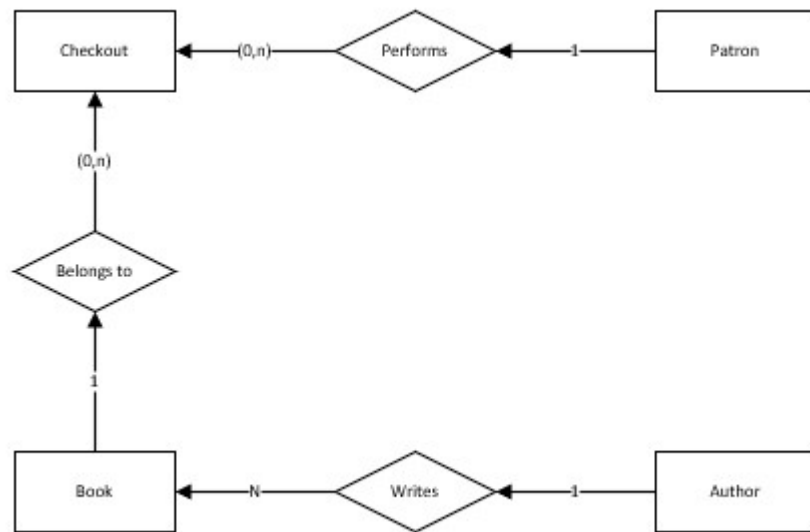
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Prof. Karimi

CIS 310-01

27 April 2020

PART I



102.

/*CIS 310-01 Emily Wantland*/

```
SELECT
  PATRON.PAT_ID,
  PATRON.PAT_LNAME,
  COUNT( CHECK_NUM ) AS 'NUM CHECKOUTS',
  CHOSEN.NUM AS 'NUM DIFFERENT BOOKS'
FROM
  (
    SELECT
      PAT_ID,
      COUNT( BOOK_NUM ) AS NUM
    FROM
      (
        SELECT DISTINCT
          PAT_ID,
          BOOK_NUM
        FROM
          CHECKOUT
      )
    AS CHOSEN2
    GROUP BY
      PAT_ID
  )
  AS CHOSEN
  INNER JOIN
    (
      PATRON
      INNER JOIN
        CHECKOUT
        ON PATRON.PAT_ID = CHECKOUT.PAT_ID
    )
    ON CHOSEN.PAT_ID = PATRON.PAT_ID
  GROUP BY
    PATRON.PAT_ID,
    PATRON.PAT_LNAME,
    CHOSEN.NUM
  HAVING
    COUNT( CHECK_NUM ) >= 3
  ORDER BY
    'NUM DIFFERENT BOOKS' DESC,
    "NUM CHECKOUTS" DESC,
    PATRON.PAT_ID ASC;
```

SQLQuery8.sql - (...WANT01\elw47 (54))*

```

/*CIS 310-01 Emily Wantland*/
SELECT
    PATRON.PAT_ID,
    PATRON.PAT_LNAME,
    COUNT( CHECK_NUM ) AS 'NUM CHECKOUTS',
    CHOSEN.NUM AS 'NUM DIFFERENT BOOKS'
FROM
    (
        SELECT
            PAT_ID,
            COUNT( BOOK_NUM ) AS NUM
        FROM
            (
                SELECT DISTINCT

```

100 %

Results Messages

	PAT_ID	PAT_LNAME	NUM CHECKOUTS	NUM DIFFERENT BOOKS
1	1161	Koch	3	3
2	1165	Baldwin	3	3
3	1181	Horne	3	3
4	1185	Yang	3	3
5	1210	Cooley	3	3
6	1229	Burke	3	3
7	1160	carler	3	2
8	1171	Marsh	3	2
9	1172	Miles	3	2
10	1207	Ramos	3	2
11	1209	Mathis	3	2
12	1183	Hughes	3	1

Query executed successfully. (LocalDB)\MSSQLLocalDB (13... ELWANT01\elw47 (54) Chapter 7 00:00:00 12 rows

103.

/*CIS 310-01 Emily Wantland*/

SELECT

ROUND(AVG(DATEDIFF(Day, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE)), 2) AS 'Average Days Kept'

FROM

CHECKOUT;

SQLQuery8.sql - (...WANT01\elw47 (54))*

```

/*CIS 310-01 Emily Wantland*/
SELECT
    ROUND( AVG( DATEDIFF( Day, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE ) ), 2 ) AS 'Average Days Kept'
FROM
    CHECKOUT;

```

100 %

Results Messages

	Average Days Kept
1	4

Query executed successfully. (LocalDB)\MSSQLLocalDB (13... ELWANT01\elw47 (54) Chapter 7 00:00:00 1 rows

104.

/*CIS 310-01 Emily Wantland*/

```
SELECT
    CHECKOUT.PAT_ID,
    AVG( DATEDIFF(Day, CHECKOUT.CHECK_OUT_DATE,
CHECKOUT.CHECK_IN_DATE )) AS 'Average Days Kept'
FROM
    CHECKOUT
GROUP BY
    CHECKOUT.PAT_ID
HAVING
    Count( CHECKOUT.CHECK_NUM ) >= 3
ORDER BY
    AVG( DATEDIFF(Day, CHECKOUT.CHECK_OUT_DATE,
CHECKOUT.CHECK_IN_DATE )) DESC;
```



The screenshot shows a SQL Server Enterprise Manager window with a query editor and a results pane. The query editor contains the following SQL code:

```
/*CIS 310-01 Emily Wantland*/
SELECT
    CHECKOUT.PAT_ID,
    AVG( DATEDIFF(Day, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE )) AS 'Average Days Kept'
FROM
    CHECKOUT
GROUP BY
    CHECKOUT.PAT_ID
HAVING
    Count( CHECKOUT.CHECK_NUM ) >= 3
ORDER BY
    AVG( DATEDIFF(Day, CHECKOUT.CHECK_OUT_DATE, CHECKOUT.CHECK_IN_DATE )) DESC;
```

The results pane displays the following data:

PAT_ID	Average Days Kept
1160	7
1185	6
1207	5
1209	5
1165	5
1172	4
1183	4
1181	3
1171	3
1161	3
1210	2
1229	2

The status bar at the bottom indicates: Query executed successfully. (LocalDB)\MSSQLLocalDB (13... ELWANT01\elw47 (54) Chapter 7 00:00:00 12 rows

105.

/*CIS 310-01 Emily Wantland*/

```
SELECT
    BOOK.BOOK_NUM,
    BOOK.BOOK_TITLE,
    BOOK.BOOK_COST
FROM
    BOOK
WHERE
    BOOK.BOOK_COST =
    (
        SELECT
```

```

        MIN( BOOK_COST )
FROM
    BOOK
)
ORDER BY
    BOOK.BOOK_NUM;

```

The screenshot shows a SQL query window titled 'SQLQuery8.sql - (...WANT01\elw47 (54))'. The query is as follows:

```

/*CIS 310-01 Emily Wantland*/
SELECT
    BOOK.BOOK_NUM,
    BOOK.BOOK_TITLE,
    BOOK.BOOK_COST
FROM
    BOOK
WHERE
    BOOK.BOOK_COST =
    (
        SELECT
            MIN( BOOK_COST )
        FROM
            BOOK
    )

```

Below the query, the 'Results' tab is active, displaying a table with 4 rows and 3 columns: BOOK_NUM, BOOK_TITLE, and BOOK_COST.

	BOOK_NUM	BOOK_TITLE	BOOK_COST
1	5239	J++ in Mobile Apps	49.95
2	5241	JAVA First Steps	49.95
3	5248	What You Always Wanted to Know About Database, B...	49.95
4	5254	Coding Style for Maintenance	49.95

At the bottom of the window, a status bar indicates: 'Query executed successfully. (LocalDB)\MSSQLLocalDB (13.... ELWANT01\elw47 (54) Chapter 7 00:00:00 4 rows'.

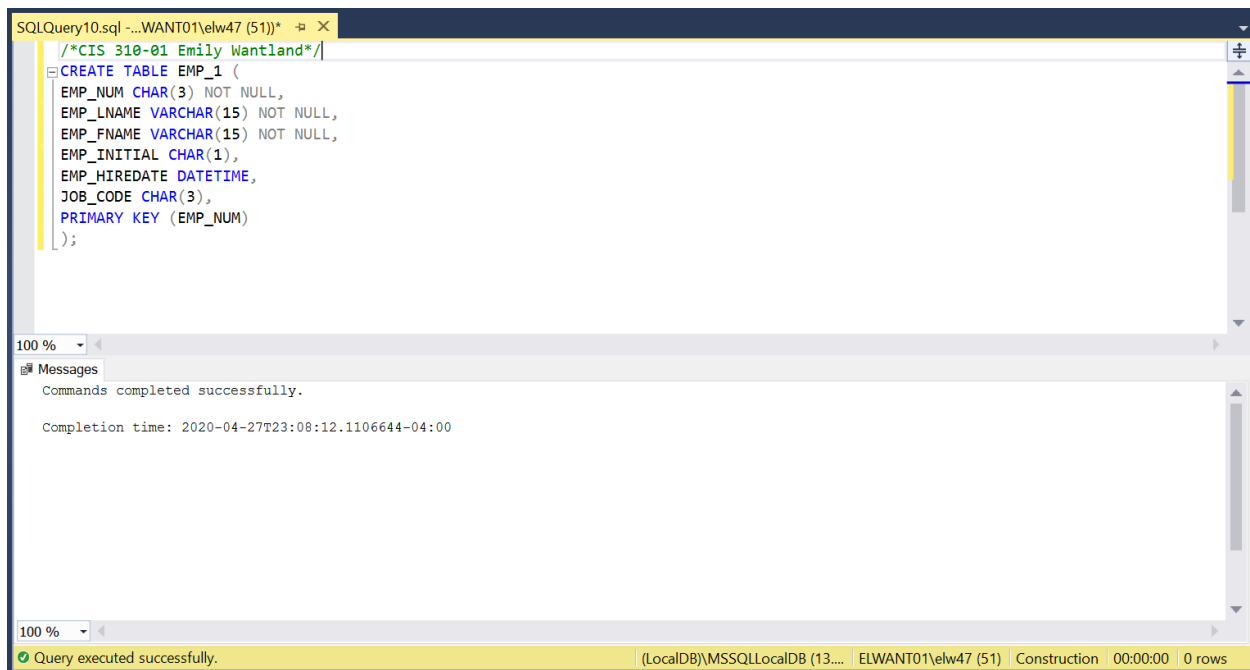
PART II

1.

```

/*CIS 310-01 Emily Wantland*/
CREATE TABLE EMP_1 (
    EMP_NUM CHAR(3) NOT NULL,
    EMP_LNAME VARCHAR(15) NOT NULL,
    EMP_FNAME VARCHAR(15) NOT NULL,
    EMP_INITIAL CHAR(1),
    EMP_HIREDATE DATETIME,
    JOB_CODE CHAR(3),
    PRIMARY KEY (EMP_NUM)
);

```

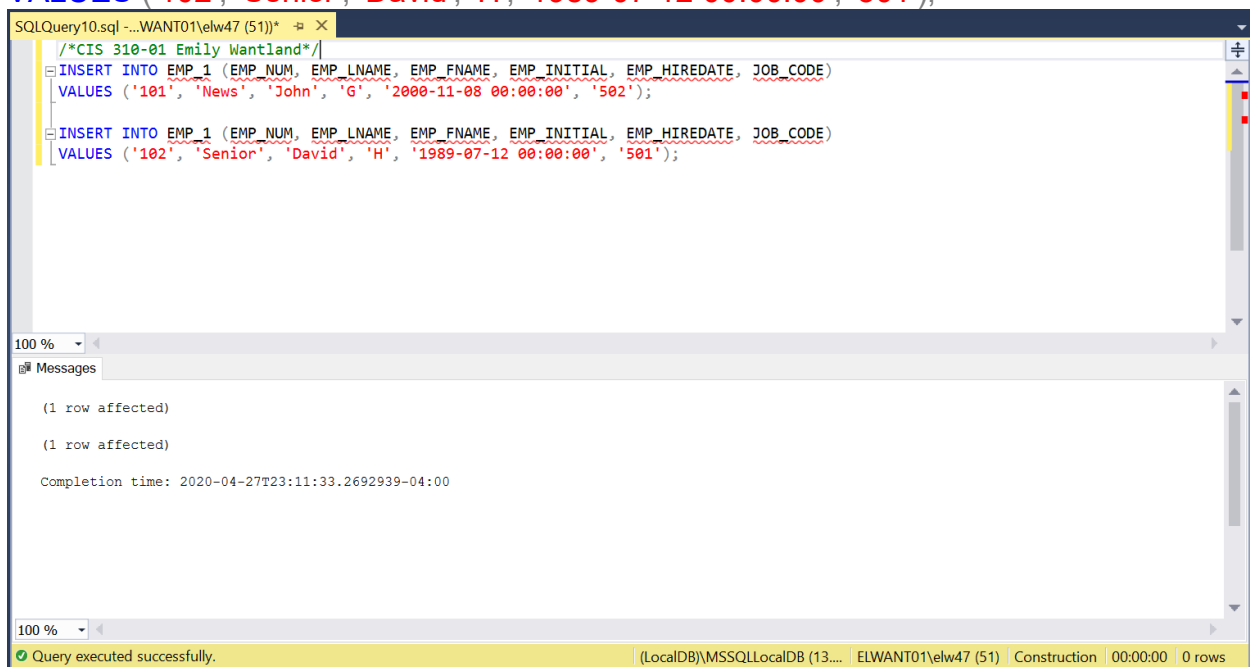


2.

`/*CIS 310-01 Emily Wantland*/`

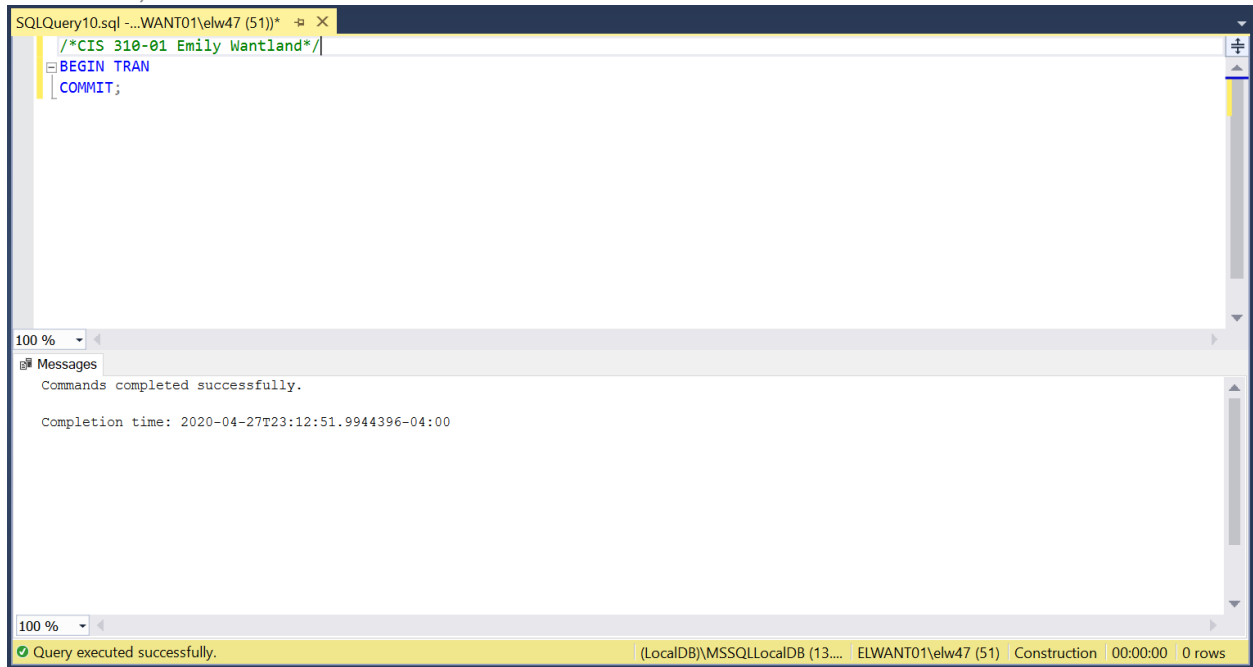
`INSERT INTO EMP_1 (EMP_NUM, EMP_LNAME, EMP_FNAME, EMP_INITIAL,
EMP_HIREDATE, JOB_CODE)
VALUES ('101', 'News', 'John', 'G', '2000-11-08 00:00:00', '502');`

`INSERT INTO EMP_1 (EMP_NUM, EMP_LNAME, EMP_FNAME, EMP_INITIAL,
EMP_HIREDATE, JOB_CODE)
VALUES ('102', 'Senior', 'David', 'H', '1989-07-12 00:00:00', '501');`



4.

```
/*CIS 310-01 Emily Wantland*/  
BEGIN TRAN  
COMMIT;
```



5.

```
/*CIS 310-01 Emily Wantland*/  
UPDATE  
  EMP_1  
SET  
  JOB_CODE = '501'  
WHERE  
  EMP_NUM = '107';
```

```
SQLQuery10.sql -...WANT01\elw47 (51))* X
/*CIS 310-01 Emily Wantland*/
UPDATE
  EMP_1
SET
  JOB_CODE = '501'
WHERE
  EMP_NUM = '107';
```

100 %

Messages

(0 rows affected)

Completion time: 2020-04-27T23:14:04.5472996-04:00

100 %

Query executed successfully. (LocalDB)\MSSQLLocalDB (13... ELWANT01\elw47 (51) Construction 00:00:00 0 rows

6.

/*CIS 310-01 Emily Wantland*/

DELETE

FROM

EMP_1

WHERE

EMP_LNAME = 'Smithfield'

AND EMP_FNAME = 'William';

```
SQLQuery10.sql -...WANT01\elw47 (51))* X
/*CIS 310-01 Emily Wantland*/
DELETE
FROM
  EMP_1
WHERE
  EMP_LNAME = 'Smithfield'
  AND EMP_FNAME = 'William';
```

100 %

Messages

(0 rows affected)

Completion time: 2020-04-27T23:15:12.6431483-04:00

100 %

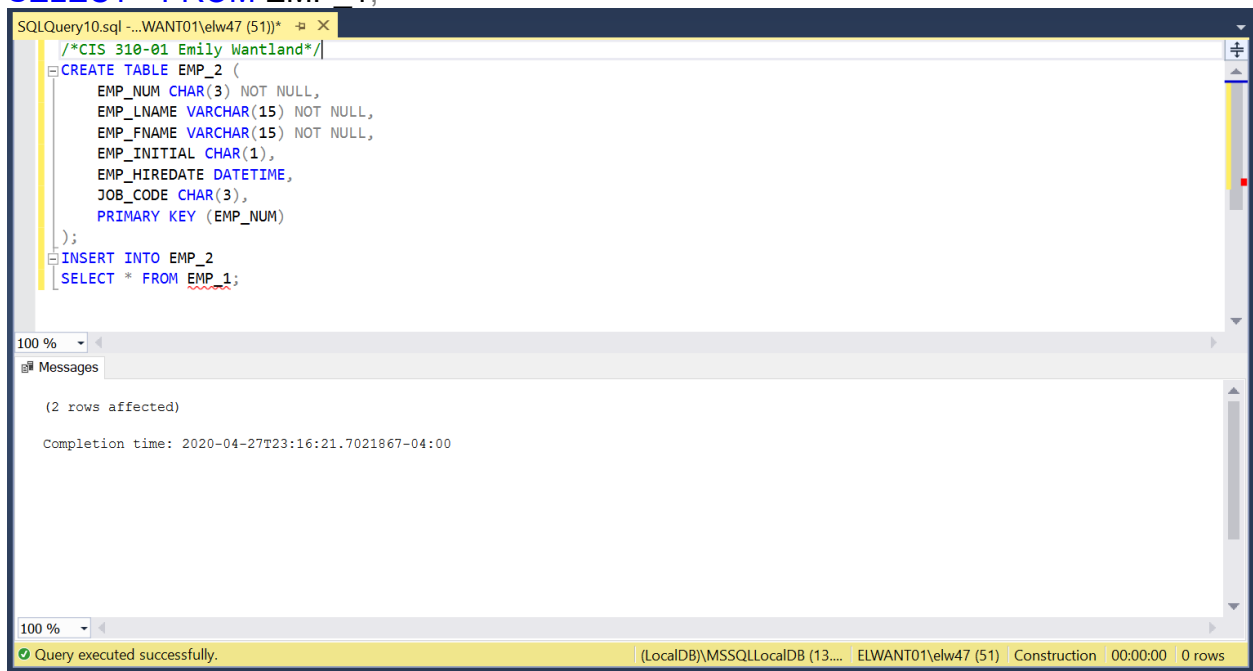
Query executed successfully. (LocalDB)\MSSQLLocalDB (13... ELWANT01\elw47 (51) Construction 00:00:00 0 rows

7.

/*CIS 310-01 Emily Wantland*/

```
CREATE TABLE EMP_2 (  
    EMP_NUM CHAR(3) NOT NULL,  
    EMP_LNAME VARCHAR(15) NOT NULL,  
    EMP_FNAME VARCHAR(15) NOT NULL,  
    EMP_INITIAL CHAR(1),  
    EMP_HIREDATE DATETIME,  
    JOB_CODE CHAR(3),  
    PRIMARY KEY (EMP_NUM)  
);
```

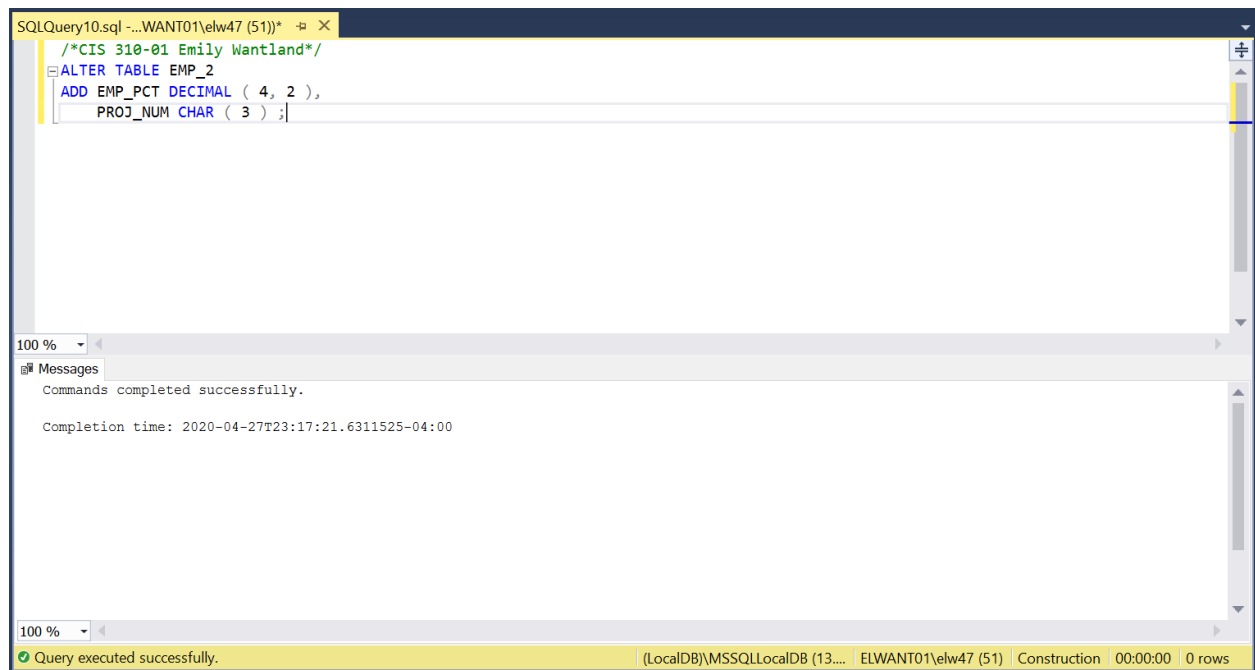
```
INSERT INTO EMP_2  
SELECT * FROM EMP_1;
```



8.

/*CIS 310-01 Emily Wantland*/

```
ALTER TABLE EMP_2  
ADD EMP_PCT DECIMAL ( 4, 2 ),  
    PROJ_NUM CHAR ( 3 );
```



9.
/*CIS 310-01 Emily Wantland*/
UPDATE
EMP_2
SET
EMP_PCT = '3.85'
WHERE
EMP_NUM = '103';

SQLQuery10.sql -...WANT01\elw47 (51))* ✕

```
/*CIS 310-01 Emily Wantland*/  
  
UPDATE  
  EMP_2  
SET  
  EMP_PCT = '3.85'  
WHERE  
  EMP_NUM = '103';
```

100 %

Messages

(0 rows affected)

Completion time: 2020-04-27T23:18:11.5975445-04:00

100 %

✓ Query executed successfully. (LocalDB)\MSSQLLocalDB (13... ELWANT01\elw47 (51) Construction 00:00:00 0 rows