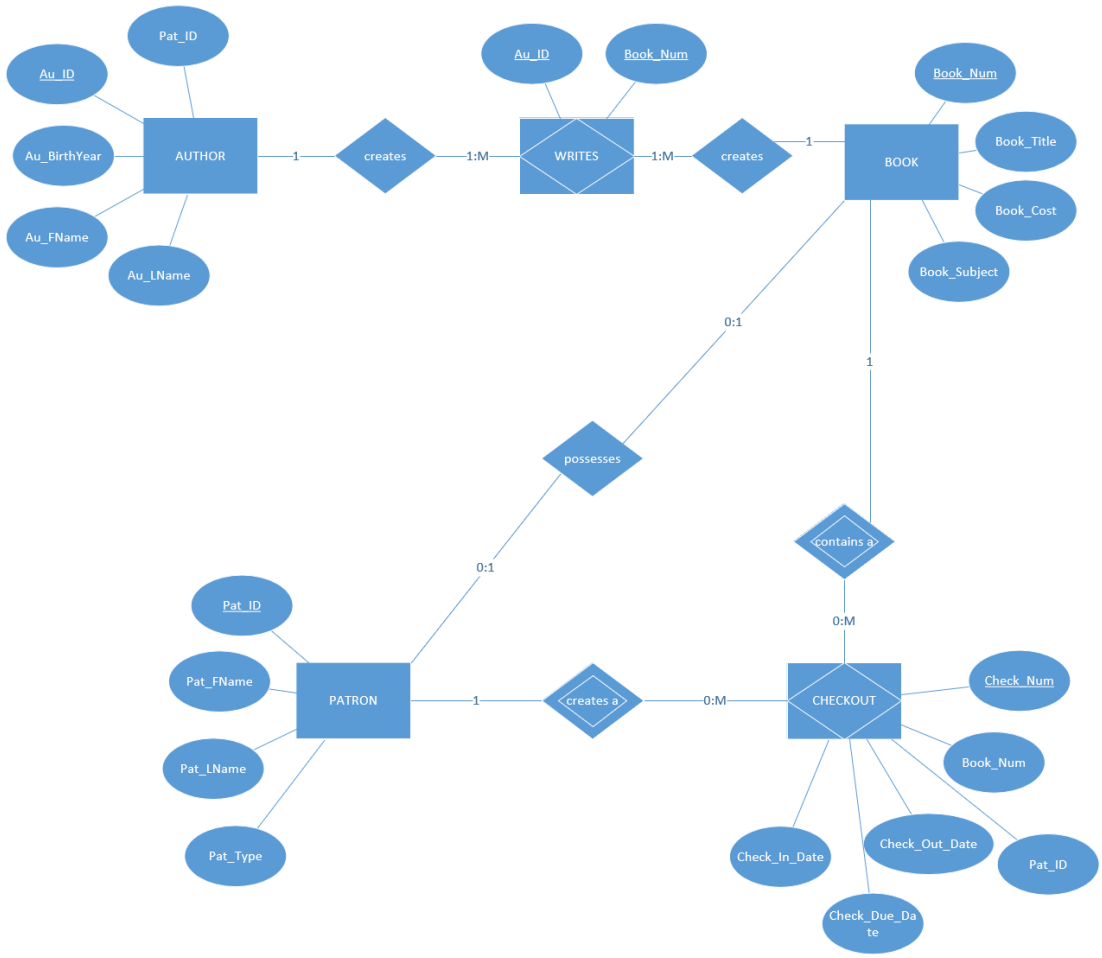
-Alex Merkley, Rylan J, Walker Nicholson, Jacob Forcht, Alex Weber
The Jawnsons

Comprehensive group project

1) Create Chen and Relational diagrams from the ERD diagram you see on page 341



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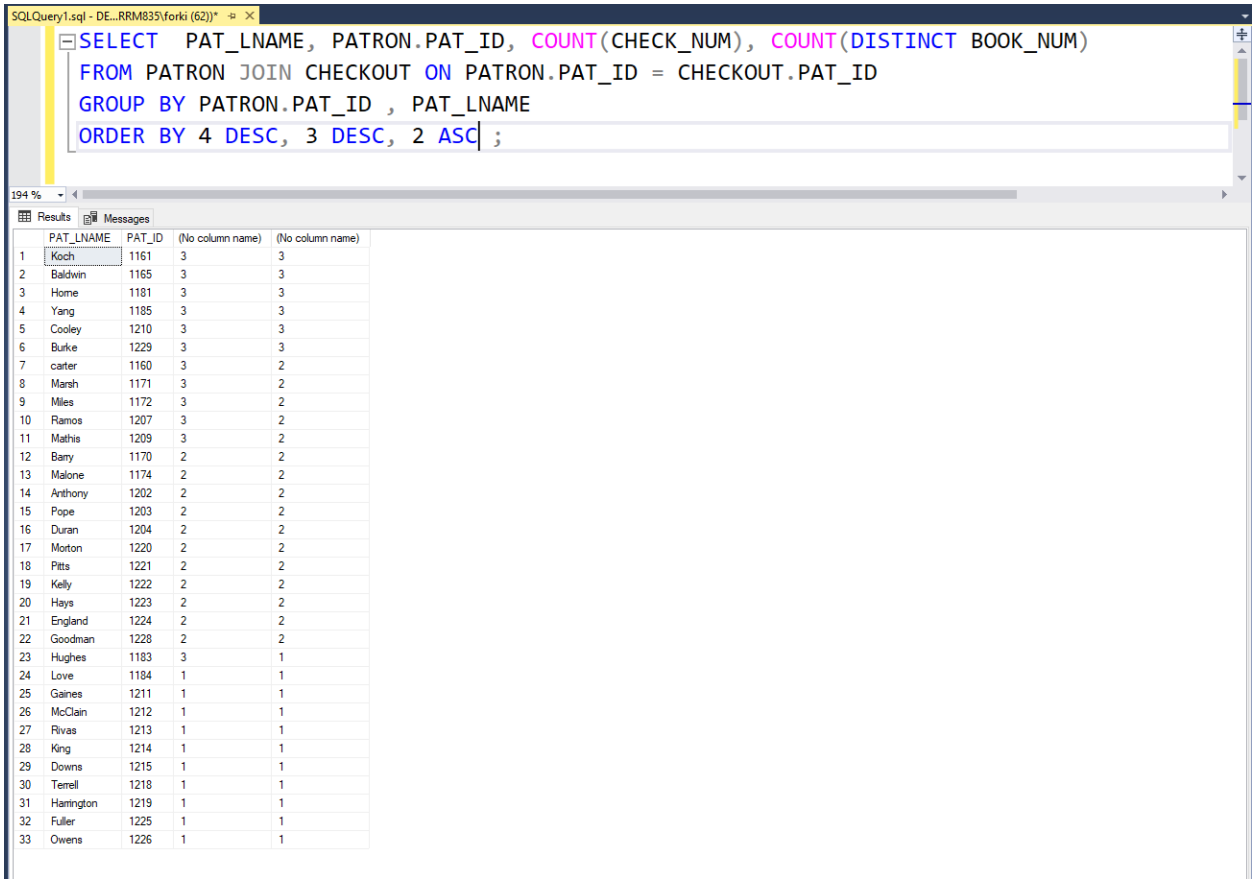
2) Complete the query questions from #102 to #105 in MS-SQL and show me the result of your query that you ran in MS SQL: Please pay attention to each request from the description and the data shown in figures from 7.102 to 7.105.

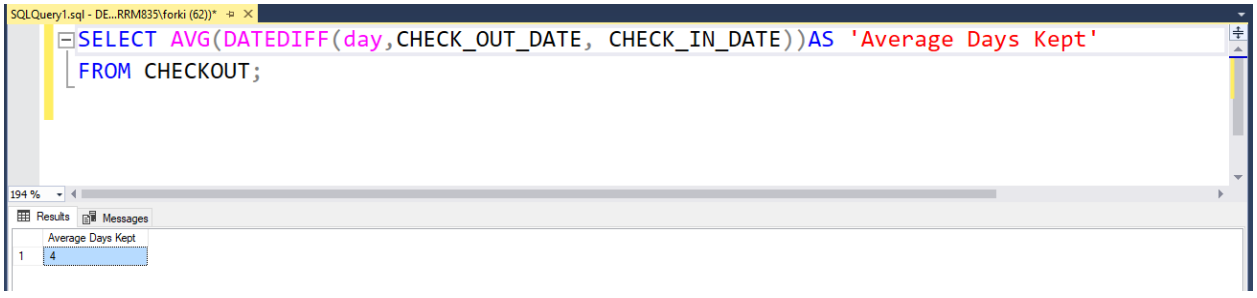
102.



```
SELECT  PAT_LNAME, PATRON.PAT_ID, COUNT(CHECK_NUM), COUNT(DISTINCT BOOK_NUM)
FROM PATRON JOIN CHECKOUT ON PATRON.PAT_ID = CHECKOUT.PAT_ID
GROUP BY PATRON.PAT_ID , PAT_LNAME
ORDER BY 4 DESC, 3 DESC, 2 ASC ;
```

	PAT_LNAME	PAT_ID	(No column name)	(No column name)
1	Koch	1161	3	3
2	Baldwin	1165	3	3
3	Horne	1181	3	3
4	Yang	1185	3	3
5	Cooley	1210	3	3
6	Burke	1229	3	3
7	carter	1160	3	2
8	Marsh	1171	3	2
9	Miles	1172	3	2
10	Ramos	1207	3	2
11	Mathis	1209	3	2
12	Barry	1170	2	2
13	Malone	1174	2	2
14	Anthony	1202	2	2
15	Pope	1203	2	2
16	Duran	1204	2	2
17	Morton	1220	2	2
18	Pitts	1221	2	2
19	Kelly	1222	2	2
20	Hays	1223	2	2
21	England	1224	2	2
22	Goodman	1228	2	2
23	Hughes	1183	3	1
24	Love	1184	1	1
25	Gaines	1211	1	1
26	McClain	1212	1	1
27	Rivas	1213	1	1
28	King	1214	1	1
29	Downs	1215	1	1
30	Terrell	1218	1	1
31	Harrington	1219	1	1
32	Fuller	1225	1	1
33	Owens	1226	1	1

103.



```
SELECT AVG(DATEDIFF(day,CHECK_OUT_DATE, CHECK_IN_DATE))AS 'Average Days Kept'
FROM CHECKOUT;
```

	Average Days Kept
1	4

-104

```
SELECT PAT_ID,AVG(DATEDIFF(day,CHECK_OUT_DATE, CHECK_IN_DATE))AS 'Average Days Kept'
FROM CHECKOUT
GROUP BY PAT_ID
ORDER BY 2 DESC;
```

	PAT_ID	Average Days Kept
1	1184	8
2	1219	8
3	1226	8
4	1228	7
5	1218	7
6	1222	7
7	1160	7
8	1185	6
9	1202	6
10	1203	6
11	1204	5
12	1207	5
13	1209	5
14	1165	5
15	1220	5
16	1183	4
17	1172	4
18	1171	3
19	1181	3
20	1161	3
21	1223	3
22	1224	3
23	1225	3
24	1215	2
25	1229	2
26	1170	2
27	1210	2
28	1211	2
29	1174	1
30	1221	1
31	1213	0
32	1214	0
33	1212	NULL

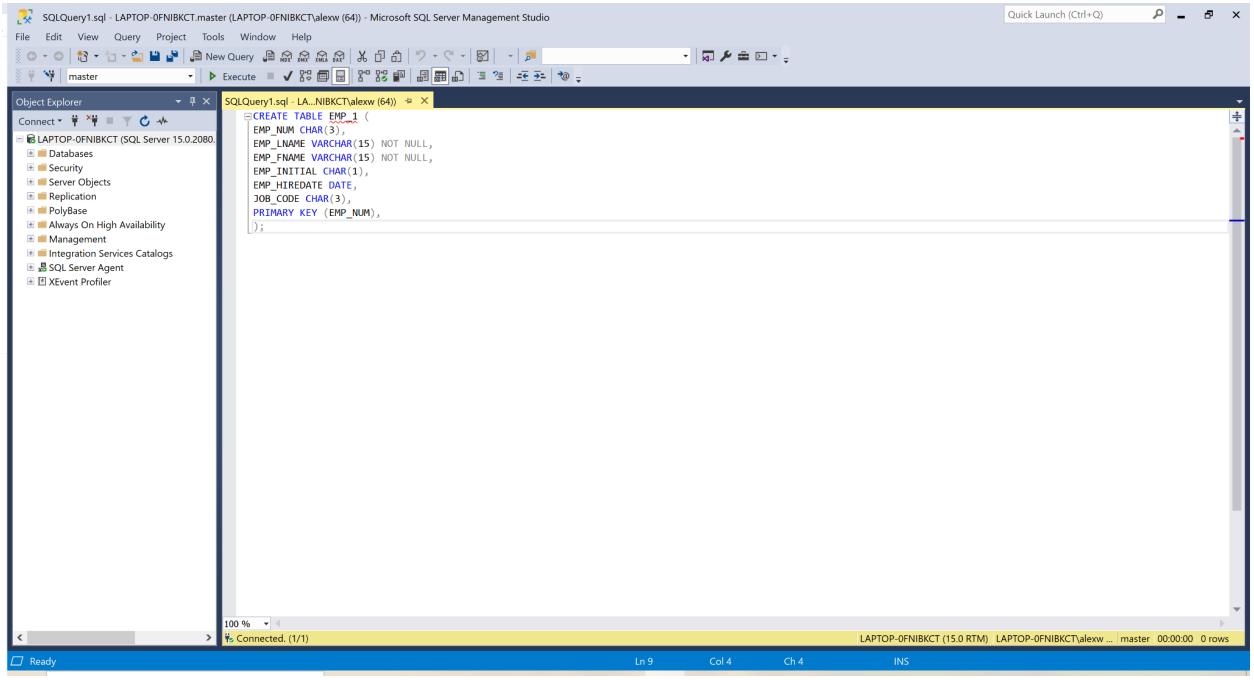
105.

```
SELECT BOOK_NUM, BOOK_TITLE, BOOK_COST
FROM BOOK
WHERE BOOK_COST = (SELECT MIN(BOOK_COST) FROM BOOK)
ORDER BY BOOK_NUM;
```

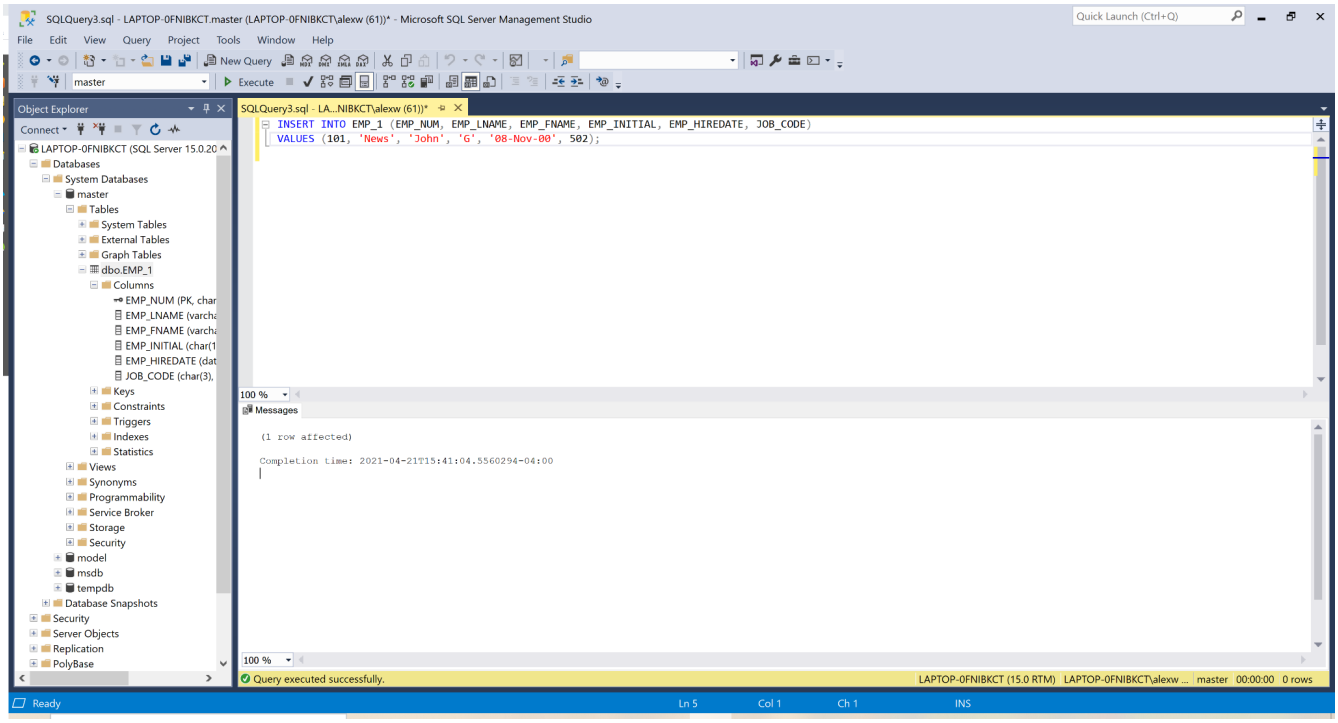
	BOOK_NUM	BOOK_TITLE	BOOK_COST
1	5239	J++ in Mobile Apps	49.95
2	5241	JAVA First Steps	49.95
3	5248	What You Always Wanted to Know About Database, B...	49.95
4	5254	Coding Style for Maintenance	49.95

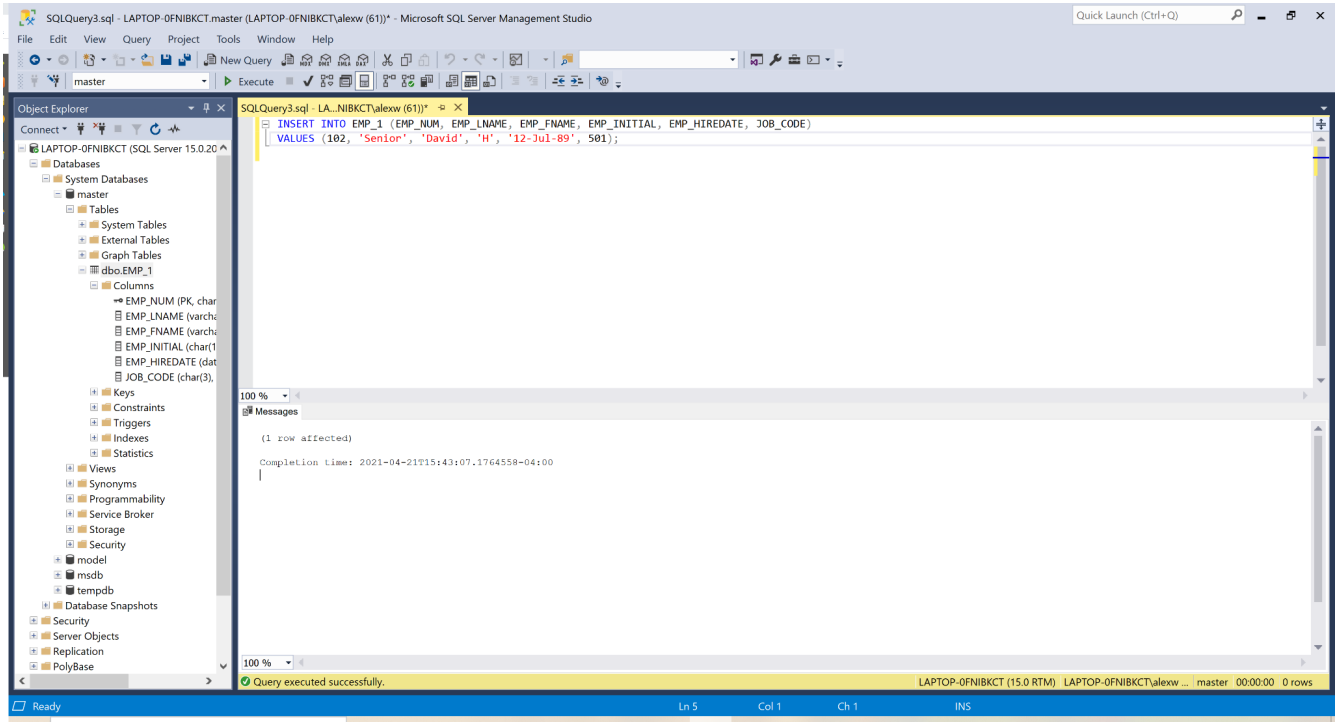
3) Given the database structure on page 426, please use SQL commands: create, insert, update, delete, and save to answer problems 1, 2, 4, 5, 6, 7, 8, and 9 (PAGES 427-428). Please show me the result of your query that you ran in MS SQL. I need to see one of your team's names depicted on top of the screenshot showing that you have used MS SQL to conduct these exercises.

1.

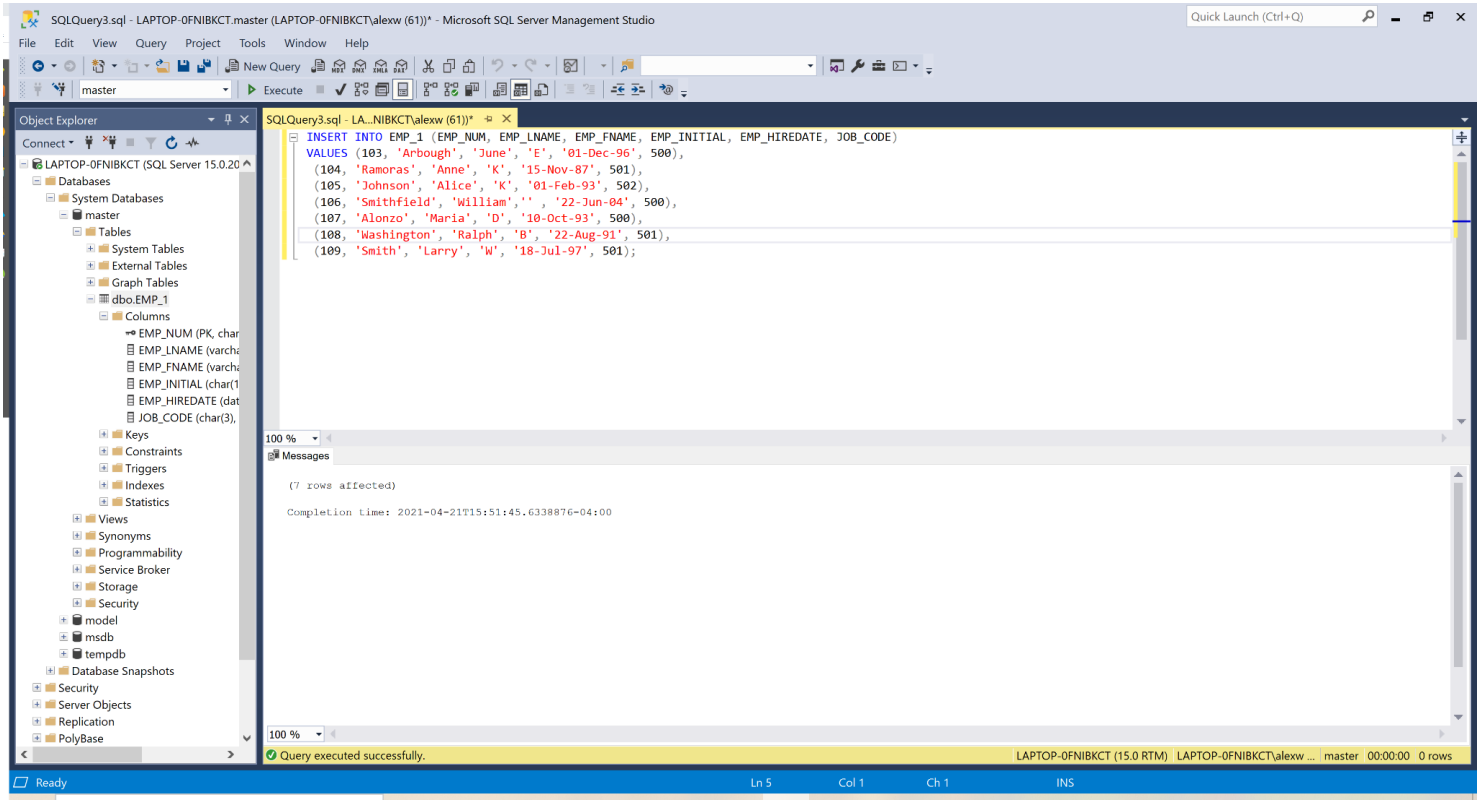


2. The Jawnsons

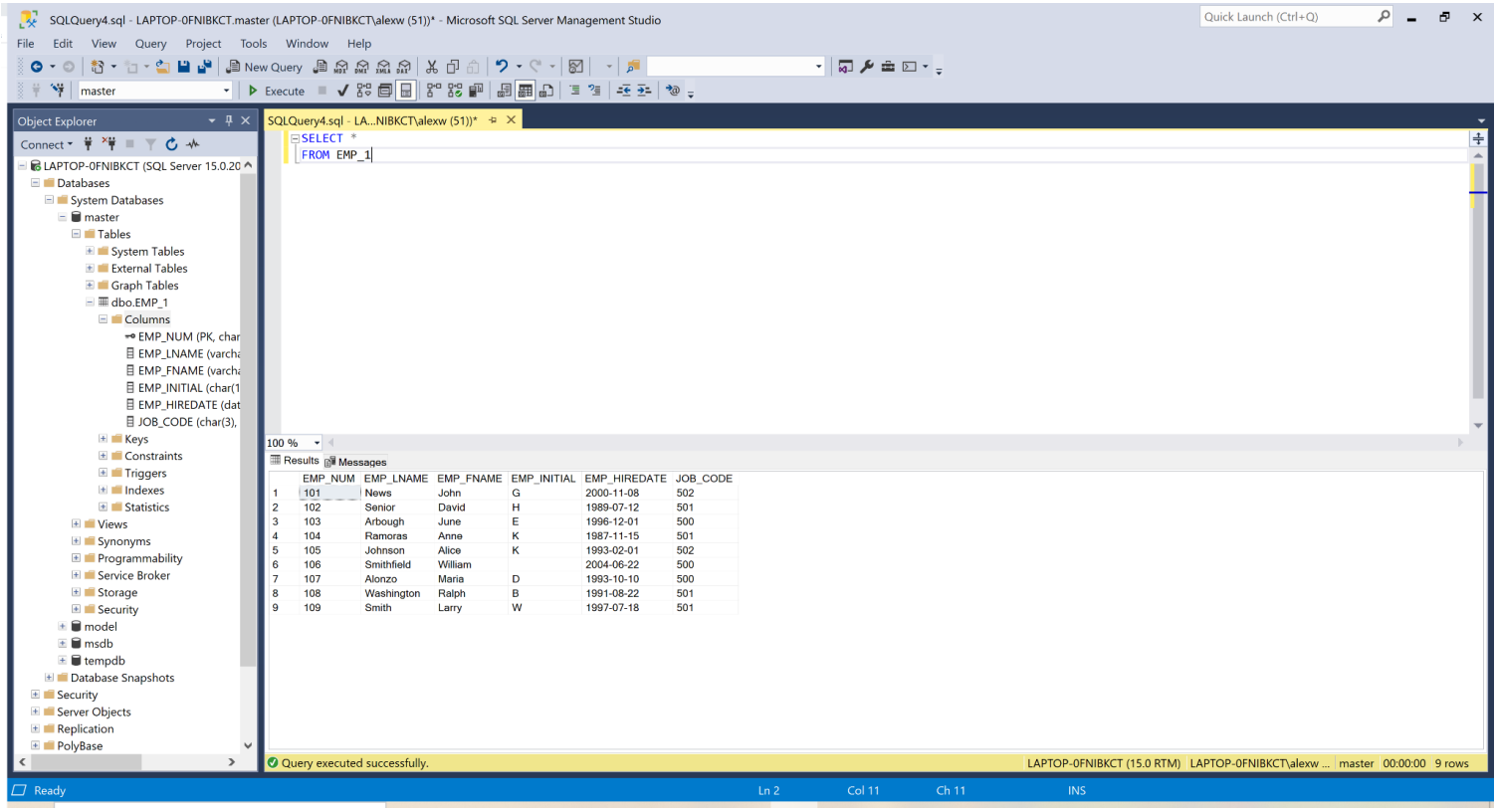




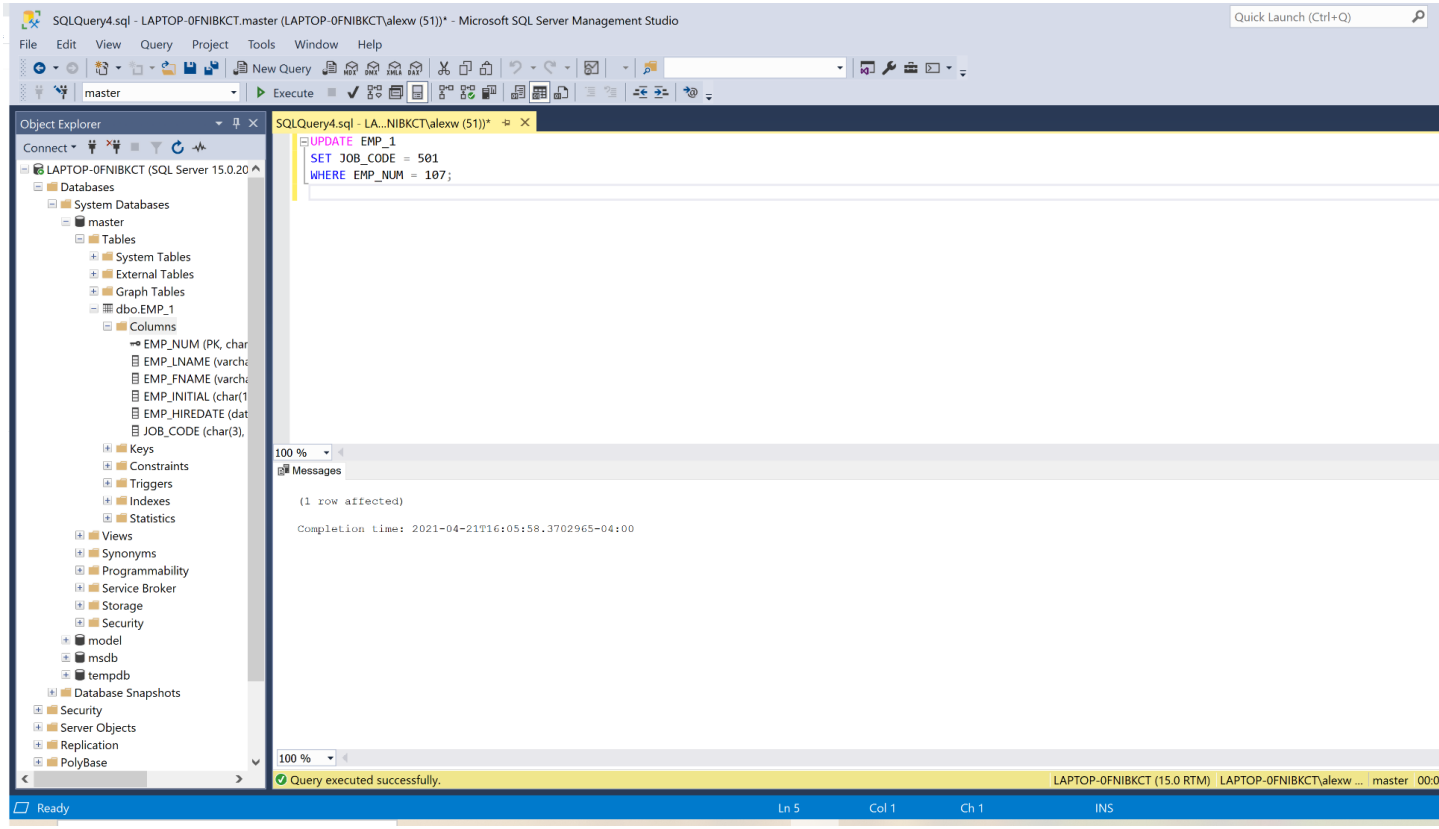
3. The Jawnsons



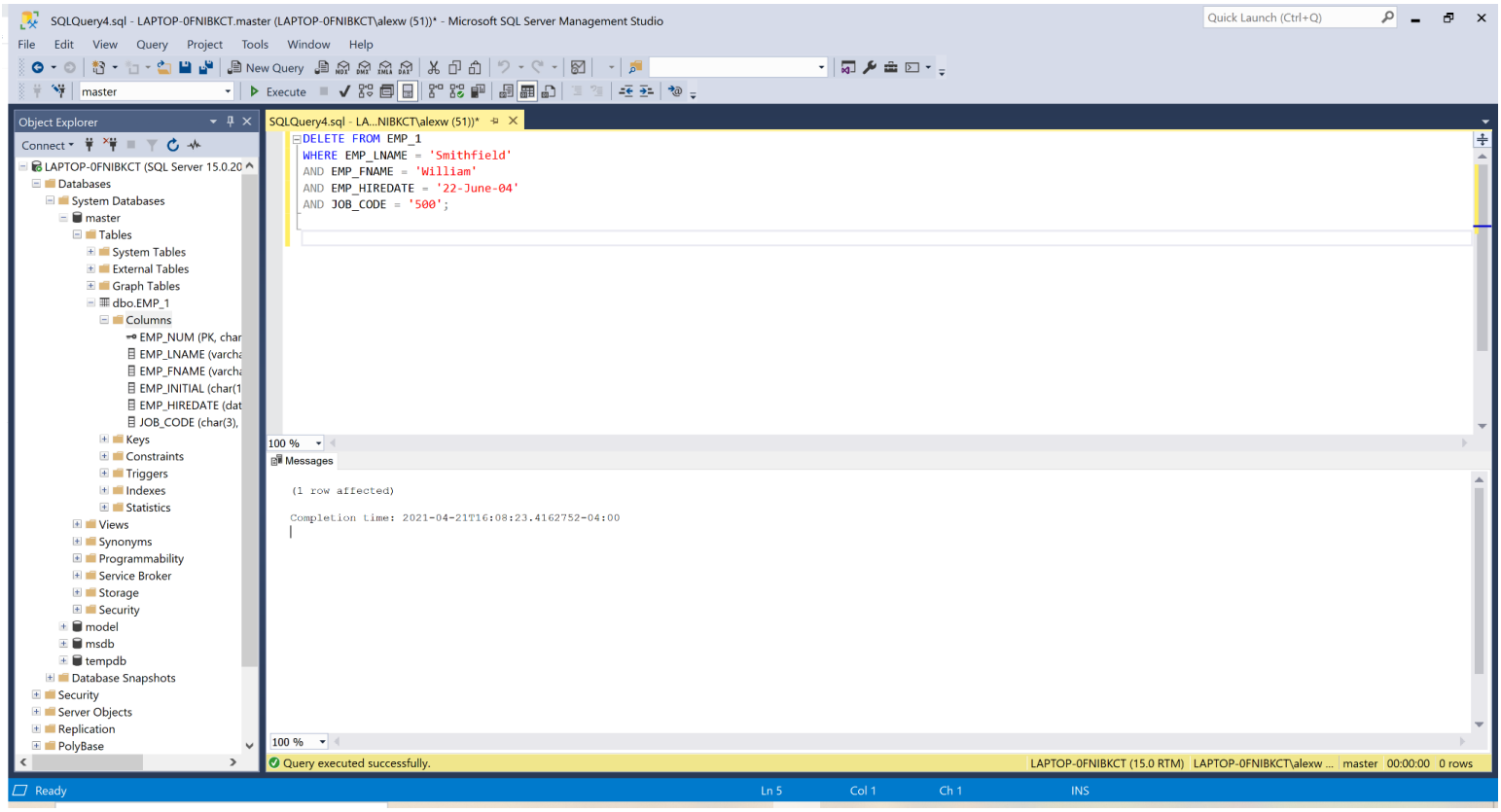
4. The Jawnsons



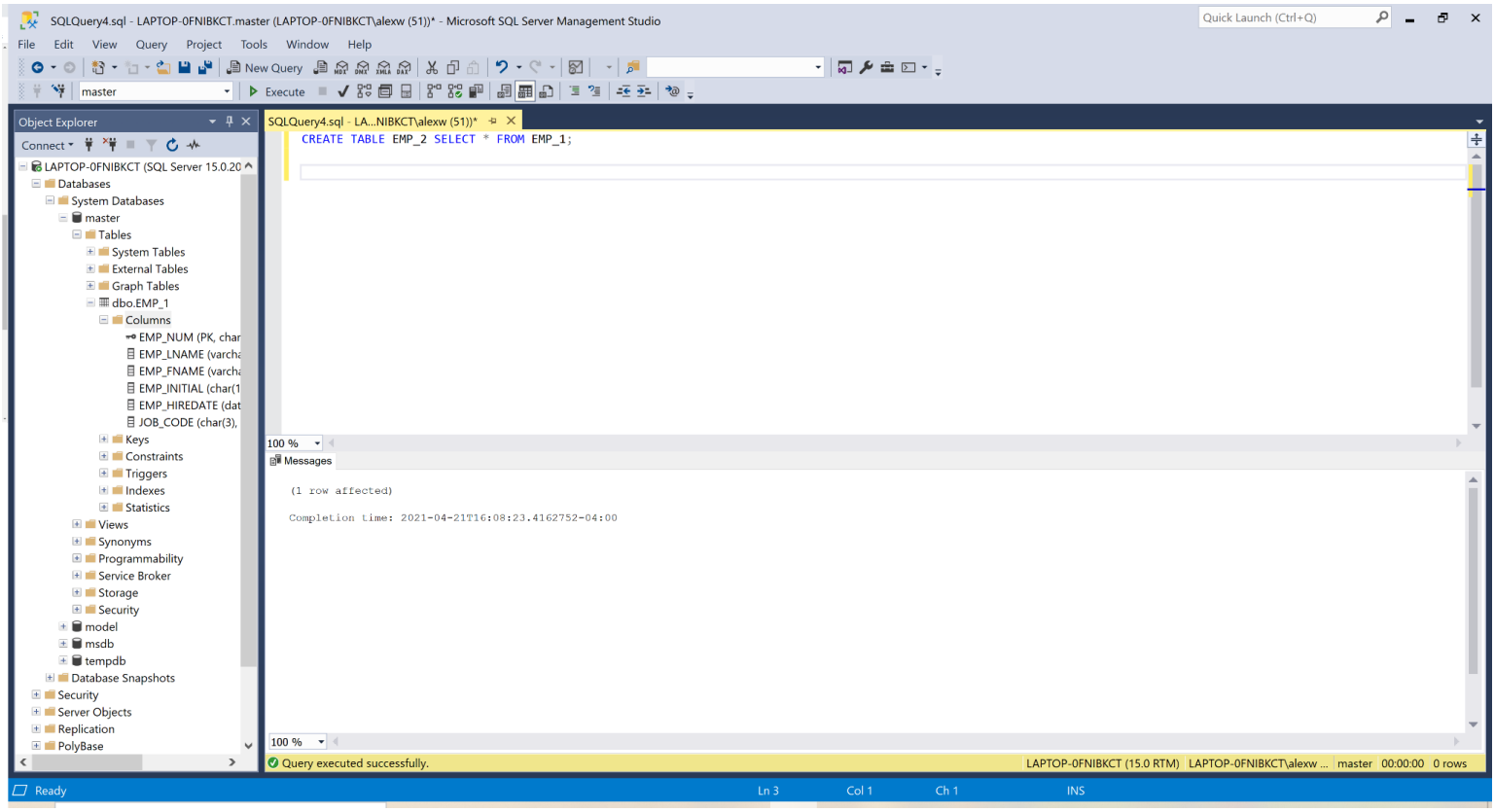
5. The Jawnsons



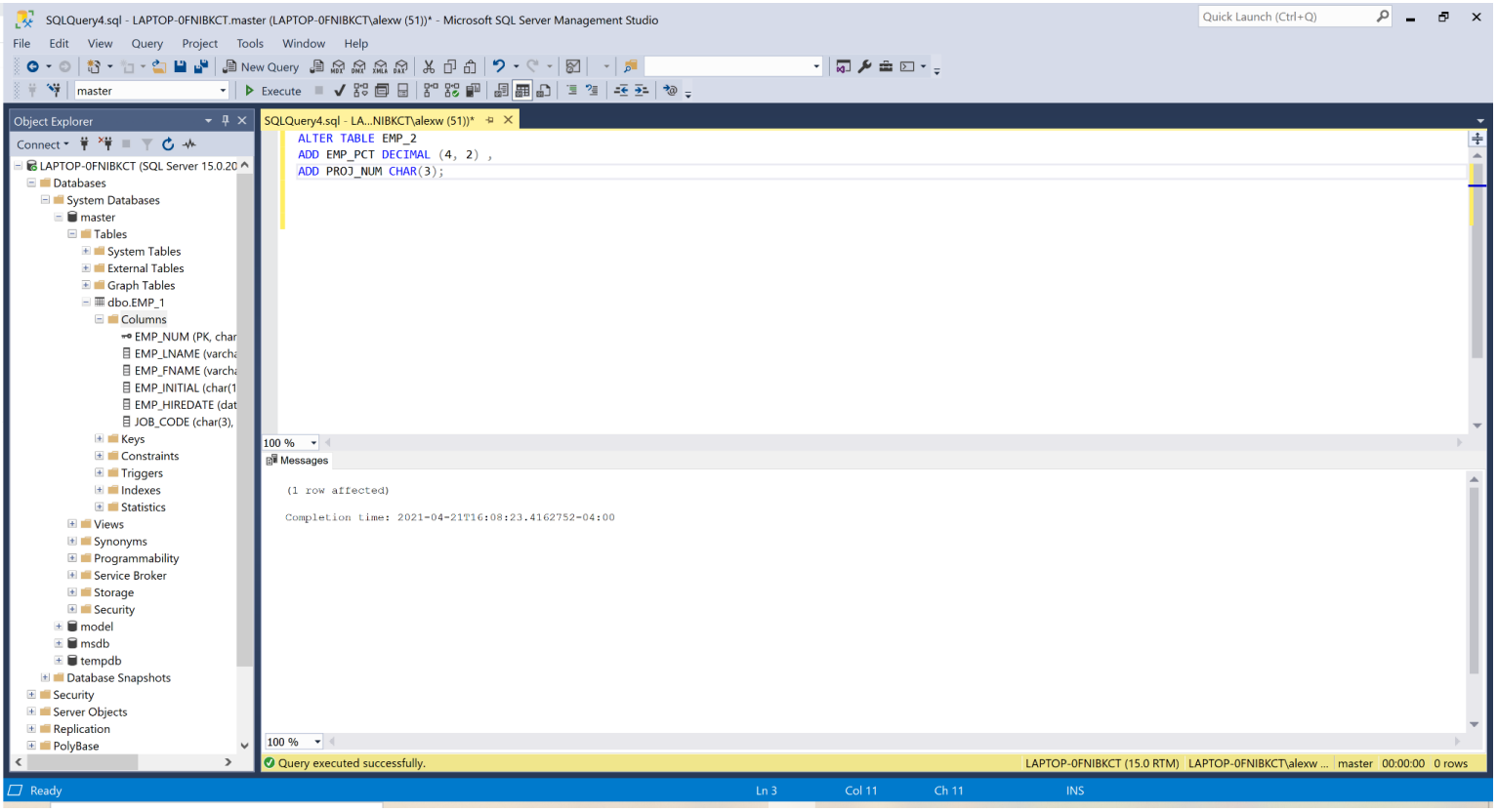
6. The Jawnsons



7. The Jawnsons



8. The Jawnsons



9. The Jawnsons