דו״ח לשלב ב׳

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שאילתות Select

את כל השאילתות ניתן לראות בGit

שאילתות ללא פרמטרים

שאילתה מס׳ 1:

מוצאת את המספר הכולל של משימות ניקיון לכל חבר צוות ב-30 הימים האחרונים ומסדרת לפי מספר המשימות

SQL Output Statistics

```
-- Query 1: Find the Total Number of Cleaning Tasks per Staff Member in the L

SELECT sm.SID, sm.FIRST_NAME, sm.LAST_NAME, COUNT(ct.TID) AS total_tasks
FROM staff_member sm
JOIN cleaning_task ct ON sm.SID = ct.SID
JOIN (
    SELECT DISTINCT ct2.TID
    FROM cleaning_task ct2
    JOIN maintenance_request mr2 ON ct2.RID = mr2.RID
    WHERE mr2.DATE_REPORTED >= SYSDATE - 30
) recent_tasks ON ct.TID = recent_tasks.TID
GROUP BY sm.SID, sm.FIRST_NAME, sm.LAST_NAME
HAVING COUNT(ct.TID) > 0
ORDER BY total_tasks DESC;
```

	SID	FIRST_NAME	LAST_NAME	TOTAL_TASKS
1	52	Goldie	Crouch	1
2	184	Brothers	Duncan	1
3	345	Praga	Uggams	1
4	310	Glenn	Pearce	1
5	248	Loretta	Macy	1

שאילתה מס׳ 2:

מוצאת את רשימת החדרים עם בקשות תחזוקה ומשימות ניקיון ב-60 הימים האחרונים

SQL Output Statistics

```
-- Query 2: List of Rooms with Maintenance Requests and Cleaning Tasks in the Last 60 Days

SELECT r.RID, r.TYPE, r.OCCUPANCY_STATUS, r.CLEANING_STATUS
FROM room r
JOIN maintenance_request mr ON r.RID = mr.RID
JOIN cleaning_task ct ON r.RID = ct.RID
WHERE mr.DATE_REPORTED >= SYSDATE - 60
AND ct.STATUS = 'Pending'
GROUP BY r.RID, r.TYPE, r.OCCUPANCY_STATUS, r.CLEANING_STATUS
ORDER BY r.RID;
```

	RID	TYPE	OCCUPANCY_STATUS	CLEANING_STATUS
1	1	Single	Occupied	Clean
2	2	Double	Vacant	Dirty
3	3	Suite	Occupied	Clean
4	4	Single	Vacant	Clean
5	6	Suite	Vacant	Clean
6	7	Single	Occupied	Dirty
7	8	Double	Vacant	Clean

שאילתה מס׳ 3:

מוצאת את אנשי הצוות עם רוב בקשות התחזוקה בשנה

```
-- Query 3: Staff Members with Most Maintenance Requests in a Year

SELECT
    sm.SID,
    sm.First_Name,
    sm.Last_Name,
    COUNT(mr.MID) AS Number_Of_Requests,
    EXTRACT(YEAR FROM mr.Date_Reported) AS Year
FROM
    Maintenance_Request mr
JOIN
    Staff_Member sm ON mr.SID = sm.SID
WHERE
    EXTRACT(YEAR FROM mr.Date_Reported) = 2023
GROUP BY
```

	SID	FIRST_NAME	LAST_NAME	NUMBER_OF_REQUESTS	YEAR
1	365	Jared	Lennox	5	2023
2	42	Roberta	Gary	5	2023
3	68	Anna	Fender	4	2023
4	394	Ernest	Ribisi	3	2023
5	230	Collin	Moreno	3	2023
6	253	Kim	Coyote	3	2023
7	313	Mekhi	Costa	3	2023
8	352	Jeanne	Ceasar	3	2023
9	140	Aimee	Boyle	3	2023
10	29	Tyrone	Deschanel	3	2023
11	7	Emma	Garcia	3	2023

שאילתה מס׳ 4:

מוצאת את הכמות הכוללת של חומרי ניקוי שהיו בשימוש בשנה ובסוג חדר ספציפיים

Select3.sql | Select4.sql | delete1.sql | delete2.sql | select * from room | Select1.sql | Select2.s

SQL | Output | Statistics

```sql
-- Query 4 : Total Quantity of Cleaning Supplies Used in Specific Year and Room Type

SELECT
    cs.Name AS Cleaning_Supply,
    SUM(nf.Quantity) AS Total_Quantity_Used,
    rt.Year,
    rt.Room_Type
FROM
    Cleaning_Supply cs
JOIN
    Need_for nf ON cs.SUID = nf.SUID
JOIN (
    SELECT
        r.RID,
        r.Type AS Room_Type,
```

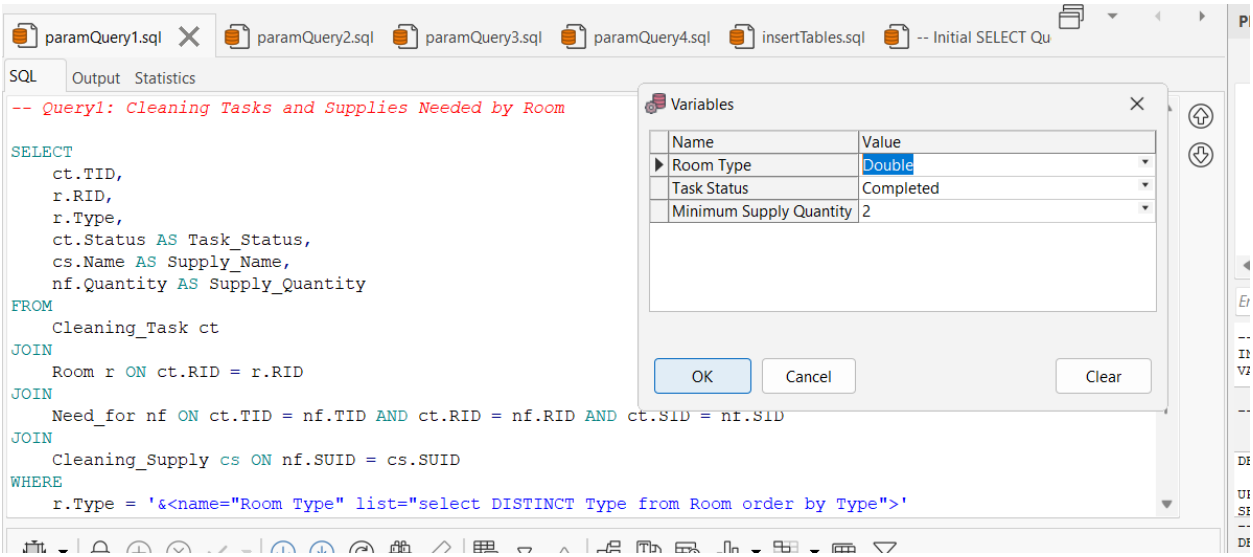
	CLEANING_SUPPLY	TOTAL_QUANTITY_USED	YEAR	ROOM_TYPE
1	Bathroom Deodorizer	72	2023	Double
2	Lint Roller	60	2023	Double
3	Rubber Gloves	56	2023	Double
4	Paper Towels	53	2023	Double
5	Vacuum	38	2023	Double
6	Stainless Steel Cleaner	36	2023	Double
7	Wood Polish	34	2023	Double
8	Hand Sanitizer	33	2023	Double
9	White Vinegar	20	2023	Double
10	Floor Polish	19	2023	Double
11	Microfiber Cloths	18	2023	Double
12	Carpet Cleaner	17	2023	Double
13	Window Squeegee	16	2023	Double
14	Detergent	16	2023	Double

שאילתות עם פרמטרים

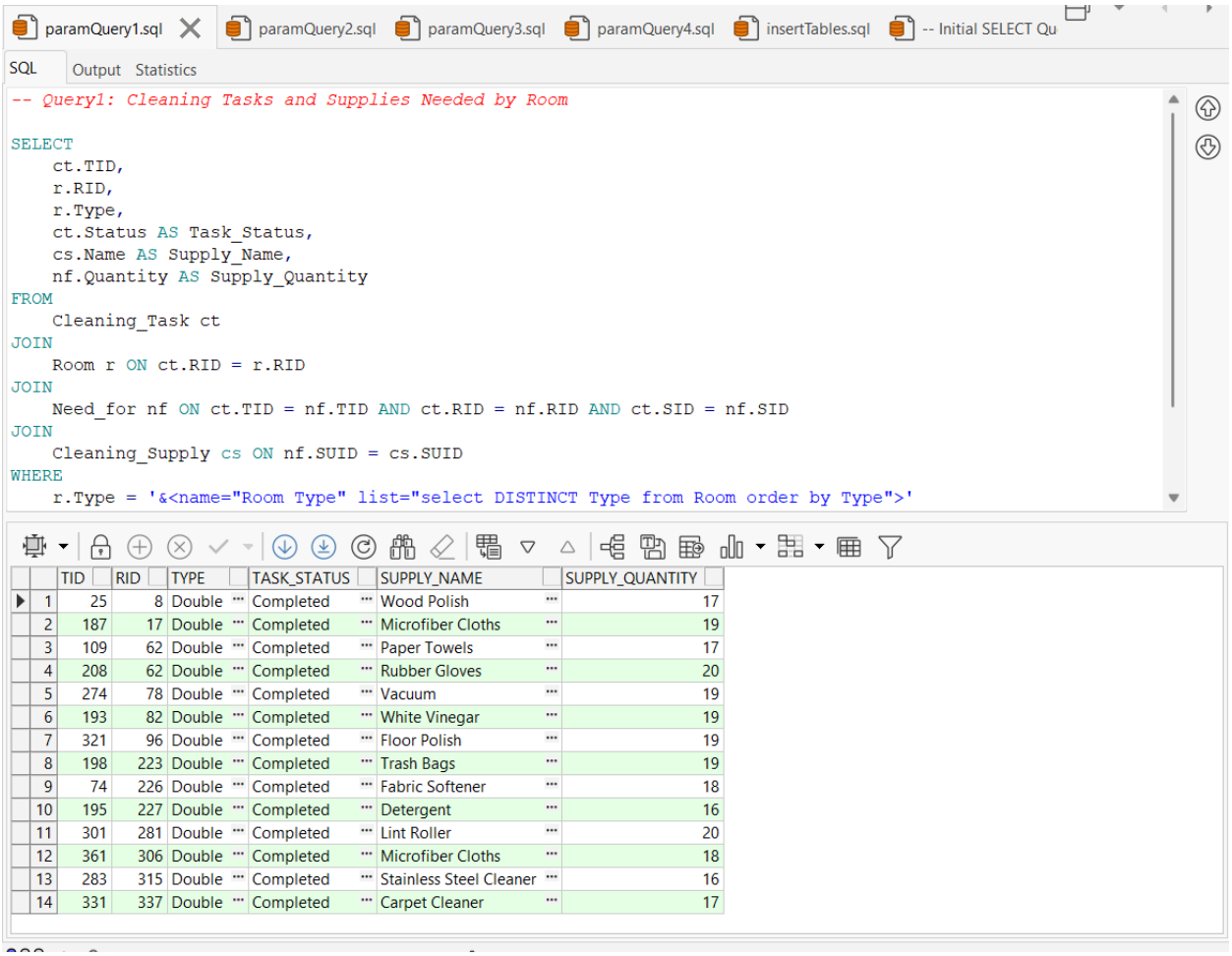
שאילתה מס׳ 1:

משימות ניקיון וחומרי ניקוי הדרושים בחדר

צילום ההרצה:



צילום התוצאה:

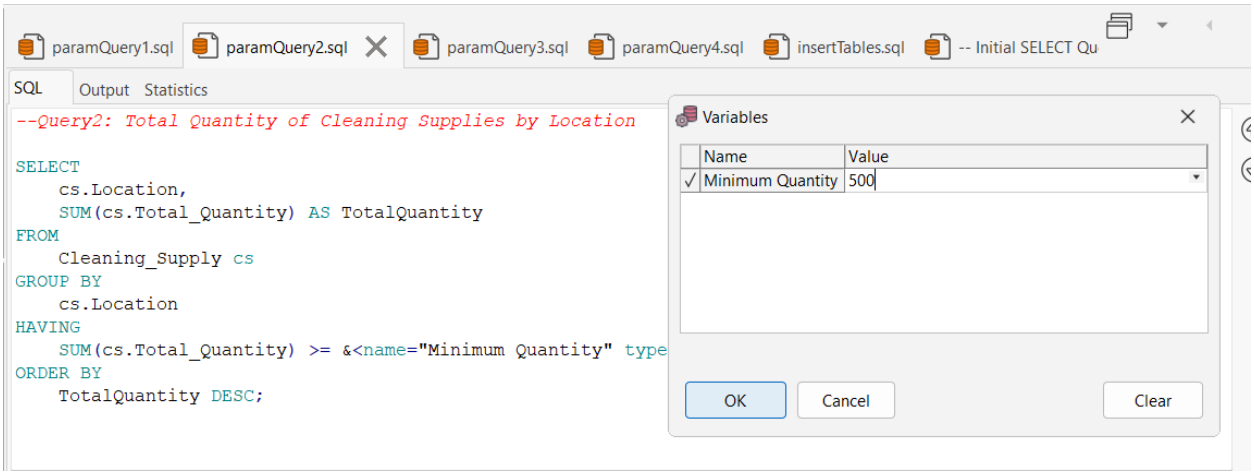


	TID	RID	TYPE	TASK_STATUS	SUPPLY_NAME	SUPPLY_QUANTITY
1	25	8	Double	Completed	Wood Polish	17
2	187	17	Double	Completed	Microfiber Cloths	19
3	109	62	Double	Completed	Paper Towels	17
4	208	62	Double	Completed	Rubber Gloves	20
5	274	78	Double	Completed	Vacuum	19
6	193	82	Double	Completed	White Vinegar	19
7	321	96	Double	Completed	Floor Polish	19
8	198	223	Double	Completed	Trash Bags	19
9	74	226	Double	Completed	Fabric Softener	18
10	195	227	Double	Completed	Detergent	16
11	301	281	Double	Completed	Lint Roller	20
12	361	306	Double	Completed	Microfiber Cloths	18
13	283	315	Double	Completed	Stainless Steel Cleaner	16
14	331	337	Double	Completed	Carpet Cleaner	17

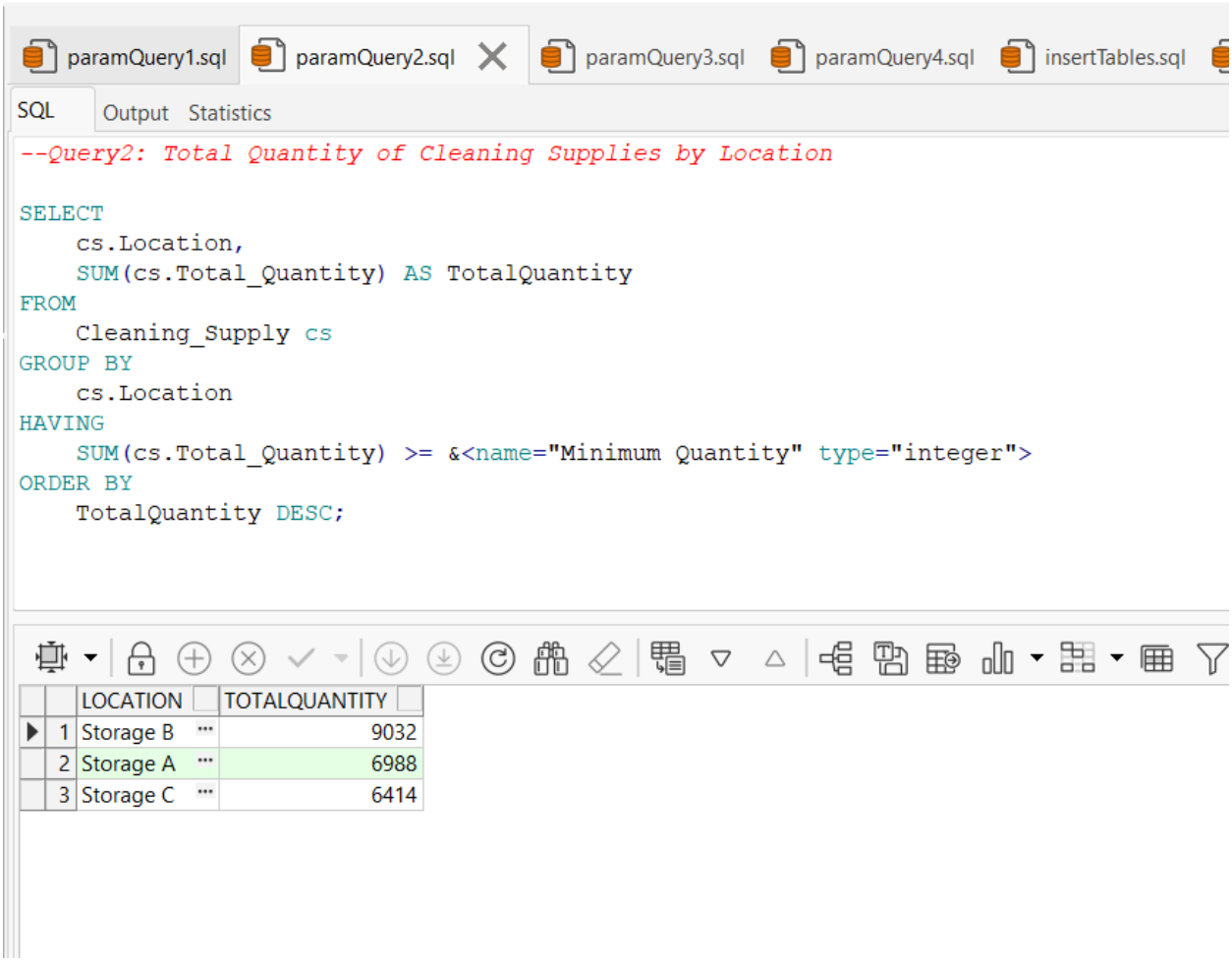
שאילתה מס׳ 2:

כמות כוללת של חומרי ניקוי לפי מיקום.

צילום ההרצה:



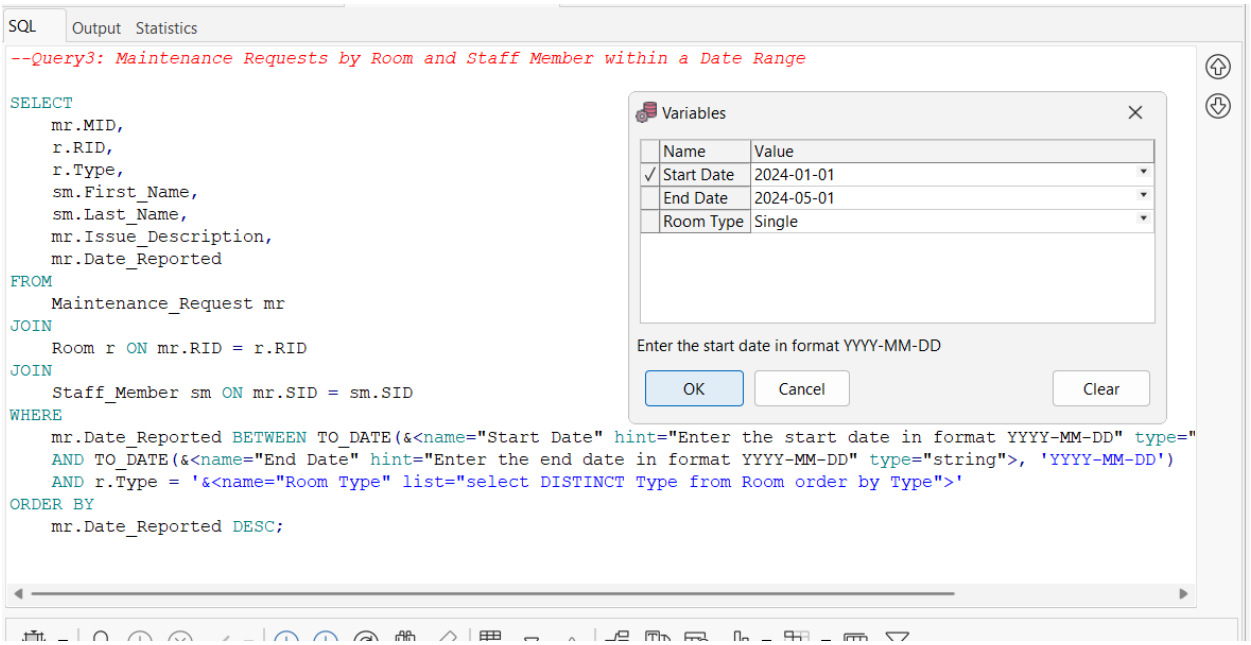
צילום התוצאה:



שאילתה מס׳ 3:

בקשות תחזוקה של חדר וחבר צוות בטווח תאריכים.

צילום ההרצה:



צילום התוצאה:

paramQuery1.sql | paramQuery2.sql | paramQuery3.sql | paramQuery4.sql | insertTables.sql | -- Initial SELECT Qu

SQL | Output | Statistics

```
--Query3: Maintenance Requests by Room and Staff Member within a Date Range

SELECT
    mr.MID,
    r.RID,
    r.Type,
    sm.First_Name,
    sm.Last_Name,
    mr.Issue_Description,
    mr.Date_Reported
FROM
    Maintenance_Request mr
JOIN
    Room r ON mr.RID = r.RID
JOIN
    Staff_Member sm ON mr.SID = sm.SID
WHERE
    mr.Date_Reported BETWEEN TO_DATE(&<name="Start Date" hint="Enter the start date in format YYYY-MM-DD"
    AND TO_DATE(&<name="End Date" hint="Enter the end date in format YYYY-MM-DD" type="string">, 'YYYY-MM
    AND r.Type = '&<name="Room Type" list="select DISTINCT Type from Room order by Type">'
ORDER BY
    mr.Date_Reported DESC;
```

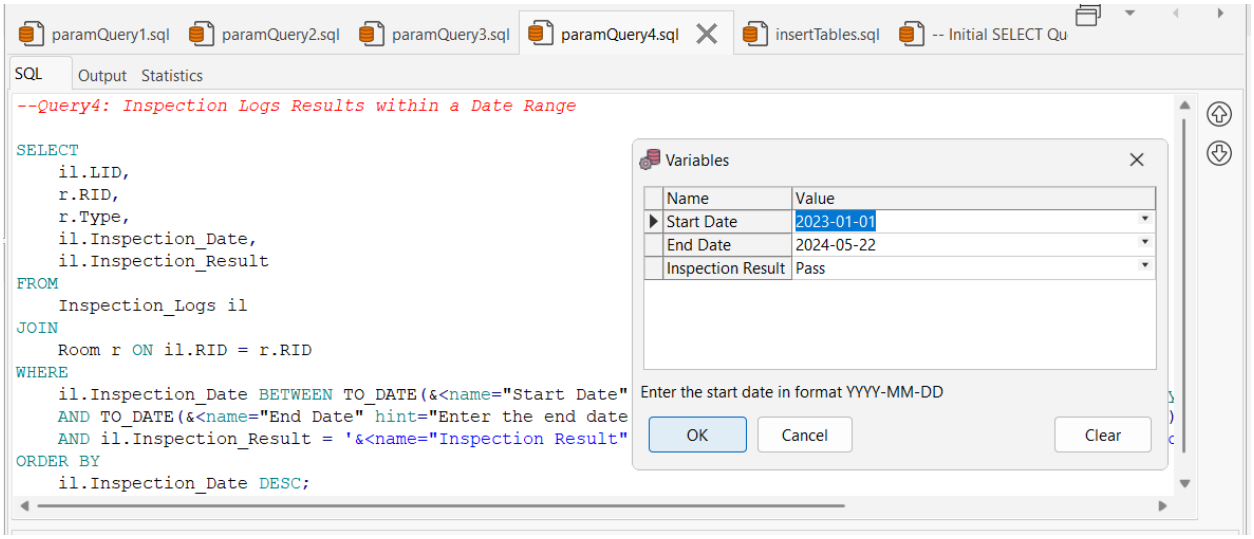
	MID	RID	TYPE	FIRST_NAME	LAST_NAME	ISSUE_DESCRIPTION	DATE_REPORTED
1	1	1	Single	John	Doe	Leaky faucet	5/1/2024
2	240	157	Single	Raul	Biehn	Pest infestation	4/24/2024
3	352	280	Single	Don	Wopat	Stained carpet	4/24/2024
4	338	312	Single	Andrea	Dalton	Broken window	4/24/2024
5	347	116	Single	Laura	Basinger	Broken switch	4/22/2024
6	164	57	Single	Ned	Hopkins	Smashed mirror	4/10/2024
7	149	350	Single	Horace	Mifune	Freezing refrigerator	4/8/2024
8	117	27	Single	Hector	Tripplehorn	Clogged drain	4/7/2024
9	13	229	Single	Val	Kinski	Flickering lights	4/6/2024

17:7 c##jerem@XE [7:23:23 PM] 9 rows selected in 0.040 seconds (more...)

שאילתה מס׳ 4:

בדיקת תוצאות יומני בדיקה בטווח תאריכים.

צילום ההרצה:



צילום התוצאה:

paramQuery1.sql | paramQuery2.sql | paramQuery3.sql | paramQuery4.sql | insertTables.sql | -- Initial SELECT Qu

SQL | Output | Statistics

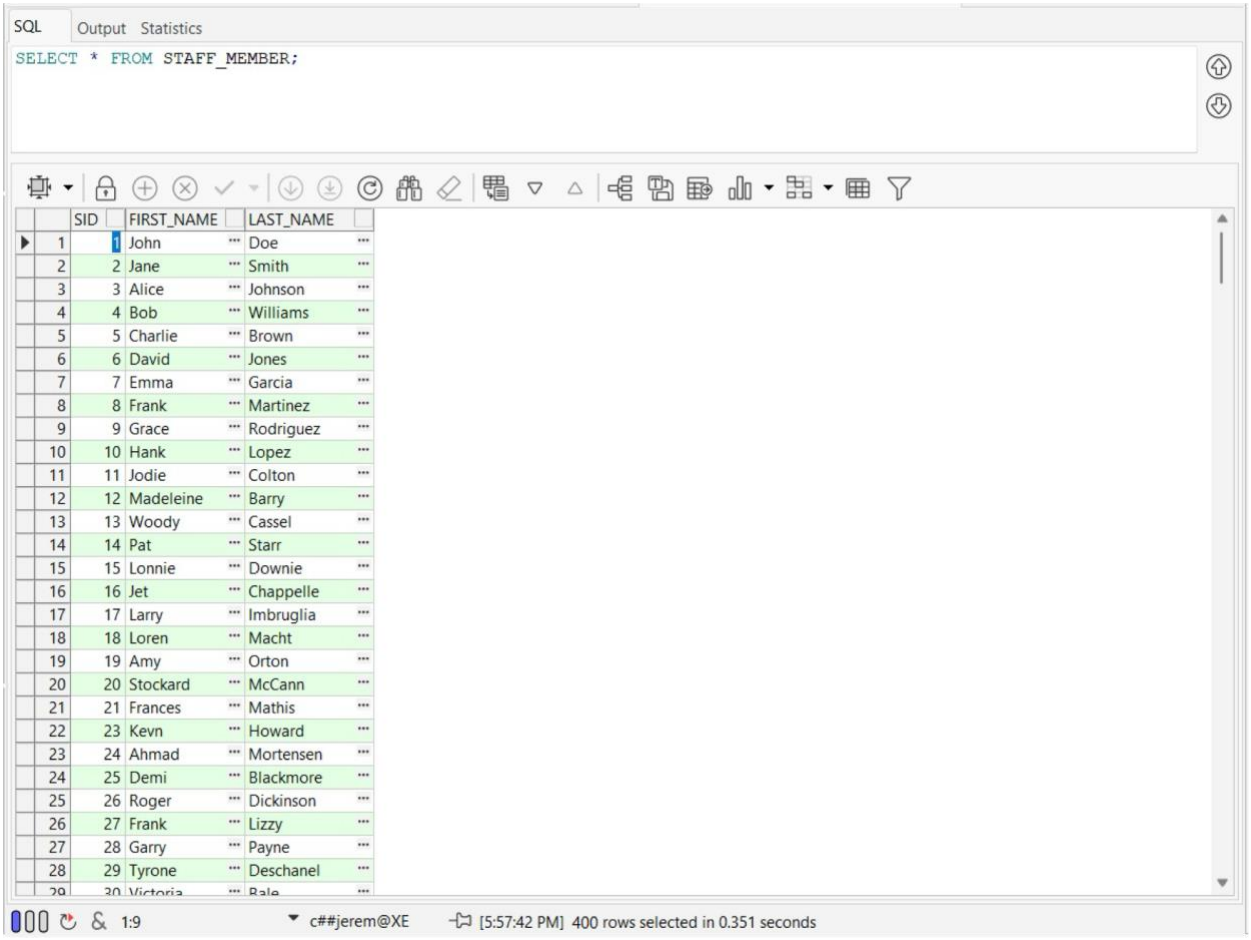
```
--Query4: Inspection Logs Results within a Date Range

SELECT
    il.LID,
    r.RID,
    r.Type,
    il.Inspection_Date,
    il.Inspection_Result
FROM
    Inspection_Logs il
JOIN
    Room r ON il.RID = r.RID
WHERE
    il.Inspection_Date BETWEEN TO_DATE(&<name="Start Date" hint="Enter the start date in format YYYY-MM-DI
    AND TO_DATE(&<name="End Date" hint="Enter the end date in format YYYY-MM-DD" type="string">, 'YYYY-MM-
    AND il.Inspection_Result = '&<name="Inspection Result" list="select DISTINCT Inspection_Result from In
ORDER BY
    il.Inspection_Date DESC;
```

	LID	RID	TYPE	INSPECTION_DATE	INSPECTION_RESULT
1	179	217	Single	5/17/2024	Pass
2	77	337	Double	5/15/2024	Pass
3	80	19	Suite	5/14/2024	Pass
4	232	325	Double	5/10/2024	Pass
5	10	10	Single	5/10/2024	Pass
6	9	9	Suite	5/9/2024	Pass
7	149	319	Suite	5/8/2024	Pass
8	7	7	Single	5/7/2024	Pass
9	6	6	Suite	5/6/2024	Pass
10	4	4	Single	5/4/2024	Pass
11	3	3	Suite	5/3/2024	Pass
12	184	330	Suite	5/2/2024	Pass
13	1	1	Single	5/1/2024	Pass
14	356	142	Double	4/23/2024	Pass

שאילתות delete

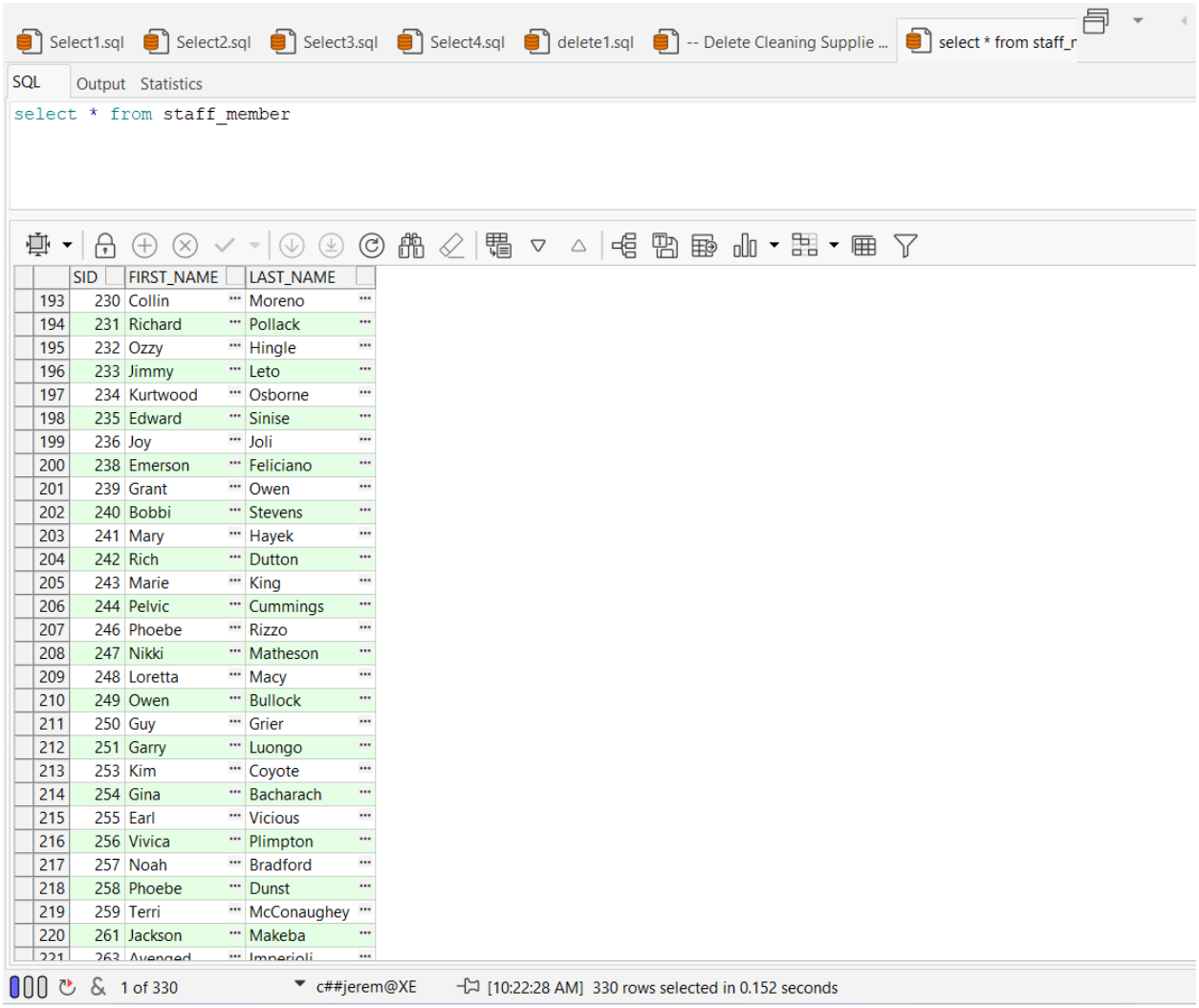
First delete query: Staff Member

בסיס הנתונים לפני הרצה:



השאילתה מוחקת חברי צוות שאינם פעילים, שלא היו מעורבים במשימות ניקיון או בקשות תחזוקה בשנה האחרונה: (ניתן לראות בצילום ש70 שורות נמחקו)

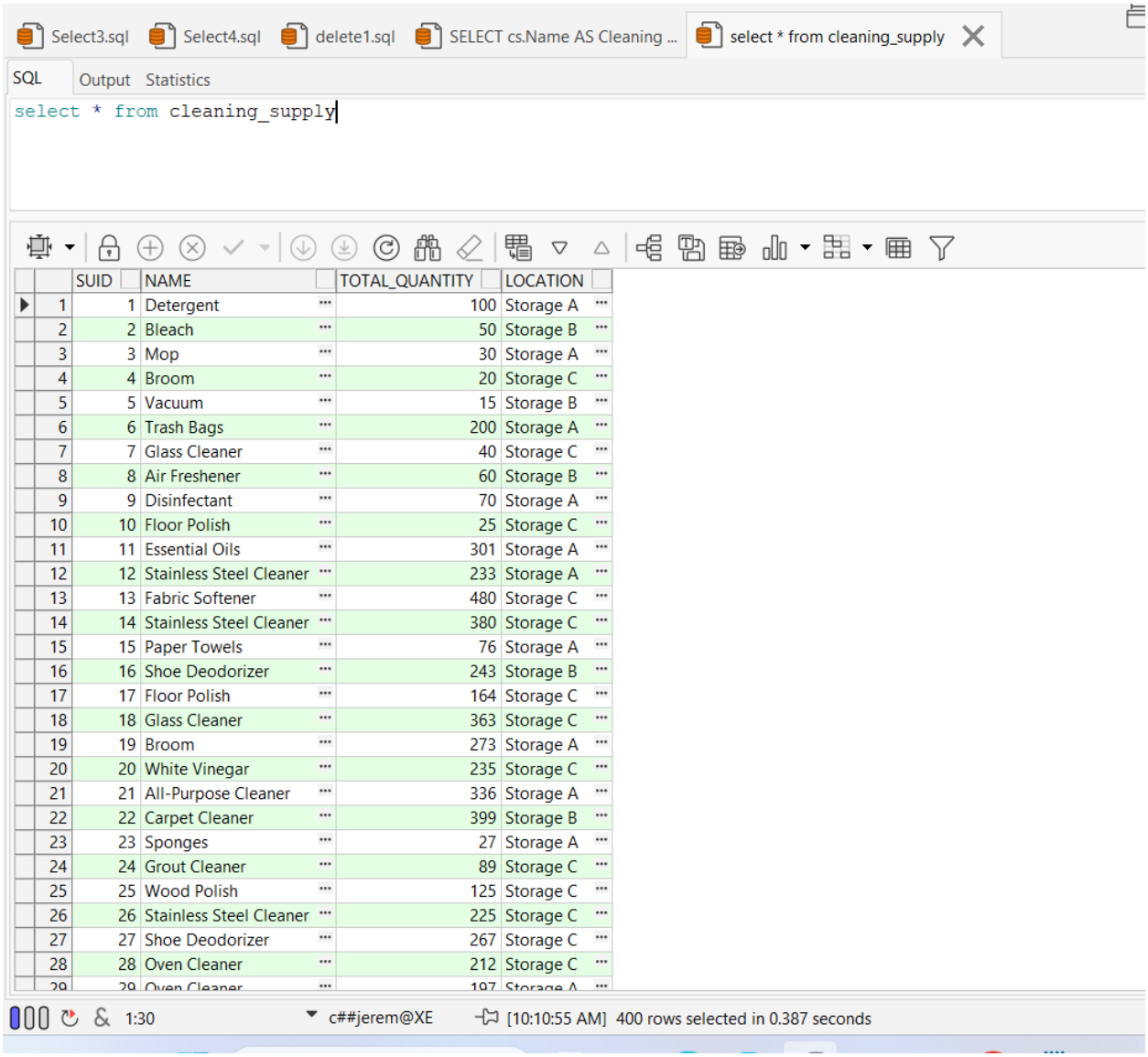
בסיס הנתונים לאחר הרצה:



	SID	FIRST_NAME	LAST_NAME
193	230	Collin	Moreno
194	231	Richard	Pollack
195	232	Ozzy	Hingle
196	233	Jimmy	Leto
197	234	Kurtwood	Osborne
198	235	Edward	Sinise
199	236	Joy	Joli
200	238	Emerson	Feliciano
201	239	Grant	Owen
202	240	Bobbi	Stevens
203	241	Mary	Hayek
204	242	Rich	Dutton
205	243	Marie	King
206	244	Pelvic	Cummings
207	246	Phoebe	Rizzo
208	247	Nikki	Matheson
209	248	Loretta	Macy
210	249	Owen	Bullock
211	250	Guy	Grier
212	251	Garry	Luongo
213	253	Kim	Coyote
214	254	Gina	Bacharach
215	255	Earl	Vicious
216	256	Vivica	Plimpton
217	257	Noah	Bradford
218	258	Phoebe	Dunst
219	259	Terri	McConaughey
220	261	Jackson	Makeba

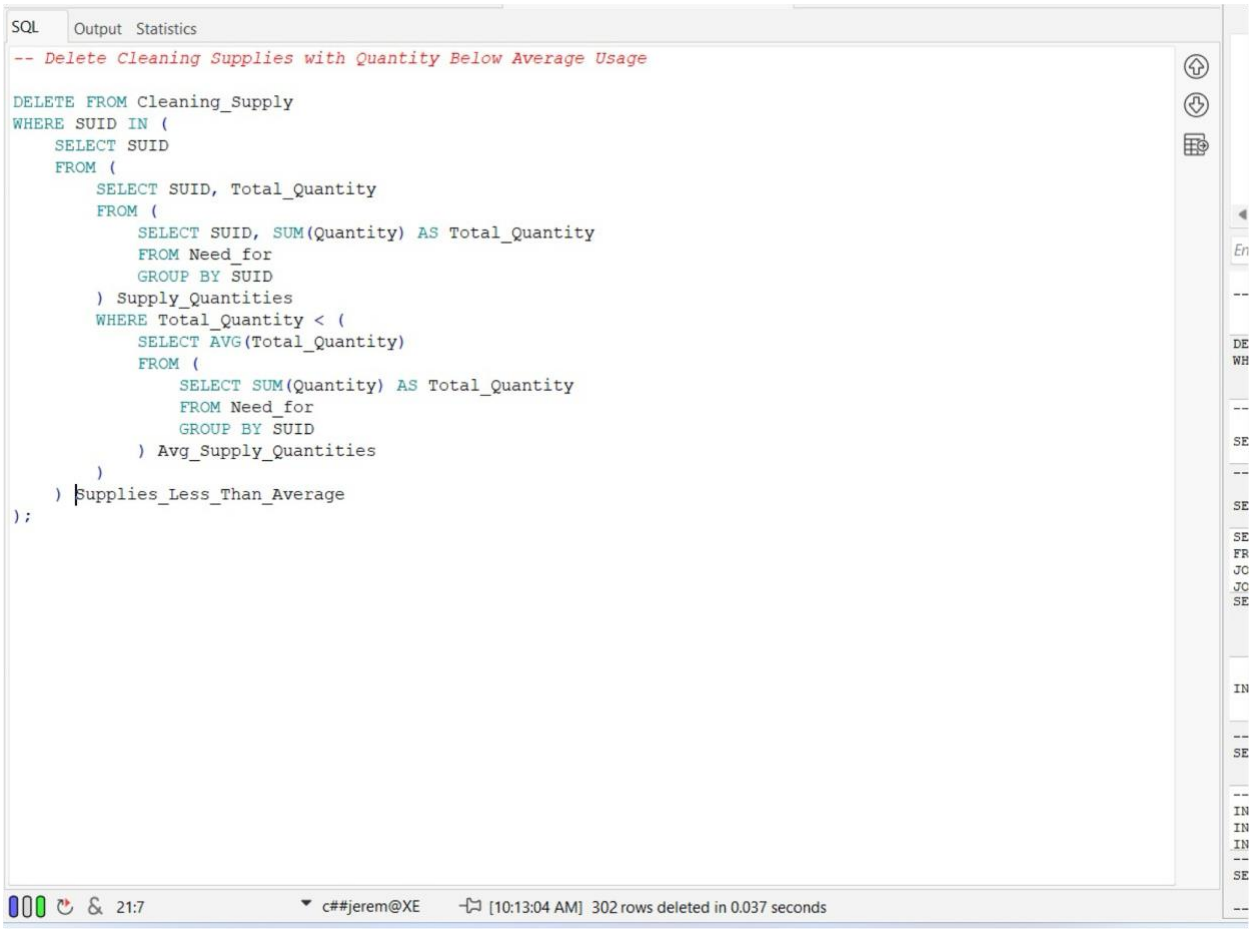
Second delete query: Cleaning Supply

בסיס הנתונים לפני הרצה:

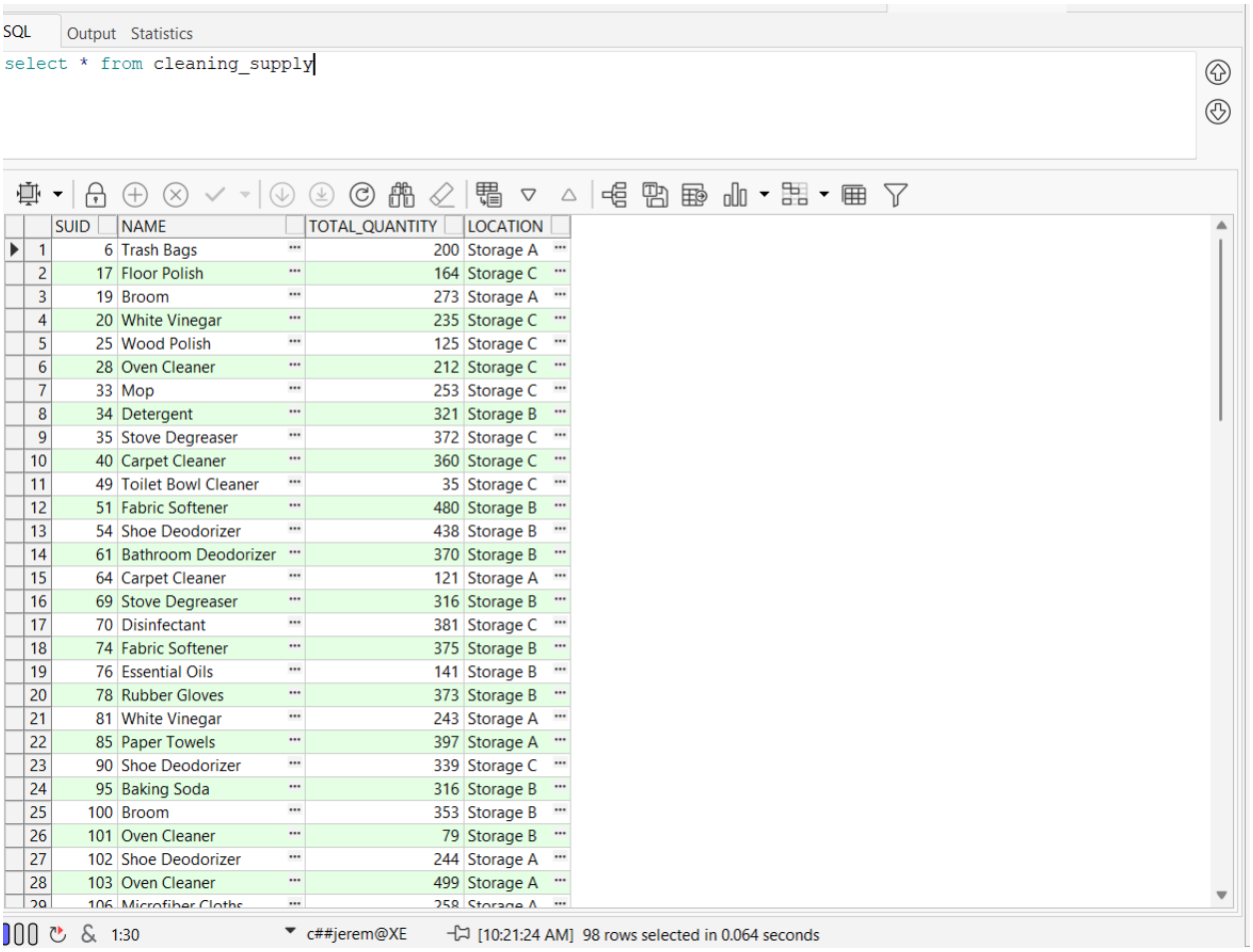


	SUID	NAME	TOTAL_QUANTITY	LOCATION
1	1	Detergent	100	Storage A
2	2	Bleach	50	Storage B
3	3	Mop	30	Storage A
4	4	Broom	20	Storage C
5	5	Vacuum	15	Storage B
6	6	Trash Bags	200	Storage A
7	7	Glass Cleaner	40	Storage C
8	8	Air Freshener	60	Storage B
9	9	Disinfectant	70	Storage A
10	10	Floor Polish	25	Storage C
11	11	Essential Oils	301	Storage A
12	12	Stainless Steel Cleaner	233	Storage A
13	13	Fabric Softener	480	Storage C
14	14	Stainless Steel Cleaner	380	Storage C
15	15	Paper Towels	76	Storage A
16	16	Shoe Deodorizer	243	Storage B
17	17	Floor Polish	164	Storage C
18	18	Glass Cleaner	363	Storage C
19	19	Broom	273	Storage A
20	20	White Vinegar	235	Storage C
21	21	All-Purpose Cleaner	336	Storage A
22	22	Carpet Cleaner	399	Storage B
23	23	Sponges	27	Storage A
24	24	Grout Cleaner	89	Storage C
25	25	Wood Polish	125	Storage C
26	26	Stainless Steel Cleaner	225	Storage C
27	27	Shoe Deodorizer	267	Storage C
28	28	Oven Cleaner	212	Storage C
29	29	Oven Cleaner	197	Storage A

השאילתה מוחקת חומרי ניקוי עם כמות נמוכה מהשימוש בממוצע: (ניתן לראות בצילום ש302 שורות נמחקו)



בסיס הנתונים לאחר הרצה:

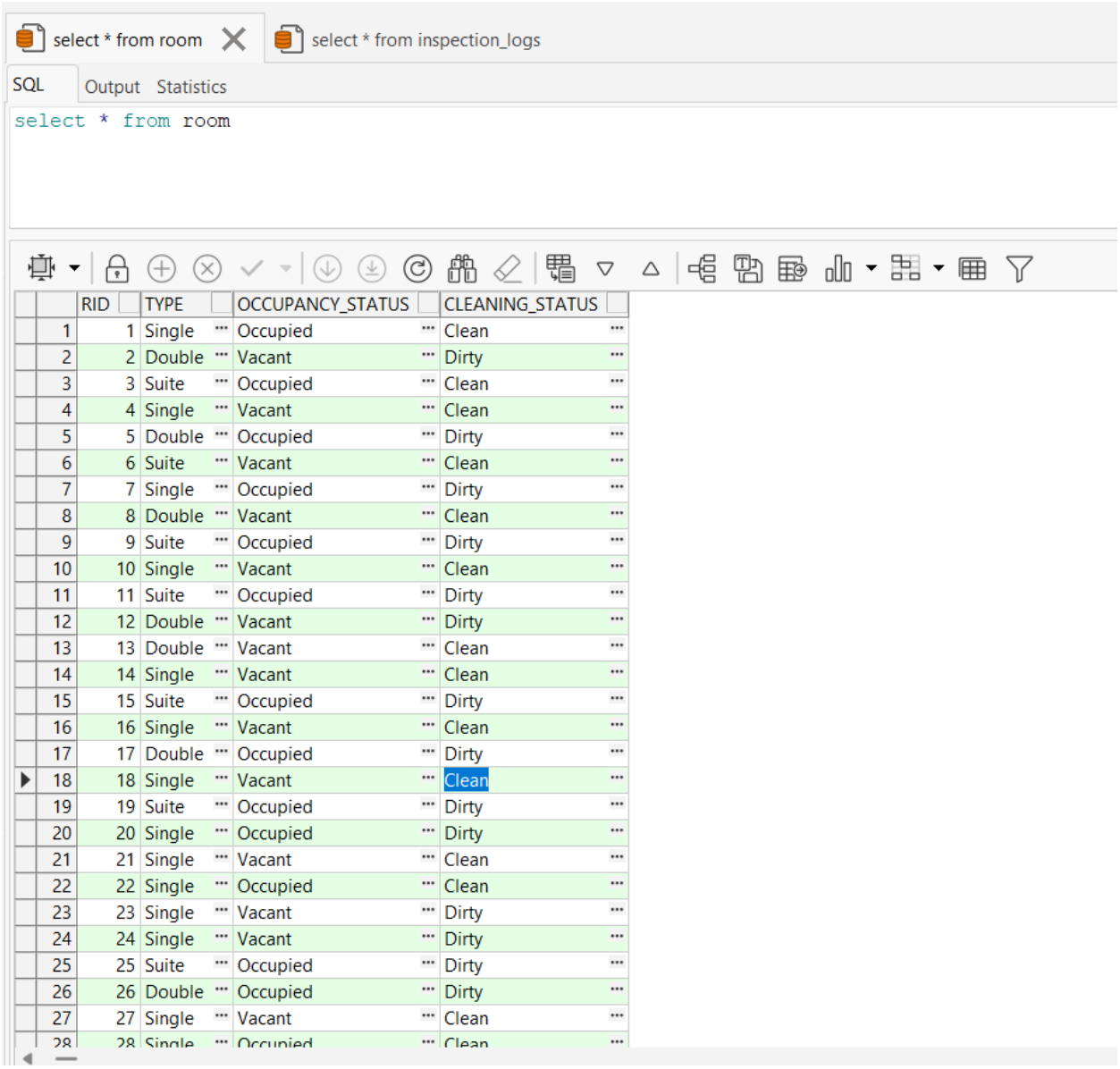


	SUID	NAME	TOTAL_QUANTITY	LOCATION
1	6	Trash Bags	200	Storage A
2	17	Floor Polish	164	Storage C
3	19	Broom	273	Storage A
4	20	White Vinegar	235	Storage C
5	25	Wood Polish	125	Storage C
6	28	Oven Cleaner	212	Storage C
7	33	Mop	253	Storage C
8	34	Detergent	321	Storage B
9	35	Stove Degreaser	372	Storage C
10	40	Carpet Cleaner	360	Storage C
11	49	Toilet Bowl Cleaner	35	Storage C
12	51	Fabric Softener	480	Storage B
13	54	Shoe Deodorizer	438	Storage B
14	61	Bathroom Deodorizer	370	Storage B
15	64	Carpet Cleaner	121	Storage A
16	69	Stove Degreaser	316	Storage B
17	70	Disinfectant	381	Storage C
18	74	Fabric Softener	375	Storage B
19	76	Essential Oils	141	Storage B
20	78	Rubber Gloves	373	Storage B
21	81	White Vinegar	243	Storage A
22	85	Paper Towels	397	Storage A
23	90	Shoe Deodorizer	339	Storage C
24	95	Baking Soda	316	Storage B
25	100	Broom	353	Storage B
26	101	Oven Cleaner	79	Storage B
27	102	Shoe Deodorizer	244	Storage A
28	103	Oven Cleaner	499	Storage A
29	106	Microfiber Cloths	258	Storage A

שאילתות Update

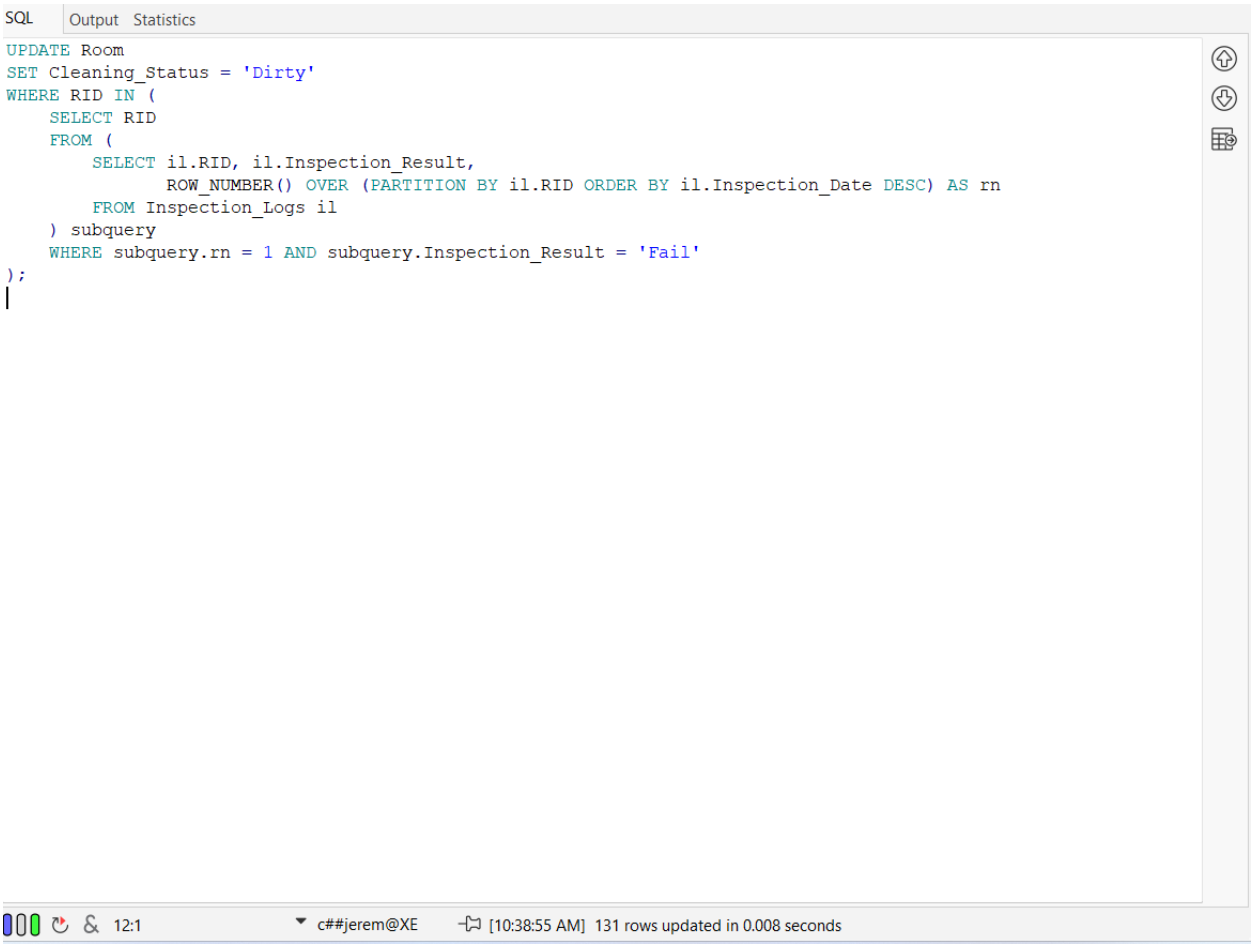
First update query: Room

בסיס הנתונים לפני הרצה:

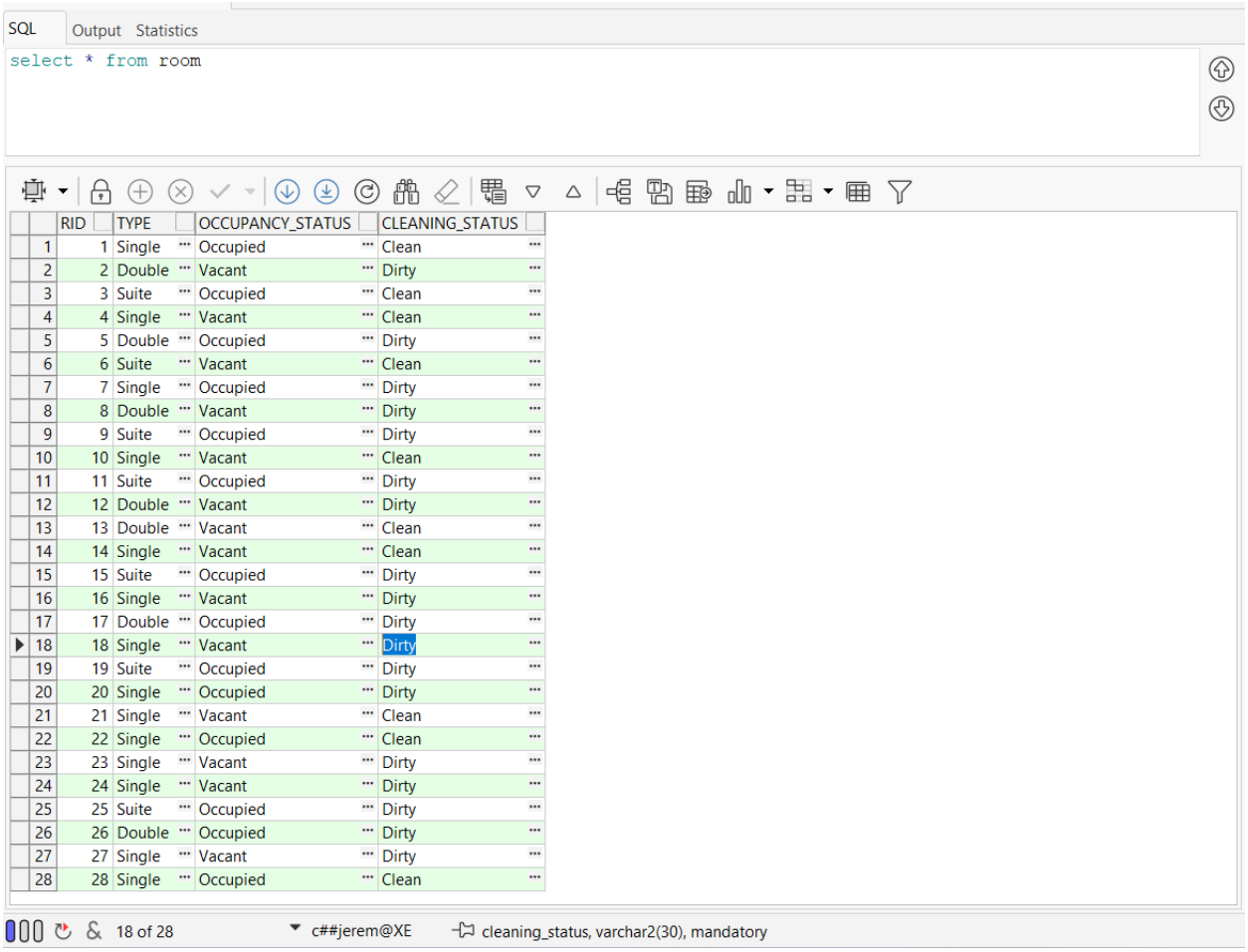


	RID	TYPE	OCCUPANCY_STATUS	CLEANING_STATUS
1	1	Single	Occupied	Clean
2	2	Double	Vacant	Dirty
3	3	Suite	Occupied	Clean
4	4	Single	Vacant	Clean
5	5	Double	Occupied	Dirty
6	6	Suite	Vacant	Clean
7	7	Single	Occupied	Dirty
8	8	Double	Vacant	Clean
9	9	Suite	Occupied	Dirty
10	10	Single	Vacant	Clean
11	11	Suite	Occupied	Dirty
12	12	Double	Vacant	Dirty
13	13	Double	Vacant	Clean
14	14	Single	Vacant	Clean
15	15	Suite	Occupied	Dirty
16	16	Single	Vacant	Clean
17	17	Double	Occupied	Dirty
18	18	Single	Vacant	Clean
19	19	Suite	Occupied	Dirty
20	20	Single	Occupied	Dirty
21	21	Single	Vacant	Clean
22	22	Single	Occupied	Clean
23	23	Single	Vacant	Dirty
24	24	Single	Vacant	Dirty
25	25	Suite	Occupied	Dirty
26	26	Double	Occupied	Dirty
27	27	Single	Vacant	Clean
28	28	Single	Occupied	Clean

השאילתה מעדכנת את סטטוס ניקיון החדר בהתבסס על תוצאות בדיקה אחרונות; אם תוצאת הבדיקה האחרונה היא 'Fail', מצב הניקוי יוגדר ל'Dirty'.



בסיס הנתונים לאחר הרצה: ניתן לראות שאכן הסטטוס של RID 18 שונה מClean ל Dirty:



Second update query: Cleaning Supply

בסיס הנתונים לפני הרצה:

```
select * from cleaning_supply
```

	SUID	NAME	TOTAL_QUANTITY	LOCATION
1	6	Trash Bags	180	Storage A
2	17	Floor Polish	147	Storage C
3	19	Broom	254	Storage A
4	20	White Vinegar	215	Storage C
5	25	Wood Polish	108	Storage C
6	28	Oven Cleaner	192	Storage C
7	33	Mop	233	Storage C
8	34	Detergent	303	Storage B
9	35	Stove Degreaser	356	Storage C
10	40	Carpet Cleaner	340	Storage C
11	49	Toilet Bowl Cleaner	15	Storage C
12	51	Fabric Softener	463	Storage B
13	54	Shoe Deodorizer	421	Storage B
14	61	Bathroom Deodorizer	353	Storage B
15	64	Carpet Cleaner	102	Storage A
16	69	Stove Degreaser	297	Storage B
17	70	Disinfectant	363	Storage C
18	74	Fabric Softener	357	Storage B
19	76	Essential Oils	121	Storage B
20	78	Rubber Gloves	357	Storage B
21	81	White Vinegar	223	Storage A
22	85	Paper Towels	378	Storage A
23	90	Shoe Deodorizer	323	Storage C
24	95	Baking Soda	296	Storage B
25	100	Broom	333	Storage B
26	101	Oven Cleaner	61	Storage B
27	102	Shoe Deodorizer	228	Storage A
28	103	Oven Cleaner	481	Storage A

השאילתה מעדכנת את הכמות הכוללת של אספקת הניקיון בהתבסס על השימוש האחרון:

בסיס הנתונים לאחר הרצה:

```
select * from cleaning_supply
```

	SUID	NAME	TOTAL_QUANTITY	LOCATION
1	6	Trash Bags	160	Storage A
2	17	Floor Polish	130	Storage C
3	19	Broom	235	Storage A
4	20	White Vinegar	195	Storage C
5	25	Wood Polish	91	Storage C
6	28	Oven Cleaner	172	Storage C
7	33	Mop	213	Storage C
8	34	Detergent	285	Storage B
9	35	Stove Degreaser	340	Storage C
10	40	Carpet Cleaner	320	Storage C
11	49	Toilet Bowl Cleaner	-5	Storage C
12	51	Fabric Softener	446	Storage B
13	54	Shoe Deodorizer	404	Storage B
14	61	Bathroom Deodorizer	336	Storage B
15	64	Carpet Cleaner	83	Storage A
16	69	Stove Degreaser	278	Storage B
17	70	Disinfectant	345	Storage C
18	74	Fabric Softener	339	Storage B
19	76	Essential Oils	101	Storage B
20	78	Rubber Gloves	341	Storage B
21	81	White Vinegar	203	Storage A
22	85	Paper Towels	359	Storage A
23	90	Shoe Deodorizer	307	Storage C
24	95	Baking Soda	276	Storage B
25	100	Broom	313	Storage B
26	101	Oven Cleaner	43	Storage B
27	102	Shoe Deodorizer	212	Storage A
28	103	Oven Cleaner	463	Storage A

אילוצים

אילוץ ראשון:

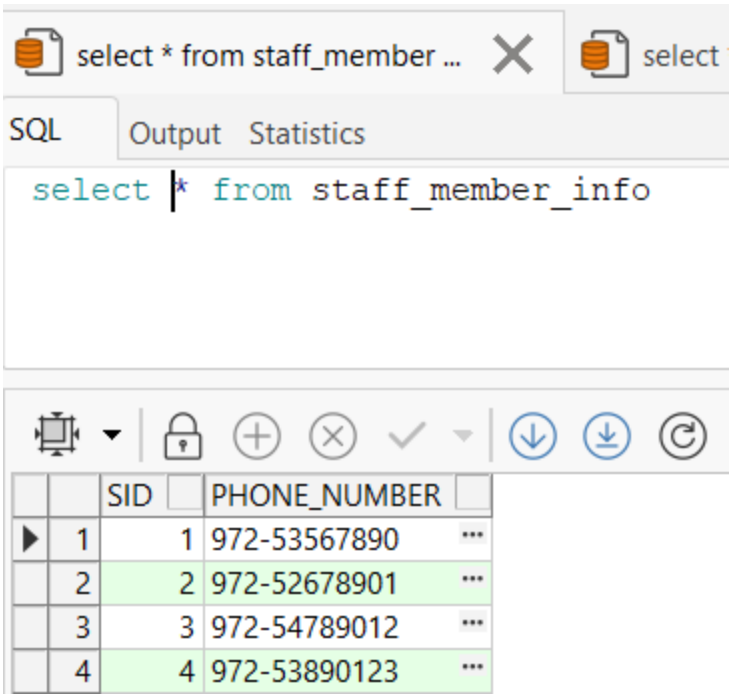
Add UNIQUE constraint to Staff_Member_Info for Phone_Number

SQL Output Statistics

```
-- Constraint1: Add UNIQUE constraint to Staff_Member_Info for Phone_Number
ALTER TABLE Staff_Member_Info
ADD CONSTRAINT uniq_phone_number UNIQUE (Phone_Number);
```

נבדוק זאת ע״י ניסיון הכנסה של מספר שכבר קיים:

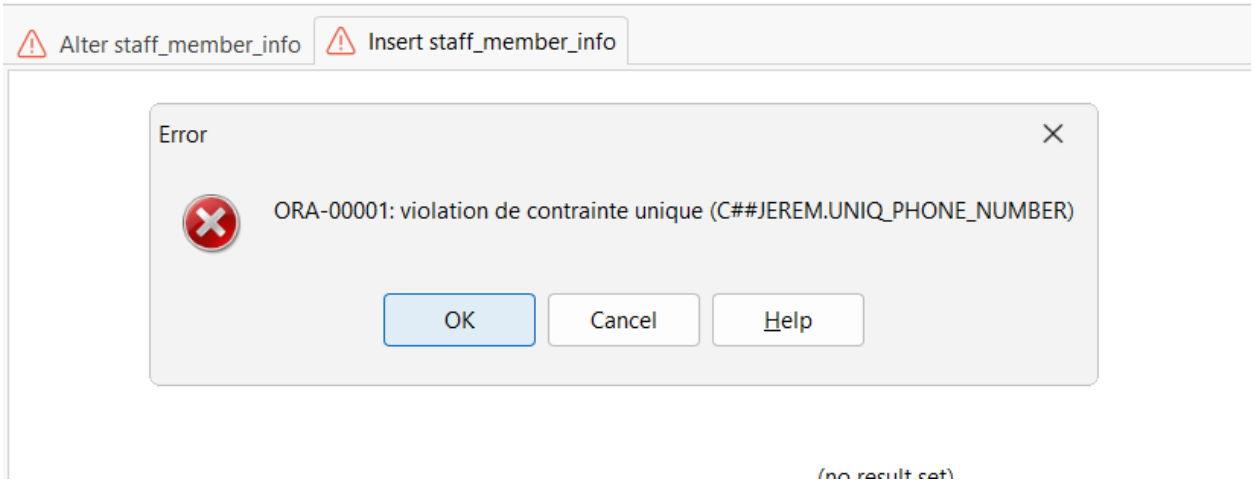
נבחר את המספר בשורה הראשונה וננסה להכניס אותו לטבלה יחד עם ID אחר



	SID	PHONE_NUMBER
1	1	972-53567890
2	2	972-52678901
3	3	972-54789012
4	4	972-53890123

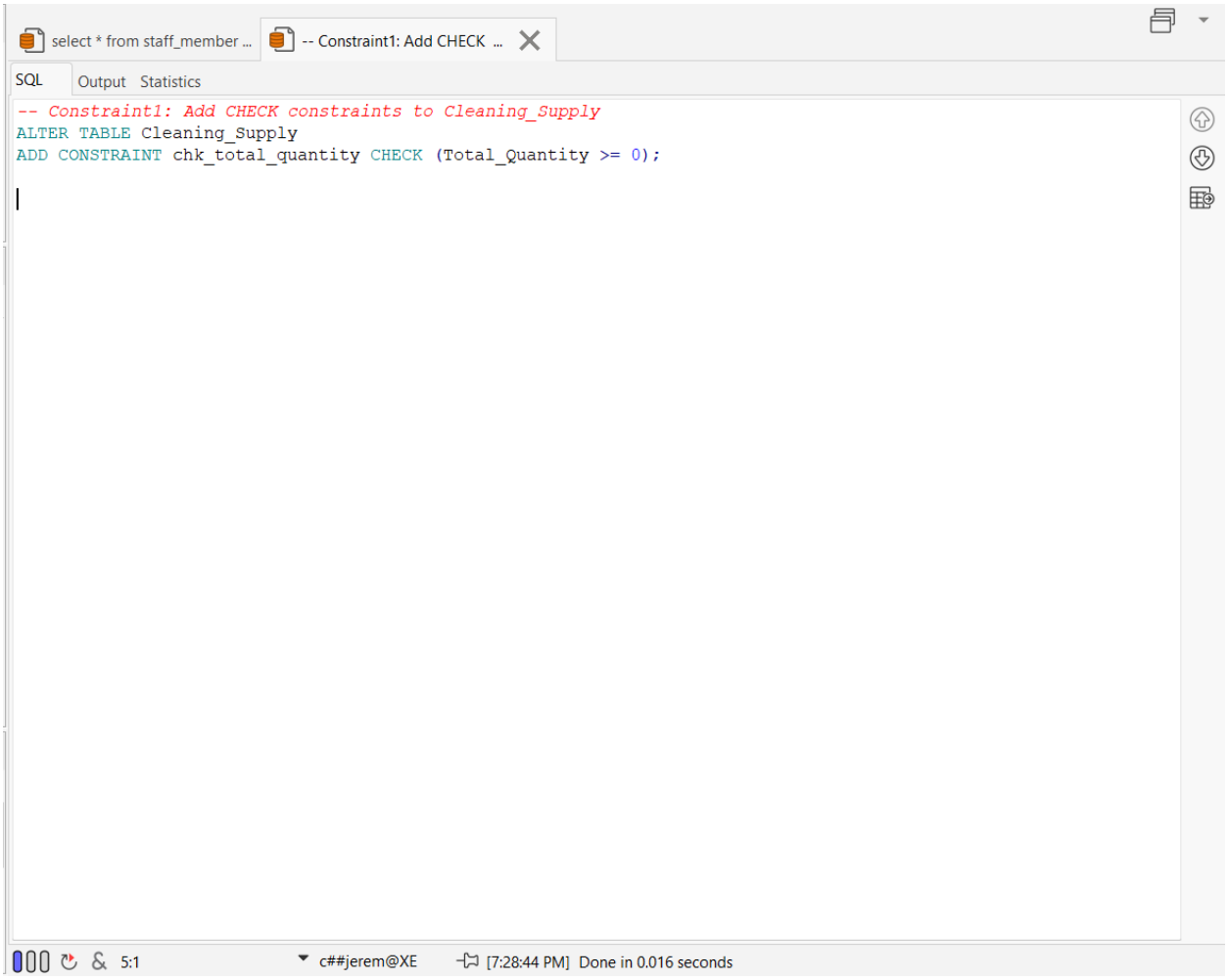
ואכן מתקבלת הודעת שגיאה שהפקודה מפרה את האילוץ:

```
INSERT INTO Staff_Member_Info (SID, Phone_Number)
VALUES (401, '972-53567890');
```



אילוץ שני:

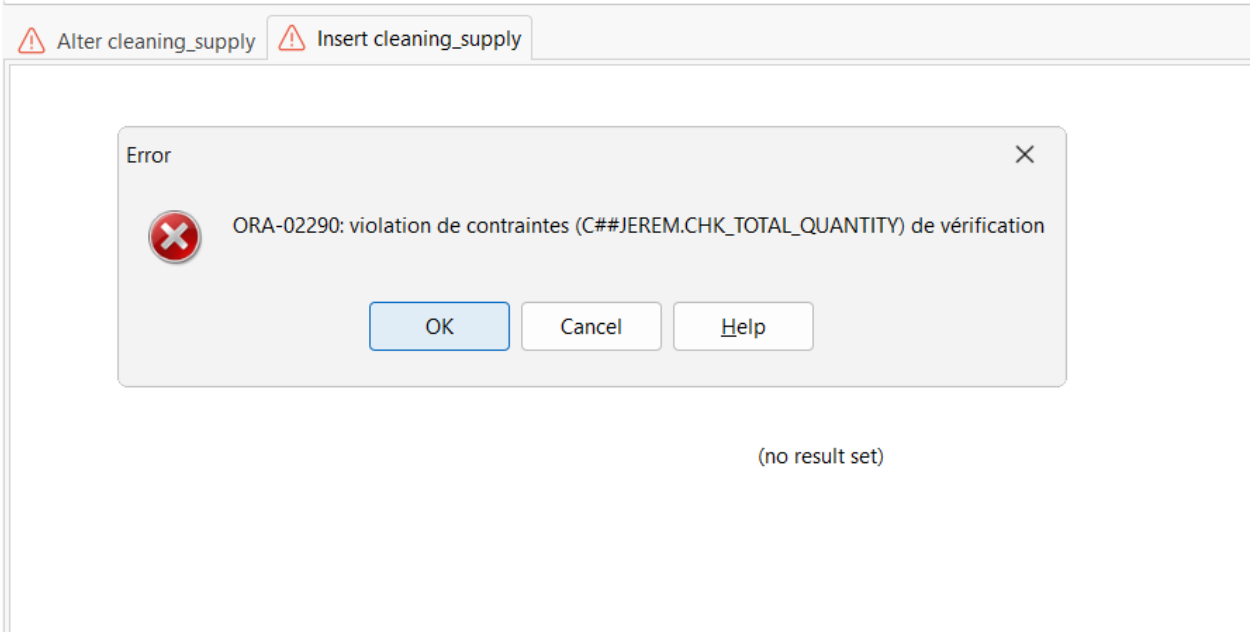
Add CHECK constraints to Cleaning_Supply



נבדוק זאת ע״י ניסיון הכנסה של מספר שלילי,

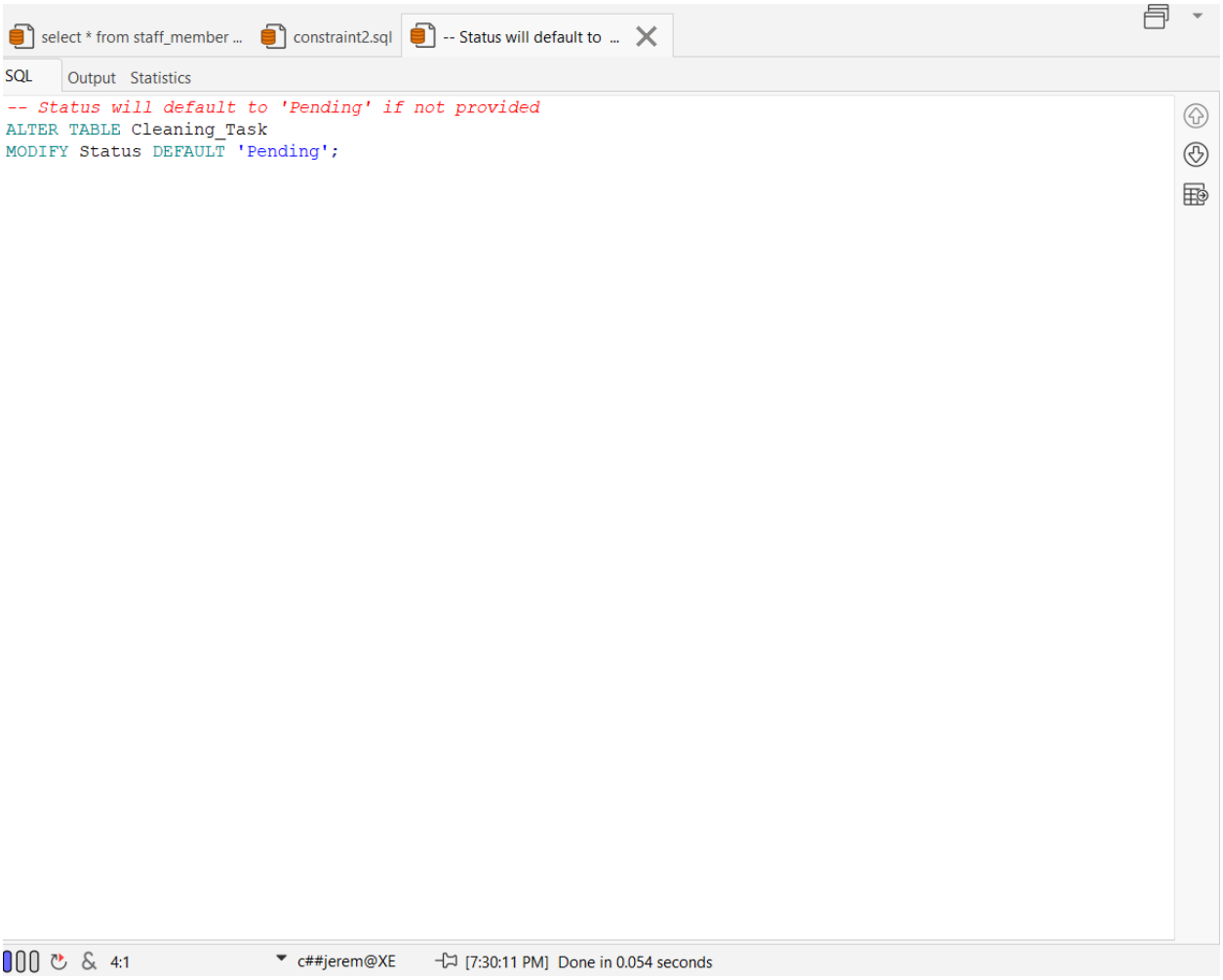
ואכן מתקבלת הודעת שגיאה שהפקודה מפרה את האילוץ:

```
INSERT INTO Cleaning_Supply (SUID, Name, Total_Quantity, Location)
VALUES (2, 'Sanitizer', -5, 'Storage Room');
```

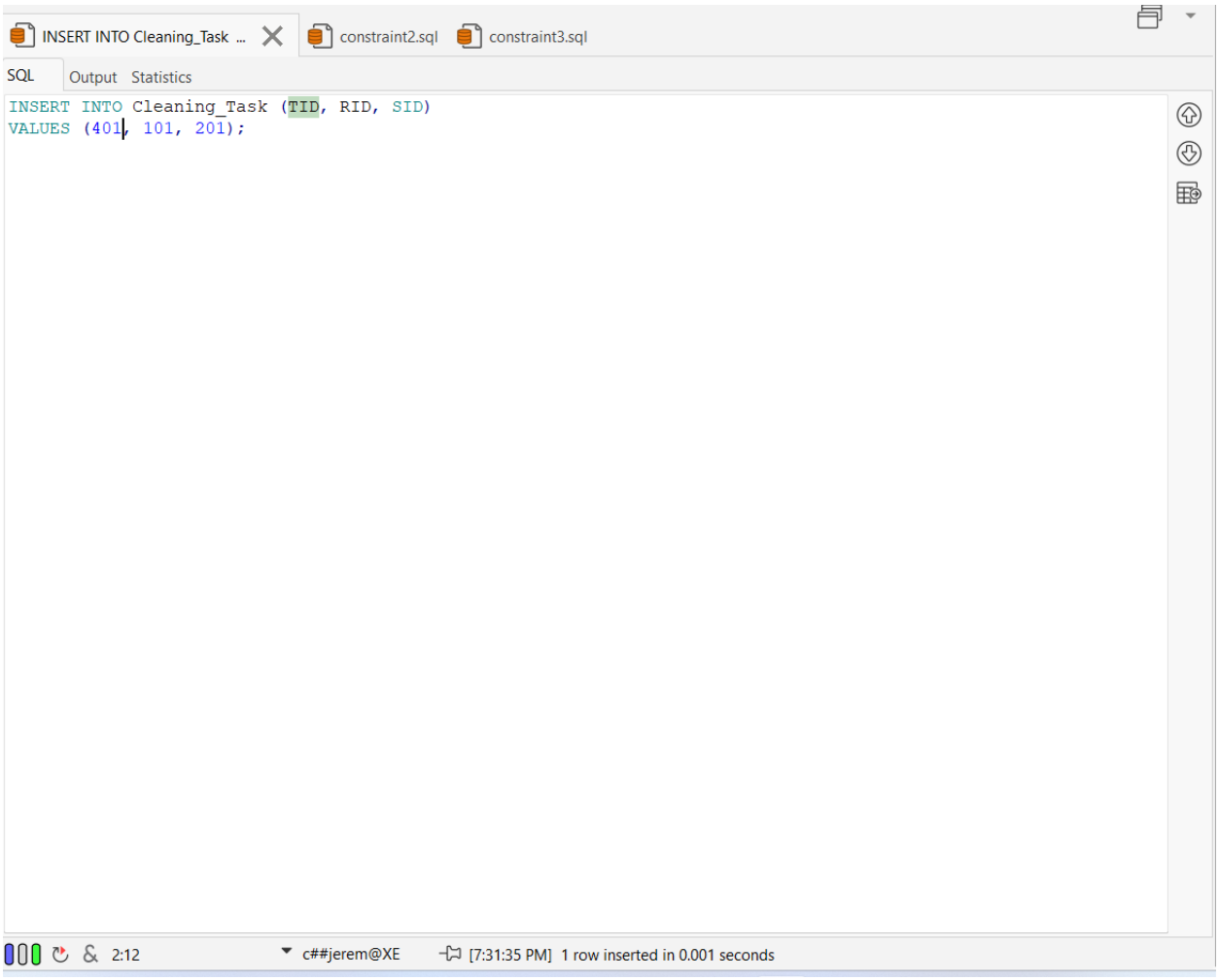


אילוץ שלישי:

Status will default to 'Pending' if not provided

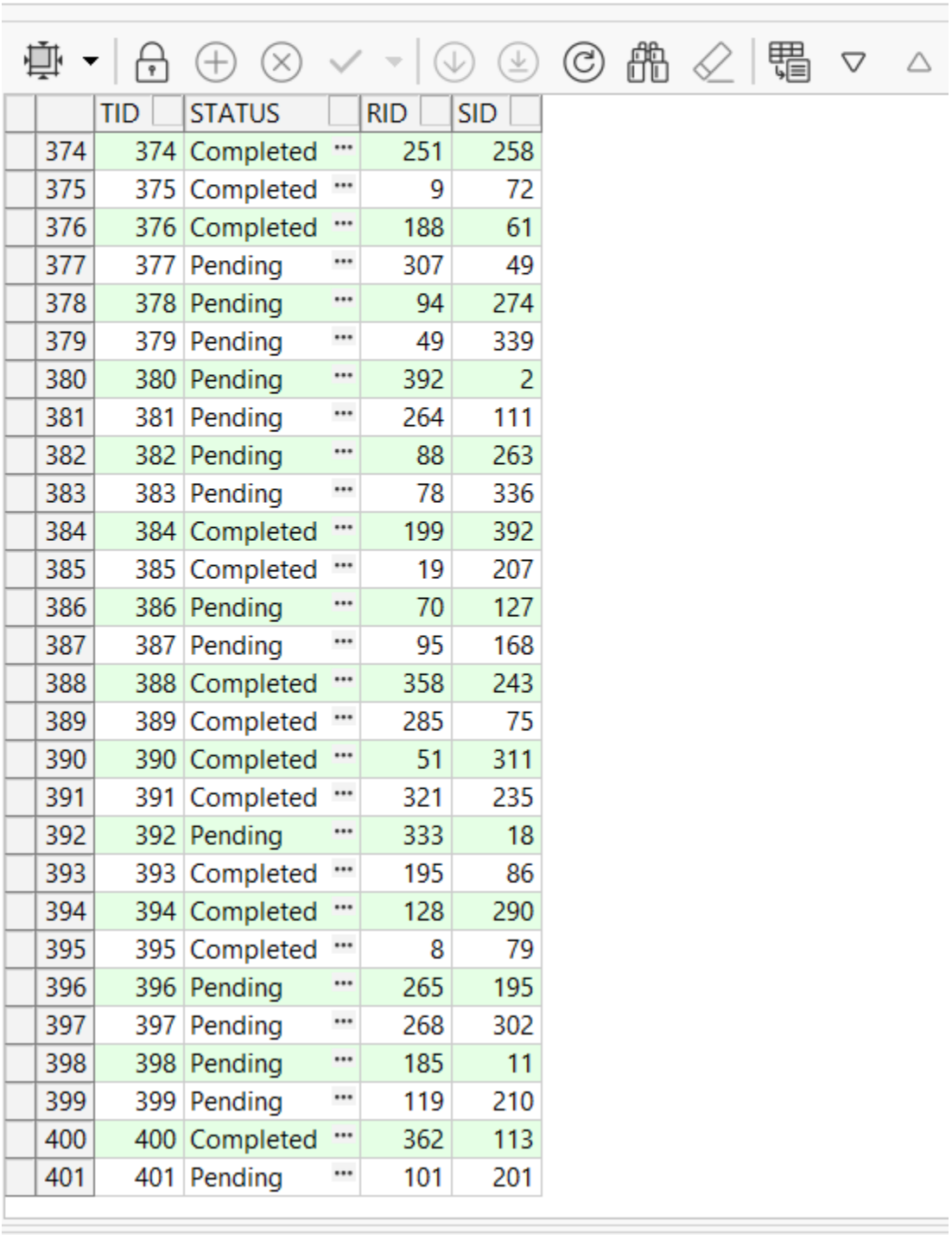


נבדוק זאת ע״י הכנסת שורה ללא ציון ערך Status:



אכן כברירת מחדל נקבל "Pending":

```
select * from cleaning_task
```



	TID	STATUS	RID	SID
374	374	Completed	251	258
375	375	Completed	9	72
376	376	Completed	188	61
377	377	Pending	307	49
378	378	Pending	94	274
379	379	Pending	49	339
380	380	Pending	392	2
381	381	Pending	264	111
382	382	Pending	88	263
383	383	Pending	78	336
384	384	Completed	199	392
385	385	Completed	19	207
386	386	Pending	70	127
387	387	Pending	95	168
388	388	Completed	358	243
389	389	Completed	285	75
390	390	Completed	51	311
391	391	Completed	321	235
392	392	Pending	333	18
393	393	Completed	195	86
394	394	Completed	128	290
395	395	Completed	8	79
396	396	Pending	265	195
397	397	Pending	268	302
398	398	Pending	185	11
399	399	Pending	119	210
400	400	Completed	362	113
401	401	Pending	101	201