

דו"ח לשלב ב'

יובל יפת 213938905

ג'רמי תורג'מן 1828264

```
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

שאלת 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

שאלת מס' 4:

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

SQL Output Statistics

-- 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
15

שאלות עם פרמטרים

שאלת מס' 1:

משימות ניקיון וחומרי ניקוי הדרושים בחדר

צילום ההרצה:

The screenshot shows a SQL IDE interface with a query editor and a variables dialog box.

Query Editor:

```
-- Query1: Cleaning Tasks and Supplies Needed by Room

SELECT
  ct.TID,
  r.RID,
  r.Type,
  ct.Status AS Task_Status,
  cs.Name AS Supply_Name,
  nf.Quantity AS Supply_Quantity
FROM
  Cleaning_Task ct
JOIN
  Room r ON ct.RID = r.RID
JOIN
  Need_for nf ON ct.TID = nf.TID AND ct.RID = nf.RID AND ct.SID = nf.SID
JOIN
  Cleaning_Supply cs ON nf.SUID = cs.SUID
WHERE
  r.Type = '<name="Room Type" list="select DISTINCT Type from Room order by Type">'
```

Variables Dialog:

Name	Value
Room Type	Double
Task Status	Completed
Minimum Supply Quantity	2

Buttons: OK, Cancel, Clear

צילום התוצאה:

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

SQL Output Statistics

-- Query1: Cleaning Tasks and Supplies Needed by Room

```
SELECT
  ct.TID,
  r.RID,
  r.Type,
  ct.Status AS Task_Status,
  cs.Name AS Supply_Name,
  nf.Quantity AS Supply_Quantity
FROM
  Cleaning_Task ct
JOIN
  Room r ON ct.RID = r.RID
JOIN
  Need_for nf ON ct.TID = nf.TID AND ct.RID = nf.RID AND ct.SID = nf.SID
JOIN
  Cleaning_Supply cs ON nf.SUID = cs.SUID
WHERE
  r.Type = '&<name="Room Type" list="select DISTINCT Type from Room order by Type">'
```

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

שאלתה מס' 2:

כמות כוללת של חומרי ניקוי לפי מיקום.

צילום ההרצה:

The screenshot shows a SQL IDE interface with a query editor and a 'Variables' dialog box.

Query Editor:

```
--Query2: Total Quantity of Cleaning Supplies by Location

SELECT
  cs.Location,
  SUM(cs.Total_Quantity) AS TotalQuantity
FROM
  Cleaning_Supply cs
GROUP BY
  cs.Location
HAVING
  SUM(cs.Total_Quantity) >= &<name="Minimum Quantity" type
ORDER BY
  TotalQuantity DESC;
```

Variables Dialog:

Name	Value
✓ Minimum Quantity	500

Buttons: OK, Cancel, Clear

צילום התוצאה:

paramQuery1.sql paramQuery2.sql X paramQuery3.sql paramQuery4.sql insertTables.sql

SQL Output Statistics

--Query2: Total Quantity of Cleaning Supplies by Location

SELECT
 cs.Location,
 SUM(cs.Total_Quantity) AS TotalQuantity
FROM
 Cleaning_Supply cs
GROUP BY
 cs.Location
HAVING
 SUM(cs.Total_Quantity) >= <name="Minimum Quantity" type="integer">
ORDER BY
 TotalQuantity DESC;

	LOCATION	TOTALQUANTITY
▶ 1	Storage B	9032
2	Storage A	6988
3	Storage C	6414

שאלת מס' 3:

בקשות תחזוקה של חדר וחבר צוות בטווח תאריכים.

צילום ההרצה:

The screenshot shows a SQL IDE window with a query editor and a variables dialog. The query editor contains the following SQL code:

```
--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" type="
    AND TO_DATE(&<name="End Date" hint="Enter the end date in format YYYY-MM-DD" type="string">, 'YYYY-MM-DD')
    AND r.Type = '&<name="Room Type" list="select DISTINCT Type from Room order by Type">'
ORDER BY
    mr.Date_Reported DESC;
```

The variables dialog is open, showing the following variables:

Name	Value
Start Date	2024-01-01
End Date	2024-05-01
Room Type	Single

The dialog also includes a text input field for the start date, a hint message, and buttons for OK, Cancel, and Clear.

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...)

שאלת מס' 4:

בדיקת תוצאות יומני בדיקה בטווח תאריכים.

צילום ההרצה:

The screenshot shows a SQL IDE interface with a query editor and a variables dialog box.

Query Editor:

```
--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"
  AND TO_DATE('<name="End Date" hint="Enter the end date"
  AND il.Inspection_Result = '<name="Inspection Result"
ORDER BY
  il.Inspection_Date DESC;
```

Variables Dialog:

Name	Value
Start Date	2023-01-01
End Date	2024-05-22
Inspection Result	Pass

Enter the start date in format YYYY-MM-DD

Buttons: OK, Cancel, Clear

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

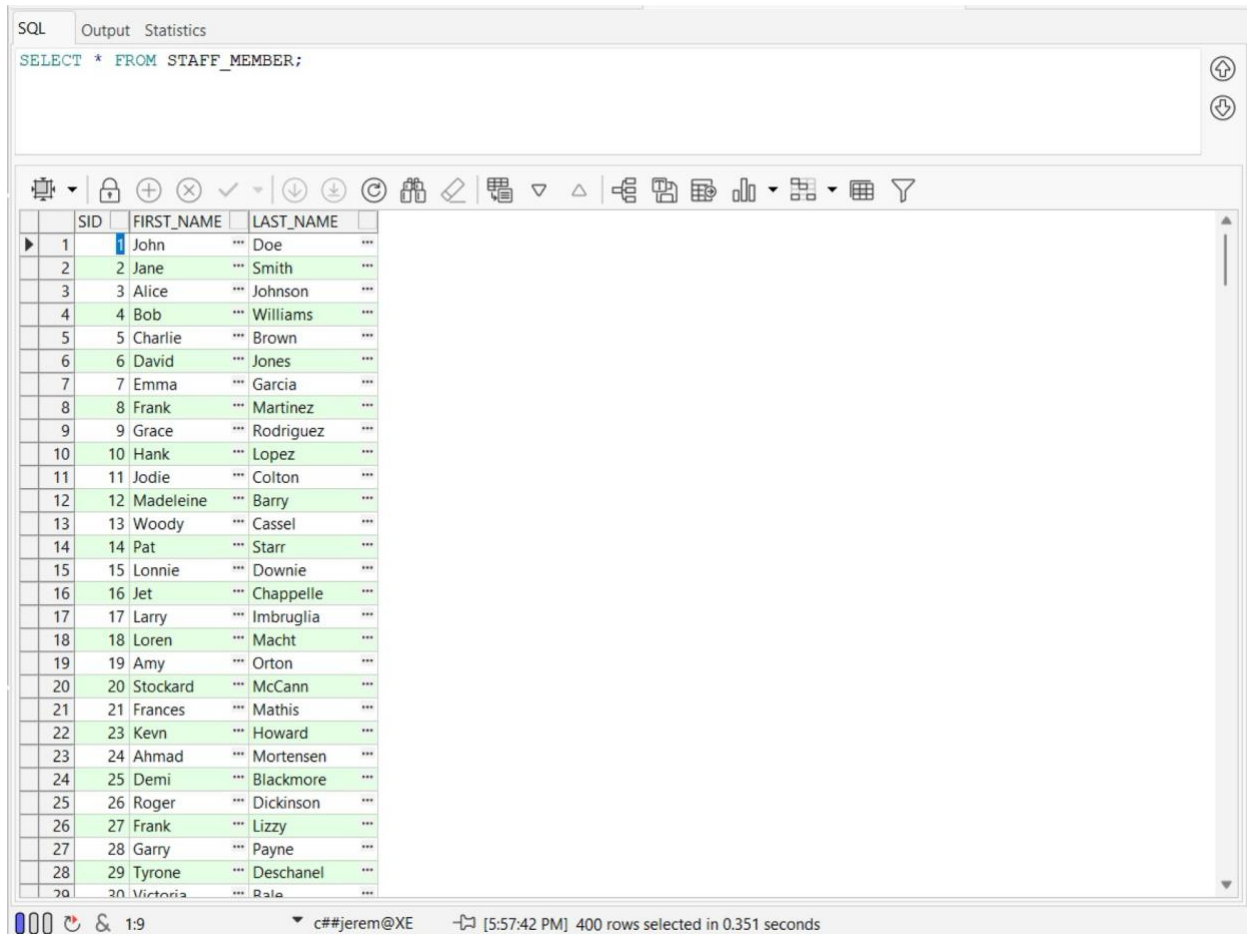
SELECT
    il.LID,
    r.RID,
    r.Type,
    il.Inspection_Date,
    il.Inspection_Result
FROM
    Inspection_Logs il
JOIN
    Room r ON il.RID = r.RID
WHERE
    il.Inspection_Date BETWEEN TO_DATE(&<name="Start Date" hint="Enter the start date in format YYYY-MM-DD" type="string">, 'YYYY-MM-DD' &<name="End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

שאלות delete

First delete query: Staff Member

בסיס הנתונים לפני הרצה:



The screenshot shows a SQL IDE interface. At the top, there are tabs for 'SQL', 'Output', and 'Statistics'. The 'SQL' tab is active, displaying the query: `SELECT * FROM STAFF_MEMBER;`. Below the query editor is a toolbar with various icons for editing and execution. The main area displays the results of the query in a table grid. The table has four columns: 'SID', 'FIRST_NAME', 'LAST_NAME', and an empty column. There are 40 rows of data, each representing a staff member. The status bar at the bottom indicates 'c##jerem@XE' and '[5:57:42 PM] 400 rows selected in 0.351 seconds'.

	SID	FIRST_NAME	LAST_NAME	
1	1	John	Doe	...
2	2	Jane	Smith	...
3	3	Alice	Johnson	...
4	4	Bob	Williams	...
5	5	Charlie	Brown	...
6	6	David	Jones	...
7	7	Emma	Garcia	...
8	8	Frank	Martinez	...
9	9	Grace	Rodriguez	...
10	10	Hank	Lopez	...
11	11	Jodie	Colton	...
12	12	Madeleine	Barry	...
13	13	Woody	Cassel	...
14	14	Pat	Starr	...
15	15	Lonnie	Downie	...
16	16	Jet	Chappelle	...
17	17	Larry	Imbruglia	...
18	18	Loren	Macht	...
19	19	Amy	Orton	...
20	20	Stockard	McCann	...
21	21	Frances	Mathis	...
22	23	Kevn	Howard	...
23	24	Ahmad	Mortensen	...
24	25	Demi	Blackmore	...
25	26	Roger	Dickinson	...
26	27	Frank	Lizzy	...
27	28	Garry	Payne	...
28	29	Tyrone	Deschanel	...
29	30	Victoria	Rale	...

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



The screenshot shows the Oracle SQL Developer interface. The top bar has tabs for 'SQL', 'Output', and 'Statistics'. The main text area contains the following SQL query:

```
DELETE FROM staff_member
WHERE SID NOT IN (
  SELECT DISTINCT SID
  FROM cleaning_task
  WHERE TID IN (
    SELECT TID
    FROM cleaning_task
    WHERE TID IN (
      SELECT TID
      FROM maintenance_request
      WHERE DATE_REPORTED >= SYSDATE - 365
    )
  )
)
AND SID NOT IN (
  SELECT DISTINCT SID
  FROM maintenance_request
  WHERE DATE_REPORTED >= SYSDATE - 365
);
|
```

On the right side of the SQL editor, there are three icons: a refresh icon, a download icon, and a table icon.

The bottom status bar displays the following information: 'c##jerem@XE' (database name), '[9:04:26 AM]' (time), and '70 rows deleted in 0.047 seconds' (execution results).

בסיס הנתונים לאחר הרצה:

SQL Output Statistics

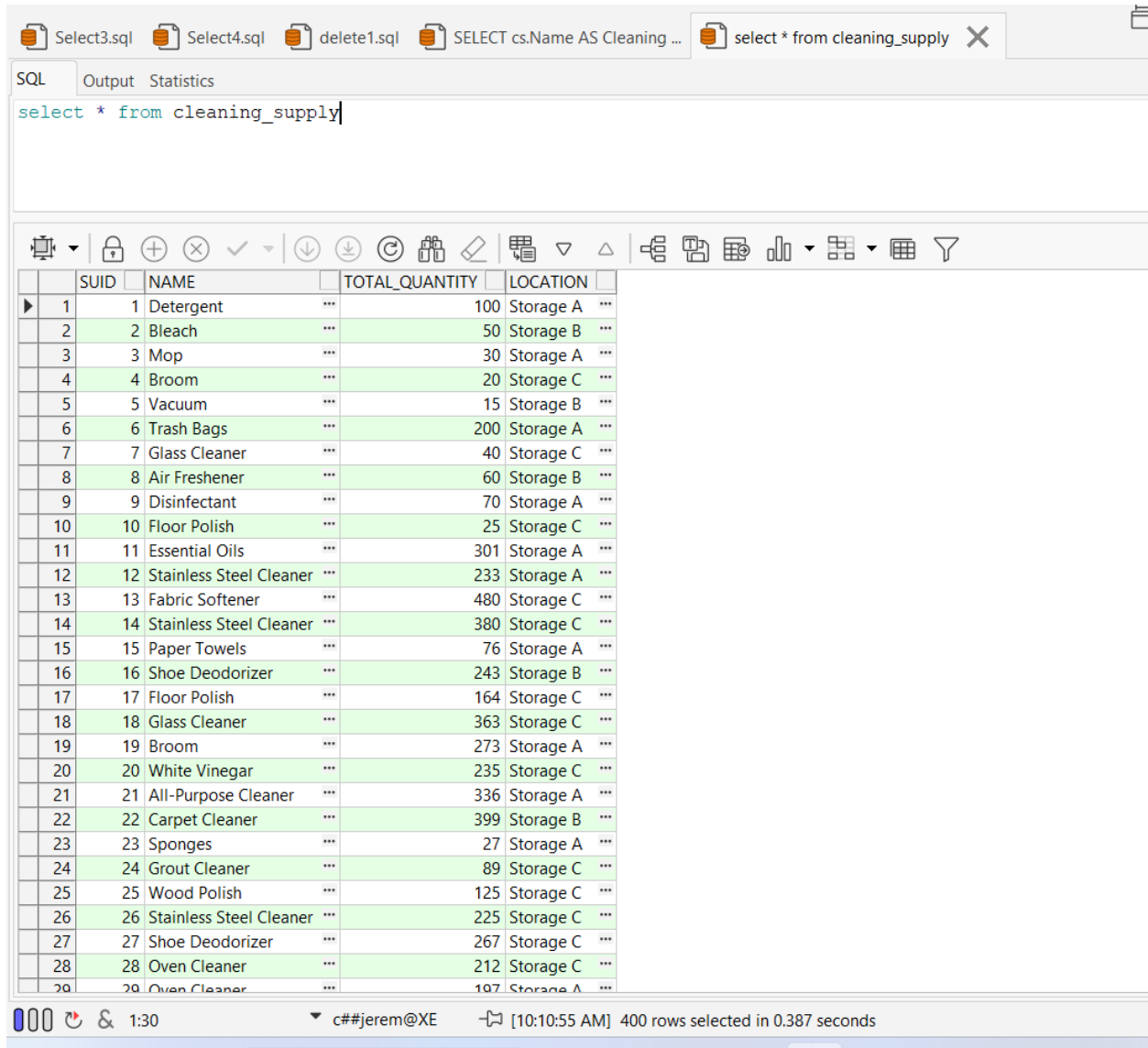
```
select * from staff_member
```

	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
221	262	Ava	Imperiali

1 of 330 c#jerem@XE [10:22:28 AM] 330 rows selected in 0.152 seconds

Second delete query: Cleaning Supply

בסיס הנתונים לפני הרצה:



The screenshot shows a SQL IDE interface with a query window and a results grid. The query window contains the SQL statement `select * from cleaning_supply`. The results grid displays 28 rows of data with columns SUID, NAME, TOTAL_QUANTITY, and LOCATION. The data is as follows:

	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

The status bar at the bottom indicates the user is c##jerem@XE, the time is 10:10:55 AM, and 400 rows were selected in 0.387 seconds.

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

```
SQL Output Statistics
-- Delete Cleaning Supplies with Quantity Below Average Usage

DELETE FROM Cleaning_Supply
WHERE SUID IN (
  SELECT SUID
  FROM (
    SELECT SUID, Total_Quantity
    FROM (
      SELECT SUID, SUM(Quantity) AS Total_Quantity
      FROM Need_for
      GROUP BY SUID
    ) Supply_Quantities
    WHERE Total_Quantity < (
      SELECT AVG(Total_Quantity)
      FROM (
        SELECT SUM(Quantity) AS Total_Quantity
        FROM Need_for
        GROUP BY SUID
      ) Avg_Supply_Quantities
    )
  ) Supplies_Less_Than_Average
);
```

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21:7 c##jerem@XE [10:13:04 AM] 302 rows deleted in 0.037 seconds

בסיס הנתונים לאחר הרצה:

SQL

Output Statistics

select * from cleaning_supply

</

שאלות Update

First update query: Room

בסיס הנתונים לפני הרצה:

select * from room X select * from inspection_logs

SQL Output Statistics

select * from room

	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

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

```
SQL | Output | Statistics
UPDATE Room
SET Cleaning_Status = 'Dirty'
WHERE RID IN (
  SELECT RID
  FROM (
    SELECT il.RID, il.Inspection_Result,
           ROW_NUMBER() OVER (PARTITION BY il.RID ORDER BY il.Inspection_Date DESC) AS rn
    FROM Inspection_Logs il
  ) subquery
 WHERE subquery.rn = 1 AND subquery.Inspection_Result = 'Fail'
);
|
```

12:1 c##jerem@XE [10:38:55 AM] 131 rows updated in 0.008 seconds

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

SQL Output Statistics

```
select * from room
```

↑
↓

SQL Query Results:

	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	Dirty
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	Dirty
17	17	Double	Occupied	Dirty
▶ 18	18	Single	Vacant	Dirty
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	Dirty
28	28	Single	Occupied	Clean

18 of 28 c##jerem@XE cleaning_status, varchar2(30), mandatory

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:

```
SQL Output Statistics
UPDATE Cleaning_Supply cs
SET Total_Quantity = Total_Quantity - (
  SELECT COALESCE(SUM(nf.Quantity), 0)
  FROM Need_for nf
  WHERE nf.SUID = cs.SUID
  AND nf.TID = (
    SELECT MAX(nf_inner.TID)
    FROM Need_for nf_inner
    WHERE nf_inner.SUID = nf.SUID
  )
)
WHERE EXISTS (
  SELECT 1
  FROM Need_for nf
  WHERE nf.SUID = cs.SUID
);
```


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 ונסה להכניס אותו לטבלה יחד עם ID אחר

 select * from staff_member ...

 select

SQL Output Statistics

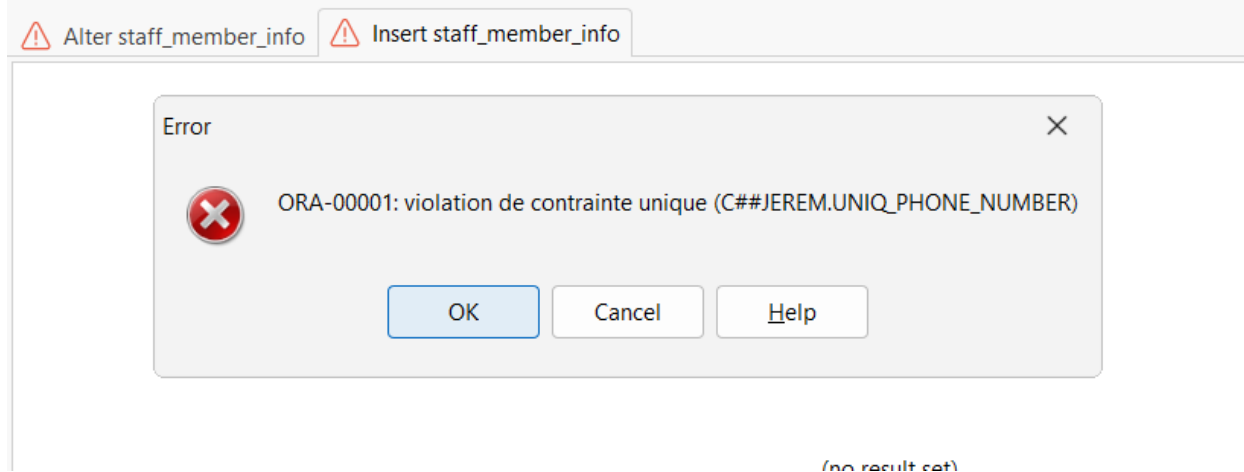
select * from staff_member_info

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

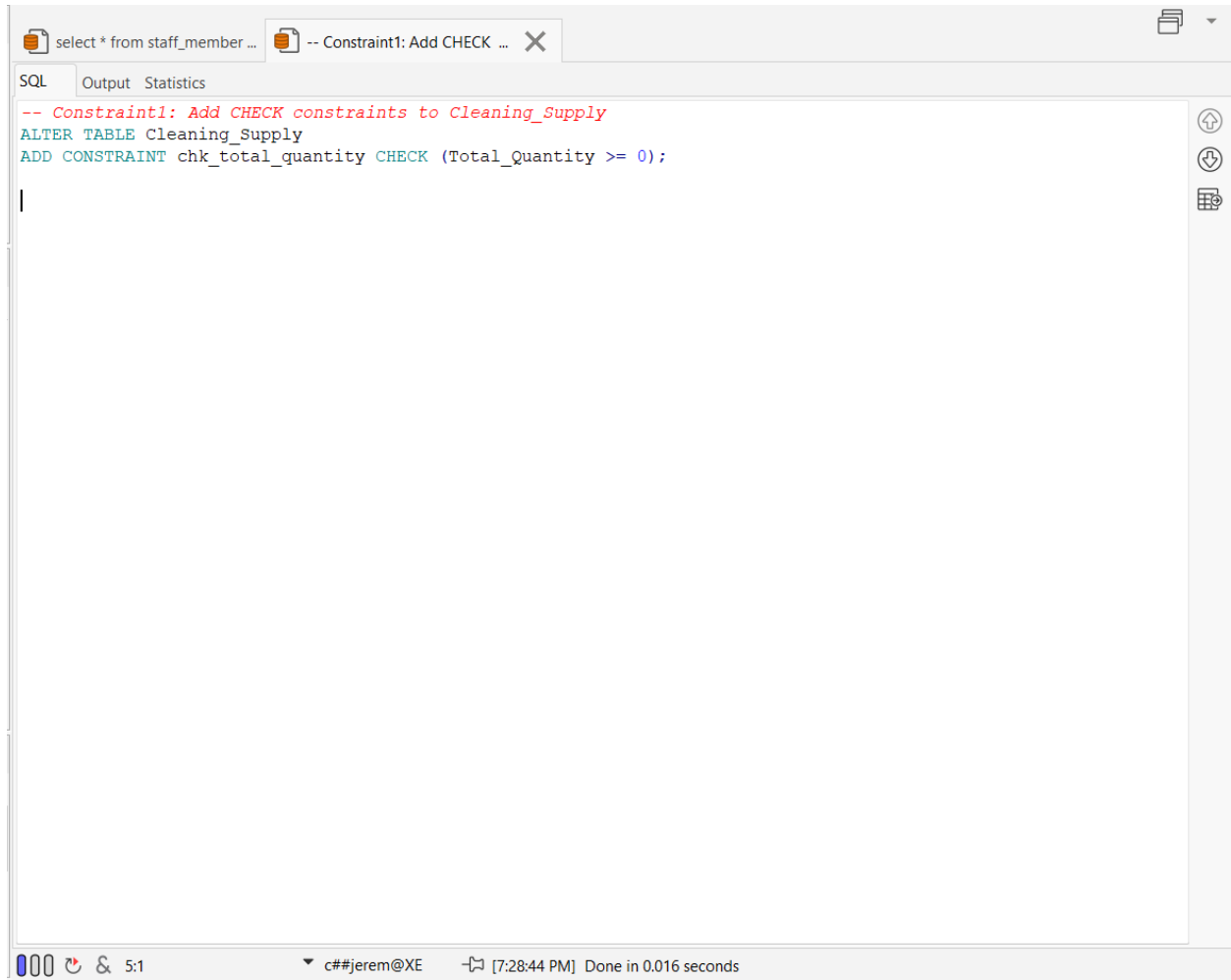
ואכן מתקבלת הודעת שגיאה שהפקודה מפרה את האילוץ:

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



אילוף שני:

Add CHECK constraints to Cleaning_Supply



The screenshot shows a SQL IDE window with two tabs: "select * from staff_member ..." and "-- Constraint1: Add CHECK ...". The "SQL" tab is active, displaying the following SQL command:

```
-- Constraint1: Add CHECK constraints to Cleaning_Supply
ALTER TABLE Cleaning_Supply
ADD CONSTRAINT chk_total_quantity CHECK (Total_Quantity >= 0);
```

The command is executed successfully, as indicated by the status bar at the bottom, which shows "Done in 0.016 seconds". The status bar also displays the user "c##jerem@XE" and the time "7:28:44 PM".

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');
```

Alter cleaning_supply

Insert cleaning_supply

Error



ORA-02290: violation de contraintes (C##JEREM.CHK_TOTAL_QUANTITY) de vérification

OK

Cancel

Help

(no result set)

אילוף שלישי:

Status will default to 'Pending' if not provided

The screenshot shows a SQL IDE window with three tabs: 'select * from staff_member ...', 'constraint2.sql', and '-- Status will default to ...'. The active tab is the third one. The SQL editor contains the following code:

```
-- Status will default to 'Pending' if not provided
ALTER TABLE Cleaning_Task
MODIFY Status DEFAULT 'Pending';
```

The IDE has a sidebar on the right with icons for 'Up', 'Down', and 'Table'. The status bar at the bottom shows the user 'c##jerem@XE', the time '7:30:11 PM', and the execution time 'Done in 0.054 seconds'.

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

The screenshot shows an Oracle SQL Developer window with the following components:

- Tab Bar:** Contains three tabs: "INSERT INTO Cleaning_Task ...", "constraint2.sql", and "constraint3.sql".
- SQL Editor:** Displays the following SQL statement:

```
INSERT INTO Cleaning_Task (TID, RID, SID)
VALUES (401, 101, 201);
```
- Output Panel:** Shows the execution results of the SQL statement:

```
SQL> INSERT INTO Cleaning_Task (TID, RID, SID)
VALUES (401, 101, 201);

1 row inserted.
```
- Status Bar:** Displays the following information:
 - On the left: Three colored circles (blue, green, red) and a refresh icon.
 - In the middle: "c##jerem@XE".
 - On the right: "[7:31:35 PM] 1 row inserted in 0.001 seconds".

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	