

דוח עבור שלב ב:

שאלות SELECT ללא פרמטרים :

(1)

מספר ארוחות שהוזמנו בחודש מסוים עבור כל קבוצה

```

SELECT

,G.Group_name AS Group_Name

,EXTRACT(MONTH FROM I.Invitation_date) AS Month

SUM(I.amount) AS Total_Meals_Ordered

FROM

Invitation I

JOIN Groups G ON I.Group_ID = G.Group_ID

GROUP BY

G.Group_name, EXTRACT(MONTH FROM I.Invitation_date)

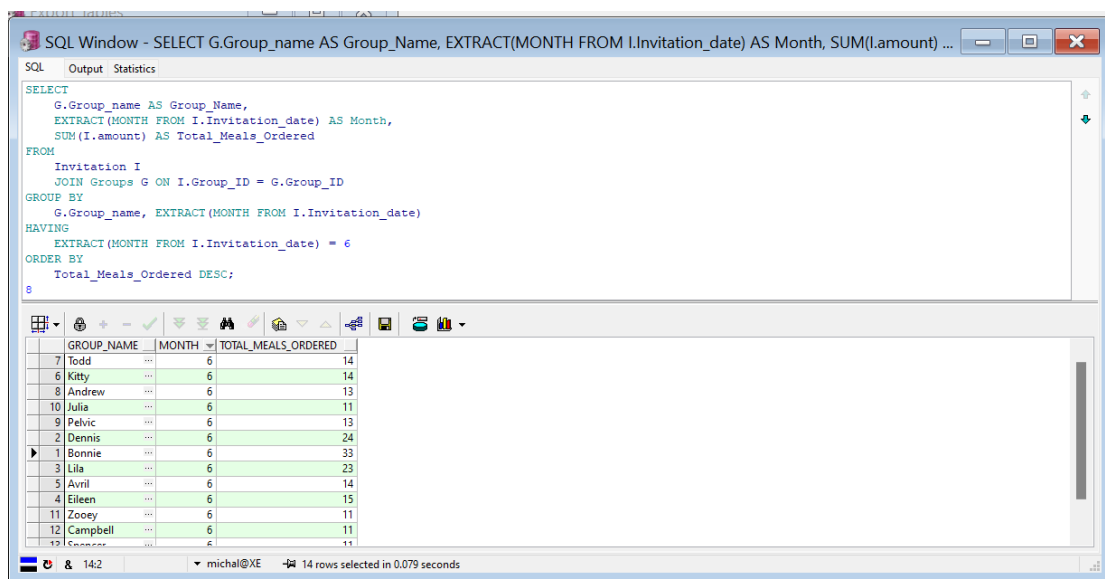
HAVING

EXTRACT(MONTH FROM I.Invitation_date) = 6

ORDER BY

;Total_Meals_Ordered DESC

```



The screenshot shows a SQL Window titled "SQL Window - SELECT G.Group_name AS Group_Name, EXTRACT(MONTH FROM I.Invitation_date) AS Month, SUM(I.amount) ...". The SQL query is displayed in the main window, and the results are shown in a table below. The table has three columns: GROUP_NAME, MONTH, and TOTAL_MEALS_ORDERED. The results are sorted by TOTAL_MEALS_ORDERED in descending order.

	GROUP_NAME	MONTH	TOTAL_MEALS_ORDERED
7	Todd	6	14
6	Kitty	6	14
8	Andrew	6	13
10	Julia	6	11
9	Pelvic	6	13
2	Dennis	6	24
1	Bonnie	6	33
3	Lila	6	23
5	Avril	6	14
4	Eileen	6	15
11	Zoey	6	11
12	Campbell	6	11
13	...	6	11

The status bar at the bottom indicates "14 rows selected in 0.079 seconds".

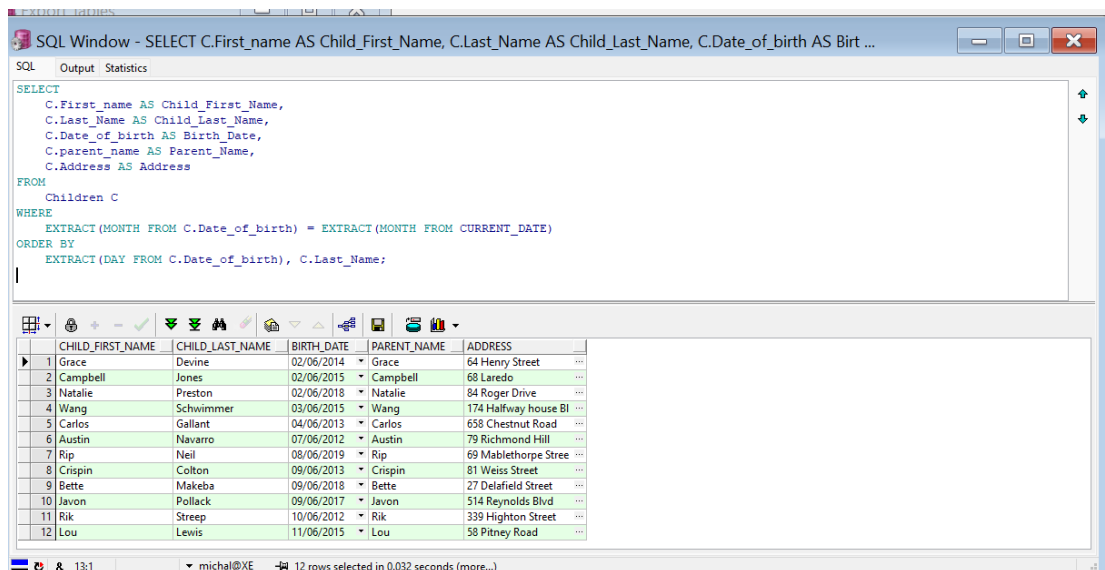
(2

פרטי ההורים וכתובת של ילדים שיום ההולדת שלהם בחודש הנוכחי

```

SELECT
,C.First_name AS Child_First_Name
,C.Last_Name AS Child_Last_Name
,C.Date_of_birth AS Birth_Date
,C.parent_name AS Parent_Name
C.Address AS Address
FROM
Children C
WHERE
EXTRACT(MONTH FROM C.Date_of_birth) = EXTRACT(MONTH FROM
CURRENT_DATE)
ORDER BY
;EXTRACT(DAY FROM C.Date_of_birth), C.Last_Name

```



	CHILD_FIRST_NAME	CHILD_LAST_NAME	BIRTH_DATE	PARENT_NAME	ADDRESS
1	Grace	Devine	02/06/2014	Grace	64 Henry Street
2	Campbell	Jones	02/06/2015	Campbell	68 Laredo
3	Natalie	Preston	02/06/2018	Natalie	84 Roger Drive
4	Wang	Schwimmer	03/06/2015	Wang	174 Halfway house Bl
5	Carlos	Gallant	04/06/2013	Carlos	658 Chestnut Road
6	Austin	Navarro	07/06/2012	Austin	79 Richmond Hill
7	Rip	Neil	08/06/2019	Rip	69 Mablethorpe Stree
8	Crispin	Colton	09/06/2013	Crispin	81 Weiss Street
9	Bette	Makeba	09/06/2018	Bette	27 Delafield Street
10	Javon	Pollack	09/06/2017	Javon	514 Reynolds Blvd
11	Rik	Streep	10/06/2012	Rik	339 Highton Street
12	Lou	Lewis	11/06/2015	Lou	58 Pitney Road

(3

סך מספר הילדים בכל קבוצה ומידע על הגננת

```
SELECT
,G.Group_name
,KT.First_name || ' ' || KT.Last_Name AS KTeacher
,COUNT(C.child_ID) AS Number_of_Children
FROM
Groups G
JOIN Kindergarten_Teacher KT ON G.KTeacher_ID = KT.KTeacher_ID
JOIN Children C ON G.Group_ID = C.Group_ID
GROUP BY
G.Group_name, KT.First_name, KT.Last_Name
ORDER BY
;Number_of_Children DESC
```

SQL Window - SELECT G.Group_name, KT.First_name || ' ' || KT.Last_Name AS KTeacher, COUNT(C.child_ID) AS Numb ...

SQL Output Statistics

```
SELECT
G.Group_name,
KT.First_name || ' ' || KT.Last_Name AS KTeacher,
COUNT(C.child_ID) AS Number_of_Children
FROM
Groups G
JOIN Kindergarten_Teacher KT ON G.KTeacher_ID = KT.KTeacher_ID
JOIN Children C ON G.Group_ID = C.Group_ID
GROUP BY
G.Group_name, KT.First_name, KT.Last_Name
ORDER BY
Number_of_Children DESC;
```

	GROUP_NAME	KTEACHER	NUMBER_OF_CHILDREN
1	Dennis	Ralph Irving	24
2	Lila	Sissy Rodgers	23
3	James	Rebeka Blaine	22
4	Olympia	Rosie Balk	19
5	Desmond	Rebeka Blaine	18
6	Claire	Saul Lynskey	18
7	Leslie	Debby Holland	17
8	Tini	Frederic Bradford	17
9	Bryan	Nastassja Hatossy	15
10	Eileen	Ruth LuPone	15
11	Sissy	Lois Domino	14
12	Reese	Chazz Houston	14

12 rows selected in 0.047 seconds (more...)

(4

מנות מוזמנות לפי תאריכים ותיאורי מנות

```
SELECT
,I.Invitation_date
,M.description
SUM(I.amount) AS Total_Amount
FROM
Invitation I
JOIN Meal M ON I.Meal_ID = M.Meal_ID
GROUP BY
I.Invitation_date, M.description
ORDER BY
,I.Invitation_date, Total_Amount DESC
```

SQL Window - SELECT I.Invitation_date, M.description, SUM(I.amount) AS Total_Amount FROM Invitation I JOIN Me ...

SQL Output Statistics

```
SELECT
  I.Invitation_date,
  M.description,
  SUM(I.amount) AS Total_Amount
FROM
  Invitation I
  JOIN Meal M ON I.Meal_ID = M.Meal_ID
GROUP BY
  I.Invitation_date, M.description
ORDER BY
  I.Invitation_date, Total_Amount DESC;
```

	INVITATION_DATE	DESCRIPTION	TOTAL_AMOUNT
1	17/02/2003	Cheese and ham crostini	14
2	26/04/2003	Turkey and cheese toasties	7
3	03/05/2003	Turkey and cranberry sandwiches	11
4	06/05/2003	Pretzel sticks with cheese dip	11
5	12/07/2003	Mini tuna sandwiches	14
6	10/08/2003	Chicken and vegetable pasta salad	10
7	12/08/2003	Turkey and cheese toasties	11
8	08/09/2003	Cheese and ham salad wraps	5
9	09/09/2003	Cheese and crackers	14
10	13/09/2003	Turkey and cranberry wraps	14
11	19/11/2003	Cheese and ham turnovers	11
12	24/12/2003	Chicken and vegetable flatbread wraps	9

12:1 | michal@XE | 12 rows selected in 0.062 seconds (more...)

שאלות UPDATE:

(1)

עדכון מס' המנות בהזמנה לפי גודל הקבוצה בפועל

UPDATE Invitation

) = SET amount

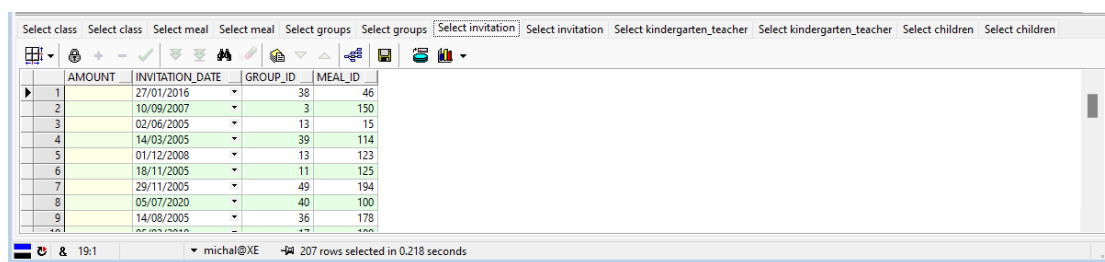
(*)SELECT COUNT

FROM Children

WHERE Children.Group_ID = Invitation.Group_ID

;

לפני הרצת השאילתה:



	AMOUNT	INVITATION_DATE	GROUP_ID	MEAL_ID
1		27/01/2016	38	46
2		10/09/2007	3	150
3		02/06/2005	13	15
4		14/03/2005	39	114
5		01/12/2008	13	123
6		18/11/2005	11	125
7		29/11/2005	49	194
8		05/07/2020	40	100
9		14/08/2005	36	178

הרצה:



```

SQL Window - UPDATE Invitation SET amount = ( SELECT COUNT(*) FROM Children WHERE Children.Group_ID = Invitat ...
SQL    Output    Statistics
UPDATE Invitation
SET amount = (
  SELECT COUNT(*)
  FROM Children
  WHERE Children.Group_ID = Invitation.Group_ID
);
  
```

אחרי ההרצה:

SQL Window - Select * from Invitation; Select count(*) from Invitation;

SQL Output Statistics

```
Select * from Invitation;
Select count(*) from Invitation;
```

Select invitation Select invitation

	AMOUNT	INVITATION_DATE	GROUP_ID	MEAL_ID
1	11	27/01/2016	38	46
2	9	10/09/2007	3	150
3	13	02/06/2005	13	15
4	5	14/03/2005	39	114
5	13	01/12/2008	13	123
6	24	18/11/2005	11	125
7	14	29/11/2005	49	194
8	15	05/07/2020	40	100
9	11	14/08/2005	36	178
10	11	05/03/2010	17	180
11	9	11/03/2019	21	186
12	7	18/09/2010	22	107
13	9	30/12/2012	21	149
14	9	17/02/2018	2	116
15	14	30/12/2016	48	177
16	14	18/03/2008	4	30

16 rows selected in 0.062 seconds (more...)

(2

עדכון גילאי הקבוצות להיות בין 2 ל 11

UPDATE Groups

;SET age_group = FLOOR(DBMS_RANDOM.VALUE(2, 11))

לפני ההרצה :

SQL Window - Select * from class; Select count(*) from class; Select * from Meal; Select count(*) from Meal; ...

SQL Output Statistics

```
Select * from Groups;
Select count(*) from Groups;

Select * from Invitation;
Select count(*) from Invitation;

Select * from Kindergarten_Teacher;
Select count(*) from Kindergarten_Teacher;
```

Select class Select class Select meal Select meal Select groups Select invitation Select invitation Select kindergarten_teacher Select kindergarten_teacher Select children Select children

	GROUP_ID	GROUP_NAME	AGE_GROUP	KTEACHER_ID	HOURL	CLASS_DAY	CLASS_ID
1	1	Johnette	...	3 428283	16	THURSDAY	507
2	2	Spike	...	8 678542	17	FRIDAY	829
3	3	Trick	...	6 51274	14	TUESDAY	856
4	4	Kyra	...	9 241345	15	WEDNESDAY	742
5	5	Ethan	...	5 517314	13	WEDNESDAY	745
6	6	Leslie	...	10 719535	16	WEDNESDAY	725
7	7	Ben	...	6 367794	16	WEDNESDAY	823
8	8	Casey	...	2 574911	17	SUNDAY	616
9	9	Famke	...	8 9727100	15	THURSDAY	701
10	10	Heath	...	6 163546	17	TUESDAY	672
11	11	Dennis	...	5 792747	13	MONDAY	599
12	12	Johnnie	...	5 524373	13	TUESDAY	811
13	13	Andrew	...	8 578595	14	SUNDAY	481
14	14	Holly	...	3 82426	13	TUESDAY	646
15	15	Desmond	...	3 191553	17	FRIDAY	801
16	16	Sander	...	8 871418	13	MONDAY	470

16 rows selected in 0.047 seconds (more...)

הרצה:

SQL Window - UPDATE Groups SET age_group = FLOOR(DBMS_RANDOM.VALUE(2, 11));

```
SQL
Output Statistics

UPDATE Groups
SET age_group = FLOOR(DBMS_RANDOM.VALUE(2, 11));
```

5:1 michal@XE 50 rows updated in 0.016 seconds

אחרי ההרצה:

SQL Window - Select * from Groups; Select count(*) from Groups;

```
SQL
Output Statistics

Select * from Groups;
Select count(*) from Groups;
```

Select groups Select groups

	GROUP_ID	GROUP_NAME	AGE_GROUP	ITEACHER_ID	HOURL	CLASS_DAY	CLASS_ID
1	1	Johnette	...	2 428283	16	THURSDAY	507
2	2	Spike	...	6 678542	17	FRIDAY	829
3	3	Trick	...	9 51274	14	TUESDAY	856
4	4	Kyra	...	3 241345	15	WEDNESDAY	742
5	5	Ethan	...	5 517314	13	WEDNESDAY	745
6	6	Leslie	...	6 719535	16	WEDNESDAY	725
7	7	Ben	...	4 367784	16	WEDNESDAY	823
8	8	Casey	...	6 574911	17	SUNDAY	616
9	9	Famke	...	3 9727100	15	THURSDAY	701
10	10	Heath	...	10 163546	17	TUESDAY	672
11	11	Dennis	...	8 792747	13	MONDAY	599
12	12	Johnnie	...	2 524373	13	TUESDAY	811
13	13	Andrew	...	9 578595	14	SUNDAY	481
14	14	Holly	...	4 82426	13	TUESDAY	646
15	15	Desmond	...	5 191553	17	FRIDAY	801
16	16	Sander	...	3 871418	13	MONDAY	470
17	17	Bonnie	...	7 916780	15	FRIDAY	654

3:1 michal@XE 17 rows selected in 0.063 seconds (more...)









שאלות DELETE

(1)

מחיקת קבוצות ללא ילדים

```
DELETE FROM Groups
) WHERE Group_ID NOT IN
SELECT DISTINCT Group_ID
FROM Children
; (
```

לפני ההרצה:

Select groups	
	
	
	
	
COUNT(*)	
1	50









אחרי ההרצה:

(נשאר אותו דבר מאחר ואין קבוצות ללא ילדים)

SQL Window - DELETE FROM Groups WHERE Group_ID NOT IN (SELECT DISTINCT Group_ID FROM Children); Select * fr ...

SQL Output Statistics

```
DELETE FROM Groups
WHERE Group_ID NOT IN (
  SELECT DISTINCT Group_ID
  FROM Children
);
Select * from Groups;
Select count(*) from Groups;
```

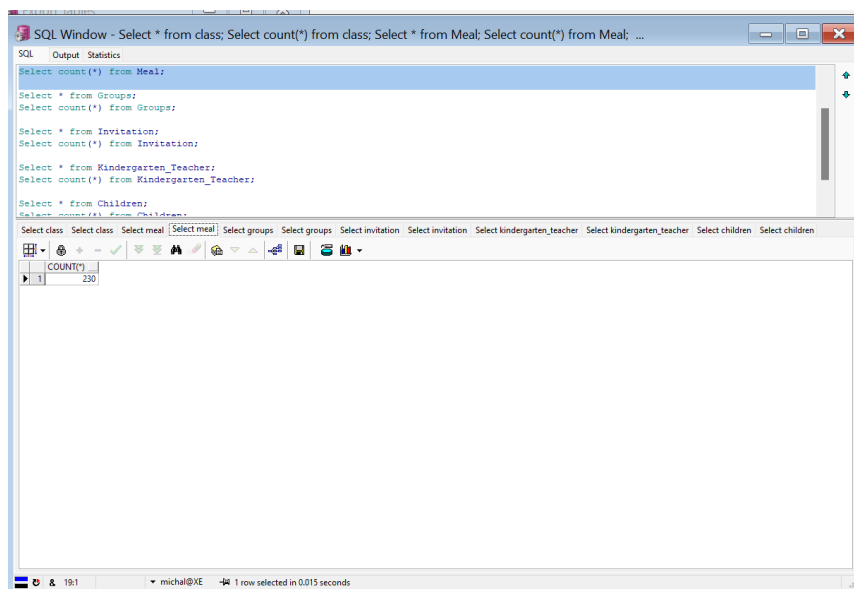
Delete groups	
	
	
	
	
COUNT(*)	
1	50

9:1 | michal@XE | 1 row selected in 0.016 seconds

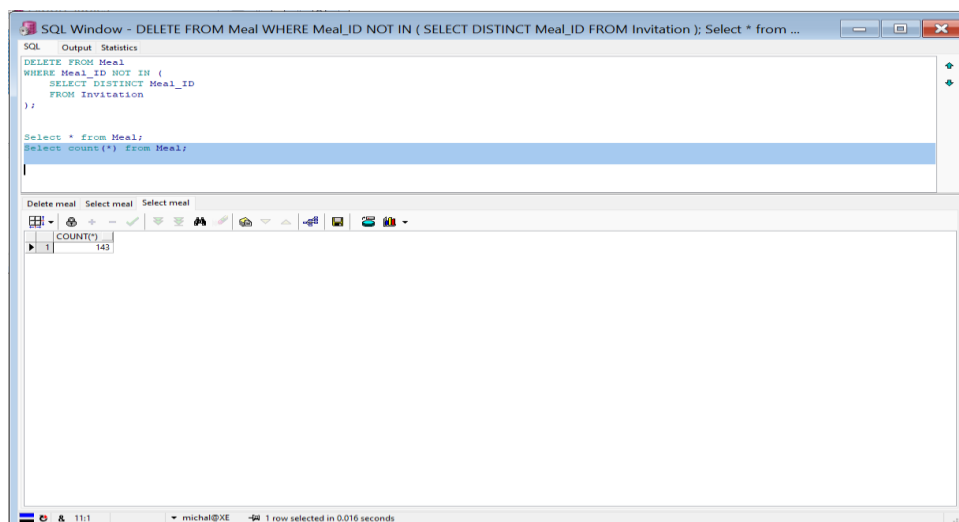
מחיקת מנות שלא הוזמנו באף הזמנה

```
DELETE FROM Meal
) WHERE Meal_ID NOT IN
SELECT DISTINCT Meal_ID
FROM Invitation
; (
```

לפני ההרצה :



אחרי ההרצה:



אילוצים:

(1)

האילוץ מוודא שגיל הילד אינו שלילי, כלומר תאריך הלידה של הילד חייב להיות קטן מהתאריך הנוכחי.

```
CREATE OR REPLACE TRIGGER trg_check_date_of_birth
BEFORE INSERT OR UPDATE ON Children
FOR EACH ROW
BEGIN
IF :NEW.Date_of_birth > SYSDATE THEN

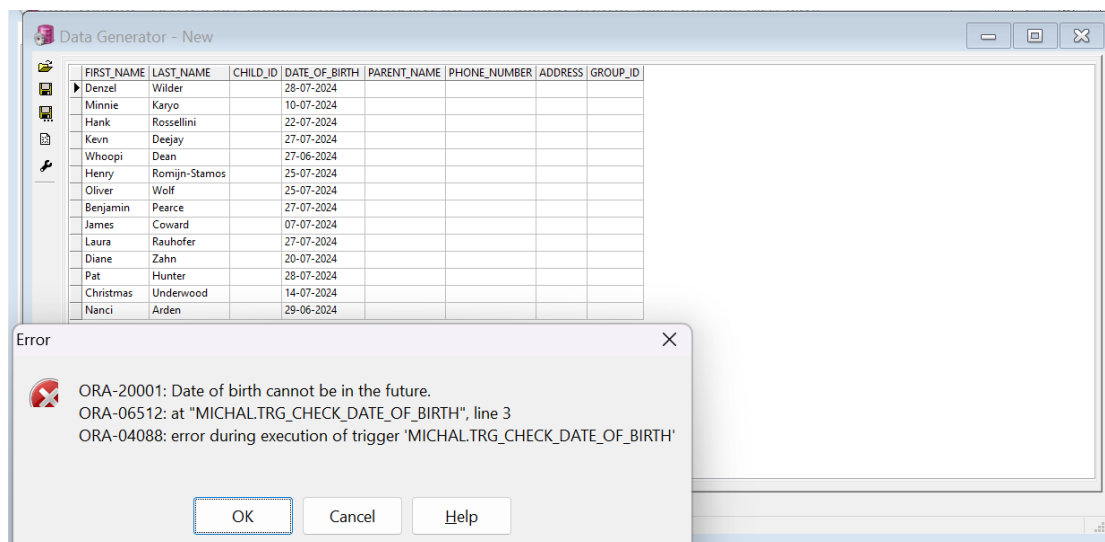
RAISE_APPLICATION_ERROR(-20001, 'Date of birth cannot be in the
;future.')

;END IF

;END

/
```

ניסיון להכניס ערך אשר סותר את האילוץ:



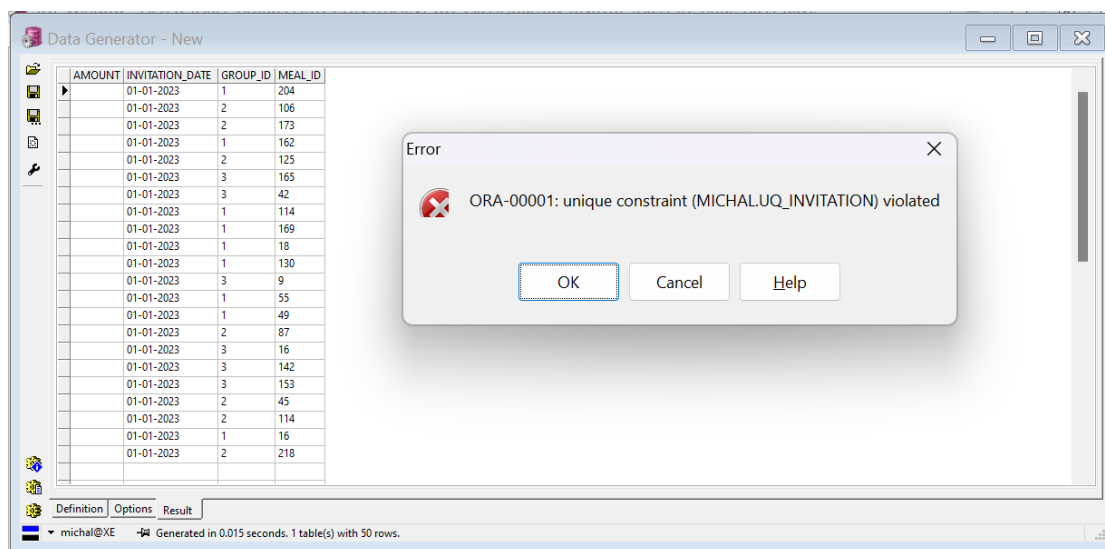
(2)

אילוץ UNIQUE על השדה Invitation_date ו-Group_ID יחד, כדי לוודא שאין יותר מהזמנה אחת לקבוצה באותו יום

ALTER TABLE Invitation

;ADD CONSTRAINT UQ_Invitation UNIQUE (Invitation_date, Group_ID)

ניסיון להכניס ערך אשר סותר את האילוץ:



(3)

אילוץ שמתאר את היחודיות של חוג, שעה ויום ביחד, כלומר שאין אותו החוג באותם שעות בצהרונים שונים

ALTER TABLE Groups

;ADD CONSTRAINT UQ_ClassHourDay UNIQUE (class_ID, hour, class_day)

ניסיון להכניס ערך אשר סותר את האילוץ:

