

[שנה]

מיניפ בסנ"ת שלב 2

נועה לשס והדס קרמן

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שאלות פשוטות

שאלתה 1

החזרת ממוצע הגילאים וכמות המאמנים שהם גם מתאמנים ממין נקבה עבור כל תחום התמחות של מאמנים.

ect g.speciality, count(g.person_id) as NumOfPeople, avg(t.age) as averageAge from coach g joi ...]

```
SQL Output Statistics
select g.speciality, count(g.person_id) as NumOfPeople, avg(t.age) as averageAge
from coach g
join trainee t on g.person_id = t.person_id
join person p on g.person_id = p.person_id
where p.gender = 'Female'
group by speciality
```

	SPECIALITY	NUMOFPEOPLE	AVERAGEAGE
1	Cardio Fitness	11	66.4545454545455
2	Pilates	15	45.4666666666667
3	Nutrition Coaching	14	47.1428571428571
4	Rehabilitation	13	57.6923076923077
5	Weight Loss	11	57.6363636363636
6	Yoga	16	54.0625
7	Strength Training	12	56
8	Endurance Training	9	40.5555555555556
9	Bodybuilding	12	47.3333333333333

hadasNoa@XE 9 rows selected in 0.063 seconds

שאלתה 2

נחזיר פרטים של שיעורים שהתפוסה המקסימלית בשיעור קטנה מתפוסת האולם שבו הוא מתקיים כלומר אפשר לקיים אותו באולם הזה. הפרטים שנחזיר עליו הם: שם השיעור, שם המאמן, תאריך תחילת השיעור והיכן השיעור מתקיים כלומר שם החדר כושר ומספר האולם.

ect g.speciality, count(g.person_id) as NumOfPeople, avg(t.age) as averageAge from coach g joi ...]

```
SQL Output Statistics
select c.class_name, o.full_name as coach_name, c.hall_number, gy.gym_name, c.start_date
from class_lesson c
join hall h on c.hall_number = h.hall_number
and c.gym_number = h.gym_number
join (select p.person_id, p.full_name
from person p
join coach co on p.person_id = co.person_id) o on o.person_id = c.person_id
join gym gy on gy.gym_number = c.gym_number
where h.capacity > c.capacity
order by c.start_date, c.class_name
```

	CLASS_NAME	COACH_NAME	HALL_NUMBER	GYM_NAME	START_DATE
1	Body Sculpt	Anticia McParlin	17	Strength Station	01/01/2024
2	Lift and Tone	Lorena Maryman	23	Total Gym	01/01/2024
3	Pilates	Anticia McParlin	17	Strength Station	01/01/2024
4	Spinning	Menard Pyzer	17	Strength Station	01/01/2024
5	Zumba	Anticia McParlin	22	Fitness Planet	01/01/2024
6	Zumba	Anticia McParlin	6	Fit Body Gym	01/01/2024
7	Body Sculpt	Menard Pyzer	27	Total Body Gym	02/01/2024
8	Body Sculpt	Menard Pyzer	4	Fit Body Gym	02/01/2024
9	Pilates	Menard Pyzer	27	Total Body Gym	02/01/2024
10	Spinning	Skelly Henrot	17	Strength Station	02/01/2024
11	Dance Cardio	Menard Pyzer	27	Total Body Gym	03/01/2024
12	HIT Fit	Lorena Maryman	4	Fit Body Gym	03/01/2024
13	Pilates	Frederico Ashdown	30	Power Performance	03/01/2024
14	Spinning	Lorena Maryman	17	Strength Station	03/01/2024
15	Dance Cardio	Lorena Maryman	4	Fit Body Gym	04/01/2024
16	Lift and Tone	Ola Mayne	25	Elite Fitness	04/01/2024
17	Pilates	Menard Pyzer	29	Flex Gym	04/01/2024
18	Spinning	Anticia McParlin	17	Strength Station	04/01/2024

hadasNoa@XE 105 rows selected in 0.219 seconds

שאלתה 3

נחזיר את כל המכשירים שלא משתמשים בהם בשיעורים שעדיין פועלים (לא הגיע תאריך הסיום שלהם) בחדר כושר מסוים (אנחנו עשינו לדוגמא חדר כושר בשם Elite Gym). כלומר נקבל את כל המכשירים הפנויים כרגע בחדר כושר Elite Gym.

The screenshot shows a SQL query in a database tool. The query is as follows:

```
select count(de.device_number) as not_in_use, de.device_model
from device de
where de.device_number not in (select ui.device_number
                              from used_in ui join class_lesson a on a.class_number = ui.class_number
                              where a.gym_number in (select b.gym_number
                                                    from class_lesson b join gym gy on gy.gym_number = b.gym_number
                                                    where gy.gym_name != 'Elite Gym'
                                                    and b.finish_date > sysdate))
group by de.device_model
```

The result set shows 6 rows of data:

NOT_IN_USE	DEVICE_MODEL
23	Spinning Bike
19	Stegmills
28	Treadmill
13	Dumbbells
15	Weight Plates
23	Cable Machine

שאלתה 4

נחזיר את כל המתאמנים שרשומים לשיעור Pilates ולא רשומים לשום קורס אחר. כלומר נקבל את כל המתאמנים שמעבירים רק את שיעור pilates.

The screenshot shows a SQL query in a database tool. The query is as follows:

```
select p.person_id, p.full_name
from person p
where exists (select tk.person_id
              from takes tk
              join class_lesson cl on cl.class_number = tk.class_number
              where cl.class_name = 'Pilates' and p.person_id = tk.person_id)
intersect
select p.person_id, p.full_name
from person p
where not exists (select cl.class_number
                  from takes tk
                  join class_lesson cl on cl.class_number = tk.class_number
                  where cl.class_name != 'Pilates' and p.person_id = tk.person_id)
```

The result set shows 11 rows of data:

PERSON_ID	FULL_NAME
48591713	Flon Woodard
91717809	Isop Borlace
224727173	Conna Eloyes
246427667	Jonah Hazard
384007856	Lucas Headen
399423803	Rutger Kloss
442799071	Pate Luck
510966901	Ronald Waldrum
624373181	Boris Chupin
624778708	Codie Punte
910834121	Laurny Ree

שאלות delete

שאלת 1

מחקנו רשומות של מתאמנים שלוקחים שיעורים (takes) במקרה שהמצב הבריאותי של המתאמן הוא – heart disease או chronic respiratory conditions ושהשיעור הוא שיעור cardio. כלומר המתאמן לא יכול להשתתף בשיעור הזה מפני שמצבו שלו לא מאפשר את זה.

אפשר לראות שנמחקו 102 רשומות ומסומנות 2 מתוכם שנמצאות בבסיס הנתונים לפני המחיקה ולא אחריה.

בסיס הנתונים לפני:

	PERSON_ID	CLASS_NUMBER
1	8496983	39
2	8496983	129
3	8496983	143
4	8496983	144
5	8496983	148
6	8419613	42
7	15823020	81
8	15823020	134
9	16268226	122
10	16268226	124
11	16268226	131
12	16268226	138
13	16268226	174
14	16268226	189
15	17335897	27

השאלתה:

```
delete
from (select tk.person_id, tk.class_number
      from takes tk
      join trainee tr on tk.person_id = tr.person_id
      join class_lessons cl on tk.class_number = cl.class_number
      where tr.health = 'Chronic Respiratory Conditions' or tr.health = 'Heart Disease'
      and cl.class_name = 'Dance Cardio') o
```

הרצת השאלתה:

	PERSON_ID	CLASS_NUMBER
1	8496983	39
2	8496983	129
3	8496983	143
4	8496983	144
5	8496983	148
6	8419613	42
7	15823020	81
8	16268226	121
9	16268226	122
10	16268226	124
11	16268226	131
12	16268226	138
13	16268226	174
14	16268226	189
15	17335897	27

בסיס הנתונים אחרי:

	PERSON_ID	CLASS_NUMBER
1	8496983	39
2	8496983	129
3	8496983	143
4	8496983	144
5	8496983	148
6	8419613	42
7	15823020	81
8	16268226	121
9	16268226	122
10	16268226	124
11	16268226	131
12	16268226	138
13	16268226	174
14	16268226	189
15	17335897	27

שאלתה 2

מחקנו את כל השיעורים שהתפוסה המקסימלית באולם שבו הם מתקיימים קטנה מהתפוסה של השיעורים, כלומר אי אפשר לקיים את השיעור באולם שבו הוא רשום וכן בדקנו שתאריך הסיום שלהם קטן מהתאריך הנוכחי.

אפשר לראות שנמחקו 11 שיעורים ומסומן מתוכם שיעור אחד שנמצא בבסיס הנתונים לפני המחיקה ולא אחריה.

בסיס הנתונים לפני:

השאלתה:

```

commit;
delete
from class_lesson cl
where exists (select g.gym_number, g.gym_name
from gym g
join hall h on h.gym_number = g.gym_number
where h.capacity < cl.capacity
and cl.gym_number = g.gym_number)
and cl.finish_date <= sysdate
rollback;
    
```

הרצת השאלתה:

בסיס הנתונים אחרי:

	START_DATE	CAPACITY	TERMS	CLASS_NAME	CLASS_NUMBER	FINISH_DATE	CLASS_DAY	CLASS_HOUR	PERSON_ID
1	10/05/2024	19	Age 40+ Gender: male Fitness Level: Intermediate Medical Conditions: no	Body Sculpt	1	11/09/2024	Tuesday	16:22	3288282
2	01/01/2024	39	Age 40+ Gender: male Fitness Level: Beginner Medical Conditions: no	Spinning	12	09/06/2024	Monday	10:00	2178410
3	12/03/2024	12	Age 18-35 Gender: female Fitness Level: Beginner Medical Conditions: no	Pilates	121	05/10/2024	Monday	11:21	9383793
4	15/01/2024	13	Age 18-35 Gender: male Fitness Level: Advanced Medical Conditions: no	Dance Cardio	144	21/09/2024	Tuesday	14:53	2968582
5	11/04/2024	12	Age 60+ Gender: female Fitness Level: Advanced Medical Conditions: no	Body Sculpt	145	12/09/2024	Monday	17:38	3308396
6	06/01/2024	20	Age 60+ Gender: female Fitness Level: Advanced Medical Conditions: no	HIT Fit	2	31/08/2024	Wednesday	11:00	1329248
7	04/01/2024	35	Age 18-35 Gender: female Fitness Level: Beginner Medical Conditions: no	Lift and Tone	3	15/07/2024	Sunday	15:00	9389699
8	03/01/2024	20	Age 18-35 Gender: female Fitness Level: Beginner Medical Conditions: no	Pilates	9	14/10/2024	Wednesday	12:00	3327001
9	06/01/2024	20	Age 15-18 Gender: male Fitness Level: Beginner Medical Conditions: no	Dance Cardio	10	19/07/2024	Saturday	12:00	5382841
10	06/01/2024	33	Age 15-18 Gender: female Fitness Level: Intermediate Medical Conditions: no	Dance Cardio	16	05/11/2024	Wednesday	14:00	5378710
11	03/01/2024	23	Age 18-35 Gender: male Fitness Level: Beginner Medical Conditions: no	HIT Fit	20	21/07/2024	Monday	15:00	5382841
12	04/01/2024	36	Age 60+ Gender: male Fitness Level: Advanced Medical Conditions: no	Zumba	22	01/09/2024	Thursday	14:00	5382841
13	06/01/2024	32	Age 18-35 Gender: female Fitness Level: Advanced Medical Conditions: no	Dance Cardio	23	07/12/2024	Tuesday	10:00	3382583
14	01/01/2024	20	Age 60+ Gender: male Fitness Level: Advanced Medical Conditions: no	Lift and Tone	25	28/12/2024	Thursday	15:00	5382841
15	04/01/2024	24	Age 15-18 Gender: female Fitness Level: Intermediate Medical Conditions: no	Zumba	27	26/12/2024	Friday	16:00	1329248
16	04/01/2024	33	Age 18-35 Gender: female Fitness Level: Intermediate Medical Conditions: no	Pilates	33	08/06/2024	Tuesday	15:00	2178410
17	02/01/2024	25	Age 15-18 Gender: male Fitness Level: Beginner Medical Conditions: no	Spinning	34	21/10/2024	Monday	14:00	5378710
18	01/01/2024	26	Age 60+ Gender: male Fitness Level: Advanced Medical Conditions: no	Zumba	35	14/11/2024	Thursday	10:00	1329248
19	04/01/2024	23	Age 15-18 Gender: female Fitness Level: Beginner Medical Conditions: no	Dance Cardio	39	10/09/2024	Friday	12:00	5382841
20	06/01/2024	37	Age 18-35 Gender: female Fitness Level: Intermediate Medical Conditions: no	Pilates	40	29/06/2024	Tuesday	10:00	1329248
21	01/01/2024	29	Age 40+ Gender: male Fitness Level: Intermediate Medical Conditions: no	Zumba	42	07/07/2024	Thursday	14:00	5378710
22	01/01/2024	24	Age 18-35 Gender: male Fitness Level: Beginner Medical Conditions: no	Zumba	48	09/07/2024	Friday	14:00	1329248
23	01/01/2024	34	Age 60+ Gender: female Fitness Level: Advanced Medical Conditions: no	Spinning	47	27/09/2024	Thursday	12:00	5382841
24	02/01/2024	20	Age 18-35 Gender: female Fitness Level: Intermediate Medical Conditions: no	Body Sculpt	49	09/06/2024	Saturday	15:00	2178410
25	01/01/2024	30	Age 40+ Gender: female Fitness Level: Intermediate Medical Conditions: no	Pilates	51	15/07/2024	Tuesday	10:00	1329248
26	02/01/2024	37	Age 60+ Gender: female Fitness Level: Beginner Medical Conditions: no	Pilates	58	08/06/2024	Saturday	10:00	2178410
27	25/01/2024	22	Age 18-35 Gender: male Fitness Level: Beginner Medical Conditions: no	Dance Cardio	59	17/08/2024	Tuesday	12:00	1329248
28	03/01/2024	35	Age 60+ Gender: female Fitness Level: Beginner Medical Conditions: no	Dance Cardio	66	09/06/2024	Tuesday	11:00	2178410
29	01/01/2024	32	Age 18-35 Gender: male Fitness Level: Beginner Medical Conditions: no	Body Sculpt	67	12/10/2024	Thursday	12:00	1329248
30	06/01/2024	29	Age 60+ Gender: female Fitness Level: Advanced Medical Conditions: no	Body Sculpt	73	08/06/2024	Thursday	12:00	2178410
31	04/01/2024	37	Age 18-35 Gender: male Fitness Level: Intermediate Medical Conditions: no	Spinning	74	11/11/2024	Wednesday	15:00	1329248
32	02/01/2024	23	Age 60+ Gender: female Fitness Level: Advanced Medical Conditions: no	Body Sculpt	80	09/06/2024	Tuesday	15:00	2178410

שאלות update

שאלה 1

עדכנו את המשכורת של כל המאמנים בבנוס של 1500 שקל אם הם מלמדים 10 או יותר שיעורים.

אפשר לראות את המאמנים המסומנים שבהם המשכורת גדלה ב1500 שקל.

בסיס הנתונים לפני והשאלה:

SQL

```

update coach
set salary = salary + 1500
where person_id in (select c1.person_id, count(c1.class_number)
from class_lesson c1
group by c1.person_id
having count(c1.class_number) >= 10)

```

select * from coach

	SPECIALITY	SALARY	EXPERIENCE	PERSON_ID
1	Rehabilitation	11484	7 years	165021958
2	Weight Loss	10285	15 years	404616118
3	Rehabilitation	9344	9 years	791276222
4	Endurance Training	9342	5 years	537871885
5	Rehabilitation	9342	5 years	332700112
6	Endurance Training	7293	3 years	826205546
7	Yoga	7293	3 years	378600032
8	Bodybuilding	7293	1 years	826016648
9	Bodybuilding	7140	24 years	826426071
10	Nutrition Coaching	11844	15 years	652621999
11	Pilates	10536	9 years	782753882
12	Strength Training	7775	21 years	836262596
13	Yoga	9546	11 years	278701404
14	Nutrition Coaching	9546	21 years	398712524
15	Cardio Fitness	9285	4 years	538899949
16	Endurance Training	7974	8 years	965564108
17	Weight Loss	10269	4 years	666931958
18	Endurance Training	8444	11 years	88947666
19	Bodybuilding	8034	13 years	621394627
20	Bodybuilding	7999	8 years	919189920
21	Endurance Training	10482	15 years	482913375
22	Nutrition Coaching	7829	24 years	509609952
23	Pilates	8368	8 years	

הרצת השאלה:

hadasloa@XE	6 rows updated in 0 seconds
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בסיס הנתונים אחרי:

select g.specialty, count(g.person_id) as NumOfPeople, avg(t.age) as averageAge from coach g join t on

Reports Window Help

SQL Output Statistics

```
update coach
set salary = salary + 1500
where person_id in (select cl.person_id
from class_lesson cl
group by cl.person_id
having count(cl.class_number) >= 10)
```

SPECIALTY	SALARY	EXPERIENCE	PERSON_ID
1 Rehabilitation	4900 12 years	11	558102976
2 Weight Loss	12584 7 years	1	165021958
3 Rehabilitation	7779 15 years	1	404616118
4 Endurance Training	9344 9 years	1	791276222
5 Rehabilitation	9344 8 years	1	537871085
6 Endurance Training	7779 15 years	1	332700112
7 Yoga	8793 3 years	1	526205546
8 Bodybuilding	10455 7 years	1	376600032
9 Bodybuilding	7740 24 years	1	829006948
10 Nutrition Coaching	11844 15 years	1	834480711
11 Pilates	10556 9 years	1	652621999
12 Strength Training	7778 21 years	1	792793892
13 Yoga	7779 15 years	1	936296296
14 Nutrition Coaching	11046 21 years	1	278701404
15 Cardio Fitness	7523 4 years	1	398712524
16 Endurance Training	7974 8 years	1	938999949
17 Weight Loss	10289 4 years	1	945564108
18 Endurance Training	7779 15 years	1	666931958
19 Bodybuilding	10134 13 years	1	88847666
20 Bodybuilding	7779 15 years	1	621394627
21 Endurance Training	10442 15 years	1	919199930
22 Nutrition Coaching	7829 24 years	1	482913375
23 Pilates	8368 8 years	1	509609652
24 Bodybuilding	11826 25 years	1	542196095
25 Strength Training	11987 17 years	1	1196287960
26 Nutrition Coaching	11181 3 years	1	882528796
27 Endurance Training	9309 13 years	1	270436980

hadasNoa@XE 369 rows selected in 0.375 seconds

שאלתה 2

עדכנו את תאריך הסיום של כל השיעורים שמעבירים אותם מאמנים שהנסיון שלהם גדול מ20 שנים להיות התאריך של היום (sysdate, כאילו הם מסתיימים היום).

אפשר לראות את השיעורים המסומנים שבהם השתנה תאריך הסיום שלהם ל9.6.2024.

בסיס הנתונים לפני:

CLASS_lesson

START_DATE	CAPACITY	TERMS	CLASS_NAME	CLASS_NUMBER	FINISH_DATE	CLASS_DAY	CLASS_HOUR	PERSON_ID
1 10/01/2024	19	Age 40+ Gender: female Fitness Level: Intermediate Medical Conditions: no	Rehabilitation	1	10/06/2024	Monday	16:12	3283032
2 01/03/2024	39	Age 40+ Gender: male Fitness Level: Beginner Medical Conditions: no	Spinning	1	28/11/2024	Monday	10:00	2178410
3 12/03/2024	12	Age 18-35 Gender: female Fitness Level: Beginner Medical Conditions: no	Pilates	1	28/11/2024	Monday	11:21	9383795
4 15/01/2024	13	Age 18-35 Gender: female Fitness Level: Advanced Medical Conditions: no	Dance Cardio	144	21/09/2024	Tuesday	14:53	2998952
5 11/04/2024	12	Age 50+ Gender: female Fitness Level: Advanced Medical Conditions: no	Body Sculpt	145	12/09/2024	Monday	17:38	3308396
6 06/01/2024	20	Age 60+ Gender: female Fitness Level: Advanced Medical Conditions: no	HIT Fit	2	31/08/2024	Wednesday	11:00	1329248
7 04/01/2024	35	Age 18-35 Gender: female Fitness Level: Beginner Medical Conditions: no	Lift and Tone	3	15/07/2024	Sunday	15:00	9389699
8 03/01/2024	20	Age 18-35 Gender: female Fitness Level: Beginner Medical Conditions: no	Pilates	9	14/10/2024	Wednesday	12:00	3327001
9 08/01/2024	20	Age 15-18 Gender: male Fitness Level: Beginner Medical Conditions: no	Dance Cardio	10	18/07/2024	Saturday	12:00	5382841
10 06/01/2024	33	Age 15-18 Gender: female Fitness Level: Intermediate Medical Conditions: no	Dance Cardio	16	05/11/2024	Wednesday	14:00	5378710
11 03/01/2024	23	Age 18-35 Gender: male Fitness Level: Beginner Medical Conditions: no	HIT Fit	20	21/07/2024	Monday	15:00	5382841
12 04/01/2024	36	Age 60+ Gender: male Fitness Level: Advanced Medical Conditions: no	Zumba	22	01/08/2024	Thursday	14:00	5382841
13 06/01/2024	32	Age 18-35 Gender: female Fitness Level: Advanced Medical Conditions: no	Dance Cardio	23	07/12/2024	Tuesday	10:00	3382583
14 01/01/2024	20	Age 60+ Gender: male Fitness Level: Advanced Medical Conditions: no	Lift and Tone	25	28/12/2024	Thursday	15:00	5382841
15 04/01/2024	24	Age 15-18 Gender: female Fitness Level: Intermediate Medical Conditions: no	Zumba	26	04/09/2024	Friday	16:00	1329248
16 04/01/2024	33	Age 18-35 Gender: female Fitness Level: Intermediate Medical Conditions: no	Pilates	30	15/09/2024	Tuesday	15:00	2178410
17 02/01/2024	25	Age 15-18 Gender: male Fitness Level: Beginner Medical Conditions: no	Spinning	34	22/09/2024	Monday	14:00	5378710
18 01/01/2024	26	Age 60+ Gender: male Fitness Level: Advanced Medical Conditions: no	Zumba	35	14/11/2024	Thursday	10:00	1329248
19 04/01/2024	23	Age 15-18 Gender: female Fitness Level: Beginner Medical Conditions: no	Dance Cardio	39	10/09/2024	Friday	12:00	5382841
20 06/01/2024	37	Age 18-35 Gender: female Fitness Level: Intermediate Medical Conditions: no	Pilates	40	26/06/2024	Tuesday	10:00	1329248
21 01/01/2024	29	Age 40+ Gender: male Fitness Level: Intermediate Medical Conditions: no	Zumba	41	25/09/2024	Thursday	14:00	5378710
22 04/01/2024	28	Age 40+ Gender: male Fitness Level: Beginner Medical Conditions: no	HIT Fit	44	22/11/2024	Tuesday	15:00	2178410
23 01/01/2024	24	Age 18-35 Gender: male Fitness Level: Beginner Medical Conditions: no	Zumba	46	01/09/2024	Friday	14:00	1329248
24 03/01/2024	34	Age 60+ Gender: female Fitness Level: Advanced Medical Conditions: no	Spinning	49	01/09/2024	Thursday	12:00	5382841
25 02/01/2024	20	Age 18-35 Gender: female Fitness Level: Intermediate Medical Conditions: no	Body Sculpt	49	30/10/2024	Saturday	15:00	2178410
26 01/01/2024	30	Age 40+ Gender: female Fitness Level: Intermediate Medical Conditions: no	Pilates	51	09/09/2024	Tuesday	10:00	1329248
27 02/01/2024	37	Age 60+ Gender: female Fitness Level: Beginner Medical Conditions: no	Pilates	52	16/12/2024	Saturday	10:00	2178410
28 05/01/2024	22	Age 18-35 Gender: male Fitness Level: Beginner Medical Conditions: no	Dance Cardio	52	16/12/2024	Tuesday	12:00	1329248
29 03/01/2024	35	Age 60+ Gender: female Fitness Level: Beginner Medical Conditions: no	Dance Cardio	58	08/06/2024	Tuesday	11:00	2178410

hadasNoa@XE 118 rows selected in 1.281 seconds

השאלתה:

```
update class_lesson cl
set class_end_date = TRUNC(SYSDATE)
where exist (SELECT o.number_part
from (SELECT TO_NUMBER(REGEXP_SUBSTR(co.experience, '[0-9]+')) AS number_part, co.person_id
from coach co) o
where o.number_part > 20 and o.person_id = cl.person_id)
```

הוצאת השאלתה:

Peo	hadasNoa@XE	33 rows updated in 0.016 seconds
-----	-------------	----------------------------------

בסיס הנתונים אחר:

START DATE	CAPACITY	TERMS	CLASS NAME	CLASS NUMBER	FINISH DATE	CLASS DAY	CLASS HOUR	PERSON ID
1 30/05/2024	19	Age:40+ Gender:female Fitness Level:Intermediate Medical Conditions: no h	Body Sculpt	1	11/06/2024	Tuesday	16:22	328202
2 01/01/2024	39	Age:40+ Gender:female Fitness Level:Beginner Medical Conditions: no h	Spinning	121	09/06/2024	Monday	10:00	2178410
3 12/03/2024	12	Age:18-35 Gender:female Fitness Level:Beginner Medical Conditions: no h	Pilates	144	21/06/2024	Monday	11:21	9383795
4 15/01/2024	11	Age:18-35 Gender:female Fitness Level:Advanced Medical Conditions: no h	Dance Cardio	145	12/06/2024	Monday	14:53	2995582
5 11/04/2024	12	Age:60+ Gender:female Fitness Level:Advanced Medical Conditions: no h	Body Sculpt	2	31/08/2024	Wednesday	11:00	3508396
6 06/01/2024	20	Age:15-18 Gender:female Fitness Level:Beginner Medical Conditions: no h	HIT Fit	3	15/07/2024	Sunday	15:00	1329248
7 04/01/2024	35	Age:18-35 Gender:female Fitness Level:Beginner Medical Conditions: no h	Lift and Tone	9	14/07/2024	Wednesday	12:00	9389699
8 03/01/2024	20	Age:18-35 Gender:female Fitness Level:Beginner Medical Conditions: no h	Pilates	10	19/07/2024	Saturday	12:00	3827061
9 06/01/2024	20	Age:15-18 Gender:female Fitness Level:Beginner Medical Conditions: no h	Dance Cardio	16	05/11/2024	Wednesday	14:00	5382841
10 06/01/2024	33	Age:15-18 Gender:female Fitness Level:Intermediate Medical Conditions: no h	Dance Cardio	20	21/07/2024	Monday	15:00	5378710
11 03/01/2024	23	Age:18-35 Gender:female Fitness Level:Advanced Medical Conditions: no h	HIT Fit	22	01/08/2024	Thursday	14:00	5382841
12 04/01/2024	36	Age:60+ Gender:female Fitness Level:Advanced Medical Conditions: no h	Zumba	23	07/12/2024	Tuesday	10:00	3382583
13 06/01/2024	32	Age:18-35 Gender:female Fitness Level:Advanced Medical Conditions: no h	Dance Cardio	25	28/12/2024	Thursday	15:00	5382841
14 01/01/2024	20	Age:60+ Gender:female Fitness Level:Advanced Medical Conditions: no h	Lift and Tone	35	14/11/2024	Friday	16:00	1329248
15 04/01/2024	24	Age:15-18 Gender:female Fitness Level:Intermediate Medical Conditions: no h	Zumba	40	29/06/2024	Tuesday	15:00	2178410
16 04/01/2024	33	Age:18-35 Gender:female Fitness Level:Intermediate Medical Conditions: no h	Pilates	41	03/07/2024	Monday	14:00	5378710
17 02/01/2024	25	Age:15-18 Gender:female Fitness Level:Beginner Medical Conditions: no h	Spinning	39	10/08/2024	Friday	14:00	1329248
18 01/01/2024	26	Age:60+ Gender:female Fitness Level:Advanced Medical Conditions: no h	Zumba	39	10/08/2024	Friday	12:00	5382841
19 04/01/2024	23	Age:15-18 Gender:female Fitness Level:Beginner Medical Conditions: no h	Dance Cardio	40	29/06/2024	Tuesday	10:00	1329248
20 06/01/2024	37	Age:18-35 Gender:female Fitness Level:Intermediate Medical Conditions: no h	Pilates	41	03/07/2024	Monday	14:00	5378710
21 01/01/2024	29	Age:40+ Gender:female Fitness Level:Intermediate Medical Conditions: no h	Zumba	41	03/07/2024	Monday	15:00	2178410
22 04/01/2024	28	Age:40+ Gender:female Fitness Level:Beginner Medical Conditions: no h	HIT Fit	49	09/06/2024	Saturday	15:00	1329248
23 01/01/2024	24	Age:18-35 Gender:female Fitness Level:Beginner Medical Conditions: no h	Zumba	49	09/06/2024	Saturday	10:00	2178410
24 03/01/2024	34	Age:60+ Gender:female Fitness Level:Advanced Medical Conditions: no h	Spinning	50	09/06/2024	Saturday	12:00	1329248
25 02/01/2024	20	Age:18-35 Gender:female Fitness Level:Intermediate Medical Conditions: no h	Body Sculpt	50	09/06/2024	Saturday	11:00	2178410
26 01/01/2024	30	Age:40+ Gender:female Fitness Level:Intermediate Medical Conditions: no h	Pilates	50	09/06/2024	Saturday	10:00	1329248
27 02/01/2024	37	Age:60+ Gender:female Fitness Level:Beginner Medical Conditions: no h	Pilates	50	09/06/2024	Saturday	10:00	2178410
28 05/01/2024	22	Age:18-35 Gender:female Fitness Level:Beginner Medical Conditions: no h	Dance Cardio	50	09/06/2024	Saturday	12:00	1329248
29 03/01/2024	35	Age:60+ Gender:female Fitness Level:Beginner Medical Conditions: no h	Dance Cardio	50	09/06/2024	Saturday	11:00	2178410
30 01/01/2024	32	Age:18-35 Gender:female Fitness Level:Beginner Medical Conditions: no h	Body Sculpt	67	12/10/2024	Thursday	12:00	1329248

אילוצים

אילוצ check

האילוצ בודק שגיל המתאמן הוא לכל הפחות 14.

אפשר לראות שניסו להוסיף מתאמן בגיל 11 וקבלנו שגיאת הרצה.

SQL

Output

Statistics

```

commit;

alter table trainee
add constraint limit_age_trainee
check (age >= 14)

insert into trainee (subscription, training_plan, health, payment_details, age, joining_date, person_id)
values ('Basic Membership', 'Sun-Tue Body Sculpt Mon-Wed Spinning', 'Full Health', 'credit card', 11, to_date('21-03-2024', 'dd-mm-yyyy'), 11111111);

select * from trainee

```

Error

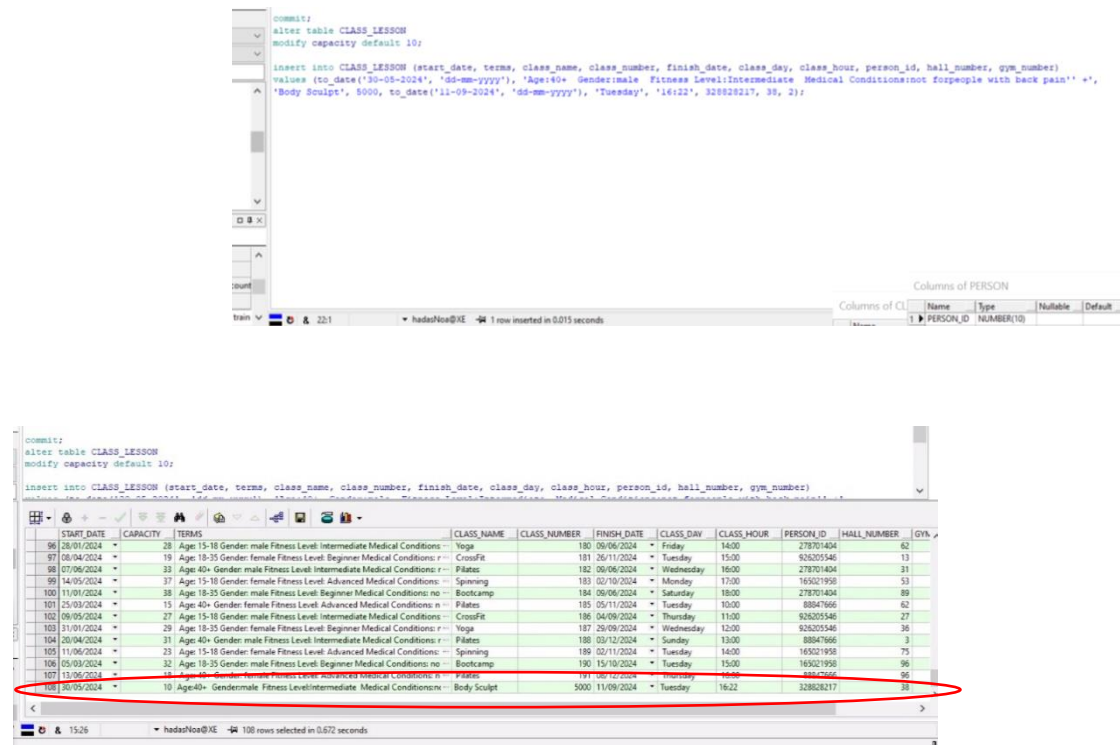
ORA-02290: check constraint (HADASNOA.LIMIT_AGE_TRAINEE) violated

OK Cancel Help

אילוצ default

האילוצ קובע שערך ברירת המחדל של capacity של שיעור יהיה 10.

אפשר לראות שהכנסו שיעור בלי ערך ב capacity והשיעור שהוכנס לבסיס הנתונים (המסומן) ערך ה capacity שלו הוא 10.



אילוץ not null

האילוץ בודק שכאשר מוסיפים בן אדם לבסיס הנתונים עמודת הטלפון היא Not null.

אפשר לראות שהוספנו בן אדם ללא מס' טלפון וקבלנו שגיאת ריצה.



אילוץ 1 delete on cascade

לא היינו בטוחות אם זה נחשב אילוץ או שינוי טבלה.

היה לנו שימוש במפתח זר class_number בטבלה used_in והייתה לנו שאילתת delete שבה מחקנו שיעורים. ברגע שמחקנו שיעורים רצינו שימחקו גם רישומים של מכשירים שמשתמשים בהם באותם שיעורים (שאת זה הטבלה used_in מביעה, הקשר הזה) לכן הוספנו את delete on cascade לטבלה.

```
w - Constraints.sql
-- Create/Recreate primary, unique and foreign key constraints
alter table USED_IN
add primary key (CLASS_NUMBER, DEVICE_NUMBER)
using index
tablespace SYSTEM
pctfree 10
initrans 1
maxtrans 255
storage
(
initial 64K
next 1M
maxextents unlimited
);
alter table USED_IN
add foreign key (DEVICE_NUMBER)
references DEVICE (DEVICE_NUMBER);
alter table USED_IN
add foreign key (CLASS_NUMBER)
references CLASS_LESSON (CLASS_NUMBER) on delete cascade;
```

אילון 2 delete on cascade

היה לנו שימוש במפתח זר class_number בטבלה takes והייתה לנו שאלת delete שבה מחקנו שיעורים. ברגע שמחקנו שיעורים רצינו שימחקו גם רישומים של מתאמנים שלוקחים את אותם שיעורים (שאת זה הטבלה takes מביעה, הקשר הזה) לכן הוספנו את delete on cascade לטבלה.

```
w - Constraints.sql
-- Constraint 5 --
-- Create/Recreate primary, unique and foreign key constraints
alter table TAKES
add primary key (PERSON_ID, CLASS_NUMBER)
using index
tablespace SYSTEM
pctfree 10
initrans 1
maxtrans 255
storage
(
initial 64K
next 1M
maxextents unlimited
);
alter table TAKES
add foreign key (PERSON_ID)
references PERSON (PERSON_ID);
alter table TAKES
add foreign key (CLASS_NUMBER)
references CLASS_LESSON (CLASS_NUMBER) on delete cascade;
```

שאלות עם פרמטרים

שאלתה 1

נחזיר את פרטי כל השיעורים בטווח תאריכים ובחדר כושר מסוים מתוך רשימת כל חדרי הכושר שהמשתמש בוחר.

```

select *
from class_lesson c
join (select g.gym_number, g.gym_name
      from gym g) o on o.gym_number = c.gym_number
where o.gym_name = <name=gymname list= "select distinct gy.gym_name from gym gy order by gy.gym_name " required=true type=string >
and c.start_date between <name = from_date type = date> and <name = to_date type = date>
select * from gym

```

	START_DATE	CAPACITY	TERMS	CLASS_NAME	CLASS_NUMBER	FINISH_DATE	CLASS_DAY	CLASS_HOUR	PERSON_ID	HALL_NUMBER	GYM
2	02/01/2024	25	Age 15-18 Gender: male Fitness Level: Beginner Medical Conditions: no	Spinning	34	21/10/2024	Monday	14:00	537871085	17	
3	03/01/2024	34	Age 60+ Gender: female Fitness Level: Advanced Medical Conditions: n	Spinning	47	27/09/2024	Thursday	12:00	538284120	17	
4	01/02/2024	30	Age 40+ Gender: female Fitness Level: Intermediate Medical Conditions:	Pilates	51	15/07/2024	Tuesday	10:00	132924806	17	
5	05/01/2024	22	Age 18-35 Gender: male Fitness Level: Beginner Medical Conditions: no	Dance Cardio	59	17/08/2024	Tuesday	12:00	132924806	17	
6	01/01/2024	32	Age 18-35 Gender: male Fitness Level: Beginner Medical Conditions: no	Body Sculpt	67	12/10/2024	Thursday	12:00	132924806	17	
7	04/01/2024	37	Age 18-35 Gender: male Fitness Level: Intermediate Medical Conditions	Spinning	74	11/11/2024	Wednesday	15:00	132924806	17	
8	06/01/2024	28	Age 18-35 Gender: female Fitness Level: Intermediate Medical Conditio	Spinning	81	18/08/2024	Monday	11:00	132924806	17	
9	04/01/2024	22	Age 18-35 Gender: female Fitness Level: Beginner Medical Conditions: r	Spinning	88	19/08/2024	Friday	11:00	132924806	17	
10	06/01/2024	26	Age 18-35 Gender: male Fitness Level: Beginner Medical Conditions: no	Spinning	94	22/08/2024	Tuesday	15:00	132924806	17	
11	05/01/2024	29	Age 18-35 Gender: male Fitness Level: Beginner Medical Conditions: no	Spinning	101	23/11/2024	Tuesday	10:00	132924806	17	
12	04/01/2024	28	Age 18-35 Gender: male Fitness Level: Beginner Medical Conditions: no	Spinning	108	21/11/2024	Friday	11:00	132924806	17	

שאלתה 2

מחזירה את רשימת המכשירים שמשתמשים בהם בשיעור המבוקש.

```

select cl.class_number, cl.class_name, t.device_model, t.device_number
from class_lesson cl
join (select u.class_number, d.device_model, d.device_number
      from device d
      join used_in u on d.device_number = u.device_number) t on cl.class_number = t.class_number
where cl.class_number = <name=class_number hint = "number between 1-150" required=true type=integer >

```

	CLASS_NUMBER	CLASS_NAME	DEVICE_MODEL	DEVICE_NUMBER
1	140	Piloxing	Cable Machine	171
2	140	Piloxing	Stepmills	270
3	140	Piloxing	Readmill	283

שאלתה 3

נחזיר את כל השיעורים שמתקיימים בימים מסוימים שאפשר לבחור, בסדר עולה או יורד.

```

select c.class_day, p.full_name, p.person_id, c.class_name, c.class_number
from person p
join class_lesson c on p.person_id = c.person_id
where c.class_day in (<name=class_day list= " Sunday", ' Monday', ' Tuesday', ' Wednesday', ' Thursday', ' Friday" required=true multiselect=true">
order by c.class_day <name="day order" device="asc">
select * from class_lesson

```

	CLASS_DAY	FULL NAME	PERSON ID	CLASS NAME	CLASS NUMBER
1	Monday	Shelly Herrot	537871085	Spinning	14
2	Monday	Dorell Laurent	278701404	Bootcamp	178
3	Monday	Menard Pymar	217819271	Spinning	12
4	Monday	Orenan Shireff	185021988	Spinning	183
5	Monday	Elinda Pichbaum	64654134	Zumba	141
6	Monday	Lorina Maryman	538381159	NETFL	29
7	Monday	Justice McFarlin	132924806	Spinning	81
8	Monday	Lisa Smindle	985581108	Piloxing	170
9	Monday	Dorell Laurent	278701404	Zumba	132
10	Wednesday	Justice McFarlin	132924806	Spinning	74
11	Wednesday	Justice McFarlin	132924806	NETFL	2
12	Wednesday	Orenan Shireff	185021988	Spinning	185
13	Wednesday	Orenan Shireff	185021988	CrossFit	143
14	Wednesday	Menard Pymar	217819271	Body Sculpt	95
15	Wednesday	Shelly Herrot	537871085	Dance Cardio	76
16	Wednesday	Ashlee Bedford	982202562	CrossFit	168
17	Wednesday	Dorell Laurent	278701404	Pilates	142
18	Wednesday	Dorell Laurent	278701404	Bootcamp	146
19	Wednesday	Dorell Laurent	278701404	Pilates	182

שאלתה 4

נחזיר את התכונות של המתאמן לפי בחירת המשתמש, כלומר אפשר לבחור איזה תכונות נרצה לראות.

אפשר לראות שבתמונה בחרנו עמודות מסוימות שאותן נרצה לקבל על כל מתאמן וקבלנו בדיוק את הטבלה הזאת בהרצה.

Query 4

```

-- Query 4 --
-- schema = "choose_coulmn" list = "tr.subscription, tr.training_plan, tr.health, tr.payment_details, tr.age, tr.joining_date, tr.person_id, pr.full_name, pr.phone, pr.email, pr.address"
-- prefix = "select " suffix = " from person pr join trainee tr on pr.person_id = tr.person_id "
-- required=true multiSelect=true
-- schema = "Agelimit" prefix = " where tr.age > " required=true hint = "choose between 14-99" >

```

Schema: "choose_coulmn" list: "tr.subscription, tr.training_plan, tr.health, tr.payment_details, tr.age, tr.joining_date, tr.person_id, pr.full_name, pr.phone, pr.email, pr.address" prefix: "select " suffix: " from person pr join trainee tr on pr.person_id = tr.person_id " required=true multiSelect=true

Schema: "Agelimit" prefix: " where tr.age > " required=true hint: "choose between 14-99"

HEALTH	AGE	PERSON ID	FULL NAME	ADDRESS
1 Chronic Respiratory Conditions	77	765624634	Randolf Andresser	975 Autumn Leaf Park
2 Injuries	91	287056883	Aleksi Bour	7209 Lawn Crossing
3 Chronic Respiratory Conditions	81	725014216	Alexei Zink	91524 McBride Center
4 Chronic Respiratory Conditions	99	940153696	Judea Najera	80 Warner Place
5 Heart Disease	76	310151900	Ermo Childerley	80 Sycamore Junction
6 Full Health	90	548380542	Randee Scudder	6660 Starling Alley
7 High Blood Pressure	97	225440261	Maison Le Provost	026 Amoth Avenue
8 Full Health	87	974885124	Elijah Sarfatti	6 Superior Trail
9 High Blood Pressure	65	685200968	Licha Shimmans	0518 Maple Place
10 Injuries	73	325851770	Andriette Sturt	961 Mendota Hill
11 Injuries	73	435490677	Sondra Tetrell	28 Karstens Alley
12 Full Health	74	336899848	Philly Tugman	750 8th Terrace
13 High Blood Pressure	83	383155405	Way Beniford	76 Gophawk Plaza
14 Heart Disease	64	956293618	Franklin McTynally	46 Magdelaine Point
15 Chronic Respiratory Conditions	71	368841928	Marissa Lemoir	7 Meadow Valley Way
16 High Blood Pressure	89	938379550	Ich Crisford	3248 Pennsylvania Avenue
17 High Blood Pressure	95	891805799	Geniva Wooler	75 Ruskin Terrace
18 Chronic Respiratory Conditions	90	193732741	Wilbur Munders	53695 Dryden Road
19 Full Health	66	143520646	Seward Pellamonuten	279 Gulbeth Place
20 Chronic Respiratory Conditions	95	483523397	Fields Corless	7 Coolidge Road
21 Chronic Respiratory Conditions	82	891395919	Ruthie Worthing	57 Acizer Way
22 Heart Disease	71	599287960	Arion Shalyns	27 Laurel Plaza
23 High Blood Pressure	81	694286312	Dorothea Menaul	0 Pearson Drive
24 Full Health	87	448378914	Biron Eidler	56 Jenifer Alley
25 Full Health	66	298510709	Loree Vondra	3 Annamark Center
26 Heart Disease	95	455036976	Leda Julien	732 Easttown Plaza
27 Chronic Respiratory Conditions	80	342505779	Elixa Sufferel	0887 Autumn Leaf Center
28 Full Health	89	399913117	Jade Good	04122 Truxex Parkway

Variables

Name	Value
choose_coulmn	tr.health, tr.age, tr.person_id, pr.full_name, pr.add
agelimit	80

Sele...

- ☐ tr.subscription
- ☐ tr.training_plan
- ☐ tr.health
- ☐ tr.payment_details
- ☒ tr.age
- ☐ tr.joining_date
- ☒ tr.person_id
- ☒ pr.full_name
- ☐ pr.phone
- ☐ pr.email
- ☒ pr.address