

נדב פיירמן שטרן
207018250
תרגול שעה 14

```
CREATE TABLE Employees
(
Employee_id int ,
First_name text ,
Last_name text ,
Birth_date int ,
Hire_date date ,
Job_id int ,
Salary int ,
Department_id int
);
```

```
INSERT INTO Employees
VALUES
(84596 , 'Matan' , 'aviram' , 1985 , '2005-07-12' , 018 , 12000 , 100) ,
(24587 , 'Alex' , 'Aliasi' , 1986 , '2016-07-31' , 018 , 10000 , 200) ,
(25097 , 'Lora' , 'Erlih' , 1990 , '2012-04-25' , 222 , 7500 , 100) ,
(62557 , 'Pria' , 'Boike' , 1991 , '2016-03-29' , 222 , 8000 , 100) ,
(11459 , 'Lilah' , 'Benita' , 1988 , '2014-07-23' , 333 , 12000 , 100) ,
(33548 , 'Sigal' , 'Brukner' , 1980 , '2000-09-03' , 333 , 14000 , 100) ,
(25063 , 'Asaf' , 'Vong' , 1985 , '2016-03-12' , 333 , 12000 , 200) ,
(34159 , 'Arie' , 'Daari' , 1991 , '2016-07-30' , 222 , 6000 , 300) ,
(36548 , 'Ben' , 'Koen' , 1986 , '2010-12-25' , 018 , 12000 , 100) ,
(97513 , 'Ariel' , 'Levi' , 1988 , '2016-06-30' , 018 , 10000 , 200) ,
(24581 , 'Azar' , 'Nizan' , 1989 , '2016-07-23' , 222 , 7500 , 200) ,
(36596 , 'Inbar' , 'sarusi' , 1986 , '2008-02-03' , 018 , 12000 , 300) ,
(96745 , 'Daniel' , 'Fizer' , 1985 , '2016-07-12' , 222 , 12000 , 300) ,
(36854 , 'Inbal' , 'Fishman' , 1982 , '2008-11-25' , 018 , 12000 , 200) ,
(25748 , 'Rinat' , 'Kadur' , 1988 , '2008-07-25' , 018 , 12000 , 300) ;
```

```
SELECT *
FROM Employees
```

```

1 CREATE TABLE Employees
2 (
3 Employee_id int ,
4 First_name text ,
5 Last_name text ,
6 Birth_date int ,
7 Hire_date date ,
8 Job_id int ,
9 Salary int ,
10 Department_id int
11 ) ;
12
13 INSERT INTO Employees
14 VALUES
15 (84596 , 'Matan' , 'aviram' , 1985 , '2005-07-12' , 018 , 12000 , 100) ,
16 (24587 , 'Alex' , 'Aliasi' , 1986 , '2016-07-31' , 018 , 10000 , 200) ,
17 (25097 , 'Lora' , 'Erlih' , 1990 , '2012-04-25' , 222 , 7500 , 100) ,
18 (62557 , 'Pria' , 'Boike' , 1991 , '2016-03-29' , 222 , 8000 , 100) ,
19 (11459 , 'Lilah' , 'Benita' , 1988 , '2014-07-23' , 333 , 12000 , 100) ,
20 (33548 , 'Sigal' , 'Brukner' , 1980 , '2000-09-03' , 333 , 14000 , 100) ,
21 (25063 , 'Asaf' , 'Vong' , 1985 , '2016-03-12' , 333 , 12000 , 200) ,
22 (34159 , 'Arie' , 'Daari' , 1991 , '2016-07-30' , 222 , 6000 , 300) ,
23 (36548 , 'Ben' , 'Koen' , 1986 , '2010-12-25' , 018 , 12000 , 100) ,
24 (97513 , 'Ariel' , 'Levi' , 1988 , '2016-06-30' , 018 , 10000 , 200) ,
25 (24581 , 'Azar' , 'Nizan' , 1989 , '2016-07-23' , 222 , 7500 , 200) ,
26 (36596 , 'Inbar' , 'sarusi' , 1986 , '2008-02-03' , 018 , 12000 , 300) ,
27 (96745 , 'Daniel' , 'Fizer' , 1985 , '2016-07-12' , 222 , 12000 , 300) ,
28 (36854 , 'Inbal' , 'Fishman' , 1982 , '2008-11-25' , 018 , 12000 , 200) ,
29 (25748 , 'Rinat' , 'Kadur' , 1988 , '2008-07-25' , 018 , 12000 , 300) ;
30
31 SELECT *
32 FROM Employees

```

Employee_id	First_name	Last_name	Birth_date	Hire_date	Job_id	Salary	Department_id
84596	Matan	aviram	1985	2005-07-12	18	12000	100
24587	Alex	Aliasi	1986	2016-07-31	18	10000	200
25097	Lora	Erlih	1990	2012-04-25	222	7500	100
62557	Pria	Boike	1991	2016-03-29	222	8000	100
11459	Lilah	Benita	1988	2014-07-23	333	12000	100
33548	Sigal	Brukner	1980	2000-09-03	333	14000	100
25063	Asaf	Vong	1985	2016-03-12	333	12000	200
34159	Arie	Daari	1991	2016-07-30	222	6000	300
36548	Ben	Koen	1986	2010-12-25	18	12000	100
97513	Ariel	Levi	1988	2016-06-30	18	10000	200
24581	Azar	Nizan	1989	2016-07-23	222	7500	200
36596	Inbar	sarusi	1986	2008-02-03	18	12000	300
96745	Daniel	Fizer	1985	2016-07-12	222	12000	300
36854	Inbal	Fishman	1982	2008-11-25	18	12000	200
25748	Rinat	Kadur	1988	2008-07-25	18	12000	300

CREATE TABLE Jobs

(
Job_id int ,
Job_title text ,
Min_salary int ,
Max_salary int
);

INSERT INTO Jobs

VALUES

(018 , 'manager' , 10000 , 12000) ,
(222 , 'clerk' , 6000 , 8000) ,
(333 , 'engineer' , 12000 , 14000) ;

SELECT *

FROM Jobs

```
1 CREATE TABLE Jobs
2 (
3 Job_id int ,
4 Job_title text ,
5 Min_salary int ,
6 Max_salary int
7 ) ;
8
9 INSERT INTO Jobs
10 VALUES
11 (018 , 'manager' , 10000 , 12000) ,
12 (222 , 'clerk' , 6000 , 8000) ,
13 (333 , 'engineer' , 12000 , 14000) ;
14
15 SELECT *
16 FROM Jobs
```

Job_id	Job_title	Min_salary	Max_salary
18	manager	10000	12000
222	clerk	6000	8000
333	engineer	12000	14000

CREATE TABLE Departments

(
Department_id int ,
Department_name text ,
Location_id int
);

INSERT INTO Departments

VALUES

(100 , 'Business and financial services' , 207) ,
(200 , 'Events centres' , 456) ,
(300 , 'Administration' , 789) ;

SELECT *

FROM Departments

```
1 CREATE TABLE Departments
2 (
3   Department_id int ,
4   Department_name text ,
5   Location_id int
6 ) ;
7
8 INSERT INTO Departments
9 VALUES
10 (100 , 'Business and financial services' , 207) ,
11 (200 , 'Events centres' , 456) ,
12 (300 , 'Administration' , 789) ;
13
14 SELECT *
15 FROM Departments
```

Department_id	Department_name	Location_id
100	Business and financial services	207
200	Events centres	456
300	Administration	789

CREATE TABLE Locations

(
 Location_id int ,
 Country text ,
 City text ,
 Street text
);

INSERT INTO Locations

VALUES

(207 , 'israel' , 'haifa' , '3 Ben-Zvi') ,
 (456 , 'Japan' , 'tokyo' , '5 Cat-Air') ,
 (789 , 'israel' , 'Tel-aviv' , '56 Allenby') ;

SELECT *

FROM Locations

```

1 CREATE TABLE Locations
2 (
3   Location_id int ,
4   Country text ,
5   City text ,
6   Street text
7 ) ;
8
9 INSERT INTO Locations
10 VALUES
11 (207 , 'israel' , 'haifa' , '3 Ben-Zvi' ) ,
12 (456 , 'Japan' , 'tokyo' , '5 Cat-Air' ) ,
13 (789 , 'israel' , 'Tel-aviv' , '56 Allenby' ) ;
14
15 SELECT *
16 FROM Locations
  
```

Location_id	Country	City	Street
207	israel	haifa	3 Ben-Zvi
456	Japan	tokyo	5 Cat-Air
789	israel	Tel-aviv	56 Allenby

שאלות

1. select First_name , Last_name , Birth_date
 from Employees
 where Birth_date between 1983 and 1992 and Salary between 5301 and 8399

```

1 select First_name , Last_name , Birth_date
2 from Employees
3 where Birth_date between 1983 and 1992 and Salary between 5301 and 8399
  
```

First_name	Last_name	Birth_date
Lora	Erlih	1990
Pria	Boike	1991
Arie	Daari	1991
Azar	Nizan	1989

2. select Last_name , First_name
 from Employees
 where (2022 - Birth_date) <30 and Salary > 1870 * 3.51

```

1 select Last_name , First_name
2 from Employees
3 where (2022 - Birth_date) <30 and Salary > 1870 * 3.51
  
```

Last_name	First_name
-----------	------------

3. SELECT distinct E.Employee_id
 From Employees as E , Departments as D , Locations as L
 Where (L.Location_id = D.Location_id) and
 (D.Department_id = E.Department_id) and
 (L.City like '_____') and
 (L.Country like '%a%') and
 (L.Country not like '%e%')
 order by E.Employee_id asc

```
1 SELECT distinct E.Employee_id
2 From Employees as E , Departments as D , Locations as L
3 Where (L.Location_id = D.Location_id) and
4 (D.Department_id = E.Department_id) and
5 (L.City like '_____') and
6 (L.Country like '%a%') and
7 (L.Country not like '%e%')
8 order by E.Employee_id asc
```

Employee_id
24581
24587
25063
36854
97513

4. SELECT E.Last_name , E.First_name , E.Salary as 'Current_salary' , (E.Salary *1.245) as 'Future_salary'
 From Employees as E , Jobs as J
 Where (E.job_id = J.job_id) and (job_title = 'clerk')

```
1 SELECT E.Last_name , E.First_name , E.Salary as 'Current_salary' , (E.Salary *1.245) as 'Future_salary'
2 From Employees as E , Jobs as J
3 Where (E.job_id = J.job_id) and (job_title = 'clerk')
```

Last_name	First_name	Current_salary	Future_salary
Erlih	Lora	7500	9337.500
Boike	Pria	8000	9960.000
Daari	Arie	6000	7470.000
Nizan	Azar	7500	9337.500
Fizer	Daniel	12000	14940.000

5. SELECT E.Employee_id , E.Job_id , D.Department_name , E.Salary
 From Employees as E, Departments as D
 Where (D.Department_id = E.Department_id) and
 (E.Salary >= 11200) and
 (E.Last_name like '%M%') and
 (D.Department_name not like '%D%')
 order by E. Salary desc

```
1 SELECT E.Employee_id , E.Job_id , D.Department_name , E.Salary
2 From Employees as E, Departments as D
3 Where (D.Department_id = E.Department_id) and
4 (E.Salary >= 11200) and
5 (E.Last_name like '%M%') and
6 (D.Department_name not like '%D%')
7 order by E. Salary desc
```

Employee_id	Job_id	Department_name	Salary
36854	18	Events centres	12000

6. SELECT distinct E.Employee_id , (2022- E.Birth_date) as Age
 From Employees as E , Departments as D , Locations as L
 Where (L.Location_id = D.Location_id) and
 (D.Department_id = E.Department_id) and
 (L.Street like '%a%')
 order by Age ASC , E.Hire_date DESC

```
1 SELECT distinct E.Employee_id , (2022- E.Birth_date) as Age
2 From Employees as E , Departments as D , Locations as L
3 Where (L.Location_id = D.Location_id) and
4 (D.Department_id = E.Department_id) and
5 (L.Street like '%a%')
6 order by Age ASC , E.Hire_date DESC
```

Employee_id	Age
34159	31
24581	33
97513	34
25748	34
24587	36
36596	36
96745	37
25063	37
36854	40

7. SELECT job_title , (((Max_salary + Min_salary) / 2) / 3.47) as average_of_salary_in_dollars
 From Jobs

```
1 SELECT job_title , (((Max_salary + Min_salary) / 2) / 3.47) as average_of_salary_in_dollars
2 From Jobs
```

job_title	average_of_sal...
manager	3170.02881844
clerk	2017.29106628
engineer	3746.39769452

8. SELECT E. Last_name
 From Employees as E , Departments as D , Locations as L
 Where (L.Location_id = D.Location_id) and
 (D.Department_id = E.Department_id) and
 ((E.Last_name like 'A%') or (E. First_name like '%A')) and
 ((L. City like '%-%') or (L. Street like '%-%'))

```
1 SELECT E. Last_name
2 From Employees as E , Departments as D , Locations as L
3 Where (L.Location_id = D.Location_id) and
4 (D.Department_id = E.Department_id) and
5 ((E.Last_name like 'A%') or (E. First_name like '%A')) and
6 ((L. City like '%-%') or (L. Street like '%-%'))
```

Last_name
aviram
Aliasi
Erlih
Boike

9. SELECT E.Last_name , E.First_name , J.Job_title
 From Employees as E , Jobs as J , Departments as D , Locations as L
 Where (E. Job_id = J. Job_id) and
 (L.Location_id = D.Location_id) and
 (D.Department_id = E.Department_id) and
 (L.city='tokyo')
 order by E. Salary ASC , E.Hire_date DESC

```

1 SELECT E.Last_name , E.First_name , J.Job_title
2 From Employees as E , Jobs as J , Departments as D , Locations as L
3 Where (E. Job_id = J. Job_id) and
4 (L.Location_id = D.Location_id) and
5 (D.Department_id = E.Department_id) and
6 (L.city = 'tokyo')
7 order by E. Salary ASC , E.Hire_date DESC

```

Last_name	First_name	Job_title
Nizan	Azar	clerk
Aliasi	Alex	manager
Levi	Ariel	manager
Vong	Asaf	engineer
Fishman	Inbal	manager

10. SELECT E.*
 From Employees as E , Jobs as J , Departments as D
 Where (E.Job_id = J.Job_id) and
 (D.Department_id = E.Department_id) and
 (D. Department_name like '%E%E%E%') and
 (J.Job_title <> 'engineer')

```

1 SELECT E.*
2 From Employees as E , Jobs as J , Departments as D
3 Where (E.Job_id = J.Job_id) and
4 (D.Department_id = E.Department_id) and
5 (D. Department_name like '%E%E%E%') and
6 (J.Job_title <> 'engineer')

```

Employee_id	First_name	Last_name	Birth_date	Hire_date	Job_id	Salary	Department_id
84596	Matan	aviram	1985	2005-07-12	18	12000	100
24587	Alex	Aliasi	1986	2016-07-31	18	10000	200
25097	Lora	Erlih	1990	2012-04-25	222	7500	100
62557	Pria	Boike	1991	2016-03-29	222	8000	100
36548	Ben	Koen	1986	2010-12-25	18	12000	100
97513	Ariel	Levi	1988	2016-06-30	18	10000	200
24581	Azar	Nizan	1989	2016-07-23	222	7500	200
36854	Inbal	Fishman	1982	2008-11-25	18	12000	200