

Data Engineer

Assignment (4)

Under supervisor ENG: Hazem Omar

Name: Abdullah Ibrahim Mahmoud

Data Manipulating Language: Q1/2



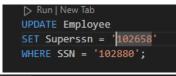










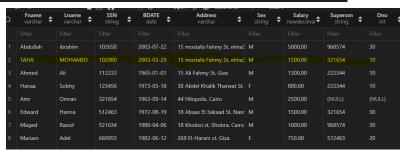


Q	Fname varchar(255) ♦	Lname varchar(255) ♦	* SSN char(6) ◆	BDATE date ♦	Address varchar(255)	Sex char(1)	Salary decimal(10,2) ♦	Superssn char(6)	Dno int ♦
									Filter
>1	Abdullah	ibrahim	102658	2003-07-22	15 mostafa Fahmy St. elma3	М	5000.00	968574	30
>2	TAHA	MOHAMED	102880	2003-03-29	15 mostafa Fahmy St. elma3	М	(NULL)	(NULL)	80

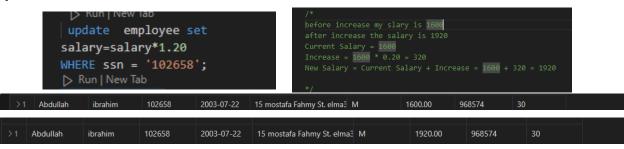
Q	Fname varchar 🕏	Lname varchar ♦	SSN string ♦	BDATE date ♦	Address varchar	Sex string ♦	Salary newdecimal ♦	Superssn string \$	Dno int ♦
>1	Abdullah	ibrahim	102658	2003-07-22	15 mostafa Fahmy St. elma3	М	5000.00	968574	30
>2	TAHA	MOHAMED	102880	2003-03-29	15 mostafa Fahmy St. elma3	М	(NULL)	102658	80

finally, my friend take the position of mr kamal

```
--('Kamel', 'Mohamed', '223344', '1970-10-15', '38 Mohy el dien abo el Ezz St. Cairo', 'M', 1800, '321654', 10)
-- first delete this data
| DRun|New Tab
| DELETE FROM | employee WHERE SSN='223344';
-- DELETE DATA OF Mr. Kamel Mohamed
| DRun|New Tab
| table employee;
|-- here i will change all infr of mr kamal to my friend
|-- Check Department Manager |
-- give 10 to my friend
| DRun|New Tab
| UPDATE Department
| SET MGRSSN = '102880', MGRStartDate = CURDATE()
| WHERE DNum = 10;
|-- Check Supervision |
-- super of my friend is the same of mr kamal |
| DRun|New Tab |
| UPDATE Employee |
| SET Superssn = '102658';
|-- Check Project Involvement |
-- update the project of mr kamal to my friend |
| DRun|New Tab |
| UPDATE Works for |
| SET SESN = '102880' |
| HHERE SSN = '122880' |
| HHERE ESSN = '122344';
|-- ubdate the dno of my friend to dno of mr kamal |
| DRUN The Work Tab |
| UPDATE Employee |
| SET SUPAGE TERMINE TABLE SESSN = '102880' |
| HHERE SSN = '102658';
```







Simple SELECT Queries:

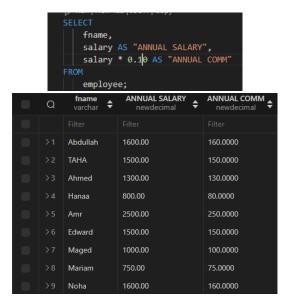
Q 1

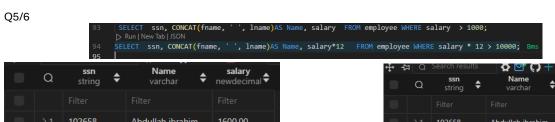


Q2



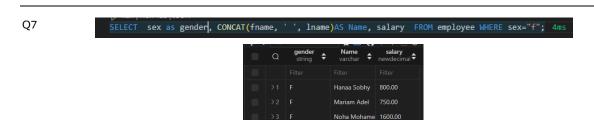






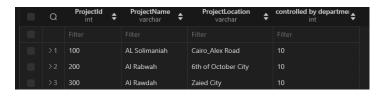






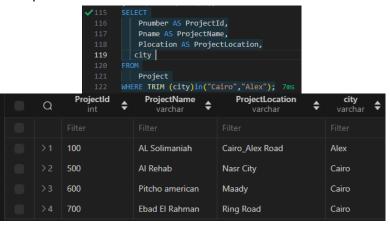






Try to implement these queries:

Q1



Q 3

| Select coNcat(e.fname," ",e.lname),e.address ,p.pname from employee e
| INNER JOIN project p on e.Dno=p.Dnum
| WHERE p.Pname = 'AL Solimaniah'; 3ms



Q	coNcat(e.fname," ",e.lna varchar	Pname varchar	Pnumber tint	Plocation varchar	City varchar \$	Dnum int \$	hours int \$
	Ahmed Ali	AL Solimaniah	100	Cairo_Alex Road	Alex		
	Ahmed Ali	Al Rabwah	200	6th of October City	Giza		
	Ahmed Ali	Al Rawdah	300	Zaied City	Giza		
	Edward Hanna	Al Rehab	500	Nasr City	Cairo		
	Edward Hanna	Pitcho american	600	Maady	Cairo		

Q5

```
    Abdullah ibrahim

                    102658 No Project
    TAHA MOHAMED 102880 AL Solimaniah
    TAHA MOHAMED
                             Al Rabwah
   TAHA MOHAMED
                    102880
                            Al Rawdah
    TAHA MOHAMED
                    102880
    Ahmed Ali
                    112233
                            AL Solimaniah
    Hanaa Sobhy
                            No Project
   Amr Omran
                    321654 No Project
    Edward Hanna
                            Al Rehab
   Edward Hanna
                    512463
                            Pitcho american
    Maged Raoof
                    521634
                            Al Rawdah
    Maged Raoof
                    521634 Al Rowad
                    521634
    Maged Raoof
                            Al Rehab
    Maged Raoof
                    521634 Pitcho american
    Mariam Adel
                    669955
                            Al Rawdah
    Mariam Adel
                    669955 Al Rowad
    Mariam Adel
                    669955
                            Ebad El Rahman
    Noha Mohamed
    Noha Mohamed
                    968574
                            Al Rowad
   Noha Mohamed
                   968574 Ebad El Rahman
```

Q6

```
Run|New Tab|JSON|Copy

SELECT CONCAT(e.Fname, ' ', e.Lname) AS " the name of its manager",

COALESCE(D.Dname, 'NO Have department') AS DepartmentName

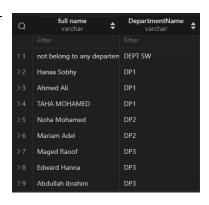
FROM Employee e

LEFT JOIN department D ON e.SSN = D.MGRSSN

ORDER BY e.fname; 4ms
```



```
SELECT coalesce(CONCAT(e.Fname, ' ', e.Lname), 'not belong to any departement' )
AS "full name",
COALESCE(D.Dname, 'NO Have department') AS DepartmentName
FROM department D
left JOIN employee e ON e.dno = d.Dnum
ORDER BY d.dname; 5ms
```





EmployeeName

Abdulah brahm

Al Rahwah
Abdulah brahm

Al Ramadh
Abdulah brahm

Al Ramadh
Abdulah brahm

Al Romad

Abdulah brahm

Al Romad

Abdulah brahm

Al Romad

Abdulah brahm

Al Romad

Al Solmaniah

Abdulah brahm

Al Romad

Al Solmaniah

Al Romad

Al Solmaniah

Al Romad

Al Romad

Al Romad

Al Solmaniah

Al Solmaniah

Al Romad

Al Solmaniah

Al Solmaniah

Al Solmaniah

Bowad Hanna

Al Romad

Al Romad

Al Romad

Al Romad

Bowad Hanna

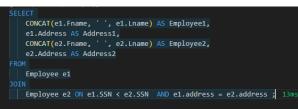
Al Romad

Bowad Hanna

Bow

EmployeeName ProjectName
Instrasa Söthy Al Rabwah
Instrasa Söthy Al Radwah
Instrasa Söthy Al Rawdah
Instrasa Söthy Al Rawdah
Instrasa Söthy Al Rawdah
Instrasa Söthy Band Instrasa Söthy
Instrasa Söthy
Instrasa Söthy
Instrasa Al Rawdah
Ins

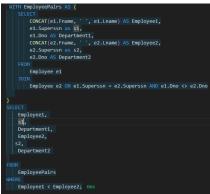
Employee/Name
Harua Söbhy
Fitch a merican
Magad Raoof
Al Rabwah
Magad Raoof
Magad Raoof
Magad Raoof
Magad Raoof
Magad Raoof
Al Rabwah
Mariam Adel
Nisha Mohamed
Nisha Mohame





If lack of job title attribute I can use the same supervisor here they are in the same object

Here output and query



SELECT
CONCAT(e1.Fname, ' ', e1.Lname) AS Employee1,
e1.Superssn AS SupervisorSSN,
e1.Dno AS Department1,
CONCAT(e2.Fname, ' ', e2.Lname) AS Employee2,
e2.Dno AS Department2
FROM
Employee e1
JOIN
Employee e2 ON e1.Superssn = e2.Superssn AND e1.Dno <> e2.Dno;
assume because lack of job title attribute
if the same supervisior === the same job
i don't care about name of department

Q	Employee1 *	s1 string ♦	Department1 int	Employee2 varchar	s2 string ♦	Department2 int
						Filter
>1	Noha Mohamed	321654		ТАНА МОНАМЕС	321654	10
>2	Edward Hanna	321654		ТАНА МОНАМЕС	321654	10
>3	Edward Hanna	321654		Noha Mohamed	321654	20

Employee1 varchar	SupervisorSSN string	Department1	Employee2 varchar	Department2
TAHA MOHAMED	321654		Noha Mohamed	
ТАНА МОНАМЕС	321654		Edward Hanna	
Noha Mohamed	321654		ТАНА МОНАМЕС	
Noha Mohamed	321654		Edward Hanna	
Edward Hanna	321654		ТАНА МОНАМЕС	
Edward Hanna	321654		Noha Mohamed	

Another method to simplify my table

If modify in data and let the new attribute which called job title

Here the output and query

```
CONCAT(e1.Fname, ' ', e1.Lname) AS Employee1,
e1.JobTitle,
e1.Dno AS Department1,
CONCAT(e2.Fname, ' ', e2.Lname) AS Employee2,
| e2.JobTitle,
e2.Dno AS Department2

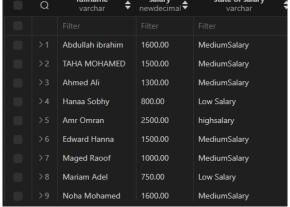
FROM
| Employee e1

JOIN
| Employee e2 ON e1.JobTitle = e2.JobTitle AND e1.Dno <> e2.Dno;
-- i don't care about name of department
```



Q	Employee1 varchar	JobTitle varchar ‡	Department1 int	Employee2 varchar	JobTitle varchar ♦	Department2 int
>1	ТАНА МОНАМЕС	head		Abdullah ibrahim	head	30
>2	Abdullah ibrahim	head	30	ТАНА МОНАМЕС	head	
>3	Noha Mohamed	Engineer		Ahmed Ali	Engineer	
>4	Mariam Adel	Clerk	20	Hanaa Sobhy	Clerk	
>5	Hanaa Sobhy	Clerk		Mariam Adel	Clerk	20
>6	Ahmed Ali	Engineer		Noha Mohamed	Engineer	20





Q12





```
✓272 SELECT

273 CONCAT(Fname, ', Lname) AS fullname, salary,
CASE

275 WHEN salary> 2000 THEN salary*0.15

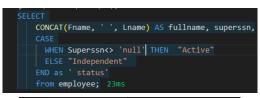
276 ELSE salary*d.10

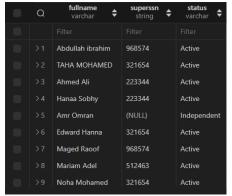
277 END as 'bonus',
278 CASE

279 WHEN salary> 2000 THEN salary*1.15

280 ELSE salary*1.10

281 END as 'salary after bonus'
282 from employee; 14ms
```





Q15



```
Q Fname 
varchar(255) ♦
                                                     2003-07-22
                                                                   15 mostafa Fahmy St. elma3 M
     Abdullah
                       ibrahim
     TAHA
                      MOHAMED
                                       102880
                                                                                                          1300.00
     Ahmed
                                                     1965-01-01
                                                                   15 Ali Fahmy St. Giza
                       Sobhy
                                                                                            М
                      Omran
                                                     1963-09-14
                                                                   44 Hilopolis. Cairo
                                                                                                          2500.00
                      Hanna
                                                     1972-08-19
                                                                   18 Abaas El 3akaad St. Nasr M
                                                                                                          1500.00
     Edward
                                                                   18 Kholosi st. Shobra. Cairo M
     Mariam
                       Adel
                                       669955
                                                     1982-06-12
                                                                   269 El-Haram st. Giza
                                                                                                          750.00
                                                                                                                             512463
```

```
create Procedure p1 (IN ID_EM INT )
begin
select * from employee WHERE ID_EM=SSN;
end;
|> Run|New Tab
CALL P1(102658); 13ms
```

Q	Fname varchar	Lname varchar	SSN string ♦	BDATE date	Address varchar	Sex string ♦	Salary newdecimal ♥	Superssn string	Dno int ♦
									Filter
>1	Abdullah	ibrahim	102658	2003-07-22	15 mostafa Fal	М	1600.00	968574	30

```
-- create funcation

| Run|New Tab |
| DELIMITER $$
| Run|Copy |
| Create FUNCTION f1( salaryy int )
| RETURNS VARCHAR(50) |
| DETERMINISTIC |
| begin |
| DECLARE e_result VARCHAR(50);
| > set e_result = CASE |
| WHEN salaryy > 3000 THEN "Hight Salary" |
| WHEN salaryy > 2000 THEN "Higher salary" |
| ELSE "Lower Salary" |
| END ; return e_result; end $$
| Run|New Tab |
| DELIMITER; |
| -- test funcatiom |
| Run|New Tab|JSON |
| select concat(fname," ",lname)as full_name,salary, f1(Salary)as "SalaryCategory" from employee;
```

Q	full_name varchar	salary newdecimal ♥	SalaryCategory varchar
	Filter	Filter	Filter
>1	Abdullah ibrahim	1600.00	Lower Salary
>2	TAHA MOHAMED	1500.00	Lower Salary
>3	Ahmed Ali	1300.00	Lower Salary
>4	Hanaa Sobhy	800.00	Lower Salary
> 5	Amr Omran	2500.00	Higher salary
>6	Edward Hanna	1500.00	Lower Salary
>7	Maged Raoof	1000.00	Lower Salary
>8	Mariam Adel	750.00	Lower Salary
>9	Noha Mohamed	1600.00	Lower Salary

Thank you