



# **Data Engineer**

## **Assignment (3)**

**Under supervisor**  
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Q 1/2

```

1 • create database my;
2 • use my;
3 • create table company (
4   id INT PRIMARY KEY,
5   NAME VARCHAR(50),
6   age INT,
7   address CHAR(50),
8   salary FLOAT
9 );
10 • DESC COMPANY;
11 • truncate table company;
12 • insert INTO company values
13   (5252,"Ahmed", 26," Cairo,Egypt", 8000),
14   (782782," Mohamed", 25 ," Alexandria, Egypt", 8200),
15   (144, "Amira", 32," Giza, Egypt", 7500),
16   ( 4347,"Nada", 22," Giza, Egypt", 5000),
17   ( 3826 ,"Omar", 38," Cairo, Egypt", 9500 );
18 • table company;
19

```

	id	NAME	age	address	salary
▶	144	Amira	32	Giza, Egypt	7500
	3826	Omar	38	Cairo, Egypt	9500
	4347	Nada	22	Giza, Egypt	5000
	5252	Ahmed	26	Cairo,Egypt	8000
	782782	Mohamed	25	Alexandria, Egypt	8200

Q 3/4/5

```

21 insert INTO company (id,NAME,age,address,salary)values
22 ( 4347,"Nada", 22," Giza, Egypt", 5000 )
23 on duplicate key update
24 NAME =values(NAME),
25 age=values(age),
26 address=values(address),
27 salary= values(salary);
28 -- answer for question 3
29 > Run | New Tab
30 ALTER table company add column ROLE varchar(50);
31 > Run | New Tab
32 ALTER table company add column gender varchar(20);
33 -- answer for question 4
34 > Run | New Tab
35 DESC COMPANY ; 5ms

```

Result						
Q	Field varchar	Type blob	Null varchar	Key string	Default blob	Extra varchar
> 1	id	int	NO	PRI	(NULL)	
> 2	NAME	varchar(50)	YES		(NULL)	
> 3	age	int	YES		(NULL)	
> 4	address	char(50)	YES		(NULL)	
> 5	salary	float	YES		(NULL)	
> 6	ROLE	varchar(50)	YES		(NULL)	
> 7	gender	varchar(20)	YES		(NULL)	

```

31 > Run | New Tab
32 INSERT INTO company (id,name,age)VALUES (5977,"Ramy",30 );
33 > Run | New Tab
34 table company; 2ms

```

Q	id int	NAME varchar	age int	address string	salary float	ROLE varchar	gender varchar
> 1	144	Amira	32	Giza, Egypt	7500	(NULL)	(NULL)
> 2	3826	Omar	38	Cairo, Egypt	9500	(NULL)	(NULL)
> 3	4347	Nada	22	Giza, Egypt	5000	(NULL)	(NULL)
> 4	5252	Ahmed	26	Cairo,Egypt	8000	(NULL)	(NULL)
> 5	5977	Ramy	30	(NULL)	(NULL)	(NULL)	(NULL)
> 6	782782	Mohamed	25	Alexandria, Egypt	8200	(NULL)	(NULL)

Q 6

```
31 • ALTER table company drop column gender ;
32 • desc company;
33
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	
NAME	varchar(50)	YES		NULL	
age	int	YES		NULL	
address	char(50)	YES		NULL	
salary	float	YES		NULL	
ROLE	varchar(50)	YES		NULL	

Q 7

OUTPUT

command

id	NAME	age	address	salary	ROLE
144	Amira	32	Giza, Egypt	7500	NULL
1234	Laila	41	Alexandria, Egypt	9200	NULL
2345	Mahmoud	37	Fayoum, Egypt	8600	NULL
3456	Nour	27	Ismailia, Egypt	6800	NULL
3826	Omar	38	Cairo, Egypt	9500	NULL
4347	Nada	22	Giza, Egypt	5000	NULL
4567	Ali	50	Port Said, Egypt	11000	NULL
5252	Ahmed	26	Cairo, Egypt	8000	NULL
5678	Hesham	36	Damietta, Egypt	8700	NULL
5977	Ramy	30	NULL	NULL	NULL
6780	Fatma	34	Suez, Egypt	8200	NULL
6789	Sara	28	Mansoura, Egypt	6700	NULL
7890	Khaled	45	Aswan, Egypt	10500	NULL
8901	Hanaa	33	Luxor, Egypt	8000	NULL
9012	Youssef	29	Hurghada, Egypt	7300	NULL
782...	Mohamed	25	Alexandria, Egypt	8200	NULL

```
13 • insert INTO company(id,NAME,age, address,salary) values
14 (6789, 'Sara', 28, 'Mansoura, Egypt', 6700),
15 (7890, 'Khaled', 45, 'Aswan, Egypt', 10500),
16 (8901, 'Hanaa', 33, 'Luxor, Egypt', 8000),
17 (9012, 'Youssef', 29, 'Hurghada, Egypt', 7300),
18 (1234, 'Laila', 41, 'Alexandria, Egypt', 9200),
19 (2345, 'Mahmoud', 37, 'Fayoum, Egypt', 8600),
20 (3456, 'Nour', 27, 'Ismailia, Egypt', 6800),
21 (4567, 'Ali', 50, 'Port Said, Egypt', 11000),
22 (5678, 'Hesham', 36, 'Damietta, Egypt', 8700),
23 (6780, 'Fatma', 34, 'Suez, Egypt', 8200);
24 • TABLE COMPANY;
```

Q8/9/10

```
3 -- task 8
4 > Run | New Tab
5 update company set role="IT_Support" where name="Nada";
6 > Run | New Tab
7 update company set role="IT_Support" where NAME="Amira";
8 > Run | New Tab
9 update company set role="IT_Support" where name="Ahmed";
10 -- task9
11 > Run | New Tab
12 update company set role="Manager" where name="Omar";
13 > Run | New Tab
14 update company set role="Manager" where NAME="Mohamed";
15 > Run | New Tab
16 TABLE company;
```

id	NAME	age	address	salary	ROLE
144	Amira	32	Giza, Egypt	7500	IT_Support
1234	Laila	41	Alexandria, Egypt	9200	NULL
2345	Mahmoud	37	Fayoum, Egypt	8600	NULL
3456	Nour	27	Ismailia, Egypt	6800	NULL
3826	Omar	38	Cairo, Egypt	9500	Manager
4347	Nada	22	Giza, Egypt	5000	IT_Support
4567	Ali	50	Port Said, Egypt	11000	NULL
5252	Ahmed	26	Cairo, Egypt	8000	IT_Support
5678	Hesham	36	Damietta, Egypt	8700	NULL
5977	Ramy	30	NULL	NULL	NULL
6780	Fatma	34	Suez, Egypt	8200	NULL
6789	Sara	28	Mansoura, Egypt	6700	NULL
7890	Khaled	45	Aswan, Egypt	10500	NULL
8901	Hanaa	33	Luxor, Egypt	8000	NULL
9012	Youssef	29	Hurghada, Egypt	7300	NULL
782...	Mohamed	25	Alexandria, Egypt	8200	Manager

10// ANSWER

```
52 • select* from company where role="Manager";
53
```

id	NAME	age	address	salary	ROLE
3826	Omar	38	Cairo, Egypt	9500	Manager
782782	Mohamed	25	Alexandria, Egypt	8200	Manager
NULL	NULL	NULL	NULL	NULL	NULL

Q11

Answer

```
53
54 • select distinct role from company ;
55
56
```

Result Grid

role
IT_Support
NULL
Manager

Q12

Answer

Don't have any record which name of this is called nada

```
54 • DELETE from company where name="Nada";
55 • table company ;
56
```

Result Grid

id	NAME	age	address	salary	ROLE
144	Amira	32	Giza, Egypt	7500	IT_Support
1234	Laila	41	Alexandria, Egypt	9200	NULL
2345	Mahmoud	37	Fayoum, Egypt	8600	NULL
3456	Nour	27	Ismailia, Egypt	6800	NULL
3826	Omar	38	Cairo, Egypt	9500	Manager
4567	Ali	50	Port Said, Egypt	11000	NULL
5252	Ahmed	26	Cairo, Egypt	8000	IT_Support
5678	Hesham	36	Damietta, Egypt	8700	NULL
5977	Ramy	30	NULL	NULL	NULL
6780	Fatma	34	Suez, Egypt	8200	NULL
6789	Sara	28	Mansoura, Egypt	6700	NULL
7890	Khaled	45	Aswan, Egypt	10500	NULL
8901	Hanaa	33	Luxor, Egypt	8000	NULL
9012	Youssef	29	Hurghada, Egypt	7300	NULL
782...	Mohamed	25	Alexandria, Egypt	8200	Manager

Q 13

Before

> 1	144	Amira	32	Giza, Egypt	7500	IT_Support
-----	-----	-------	----	-------------	------	------------

After

> 1	144	Amira	32	Cairo, Egypt	8500	IT_Support
-----	-----	-------	----	--------------	------	------------

command

```
44 • table company; 3ms
45 • update company set address="Cairo, Egypt" where NAME = 'Amira';
46 • update company set salary=8500 where NAME = 'Amira';
```

Q 14

-- THIS ID IS FIND BY ONTHER employee i update this data to new data  
-- instead of this data (3456 Nour 27 Ismailia, Egypt 6800)

```
49 insert INTO company ( id,NAME,age,address,salary) values
50 (3456,"Samir", 40,NULL,NULL)
51 on duplicate key update
52 id=values(id),
53 Name=values(Name),
54 age=values(age),
55 address=values(address),
56 salary= values(salary);
57 -- THIS ID IS FIND BY ONTHER employee i update this data to new data
```

> 3	2345	Mahmoud	37	Fayoum, Egypt	8600	(NULL)
> 4	3456	Samir	40	(NULL)	(NULL)	(NULL)
> 5	3826	Omar	38	Cairo, Egypt	9500	Manager
> 6	4567	Ali	50	Port Said, Egypt	11000	(NULL)
> 7	5252	Ahmed	26	Cairo, Egypt	8000	IT_Support
> 8	5678	Hesham	36	Damietta, Egypt	8700	(NULL)
> 9	5977	Ramy	30	(NULL)	(NULL)	(NULL)
> 10	6780	Fatma	34	Suez, Egypt	8200	(NULL)
> 11	6789	Sara	28	Mansoura, Egypt	6700	(NULL)
> 12	7890	Khaled	45	Aswan, Egypt	10500	(NULL)
> 13	8901	Hanaa	33	Luxor, Egypt	8000	(NULL)
> 14	9012	Youssef	29	Hurghada, Egypt	7300	(NULL)

Q 15

```
select NAME AS Employee_NAME ,salary as Employee_Salary from company;
```

Employee_NAME	Employee_Salary
Amira	8500
Laila	9200
Mahmoud	8600
Samir	NULL
Omar	9500
Ali	11000
Ahmed	8000
Hesham	8700
Ramy	NULL
Fatma	8200
Sara	6700
Khaled	10500
Hanaa	8000
Youssef	7300
Mohamed	8200

Q 16

- ```
select NAME AS Employee_NAME_biggerthan_30 from company where age>30 ;
```

| Employee_NAME_biggerthan_30 |
|-----------------------------|
| Amira                       |
| Laila                       |
| Mahmoud                     |
| Samir                       |
| Omar                        |
| Ali                         |
| Hesham                      |
| Fatma                       |
| Khaled                      |
| Hanaa                       |

Q 17

```
45  -- before increase
46  • select NAME AS Employee_NAME ,salary as Employee_Salary from company;
47  • UPDATE COMPANY
48  SET salary = salary * 1.10
49  WHERE salary IS NOT NULL;
50  -- after increase
51  • select NAME AS Employee_NAME ,salary as Employee_Salary from company;
```

| Employee_NAME | Employee_Salary |
|---------------|-----------------|
| Amira         | 8500            |
| Laila         | 9200            |
| Mahmoud       | 8600            |
| Samir         | NULL            |
| Omar          | 9500            |
| Ali           | 11000           |
| Ahmed         | 8000            |
| Hesham        | 8700            |
| Ramy          | NULL            |
| Fatma         | 8200            |
| Sara          | 6700            |
| Khaled        | 10500           |
| Hanaa         | 8000            |
| Youssef       | 7300            |
| Mohamed       | 8200            |

| Employee_NAME | Employee_Salary |
|---------------|-----------------|
| Amira         | 9350            |
| Laila         | 10120           |
| Mahmoud       | 9460            |
| Samir         | NULL            |
| Omar          | 10450           |
| Ali           | 12100           |
| Ahmed         | 8800            |
| Hesham        | 9570            |
| Ramy          | NULL            |
| Fatma         | 9020            |
| Sara          | 7370            |
| Khaled        | 11550           |
| Hanaa         | 8800            |
| Youssef       | 8030            |
| Mohamed       | 9020            |

Q 18/19

18 51 • `select NAME AS Employee_NAME ,age , salary from company WHERE age >35 and salary >800;`

|   | Employee_NAME | age | salary |
|---|---------------|-----|--------|
| ▶ | Laila         | 41  | 10120  |
|   | Mahmoud       | 37  | 9460   |
|   | Omar          | 38  | 10450  |
|   | Ali           | 50  | 12100  |
|   | Hesham        | 36  | 9570   |
|   | Khaled        | 45  | 11550  |

19 • `select NAME AS Employee_NAME ,age , salary from company WHERE age >25 and salary <9000 ;`

|   | Employee_NAME | age | salary |
|---|---------------|-----|--------|
| ▶ | Ahmed         | 26  | 8800   |
|   | Sara          | 28  | 7370   |
|   | Hanaa         | 33  | 8800   |
|   | Youssef       | 29  | 8030   |

Q 20

• `select Name Employee_NAME , address from company WHERE TRIM(address) NOT IN ('Cairo, Egypt', 'Cairo,Egypt');`

| Result grid   | Filter rows:      |
|---------------|-------------------|
| Employee_NAME | address           |
| ▶ Laila       | Alexandria, Egypt |
| Mahmoud       | Fayoum, Egypt     |
| Ali           | Port Said, Egypt  |
| Hesham        | Damietta, Egypt   |
| Fatma         | Suez, Egypt       |
| Sara          | Mansoura, Egypt   |
| Khaled        | Aswan, Egypt      |
| Hanaa         | Luxor, Egypt      |
| Youssef       | Hurghada, Egypt   |
| Mohamed       | Alexandria, Egypt |

Q 21

`select Name Employee_NAME , salary from company WHERE salary between 5000 and 8000;`

| Result grid   | Filter rows: |
|---------------|--------------|
| Employee_NAME | salary       |
| ▶ Sara        | 7370         |

Q 22

`select Name Employee_NAME , salary as normal_salary ,(salary*12) as annual_salary from company ;`

| Employee_NAME | normal_salary | annual_salary |
|---------------|---------------|---------------|
| Amira         | 9350          | 112200        |
| Laila         | 10120         | 121440        |
| Mahmoud       | 9460          | 113520        |
| Samir         | 8800          | 105600        |
| Omar          | 10450         | 125400        |
| Ali           | 12100         | 145200        |
| Ahmed         | 8800          | 105600        |
| Hesham        | 9570          | 114840        |
| Ramy          | 8030          | 96360         |
| Fatma         | 9020          | 108240        |
| Sara          | 7370          | 88440         |
| Khaled        | 11550         | 138600        |
| Hanaa         | 8800          | 105600        |
| Youssef       | 8030          | 96360         |
| Mohamed       | 9020          | 108240        |

Q 23

```
select Name Employee_NAME , age, salary ,address from company where age >30 and salary >7000 and address <> 'Giza, Egypt';
```

|   | Employee_NAME | age | salary | address           |
|---|---------------|-----|--------|-------------------|
| ► | Amira         | 32  | 9350   | Cairo, Egypt      |
|   | Laila         | 41  | 10120  | Alexandria, Egypt |
|   | Mahmoud       | 37  | 9460   | Fayoum, Egypt     |
|   | Omar          | 38  | 10450  | Cairo, Egypt      |
|   | Ali           | 50  | 12100  | Port Said, Egypt  |
|   | Hesham        | 36  | 9570   | Damietta, Egypt   |
|   | Fatma         | 34  | 9020   | Suez, Egypt       |
|   | Khaled        | 45  | 11550  | Aswan, Egypt      |
|   | Hanaa         | 33  | 8800   | Luxor, Egypt      |