Elz Cosmetics Database System

Elz Cosmetics Database System Prepared By

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A) Project description:

- Our database system was developed for cosmetic corporation, and its goal is to maintain relationships between The Elz Cosmetics company and its departments, employees, storage, cosmetics items, customers working with them, and logistic companies in charge of delivering cosmetic products between customers and our company.

B) Scope:

a) Included Business Processes

- Orders are created from the producer to us and from us to the customer.
- Storing cosmetic items in storage (by order ID FK column in the PRODUCT and STORAGE tables)
- Classification of Cosmetic Items (type column in PRODUCT)
- Sale records are kept on the ORDER table.
- Information about logistics companies is saved.
- Keeping employee and department information

b) Excluded Business Processes

- All cosmetic products that have returned functionality (change requests) are not included.
- Exporting to EXCEL will be done in the web interface part.

C) Data and requirements analysis for the database and business processes.

a) Functional Requirements:
- Creating, reading, updating and deletion of all entities.
- Filtering of cosmetic items by their attributes.
- Exporting data to excel.
- Return and change features.
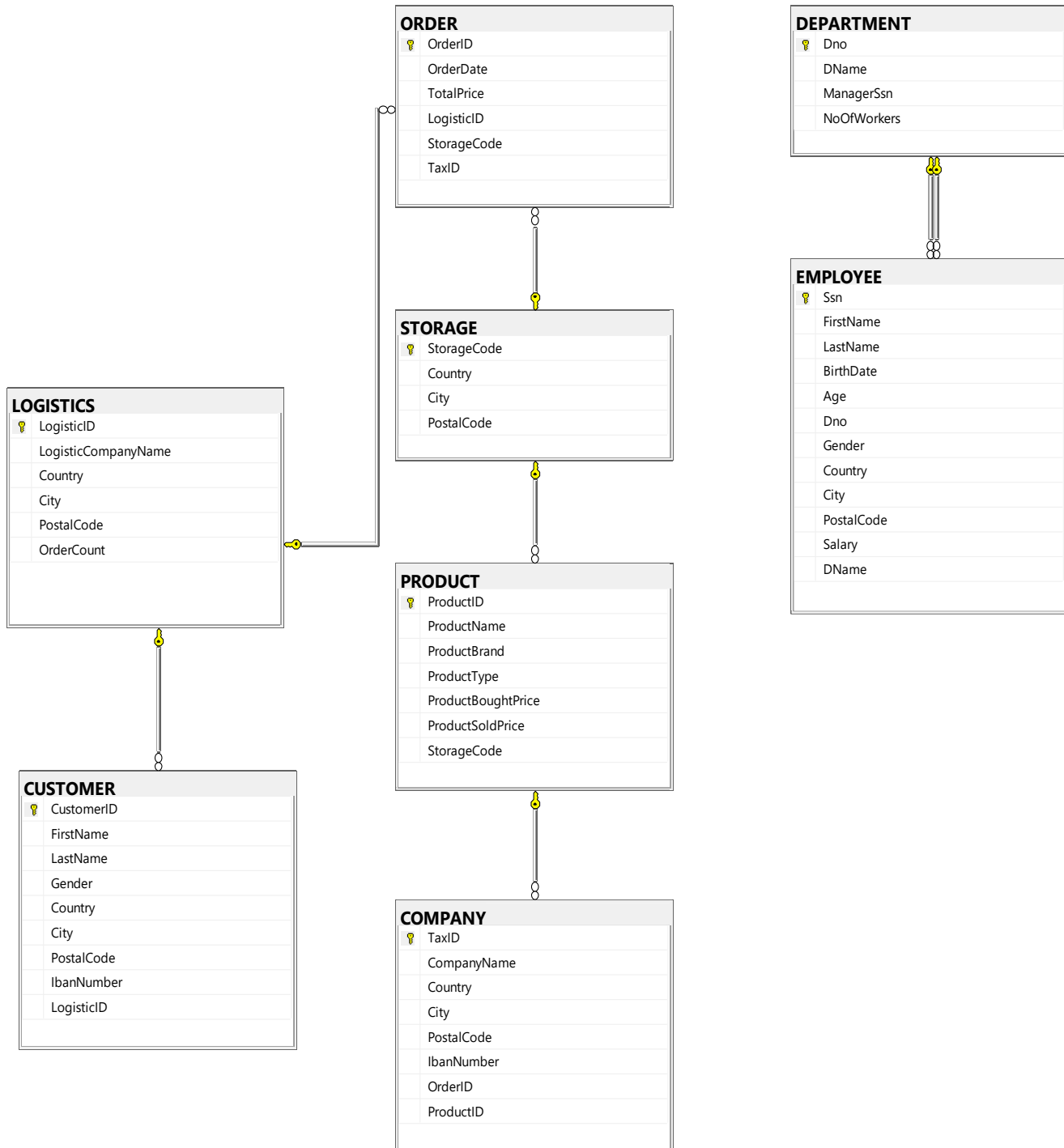- Storage of sale records.

b) Non-Functional Requirements:
- Web interface.
- The database engine will be Microsoft SQL server.
- Meeting at least 1 time a day.
- Submitting a report of each step.

c) Business Processes

• The cosmetic items are manufactured by the producer and delivered to our company by a logistics company.

• The quality control department examines whether the ordered cosmetic items have negative effect on human health, deformed, or have passed their expiration date. If this is the case, they are returned to the producer. The cost of deformed and expired items is refunded to our bank account.

• Ordered cosmetic items are kept in storage and are classified by employees in the operations department.

• The marketing department organizes the shop's demands, while the sales department sells them.

• A sale record is kept for each sale.

• A logistics company delivers cosmetic products to shops.

• If a store or individual consumer requests a return, the logistic business will send the cosmetic item back to inventory. Every request for a refund is kept in a database. The cost of returned cosmetic products is sent to the retailer's bank account.

• The products are returned to storage by the logistic company if a customer requests a modification. Every request for a change is kept in a database.

D) Diagram of whole database.

ORDER
- 🔑 OrderID
- OrderDate
- TotalPrice
- LogisticID
- StorageCode
- TaxID

DEPARTMENT
- 🔑 Dno
- DName
- ManagerSsn
- NoOfWorkers

STORAGE
- 🔑 StorageCode
- Country
- City
- PostalCode

EMPLOYEE
- 🔑 Ssn
- FirstName
- LastName
- BirthDate
- Age
- Dno
- Gender
- Country
- City
- PostalCode
- Salary
- DName

LOGISTICS
- 🔑 LogisticID
- LogisticCompanyName
- Country
- City
- PostalCode
- OrderCount

PRODUCT
- 🔑 ProductID
- ProductName
- ProductBrand
- ProductType
- ProductBoughtPrice
- ProductSoldPrice
- StorageCode

CUSTOMER
- 🔑 CustomerID
- FirstName
- LastName
- Gender
- Country
- City
- PostalCode
- IbanNumber
- LogisticID

COMPANY
- 🔑 TaxID
- CompanyName
- Country
- City
- PostalCode
- IbanNumber
- OrderID
- ProductID

E) Tables:

1) Company Table

i, iii. Name Of the fields/columns and their data types.

- TaxID (int)
- CompanyName(nvarchar(60)
- Country (nvarchar(40)
- City(nvarchar(40)
- PostalCode(nchar(5)
- IbanNumber (nchar(30)
- OrderID(int)
- ProductID (int)

ii. This table contains information about the company that sells cosmetic items.

iv. - Indexes: None

- Primary Key: PK_TaxID

- Foreign Key: FK_COMPANY_PRODUCT

                 * COMPANY connect to PRODUCT via ProductID

v. - Unique: IbanNumber

- Identity: None

- Check Constraints: None

- Defaults: None

- Computed Columns: None

vi. – Triggers: No Triggers.

2) Customer Table

i, iii. Name Of the fields/columns and their data types.

- CustomerID(int)
- FirstName(nvarchar(50)
- LastName(nvarchar(50)
- Gender (char(1)
- Country (nvarchar(50)
- City (nvarchar(50)
- PostalCode (nchar10))
- IbanNumber(nvarchar(50)
- LogisticID(int)

ii. Table containing information about customers who have purchased cosmetic items from the company.

iv.   - Indexes: None

- Primary Key: PK_CustomerID

- Foreign Key: FK_CUSTOMER_LOGISTICS

            * CUSTOMER connect to LOGISTIC via LogisticID

v.   - Unique: IbanNumber

- Identity: None

- Check Constraints: Gender must be 'F' for Female and 'M' for Male. Other option is invalid.

- Defaults: Country is Türkiye

- Computed Columns: None

vi.   – Triggers: No Triggers.

3) Department Table

i, iii.   Name Of the fields/columns and their data types.

- Dno (int)
- DName(nvarchar(50)
- ManagerSsn(nvarchar(50)
- NoOfWorkers (int)

ii.   Table, which includes information about the company's departments.

iv.   - Indexes: None

- Primary Key: PK_Dno

- Foreign Key: FK_DEPARTMENT_EMPLOYEE

            DEPARTMENT connected to EMPLOYEE via ManagerSsn

v.   - Unique: DNAME

- Identity: None

- Check Constraints: None

- Defaults: None

- Computed Columns: None

vi.   – Triggers: No Triggers.

4) Employee Table

i, iii.   Name of the fields/columns and their data types.

- Ssn(int)
- FirstName(navarchar(50)
- LastName(nvarchar(50))
- BirthDate(smalldatetime)
- Age (int)
- Dno(int)
- Gender(char(1)
- Country(nvarchar(50)
- City(nvarchar(50)
- PostalCode(nvarchar(5)
- Salary(int)
- DName (Nvarchar(50))

ii.   Table including information about employees in the company**.**

iv.   **-** Indexes: Birthdate

- Primary Key: PK_Ssn

- Foreign Key: FK_EMPLOYEE_DEPARTMENT

EMPLOYEE is connected to DEPARTMENT by Dno.

v.   **-** Unique: None

- Identity: None

- Check Constraints: Gender must be 'F' for Female and 'M' for Male. Other option is invalid.

- Defaults: Country is Türkiye

- Computed Columns: None

vi.   **–** Triggers: No Triggers.

5) LOGISTIC

i, iii.   Name Of the fields/columns and their data types.

- LogisticID(int)
- LogisticCompanyName(nchar(50))
- Country (nchar(50))
- City(nchar(50))
- PostalCode (nchar(50))
- OrderCount(int)

ii.   This table contains information about the company responsible for delivering the cosmetic items.

iv.   - Indexes: None

- Primary Key: PK_LogisticID

- Foreign Key: None

v.   - Unique: None

- Identity: None

- Check Constraints: None

- Defaults: None

- Computed Columns: None

vi.   – Triggers: No Triggers.

6) Order Table

i, iii.   Name Of the fields/columns and their data types.

- OrderID(int)
- OrderDate(smalldatetime)
- TotalPrice(int)
- LogisticID(int)
- StorageCode (int)
- TaxID(int)

ii.   Table include information about order which sold   products to our customer.

iv.   - Indexes: None

- Primary Key: OrderID

- Foreign Key: FK_ORDER_LOGISTIC

FK_ORDER_STORAGE

* ORDER is connect to LOGISTIC via LogisticID

* ORDER is connect to STORAGE via StorageCode

v.   - Unique: None

   - Identity: None

   - Check Constraints: None

   - Defaults: None

   - Computed Columns: None

vi.   – Triggers: tg_DeleteOrdertoLogistics

                   tg_OrdertoLogistics

7) Product Table

i, iii.   Name Of the fields/columns and their data types.

- ProductID(int)
- ProductName(varchar(50))
- ProductBrand(varchar(50)
- ProductType(varchar(50))
- ProductBoughtPrice (decimal(18.0))
- ProductSoldPrice (decimal(18.0))
- StorageCode(int)

ii.   Table, which contains information about cosmetic items that are being sold by the company.

iv.   - Indexes: None.

   - Primary Key: PK_ProductID

   - Foreign Key: FK_PRODUCT_STORAGE

                   ❖ PRODUCT connect to STORAGE via StorageCode

v.   - Unique: None.

   - Identity: ProductID

   - Check Constraints: None.

   - Defaults: None.

   - Computed Columns: None.

vi.   – Triggers: No Triggers.

8) Storage Table

i, iii.   Name Of the fields/columns and their data types.

- StorageCode(int)
- Country(nvarchar(10)
- City(nvarchar(10)
- PostalCode (int)

ii.   Table, which includes information about cosmetic items that are being sold by the company.

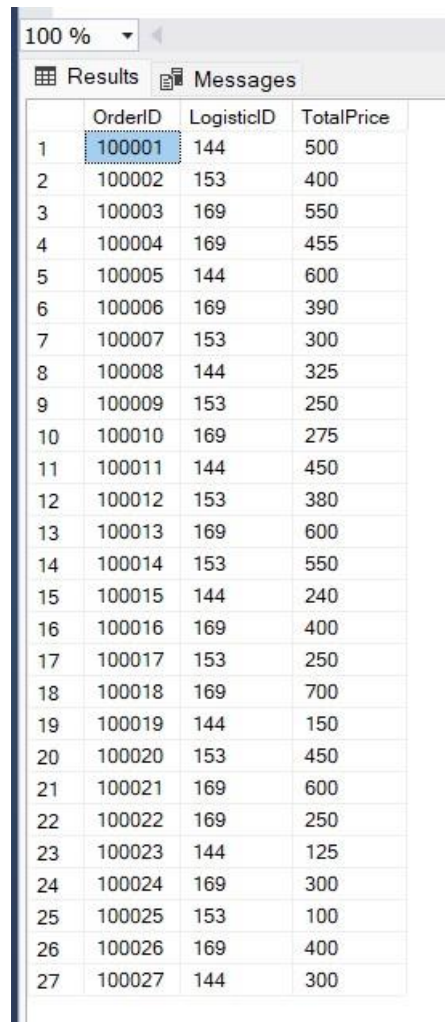**iv.**   **-** Indexes: None

- Primary Key: PK_StorageCode

- Foreign Key: None

v.   **-** Unique: None

- Identity: None

- Check Constraints: None

- Defaults: None

- Computed Columns: None

vi.   **–** Triggers: No Triggers.

F) Views

1) We displayed the name of the logistics company and the price paid for the order.

```
create view OrderWithLogistics as
Select o.OrderID, l.LogisticID, o.TotalPrice FROM [dbo].LOGISTICS l
join [dbo].[ORDER] o on l.LogisticID = o.LogisticID
```
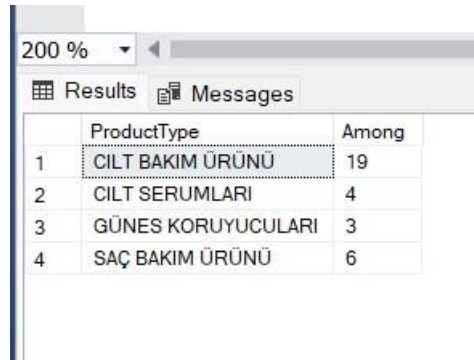
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▦ Results ▦ Messages

	OrderID	LogisticID	TotalPrice
1	100001	144	500
2	100002	153	400
3	100003	169	550
4	100004	169	455
5	100005	144	600
6	100006	169	390
7	100007	153	300
8	100008	144	325
9	100009	153	250
10	100010	169	275
11	100011	144	450
12	100012	153	380
13	100013	169	600
14	100014	153	550
15	100015	144	240
16	100016	169	400
17	100017	153	250
18	100018	169	700
19	100019	144	150
20	100020	153	450
21	100021	169	600
22	100022	169	250
23	100023	144	125
24	100024	169	300
25	100025	153	100
26	100026	169	400
27	100027	144	300

2) We displayed product types and amount of them.

```sql
create view [dbo].[ProductType] as
SELECT p.ProductType,count(*) as Among FROM PRODUCT p
Group By p.ProductType
```

	ProductType	Among
1	CILT BAKIM ÜRÜNÜ	19
2	CILT SERUMLARI	4
3	GÜNES KORUYUCULARI	3
4	SAÇ BAKIM ÜRÜNÜ	6

3) We displayed ssn, full name of employees and their departments' number and its name.

```
Create view [dbo].[DepartmentsOfEmployees] as
Select e.Ssn,e.FirstName +' ' + e.LastName as FullName,e.Dno,d.DName
From EMPLOYEE e inner join DEPARTMENT d on e.Dno=d.Dno
```

	Ssn	FullName	Dno	DName
1	101	İsmail Ellez	170	Accounting
2	102	Necmi Ellez	170	Accounting
3	103	Sümeyye Demirci	91	Sales
4	104	Hazal Leyla	91	Sales
5	105	Aleyna Demir	91	Sales
6	106	Recep Değirmenci	91	Sales
7	107	Şener Barış	91	Sales
8	108	Melisa Durmuş	91	Sales
9	109	Muhammed Bardakçı	91	Sales
10	110	Özge Saltan	131	Quality Control
11	111	Cüneyt Okan Koç	131	Quality Control
12	112	Bayram İsmail Kartal	131	Quality Control
13	113	Kıvanç Solak	131	Quality Control
14	114	Miray Ebrar Tilki	131	Quality Control
15	115	Semih Kundakçı	131	Quality Control
16	116	Atilla Avcı	131	Quality Control
17	117	Leyla İlknur Küçük	131	Quality Control
18	118	Zeynep Yıldız	131	Quality Control
19	119	Halit Yılmaz	132	Information ...
20	120	Yunus Emre Öztürk	132	Information ...
21	121	Erhan Yılmaz	132	Information ...
22	122	Eda Türk	132	Information ...
23	123	Zümra Uzun	156	Marketing
24	124	Ece Aslan	156	Marketing
25	125	Ayşenur Aksoy	156	Marketing

4) We displayed the SSN, full name, and salary of employees whose salaries are among the top thirteen in the company.

```sql
create view [dbo].[TopthirteenEarnerEmployee] as
SELECT Top 13 e.Ssn,e.FirstName + '' + e.LastName as FullName,e.Salary
From EMPLOYEE e
Order By e.Salary desc
```
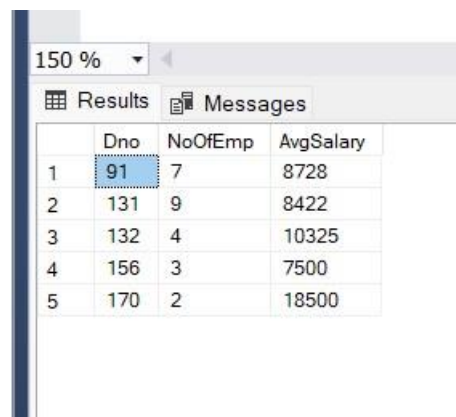
	Ssn	FullName	Salary
1	101	İsmailEllez	20000
2	102	NecmiEllez	17000
3	122	EdaTürk	10700
4	121	ErhanYılmaz	10400
5	119	HalitYılmaz	10200
6	108	MelisaDurmuş	10000
7	110	ÖzgeSaltan	10000
8	120	Yunus EmreÖztürk	10000
9	109	MuhammedBardakçı	8800
10	106	RecepDeğirmenci	8700
11	107	ŞenerBarış	8600
12	105	AleynaDemir	8500
13	103	SümeyyeDemirci	8500

5) We displayed for each department, department number, the number of employees in the department and their average salary.

```sql
create view [dbo].[avgsalaryEmployee] as
Select e.Dno, Count(*) NoOfEmp, Avg(e.Salary) AvgSalary
From Employee e
Group By e.Dno
```
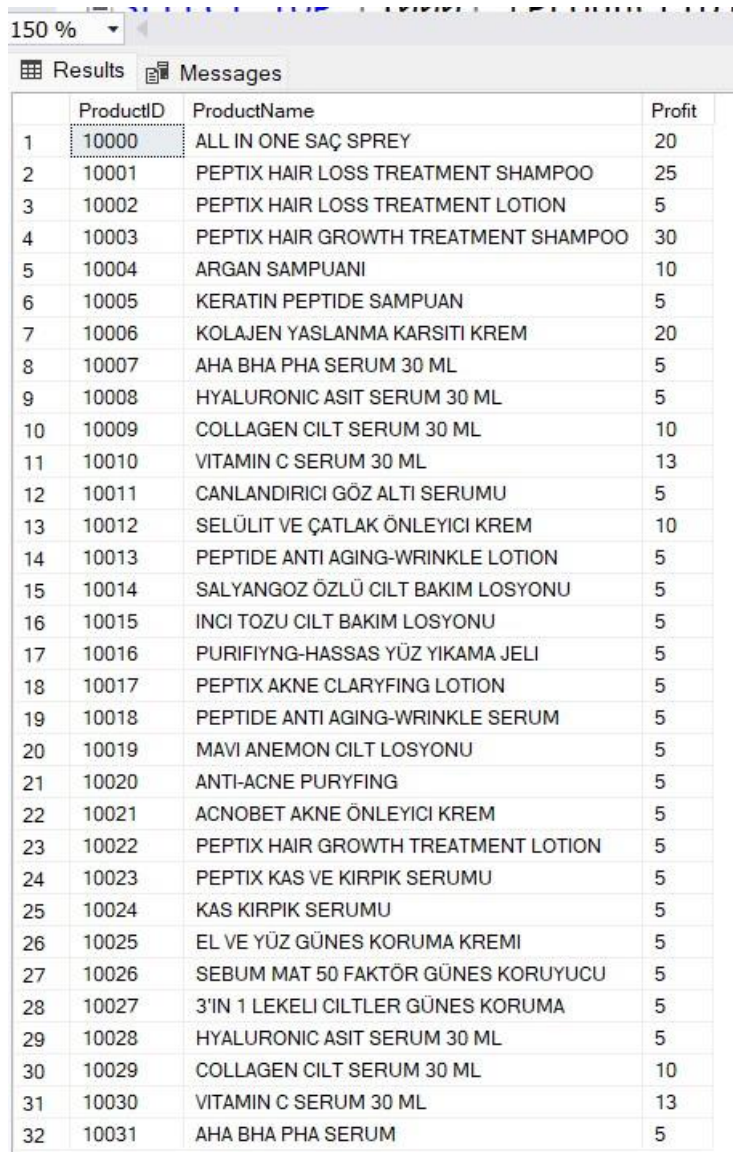
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Results | Messages

	Dno	NoOfEmp	AvgSalary
1	91	7	8728
2	131	9	8422
3	132	4	10325
4	156	3	7500
5	170	2	18500

6) We displayed some knowledge about products and their income.
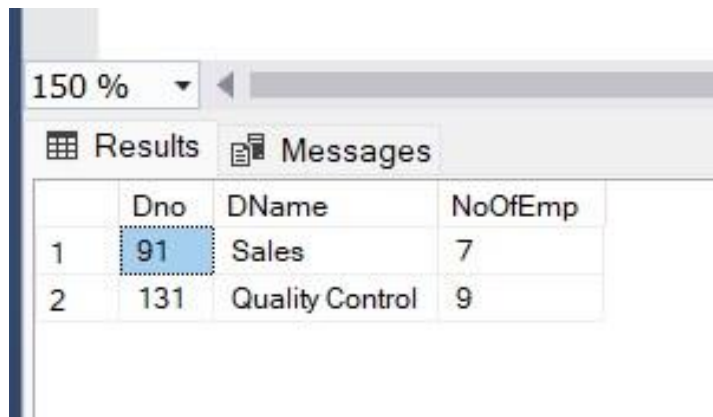
```sql
CREATE VIEW [dbo].[ProfitOfProducts] as
Select p.ProductID ,p.ProductName,p.ProductSoldPrice- p.ProductBoughtPrice as Profit
From PRODUCT p
```

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⊞ Results ▩ Messages

	ProductID	ProductName	Profit
1	10000	ALL IN ONE SAÇ SPREY	20
2	10001	PEPTIX HAIR LOSS TREATMENT SHAMPOO	25
3	10002	PEPTIX HAIR LOSS TREATMENT LOTION	5
4	10003	PEPTIX HAIR GROWTH TREATMENT SHAMPOO	30
5	10004	ARGAN SAMPUANI	10
6	10005	KERATIN PEPTIDE SAMPUAN	5
7	10006	KOLAJEN YASLANMA KARSITI KREM	20
8	10007	AHA BHA PHA SERUM 30 ML	5
9	10008	HYALURONIC ASIT SERUM 30 ML	5
10	10009	COLLAGEN CILT SERUM 30 ML	10
11	10010	VITAMIN C SERUM 30 ML	13
12	10011	CANLANDIRICI GÖZ ALTI SERUMU	5
13	10012	SELÜLIT VE ÇATLAK ÖNLEYICI KREM	10
14	10013	PEPTIDE ANTI AGING-WRINKLE LOTION	5
15	10014	SALYANGOZ ÖZLÜ CILT BAKIM LOSYONU	5
16	10015	INCI TOZU CILT BAKIM LOSYONU	5
17	10016	PURIFIYNG-HASSAS YÜZ YIKAMA JELI	5
18	10017	PEPTIX AKNE CLARYFING LOTION	5
19	10018	PEPTIDE ANTI AGING-WRINKLE SERUM	5
20	10019	MAVI ANEMON CILT LOSYONU	5
21	10020	ANTI-ACNE PURYFING	5
22	10021	ACNOBET AKNE ÖNLEYICI KREM	5
23	10022	PEPTIX HAIR GROWTH TREATMENT LOTION	5
24	10023	PEPTIX KAS VE KIRPIK SERUMU	5
25	10024	KAS KIRPIK SERUMU	5
26	10025	EL VE YÜZ GÜNES KORUMA KREMI	5
27	10026	SEBUM MAT 50 FAKTÖR GÜNES KORUYUCU	5
28	10027	3'IN 1 LEKELI CILTLER GÜNES KORUMA	5
29	10028	HYALURONIC ASIT SERUM 30 ML	5
30	10029	COLLAGEN CILT SERUM 30 ML	10
31	10030	VITAMIN C SERUM 30 ML	13
32	10031	AHA BHA PHA SERUM	5

7) We displayed for each department that has at least five employees; retrieve the department number, department name and the number of its employees with salary greater than 11600.
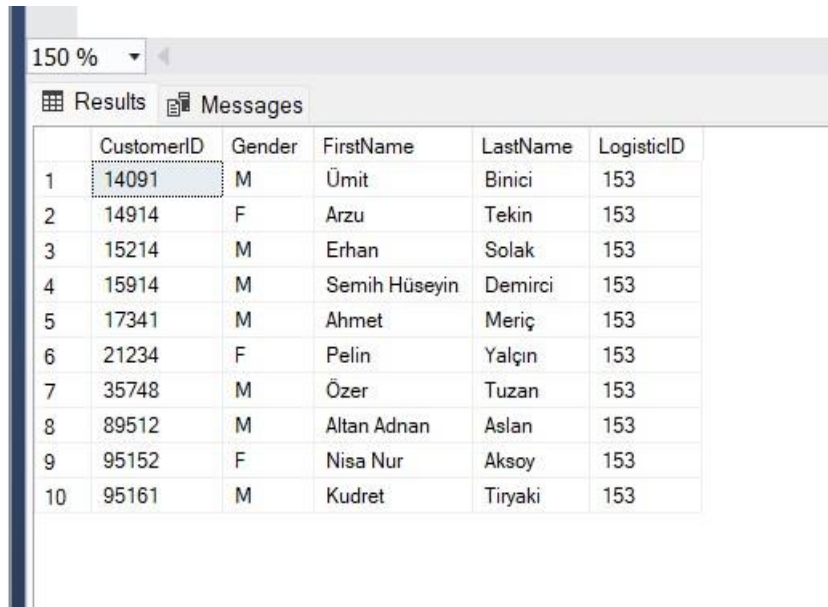
```sql
/*View 7*/
Create view [dbo].[greaterEleventhousandsixhundredOfEmployees] as
Select d.Dno, d.DName, Count(*) NoOfEmp
From Employee e inner join Department d on e.Dno=d.Dno
Where d.Dno in
(Select e2.Dno
From Employee e2
Group By e2.Dno
Having Count(*)>=5)
and e.Salary<11600
Group By d.Dno, d.DName
```

	Dno	DName	NoOfEmp
1	91	Sales	7
2	131	Quality Control	9

8) We displayed customer information and their logistic companies' ID.

```
48    /*View 8 */
49
50 ⊟create view [dbo].[FindLogistics] as
51    select c.CustomerID, c.Gender,c.FirstName, c.LastName, l.LogisticID FROM LOGISTICS l
52    join CUSTOMER c on l.LogisticID = c.LogisticID
53    where c.LogisticID = 153
```

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▦ Results 🖼 Messages				
	CustomerID	Gender	FirstName	LastName	LogisticID
---	---	---	---	---	---
1	14091	M	Ümit	Binici	153
2	14914	F	Arzu	Tekin	153
3	15214	M	Erhan	Solak	153
4	15914	M	Semih Hüseyin	Demirci	153
5	17341	M	Ahmet	Meriç	153
6	21234	F	Pelin	Yalçın	153
7	35748	M	Özer	Tuzan	153
8	89512	M	Altan Adnan	Aslan	153
9	95152	F	Nisa Nur	Aksoy	153
10	95161	M	Kudret	Tiryaki	153

G) TRIGGERS:

1) We found out to which cargo company the order was transferred and calculated the number.

```
6    /*Trigger 1 --------------------------------------------------------------------*/
7
8    CREATE TRIGGER tg_OrdertoLogistics
9    on [dbo].[ORDER]
10   After Insert
11   As
12   Begin
13   Update LOGISTICS
14   Set OrderCount = OrderCount+1
15   Where LogisticID=(select LogisticID FROM inserted)
16   end
17
18   Insert Into [dbo].[ORDER](OrderID, LogisticID) Values (100028, 144)
```

-Before The Trigger Logistics Table:

	LogisticID	LogisticCompanyName	Country	City	PostalCode	OrderCount
1	144	Yurtiçi Kargo	Türkiye	İstanbul	34800	8
2	153	MNG Kargo	Türkiye	İstanbul	34300	8
3	169	Aras Kargo	Türkiye	İstanbul	34500	11

- **Before The Trigger Order Table:**

	OrderID	OrderDate	TotalPrice	LogisticID	StorageCode	TaxID
1	100001	2021-08-02 00:00:00	500	144	1001	25151512
2	100002	2021-08-04 00:00:00	400	153	1002	51235151
3	100003	2021-08-10 00:00:00	550	169	1003	51251515
4	100004	2021-08-25 00:00:00	455	169	1004	51251614
5	100005	2021-09-06 00:00:00	600	144	1005	51256126
6	100006	2021-09-09 00:00:00	390	169	1006	71261371
7	100007	2021-09-21 00:00:00	300	153	1007	71261371
8	100008	2021-09-30 00:00:00	325	144	1008	215515161
9	100009	2021-10-14 00:00:00	250	153	1009	241241514
10	100010	2021-10-31 00:00:00	275	169	1010	381848189
11	100011	2021-11-06 00:00:00	450	144	1011	412774178
12	100012	2021-11-29 00:00:00	380	153	1012	412901249
13	100013	2021-12-07 00:00:00	600	169	1013	418814817
14	100014	2021-12-23 00:00:00	550	153	1014	419029041
15	100015	2022-01-02 00:00:00	240	144	1015	481848181
16	100016	2022-01-14 00:00:00	400	169	1016	491291421
17	100017	2022-02-01 00:00:00	250	153	1017	518951898
18	100018	2022-02-14 00:00:00	700	169	1018	519518151
19	100019	2022-02-25 00:00:00	150	144	1019	519951911
20	100020	2022-03-08 00:00:00	450	153	1020	588181581
21	100021	2022-03-21 00:00:00	600	169	1021	632561512
22	100022	2022-04-01 00:00:00	250	169	1022	724188712
23	100023	2022-04-10 00:00:00	125	144	1023	841941918
24	100024	2022-05-08 00:00:00	300	169	1024	842198418
25	100025	2022-06-10 00:00:00	100	153	1025	852185181
26	100026	2022-07-20 00:00:00	400	169	1026	412774178
27	100027	2022-07-22 00:00:00	300	144	1027	51235151

- **After The Trigger Logistics Table:**

	LogisticID	LogisticCompanyName	Country	City	PostalCode	OrderCount
1	144	Yurtiçi Kargo	Türkiye	İstanbul	34800	9
2	153	MNG Kargo	Türkiye	İstanbul	34300	8
3	169	Aras Kargo	Türkiye	İstanbul	34500	11

- **After The Trigger Order Table:**

```
      3 |            , [OrderDate]
100 %   ▼  ◄
```

⊞ Results 📄 Messages

	OrderID	OrderDate	TotalPrice	LogisticID	StorageCode	TaxID
1	100001	2021-08-02 00:00:00	500	144	1001	25151512
2	100002	2021-08-04 00:00:00	400	153	1002	51235151
3	100003	2021-08-10 00:00:00	550	169	1003	51251515
4	100004	2021-08-25 00:00:00	455	169	1004	51251614
5	100005	2021-09-06 00:00:00	600	144	1005	51256126
6	100006	2021-09-09 00:00:00	390	169	1006	71261371
7	100007	2021-09-21 00:00:00	300	153	1007	71261371
8	100008	2021-09-30 00:00:00	325	144	1008	215515161
9	100009	2021-10-14 00:00:00	250	153	1009	241241514
10	100010	2021-10-31 00:00:00	275	169	1010	381848189
11	100011	2021-11-06 00:00:00	450	144	1011	412774178
12	100012	2021-11-29 00:00:00	380	153	1012	412901249
13	100013	2021-12-07 00:00:00	600	169	1013	418814817
14	100014	2021-12-23 00:00:00	550	153	1014	419029041
15	100015	2022-01-02 00:00:00	240	144	1015	481848181
16	100016	2022-01-14 00:00:00	400	169	1016	491291421
17	100017	2022-02-01 00:00:00	250	153	1017	518951898
18	100018	2022-02-14 00:00:00	700	169	1018	519518151
19	100019	2022-02-25 00:00:00	150	144	1019	519951911
20	100020	2022-03-08 00:00:00	450	153	1020	588181581
21	100021	2022-03-21 00:00:00	600	169	1021	632561512
22	100022	2022-04-01 00:00:00	250	169	1022	724188712
23	100023	2022-04-10 00:00:00	125	144	1023	841941918
24	100024	2022-05-08 00:00:00	300	169	1024	842198418
25	100025	2022-06-10 00:00:00	100	153	1025	852185181
26	100026	2022-07-20 00:00:00	400	169	1026	412774178
27	100027	2022-07-22 00:00:00	300	144	1027	51235151
28	100028	NULL	NULL	144	NULL	NULL

2) We have ensured that the given order is deleted from the held ball.

```
20   /*Trigger 2 --------------------------------------------------------------*/
21
22  ⊟CREATE TRIGGER tg_DeleteOrdertoLogistics
23   on [dbo].[ORDER]
24   After Delete
25   As
26  ⊟Begin
27  ⊟Update LOGISTICS
28   Set OrderCount = OrderCount+1
29   Where LogisticID=(select LogisticID FROM deleted)
30   end
31
32   Insert Into [dbo].[ORDER](OrderID, LogisticID) Values (100028, 144)
```

-Before The Trigger Logistics Table:

	LogisticID	LogisticCompanyName	Country	City	PostalCode	OrderCount
1	144	Yurtiçi Kargo	Türkiye	İstanbul	34800	9
2	153	MNG Kargo	Türkiye	İstanbul	34300	8
3	169	Aras Kargo	Türkiye	İstanbul	34500	11

- **After The Trigger Logistics Table:**

	LogisticID	LogisticCompanyName	Country	City	PostalCode	OrderCount
1	144	Yurtiçi Kargo	Türkiye	İstanbul	34800	8
2	153	MNG Kargo	Türkiye	İstanbul	34300	8
3	169	Aras Kargo	Türkiye	İstanbul	34500	11

- **Before The Trigger Order Table:**

```
 3 |          ,[OrderDate]
```

100 % ▼

▦ Results | 🗐 Messages

	OrderID	OrderDate	TotalPrice	LogisticID	StorageCode	TaxID
1	100001	2021-08-02 00:00:00	500	144	1001	25151512
2	100002	2021-08-04 00:00:00	400	153	1002	51235151
3	100003	2021-08-10 00:00:00	550	169	1003	51251515
4	100004	2021-08-25 00:00:00	455	169	1004	51251614
5	100005	2021-09-06 00:00:00	600	144	1005	51256126
6	100006	2021-09-09 00:00:00	390	169	1006	71261371
7	100007	2021-09-21 00:00:00	300	153	1007	71261371
8	100008	2021-09-30 00:00:00	325	144	1008	215515161
9	100009	2021-10-14 00:00:00	250	153	1009	241241514
10	100010	2021-10-31 00:00:00	275	169	1010	381848189
11	100011	2021-11-06 00:00:00	450	144	1011	412774178
12	100012	2021-11-29 00:00:00	380	153	1012	412901249
13	100013	2021-12-07 00:00:00	600	169	1013	418814817
14	100014	2021-12-23 00:00:00	550	153	1014	419029041
15	100015	2022-01-02 00:00:00	240	144	1015	481848181
16	100016	2022-01-14 00:00:00	400	169	1016	491291421
17	100017	2022-02-01 00:00:00	250	153	1017	518951898
18	100018	2022-02-14 00:00:00	700	169	1018	519518151
19	100019	2022-02-25 00:00:00	150	144	1019	519951911
20	100020	2022-03-08 00:00:00	450	153	1020	588181581
21	100021	2022-03-21 00:00:00	600	169	1021	632561512
22	100022	2022-04-01 00:00:00	250	169	1022	724188712
23	100023	2022-04-10 00:00:00	125	144	1023	841941918
24	100024	2022-05-08 00:00:00	300	169	1024	842198418
25	100025	2022-06-10 00:00:00	100	153	1025	852185181
26	100026	2022-07-20 00:00:00	400	169	1026	412774178
27	100027	2022-07-22 00:00:00	300	144	1027	51235151
28	100028	NULL	NULL	144	NULL	NULL

- **After The Trigger Order Table:**

100 % ▼

◢ Results ◢ Messages

	OrderID	OrderDate	TotalPrice	LogisticID	StorageCode	TaxID
1	100001	2021-08-02 00:00:00	500	144	1001	25151512
2	100002	2021-08-04 00:00:00	400	153	1002	51235151
3	100003	2021-08-10 00:00:00	550	169	1003	51251515
4	100004	2021-08-25 00:00:00	455	169	1004	51251614
5	100005	2021-09-06 00:00:00	600	144	1005	51256126
6	100006	2021-09-09 00:00:00	390	169	1006	71261371
7	100007	2021-09-21 00:00:00	300	153	1007	71261371
8	100008	2021-09-30 00:00:00	325	144	1008	215515161
9	100009	2021-10-14 00:00:00	250	153	1009	241241514
10	100010	2021-10-31 00:00:00	275	169	1010	381848189
11	100011	2021-11-06 00:00:00	450	144	1011	412774178
12	100012	2021-11-29 00:00:00	380	153	1012	412901249
13	100013	2021-12-07 00:00:00	600	169	1013	418814817
14	100014	2021-12-23 00:00:00	550	153	1014	419029041
15	100015	2022-01-02 00:00:00	240	144	1015	481848181
16	100016	2022-01-14 00:00:00	400	169	1016	491291421
17	100017	2022-02-01 00:00:00	250	153	1017	518951898
18	100018	2022-02-14 00:00:00	700	169	1018	519518151
19	100019	2022-02-25 00:00:00	150	144	1019	519951911
20	100020	2022-03-08 00:00:00	450	153	1020	588181581
21	100021	2022-03-21 00:00:00	600	169	1021	632561512
22	100022	2022-04-01 00:00:00	250	169	1022	724188712
23	100023	2022-04-10 00:00:00	125	144	1023	841941918
24	100024	2022-05-08 00:00:00	300	169	1024	842198418
25	100025	2022-06-10 00:00:00	100	153	1025	852185181
26	100026	2022-07-20 00:00:00	400	169	1026	412774178
27	100027	2022-07-22 00:00:00	300	144	1027	51235151

H) STORED PROCEDURES

1) We show the average salary of employees working in each department (Dno).

```
/*Stored Procedure 1*/

CREATE Procedure sp_AverageSalaryOfDepartment
  @dno int
As
Begin
    Select d.Dno,avg(e.Salary * 1.0) as AverageSalary
    From EMPLOYEE e inner join DEPARTMENT d on e.Dno=d.Dno
    Group By d.Dno
    Having @dno = d.Dno

End

exec sp_AverageSalaryOfDepartment 131

/*Stored Procedure 2*/
```

	Dno	AverageSalary
1	131	8422.222222

2) We inserted a new product into the product table.

- **Before Stored Procedure 2:**

- **After Stored Procedure 2:**

	ProductID	ProductName	ProductBrand	ProductType	ProductBoughtPrice	ProductSoldPrice	StorageCode
30	10029	COLLAGEN CILT SERUM 30 ML	Q&R	CILT SERUMLARI	100	110	1010
31	10030	VITAMIN C SERUM 30 ML	Q&R	CILT SERUMLARI	105	118	1024
32	10031	AHA BHA PHA SERUM	Q&R	CILT SERUMLARI	95	100	1016
33	10032	Günes Kremi	Q&R	GÜNES KREMI	100	120	1024
34	10033	AKNE KREMI	SINOZ	CILT BAKIM ÜRÜNÜ	120	180	1025

Query executed successfully. YASINCOREKCI (15.0

3) We create a new department and hire a new employee.

```
/*Stored Procedure 3*/
Create Procedure sp_NewDepartment(
    @Dno int,
    @DName nvarchar(50),
    @ManagerSsn nvarchar(50),
    @NoOfWorkers int
)
As
Begin
    Insert Into DEPARTMENT
    Values (@Dno, @DName, @ManagerSsn, @NoOfWorkers)
End
exec sp_NewDepartment 201, 'Administrative affairs', 107641942,8
select * FROM DEPARTMENT
```

- **Before Stored Procedure 3:**

```
55
56
57   select * FROM DEPARTMENT
58
```

150 %

Results | Messages

	Dno	DName	ManagerSsn	NoOfWorkers
1	91	Sales	108931932	7
2	131	Quality Control	528109310	9
3	132	Information Technology	940194154	4
4	156	Marketing	816958185	3
5	170	Accounting	682848248	2

- **After Stored Procedure 3:**

```
52
53   exec sp_NewDepartment 201, 'Administrative affairs', 107641942,8
54   select * FROM DEPARTMENT
55
```

150 %

Results | Messages

	Dno	DName	ManagerSsn	NoOfWorkers
1	91	Sales	108931932	7
2	131	Quality Control	528109310	9
3	132	Information Technology	940194154	4
4	156	Marketing	816958185	3
5	170	Accounting	682848248	2
6	201	Administrative affairs	107641942	8

4) Add a New customer record to Customer Table

```
YASINCOREKCI. EL...M - dbo.CUSTOMER    Stored_Procedures.s...i\yasincorekci (70))*  ⊣ ×
56    CREATE Procedure sp_NewCustomer
57        @CustomerID int,
58        @FirstName nvarchar(50),
59        @LastName nvarchar(50),
60        @Gender char(1),
61        @Country nvarchar(25),
62        @City nvarchar(25),
63        @PostalCode nchar(5),
64        @IbanNumber nvarchar(50)
65    As
66   ⊟Begin
67   ⊟    Insert Into CUSTOMER Values
68            (@CustomerID,
69            @FirstName,
70            @LastName,
71            @Gender,
72            @Country,
73            @City,
74            @PostalCode,
75            @IbanNumber,
76            null)
77    End
78    exec sp_NewCustomer 96145,'Sümeyye','Giresun','F','Türkiye','Sinop', 57431,TR520006251491782686421269
79    Select * from CUSTOMER
80
```

- **Before Stored Procedure 4:**

```
82
83    Select * from CUSTOMER
84
85
86
87
```

150 % ▾

⊞ Results 📄 Messages

	CustomerID	FirstName	LastName	Gender	Country	City	PostalCode	IbanNumber	LogisticID
17	35748	Özer	Tuzan	M	Türkiye	Rize	53020	TR600006273251441922685774	153
18	49151	Ediz	Terzi	M	Türkiye	Ankara	06020	TR120006247577584822991968	169
19	58121	Polat	Turan	M	Türkiye	İstanbul	34150	TR590006298211741379489174	144
20	59141	Taner	Demir	M	Türkiye	İzmir	35100	TR1600062296734166889959185	144
21	64141	Rahmi Azra	Sadık	F	Türkiye	Kayseri	38020	TR070006299361496441399496	144
22	85142	Alperen Şadi	Binici	M	Türkiye	İstanbul	34200	TR540006287179212523934294	169
23	89512	Altan Adnan	Aslan	M	Türkiye	İstanbul	34300	TR510006217778874493796125	153
24	94141	Sait Cihangir	Uzun	M	Türkiye	Mersin	33010	TR370006221268375233693781	169
25	95152	Nisa Nur	Aksoy	F	Türkiye	Samsın	55010	TR960006228442982996551576	153
26	95161	Kudret	Tiryaki	M	Türkiye	Ankara	06100	TR170006261767266344134891	153

- **After Stored Procedure 4:**

5) Deleted a COMPANY from Company Table

- **Before Stored Procedure 5:**

	TaxID	CompanyName	Country	City	PostalCode	IbanNumber	OrderID	ProductID
4	51251614	Murat Eczanesi	Türkiye	Ankara	06400	TR110006287189232547876689	100004	10005
5	51256126	Ahsen Eczanecilik	Türkiye	İstanbul	34010	TR710006262654457836671385	100005	10016
6	71261371	Gül Kozmetik	Türkiye	İzmir	35020	TR400006232824476544579687	100006	10001
7	1509515...	Gül Eczanecilik	Türkiye	Adana	01010	TR420006249323919142655697	100011	10008
8	2155151...	Anıl Market	Türkiye	Antalya	07400	TR460006297947642796773978	100007	10010
9	2412415...	ARG Kozmetik	Türkiye	İstanbul	34200	TR180006292887924776974687	100008	10030
10	3818481...	Hür Market	Türkiye	Ankara	06020	TR090006252328287879815993	100017	10013
11	4127741...	Murat Eczanesi	Türkiye	Ankara	06400	TR110006287189232547876689	100020	10004
12	4129012...	GAM Market	Türkiye	İstanbul	34400	TR050006291861457795675411	100018	10019
13	4188148...	Ahsen Eczanecilik	Türkiye	İstanbul	34010	TR710006262654457836671385	100019	10020
14	4190290...	Emr Eczanesi	Türkiye	İstanbul	34010	TR050006291861457795675411	100023	10011
15	4818481...	Gül Kozmetik	Türkiye	İzmir	35020	TR400006232824476544579687	100022	10024
16	4912914...	Gül Kozmetik	Türkiye	İzmir	35020	TR400006232824476544579687	100013	10031
17	5189518...	Anıl Market	Türkiye	Antalya	07400	TR460006297947642796773978	100025	10011
18	5195181...	Nur Eczanesi	Türkiye	Mersin	33100	TR200006238713841941489254	100009	10028
19	5199519...	Gül Eczanecilik	Türkiye	Adana	01010	TR420006249323919142655697	100016	10009
20	5881815...	ARG Kozmetik	Türkiye	İstanbul	34200	TR460006297947642796773978	100024	10018
21	6325615...	Sinan Kozmetik	Türkiye	İzmir	35100	TR310006282196174591456881	100010	10025
22	7241887...	Emr Eczanesi	Türkiye	İstanbul	34010	TR050006291861457795675411	100012	10024
23	8419419...	Hür Market	Türkiye	Ankara	06020	TR090006252328287879815993	100021	10002
24	8421984...	Sinan Kozmetik	Türkiye	İzmir	35100	TR310006282196174591456688	100014	10002
25	8521851...	ARG Kozmetik	Türkiye	İstanbul	34200	TR180006292887924776974687	100015	10006

Query executed successfully.   YASINCOREKCI (15.0

- **After Stored Procedure 5:**

```
91   exec sp_DeleteCompany 852185181
92   select *From COMPANY
93
94
```

	TaxID	CompanyName	Country	City	PostalCode	IbanNumber	OrderID	ProductID
11	4127741...	Murat Eczanesi	Türkiye	Ankara	06400	TR110006287189232547876689	100020	10004
12	4129012...	GAM Market	Türkiye	İstan...	34400	TR050006291861457795675411	100018	10019
13	4188148...	Ahsen Eczane...	Türkiye	İstan...	34010	TR710006262654457836671385	100019	10020
14	4190290...	Emr Eczanesi	Türkiye	İstan...	34010	TR050006291861457795675411	100023	10011
15	4818481...	Gül Kozmetik	Türkiye	İzmir	35020	TR400006232824476544579687	100022	10024
16	4912914...	Gül Kozmetik	Türkiye	İzmir	35020	TR400006232824476544579687	100013	10031
17	5189518...	Anıl Market	Türkiye	Antalya	07400	TR460006297947642796773978	100025	10011
18	5195181...	Nur Eczanesi	Türkiye	Mersin	33100	TR200006238713841941489254	100009	10028
19	5199519...	Gül Eczanecilik	Türkiye	Adana	01010	TR420006249323919142655697	100016	10009
20	5881815...	ARG Kozmetik	Türkiye	İstan...	34200	TR460006297947642796773978	100024	10018
21	6325615...	Sinan Kozmetik	Türkiye	İzmir	35100	TR310006282196174591456881	100010	10025
22	7241887...	Emr Eczanesi	Türkiye	İstan...	34010	TR050006291861457795675411	100012	10024
23	8419419...	Hür Market	Türkiye	Ankara	06020	TR090006252328287879815993	100021	10002
24	8421984...	Sinan Kozmetik	Türkiye	İzmir	35100	TR310006282196174591456688	100014	10002

6) UPDATE

```sql
/*Stored Procedure 6*/
Create Procedure sp_UpdateSalary
As
Begin
Update e
Set e.Salary=e.Salary*1.30
From Employee e inner join Department d on e.Dno=d.Dno
inner join (Select e.Ssn
From Employee e
Group By e.Ssn
Having Sum(e.Age)>30) e5 on e.Ssn=e.Ssn
Where d.DName='Quality Control'
END


sp_UpdateSalary
Select * from EMPLOYEE
```

- **Before Stored Procedure 6:**

```sql
Select * from EMPLOYEE
```

	Ssn	FirstName	LastName	BirthDate	Age	Dno	Gender	Country	City	PostalCode	Salary	DName
8	108	Melisa	Durmuş	2000-08-24 00:00:00	22	91	F	Türkiye	İstanbul	34800	10000	Sales
9	109	Muham...	Bardakçı	1990-10-10 00:00:00	32	91	M	Türkiye	İstanbul	34050	8800	Sales
10	110	Özge	Saltan	1999-09-09 00:00:00	23	131	F	Türkiye	İstanbul	34500	10000	Quality Control
11	111	Cüneyt O...	Koç	1997-09-19 00:00:00	25	131	M	Türkiye	İstanbul	34800	8200	Quality Control
12	112	Bayram İ...	Kartal	1986-02-10 00:00:00	36	131	M	Türkiye	İstanbul	34600	8400	Quality Control
13	113	Kıvanç	Solak	1990-04-13 00:00:00	32	131	M	Türkiye	İstanbul	34050	8300	Quality Control
14	114	Miray Eb...	Tilki	1998-02-04 00:00:00	24	131	F	Türkiye	İstanbul	34300	8100	Quality Control
15	115	Semih	Kundakçı	1995-05-16 00:00:00	27	131	M	Türkiye	İstanbul	34500	7900	Quality Control
16	116	Atilla	Avcı	1984-04-17 00:00:00	38	131	M	Türkiye	İstanbul	34400	8400	Quality Control
17	117	Leyla İlk...	Küçük	1994-05-04 00:00:00	28	131	F	Türkiye	İstanbul	34510	8300	Quality Control
18	118	Zeynep	Yıldız	1989-10-01 00:00:00	33	131	F	Türkiye	İstanbul	34210	8200	Quality Control
19	119	Halit	Yılmaz	1987-01-31 00:00:00	35	132	M	Türkiye	İstanbul	34900	10200	Information Technology

- **After Stored Procedure 6:**

```
107
108    sp_UpdateSalary
109    Select * from EMPLOYEE
```

150 %

Results | Messages

	Ssn	FirstName	LastName	BirthDate	Age	Dno	Gender	Country	City	PostalCode	Salary	DName
4	104	Hazal	Leyla	1994-05-15 00:00:00	28	91	F	Türkiye	İstanbul	34500	8000	Sales
5	105	Aleyna	Demir	1996-08-17 00:00:00	26	91	F	Türkiye	İstanbul	34300	8500	Sales
6	106	Recep	Değirme...	1980-10-16 00:00:00	42	91	M	Türkiye	İstanbul	34700	8700	Sales
7	107	Şener	Barış	1989-12-17 00:00:00	33	91	M	Türkiye	İstanbul	34900	8600	Sales
8	108	Melisa	Durmuş	2000-08-24 00:00:00	22	91	F	Türkiye	İstanbul	34800	10000	Sales
9	109	Muham...	Bardakçı	1990-10-10 00:00:00	32	91	M	Türkiye	İstanbul	34050	8800	Sales
10	110	Özge	Saltan	1999-09-09 00:00:00	23	131	F	Türkiye	İstanbul	34500	16900	Quality C...
11	111	Cüneyt O...	Koç	1997-09-19 00:00:00	25	131	M	Türkiye	İstanbul	34800	13858	Quality C...
12	112	Bayram İ...	Kartal	1986-02-10 00:00:00	36	131	M	Türkiye	İstanbul	34600	14196	Quality C...
13	113	Kıvanç	Solak	1990-04-13 00:00:00	32	131	M	Türkiye	İstanbul	34050	14027	Quality C...
14	114	Miray Eb...	Tilki	1998-02-04 00:00:00	24	131	F	Türkiye	İstanbul	34300	13689	Quality C...
15	115	Semih	Kundakçı	1995-05-16 00:00:00	27	131	M	Türkiye	İstanbul	34500	13351	Quality C...
16	116	Atilla	Avcı	1984-04-17 00:00:00	38	131	M	Türkiye	İstanbul	34400	14196	Quality C...
17	117	Leyla İlk...	Küçük	1994-05-04 00:00:00	28	131	F	Türkiye	İstanbul	34510	14027	Quality C...
18	118	Zeynep	Yıldız	1989-10-01 00:00:00	33	131	F	Türkiye	İstanbul	34210	13858	Quality C...
19	119	Halit	Yılmaz	1987-01-31 00:00:00	35	132	M	Türkiye	İstanbul	34900	10200	Informati...
20	120	Yunus E...	Öztürk	1996-02-14 00:00:00	26	132	M	Türkiye	İstanbul	34310	10000	Informati...
21	121	Erhan	Yılmaz	1979-04-04 00:00:00	43	132	M	Türkiye	İstanbul	34560	10400	Informati...
22	122	Eda	Türk	1997-02-14 00:00:00	25	132	F	Türkiye	İstanbul	34200	10700	Informati...

✅ Query executed successfully. | YASINCOREKCI (15.0 RTM)

7) Sets given company names to NULL.

```
111    /*Stored Procedure 7*/
112
113    Create Procedure sp_EmptyCompany(
114        @TaxID int
115    )
116    As
117  ┌Begin
118        Update COMPANY
119        Set CompanyName=NULL
120        Where TaxID=@TaxID
121    End
122    exec sp_EmptyCompany 25151512
123    select*from COMPANY
124
125    |
126
127
```

- **Before Stored Procedure 7:**

```
122    select*from COMPANY
123
124
```

150 % ▼ ◄

🖽 Results 🗐 Messages

	TaxID	CompanyName	Country	City	PostalCode	IbanNumber	OrderID	ProductID
1	25151512	Hür Market	Türkiye	Ankara	06020	TR0900062523282878798l5993	100001	10014
2	51235151	Emr Eczanesi	Türkiye	İstan...	34010	TR0500062918614577956754l1	100002	10012
3	51251515	GAM Market	Türkiye	İstan...	34400	TR5900062777592814731231129	100003	10001
4	51251614	Murat Eczanesi	Türkiye	Ankara	06400	TR1100062871892325478766889	100004	10005
5	51256126	Ahsen Eczane...	Türkiye	İstan...	34010	TR7100062626544578366713885	100005	10016
6	71261371	Gül Kozmetik	Türkiye	İzmir	35020	TR40000623282447654457968887	100006	10001
7	1509515...	Gül Eczanecilik	Türkiye	Adana	01010	TR42000624932391914265569897	100011	10008
8	2155151...	Anıl Market	Türkiye	Antalya	07400	TR46000629794764279677339788	100007	10010
9	2412415...	ARG Kozmetik	Türkiye	İstan...	34200	TR180006292887924776974687	100008	10030
10	3818481...	Hür Market	Türkiye	Ankara	06020	TR0900062523282878798l5993	100017	10013
11	4127741...	Murat Eczanesi	Türkiye	Ankara	06400	TR1100062871892325478766889	100020	10004
12	4129012...	GAM Market	Türkiye	İstan...	34400	TR0500062918614577956754l1	100018	10019
13	4188148...	Ahsen Eczane...	Türkiye	İstan...	34010	TR7100062626544578366713885	100019	10020
14	4190290...	Emr Eczanesi	Türkiye	İstan...	34010	TR0500062918614577956754l1	100023	10011
15	4818481...	Gül Kozmetik	Türkiye	İzmir	35020	TR40000623282447654457968887	100022	10024
16	4912914...	Gül Kozmetik	Türkiye	İzmir	35020	TR40000623282447654457968887	100013	10031
17	5189518...	Anıl Market	Türkiye	Antalya	07400	TR46000629794764279677339788	100025	10011
18	5195181...	Nur Eczanesi	Türkiye	Mersin	33100	TR2000062387138419414892544	100009	10028

- **After Stored Procedure 7:**


```
121    End
122    exec sp_EmptyCompany 25151512
123    select*from COMPANY
124
```

150 %

Results | Messages

	TaxID	CompanyName	Country	City	PostalCode	IbanNumber	OrderID	ProductID
1	25151512	NULL	Türkiye	Ankara	06020	TR09000625232828787879815993	100001	10014
2	51235151	Emi Eczanesi	Türkiye	İstanbul	34010	TR05000629186145779575411	100002	10012
3	51251515	GAM Market	Türkiye	İstanbul	34400	TR59000627775928147312129	100003	10001
4	51251614	Murat Eczanesi	Türkiye	Ankara	06400	TR11000628718923254787676689	100004	10005
5	51256126	Ahsen Eczanecilik	Türkiye	İstanbul	34010	TR71000626265445783667138 5	100005	10016
6	71261371	Gül Kozmetik	Türkiye	İzmir	35020	TR40000623282447654457968 7	100006	10001