

# Costan Maria-Alexandra

## Group 1032

### -Database Project-



## content

1. Description of the database
2. Conceptual scheme for modeling the chosen theme
3. Building the database - tables, links between tables and integrity restrictions.
4. Examples of data update operations: INSERT, UPDATE, DELETE, MERGE (optional)
5. Examples of queries as varied and relevant as possible for the chosen theme that combine the following elements:
  - >, <, >=, <=, !=, IS NULL, LIKE, IN, BETWEEN;
  - Junctions (inner, outer);
  - Using group functions, GROUP BY, HAVING clauses;
  - Using row-level functions (required: TO\_CHAR, TO\_DATE, EXTRACT, SUBSTR, SYSDATE, DECODE, CASE, NVL);
  - Use of UNION, MINUS, INTERSECT operators;
  - Simple and related sub-requests;
  - CREATE/INSERT/UPDATE/DELETE + SELECT;
  - Building and using other database objects: virtual tables, indexes, synonyms and sequences.
  - Hierarchical requests (CONNECT BY, PRIOR, LEVEL, SYS\_CONNECT\_BY\_PATH)

## 1. Description of the database

The purpose of the created database is the efficient management of a chain of beauty salons and the storage of the necessary data for the smooth running of its activity.

The database contains information about the suppliers, the products used and the orders for them, as well as details about the salons, their employees and the reservations made by the customers.

Thus, the following tables are included in the database component:

**providers:** Provides information about suppliers, such as `supplier_id` (PK) which is a link to the products they distribute to salons, `name`, `contact_name`, `fur_tel_nr`.

**products:** Provides information about the products used by the salon such as the product id (PK), `product_name`, its quantity and price, a link with the Rand Order table, but also a previously mentioned connection with the supplier who distributes these products.

**COMMAND:** Provides information about orders to salon, `order_name`, `order_date`.

The `order_id` (Unique Key) is also found here. It is related to Rand Comanda and Salon.

**employee:** Provides detailed information about employees, primary key is found here `id_engajat`, the link with Salon to identify their workplace as well as the following attributes: `Name_eng`, `position`, `date_of employment`, `salary`.

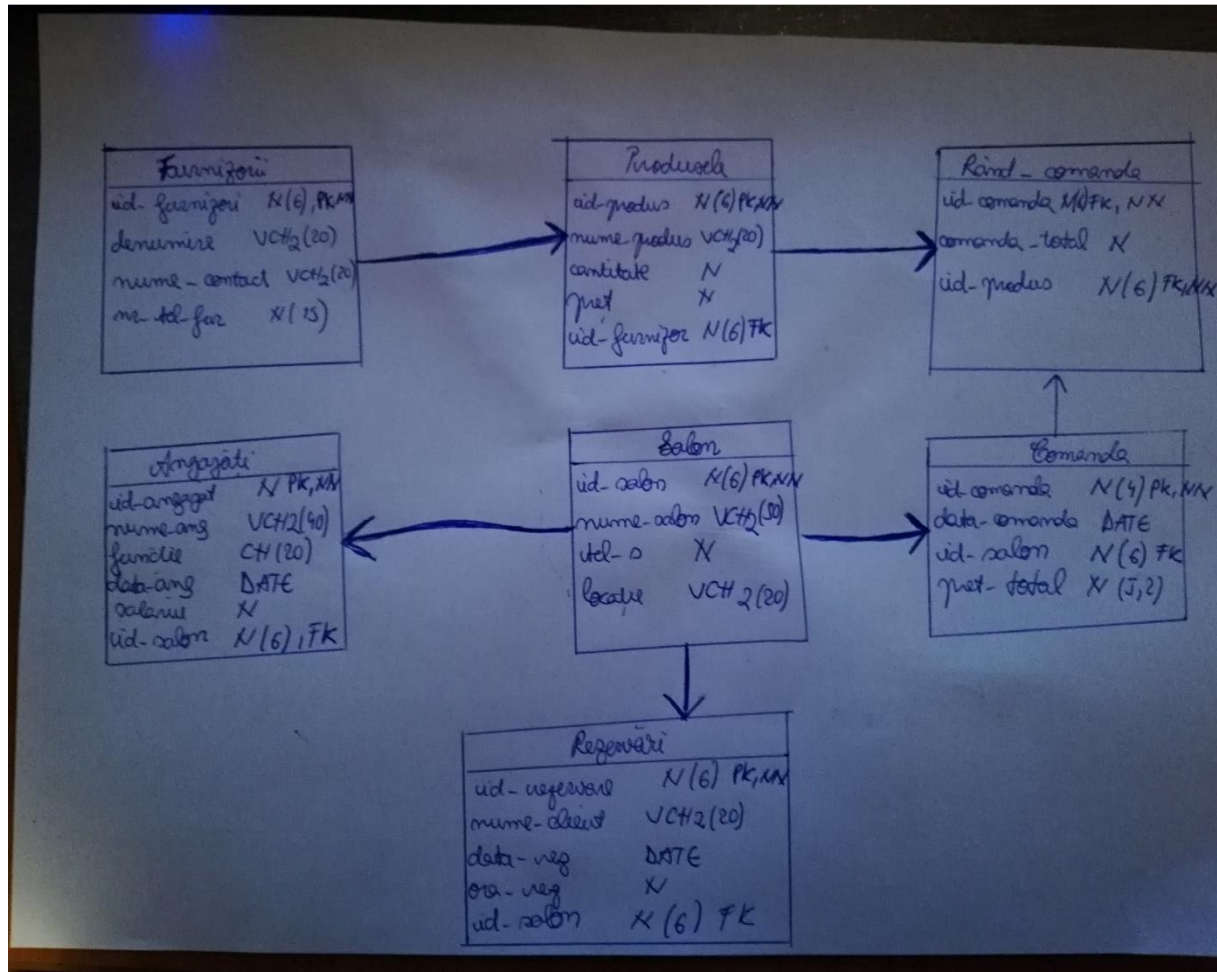
**SALON:** Provides information about the salon where the products are distributed, such as the primary key `id_salon`, the name of the salon, the phone and the location. It is related to Customer Reservations, Employees and Salon Orders.

**RESERVATIONS:** Provides information about the bookings that take place in the salon, namely the name

of the customer making the reservation, date and time of reservation, `reservation_id`. It is related to

Salon table by `id_salon`, to be able to identify the salon at which each reservation is made.

## 2. Database Schema



## 3. Creating tables

- **Table of Suppliers**

CREATE TABLE Suppliers

(id\_supplier number(6) constraint pk\_ Primary Key Suppliers,

name varchar2(20),

contact\_name varchar2(20),  
nr\_tel\_f number(15));

	↕ COLUMN_NAME	↕ DATA_TYPE	↕ NULLABLE	DATA_DEFAULT	↕ COLUMN_ID	↕ COMMENTS
1	ID_FURNIZORI	NUMBER(6,0)	No	(null)	1 (null)	
2	DENUMIRE	VARCHAR2(20 BYTE)	Yes	(null)	2 (null)	
3	NUME_CONTACT	VARCHAR2(20 BYTE)	Yes	(null)	3 (null)	
4	NR_TEL_FUR	NUMBER(15,0)	Yes	(null)	4 (null)	

ALTER tables Suppliers

ADD constraint id\_supplier\_nn

check (id\_suppliers is not null);

	↕ CONSTRAINT_NAME	↕ CONSTRAINT_TYPE	SEARCH_CONDITION
1	ID_FURNIZOR_FURNIZORI_NN	Check	id_furnizor is not null
2	PK_FURNIZORI	Primary_Key	(null)

- **Products table**

Create tables Products

(id\_produse number(6) constraint pk\_Product Primary Key,

product\_name varchar2(20),

quantity number, price number,

id\_provider number(6));

	↕ COLUMN_NAME	↕ DATA_TYPE	↕ NULLABLE	DATA_DEFAULT	↕ COLUMN_ID	↕ COMMENTS
1	ID_PRODUS	NUMBER(6,0)	No	(null)	1 (null)	
2	NUME_PRODUS	VARCHAR2(20 BYTE)	Yes	(null)	2 (null)	
3	CANTITATE	NUMBER	Yes	(null)	3 (null)	
4	PRET	NUMBER	Yes	(null)	4 (null)	
5	ID_FURNIZOR	NUMBER(6,0)	Yes	(null)	5 (null)	

Alter table Products

Add constraint id\_produs\_produs\_nn check (id\_produs is not null);

Alter table Products

Add constraint fk\_id\_supplier Foreign Key (id\_supplier)

References Suppliers (id\_suppliers);

	CONSTRAINT_NAME	CONSTRAINT_TYPE	SEARCH_CONDITION
1	FK_ID_FURNIZOR	Foreign_Key	(null)
2	ID_PRODUS_PRODUS_N	Check	id_produs is not null
3	PK_PRODUSE	Primary_Key	(null)

- **ORDER table**

Create order tables

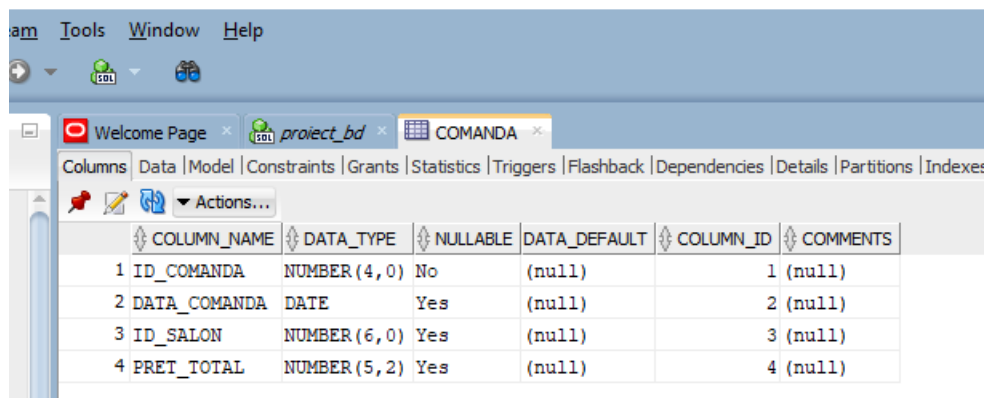
(id\_order number(4) constraint pk\_order PRIMARY KEY,

data\_order data,

id\_salon number (6),

price\_total number(5,2));

COSTANM\_32.COMANDA@proiect\_bd



The screenshot shows the SQL Developer interface with the 'COMANDA' table selected. The table structure is as follows:

	COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1	ID_COMANDA	NUMBER(4,0)	No	(null)	1	(null)
2	DATA_COMANDA	DATE	Yes	(null)	2	(null)
3	ID_SALON	NUMBER(6,0)	Yes	(null)	3	(null)
4	PRET_TOTAL	NUMBER(5,2)	Yes	(null)	4	(null)

Alter table Order

Add constraint id\_order\_nn check (id\_order is not null);

Alter table Order

add constraint fk\_id\_sal Foreign Key (id\_salon)

References Salon(id\_salon);

	CONSTRAINT_NAME	CONSTRAINT_TYPE	SEARCH_CONDITION
1	FK_ID_SAL	Foreign_Key	(null)
2	ID_COMANDA_NN	Check	id_comanda is not null
3	PK_COMANDA	Primary_Key	(null)

- **Table Rand\_order**

Create tables Rand\_Comanda

(order\_id number(6),  
order\_total number,  
id\_product number (6));

	❖ COLUMN_NAME	❖ DATA_TYPE	❖ NULLABLE	DATA_DEFAULT	❖ COLUMN_ID	❖ COMMENTS
1	ID_COMANDA	NUMBER(6,0)	Yes	(null)	1	(null)
2	COMANDA_TOTAL	NUMBER	Yes	(null)	2	(null)
3	ID_PRODUS	NUMBER(6,0)	Yes	(null)	3	(null)

Alter table Rand\_Order  
add constraint id\_produs\_nn check (id\_produs is not null);

Alter table Rand\_Order  
add constraint id\_com\_nn check (id\_comanda is not null);

Alter table Rand\_Order  
Add constraint fk\_product\_id Foreign Key(product\_id)  
References Products (product\_id);

Alter table Rand\_Order  
Add constraint fk\_order\_id Foreign Key(order\_id)  
References Order (id\_order);

	❖ CONSTRAINT_NAME	❖ CONSTRAINT_TYPE	SEARCH_CONDITION
1	FK_ID_COMANDA	Foreign_Key	(null)
2	FK_ID_PRODUS	Foreign_Key	(null)
3	ID_COM_NN	Check	id_comanda is not null
4	ID_PRODUS_NN	Check	id_produs is not null

- **Salon table**

Create tables Salon

(id\_salon number(6) constraint pk\_Salon Primary Key,  
salon\_name varchar(30),  
tel\_s number,  
location varchar2(20));

	❖ COLUMN_NAME	❖ DATA_TYPE	❖ NULLABLE	DATA_DEFAULT	❖ COLUMN_ID	❖ COMMENTS
1	ID_SALON	NUMBER(6,0)	No	(null)	1 (null)	
2	NUME_SALON	VARCHAR2(30 BYTE)	Yes	(null)	2 (null)	
3	TEL_S	NUMBER	Yes	(null)	3 (null)	
4	LOCATIE	VARCHAR2(20 BYTE)	Yes	(null)	4 (null)	

Alter table Salon

Add constraint id\_salon\_nn  
check (id\_salon is not null);

	❖ CONSTRAINT_NAME	❖ CONSTRAINT_TYPE	SEARCH_CONDITION
1	ID_SALON_NN	Check	id_salon is not null
2	PK_SALON	Primary_Key	(null)

- **Employees table**

Create tables Employees

(id\_employee number constraint pk\_Employee Primary Key,

ang\_name varchar(40),

function char(20),

given\_employment\_date,

salary number,

id\_salon number(6));

	❖ COLUMN_NAME	❖ DATA_TYPE	❖ NULLABLE	DATA_DEFAULT	❖ COLUMN_ID	❖ COMMENTS
1	ID_ANGAJAT	NUMBER	No	(null)	1 (null)	
2	NUME_ANG	VARCHAR2(40 BYTE)	Yes	(null)	2 (null)	
3	FUNCTIE	CHAR(20 BYTE)	Yes	(null)	3 (null)	
4	DATA_ANGAJARII	DATE	Yes	(null)	4 (null)	
5	SALARIU	NUMBER	Yes	(null)	5 (null)	
6	ID_SALON	NUMBER(6,0)	Yes	(null)	6 (null)	

Change board Employees

add constraint id\_ang\_n check (id\_employee is not null);

Change table Employees

add constraint fk\_id\_salon Foreign Key (id\_salon)

References Salon (id\_salon);

	❖ CONSTRAINT_NAME	❖ CONSTRAINT_TYPE	SEARCH_CONDITION
1	FK_ID_SALON	Foreign_Key	(null)
2	ID_ANG_N	Check	id_angajat is not null
3	PK_ANGAJATI	Primary_Key	(null)



- **RESERVATIONS table**

Create tables Reservations

(id\_reservare number(6) constraint pk\_reservari primary Key,  
customer\_name varchar2(20),  
date\_rez date, time\_rez number, id\_salon number(6));

	❖ COLUMN_NAME	❖ DATA_TYPE	❖ NULLABLE	DATA_DEFAULT	❖ COLUMN_ID	❖ COMMENTS
1	ID_REZERVARE	NUMBER(6,0)	No	(null)	1	(null)
2	NUME_CLIENT	VARCHAR2(20 BYTE)	Yes	(null)	2	(null)
3	DATA_REZ	DATE	Yes	(null)	3	(null)
4	ORA_REZ	NUMBER	Yes	(null)	4	(null)
5	ID_SALON	NUMBER(6,0)	Yes	(null)	5	(null)

Alter table Reservations

add constraint id\_reservare\_nn check (id\_reservare is not null);

Alter table Reservations

add constraint fk\_reservari Foreign Key (id\_salon)  
References Salon(id\_salon);

	❖ CONSTRAINT_NAME	❖ CONSTRAINT_TYPE	SEARCH_CONDITION
1	FK_REZERVARI	Foreign_Key	(null)
2	ID_REZERVARE_NN	Check	id_rezervare is not null
3	PK_REZERVARI	Primary_Key	(null)

### Alteration of tables

1. Add the table\_nr column to the Salon table with type number, then remove it.

Alter table Salon

add nr\_mese number;

	❖ COLUMN_NAME	❖ DATA_TYPE	❖ NULL...
1	ID_SALON	NUMBER(6,0)	No
2	NUME_SALON	VARCHAR2(20 BYTE)	Yes
3	TEL_S	NUMBER	Yes
4	ID_LOCATIE	NUMBER(6,0)	Yes
5	NR_MESE	NUMBER	Yes

Deleting the table\_nr column:

Alter table Salon

Drop column nr\_mesa;

2. Add the ck\_ora integrity constraint to disallow the ora\_rez field to be less than 200 and greater than 1000 in the Reservations table.

Alter table Reservations

add constraint ck\_ora\_rez check (ora\_rez in (200,1000));

	CONSTRAINT_NAME	CONSTRAINT_TYPE	SEARCH_CONDITION
1	CK_ORA_REZ	Check	ora_rez in (200,1000)
2	FK_REZERVARI	Foreign_Key	(null)
3	ID_REZERVARE_NN	Check	id_rezervare is not null
4	PK_REZERVARI	Primary_Key	(null)

3. Disable the check\_ora\_rez integrity constraint on the Reservations table.

Alter table Reservations

disable constraint ck\_ora\_rez;

CONSTRAINT_NAME	CONSTRAINT_TYPE	SEARCH_CONDITION	R_OWNER	R_TABLE_NAME	R_CONSTRAINT_NAME	DELETE_...	STATUS
1 CK_ORA_REZ	Check	ora_rez in (200,1000)	(null)	(null)	(null)	(null)	DISABLED

4. Change the properties of the salon\_name field in the Salon table so that its length is 50.

Alter table Salon

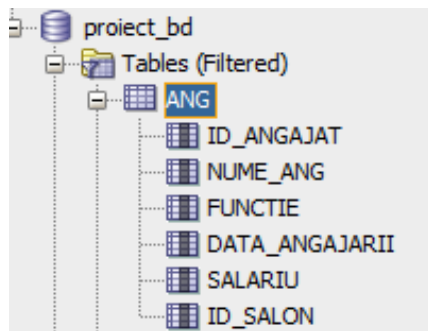
modify salon\_name varchar2(50);

	COLUMN_NAME	DATA_TYPE	NULLABLE
1	ID_SALON	NUMBER (6,0)	No
2	NUME_SALON	VARCHAR2 (50 BYTE)	Yes
3	TEL_S	NUMBER	Yes
4	ID_LOCATIE	NUMBER (6,0)	Yes
5	NR_MESE	NUMBER	Yes

5. Change the name of the Employees table to Eng.

Change board Employees

rename to Ang;



6. Add the nn\_salary integrity constraint that checks that salary is not null in the Ang table.

	CONSTRAINT_NAME	CONSTRAINT_TYPE	SEARCH_CONDITION
1	FK_ID_SALON	Foreign_Key	(null)
2	ID_ANG_N	Check	id_angajat is not null
3	NN_SALARIU	Check	salariu is not null
4	PK_ANGAJATI	Primary_Key	(null)

7. Delete the restriction created at no. 6.

Alter table Ang

drop constraint nn\_salary;

## 4. Updating the data

### • inserting

#### Table of Suppliers

Insert into Suppliers values (1,'Angelic','Alexandra Anghel',0723455676);

Insert into Suppliers values (1,'Angelic','Alexandra Anghel',0723455676);

Insert into Suppliers values (2,'Clean','Popescu Iulian',0724857074);

Insert into Suppliers values (3,'Collistar','Gheorghe Cristina',0744867231);

Insert into Suppliers values (4,'Deborah','Dov Alina',0754167302);

Insert into Suppliers values (5,'Farmec','Eftene Alin',0723485779);

Insert into Suppliers values (6,'Kallos','Tancu Marilena',0721231655);

Insert into Suppliers values (7,'Loreal','Mindrescu Lucian',0732545176);

Insert into Suppliers values (8,'MaxFactor','Toma Miruna',0755485968);

Insert into Suppliers values (9,'Maybelline','Voinea Elena',0766859451);

Insert into Suppliers values (10,'Nivea','Voica Andrei',0725785481);

ID_FURNIZORI	DENUMIRE	NUME_CONTACT	NR_TEL_FUR
1	1 Angelic	Alexandra Anghel	723455676
2	2 Clean	Popescu Iulian	724857074
3	3 Collistar	Gheorghe Cristina	744867231
4	4 Deborah	Dov Alina	754167302
5	5 Farmec	Eftene Alin	723485779
6	6 Kallos	Iancu Marilena	721231655
7	7 Loreal	Mindrescu Lucian	732545176
8	8 MaxFactor	Toma Miruna	755485968
9	9 Maybelline	Voinea Elena	766859451
10	10 Nivea	Voica Andrei	725785481

### Products table

Insert into Products values (101,'Face cream',30,20,10);

Insert into Products values (102,'Foundation',25,80,8);

Insert into Products values (103,'Fard',50,50,2);

Insert into Products values (104,'Dermatograf',50,20,9);

Insert into Products values (105,'Tus',50,30,6);

Insert into Products values (106,'Mascara',40,30,1);

Insert into Products values (107,'Blush',40,40,7);

Insert into Products values (108,'Lipstick',40,40,5);

Insert into Products values (109,'LipStick',40,17,4);

Insert into Products values (110,'Glitter',100,30,3);

ID_PRODUS	NUME_PRODUS	CANTITATE	PRET	ID_FURNIZOR
1	101 Crema de fata	30	20	10
2	102 Fond de ten	25	80	8
3	103 Fard	50	50	2
4	104 Dermatograf	50	20	9
5	105 Tus	50	30	6
6	106 Rimel	40	30	1
7	107 Blush	40	40	7
8	108 Ruj	40	40	5
9	109 LipStick	40	17	4
10	110 Sclipici	100	30	3

### Salon table

Insert into Salon values(201,'Salon1',0786546789,'Craiova');

Insert into Salon values(202,'Salon2',0798765678,'Bucuresti');

Insert into Salon values(203,'Salon3',0755554345,'Bucharest');

Insert into Salon values(204,'Salon4',0723444543,'Timisoara');

Insert into Salon values(205,'Salon5',0745678987,'Bacau');

Insert into Salon values(206,'Salon6',0756789098,'Galati');

Insert into Salon values(207,'Salon7',0788886789,'Slatina');

Insert into Salon values(208,'Salon8',0770876789,'Craiova');  
 Insert into Salon values(209,'Salon9',0754675678,'Constanta');  
 Insert into Salon values(210,'Salon10',0734567876,'TarguJiu');

	ID_SALON	NUME_SALON	TEL_S	LOCATIE
1	201	Salon1	786546789	Craiova
2	202	Salon2	798765678	Bucuresti
3	203	Salon3	75554345	Bucuresti
4	204	Salon4	723444543	Timisoara
5	205	Salon5	745678987	Bacau
6	206	Salon6	756789098	Galati
7	207	Salon7	788886789	Slatina
8	208	Salon8	770876789	Craiova
9	209	Salon9	754675678	Constanta
10	210	Salon10	734567876	TarguJiu

### Order table

Insert into  
 Order(order\_id,order\_date,salon\_id)values(310,to\_date('4.12.2015','DD.MM.YYYY'),201);  
 Insert into  
 Order(order\_id,order\_date,salon\_id)values(311,to\_date('11.11.2015','DD.MM.YYYY'),202);  
 Insert into  
 Order(order\_id,order\_date,salon\_id)values(312,to\_date('13.11.2015','DD.MM.YYYY'),203);  
 Insert into  
 Order(id\_order,date\_order,id\_salon)values(313,to\_date('14.11.2015','DD.MM.YYYY'),204);  
 Insert into  
 Order(id\_order,date\_order,id\_salon)values(314,to\_date('18.11.2015','DD.MM.YYYY'),205);  
 Insert into  
 Order(id\_order,date\_order,id\_salon)values(315,to\_date('20.11.2015','DD.MM.YYYY'),206);  
 Insert into  
 Order(id\_order,date\_order,id\_salon)values(316,to\_date('21.11.2015','DD.MM.YYYY'),207);  
 Insert into  
 Order(id\_order,date\_order,id\_salon)values(317,to\_date('23.11.2015','DD.MM.YYYY'),208);  
 Insert into  
 Order(id\_order,date\_order,id\_salon)values(318,to\_date('24.11.2015','DD.MM.YYYY'),209);  
 Insert into  
 Order(order\_id,order\_date,salon\_id)values(319,to\_date('28.11.2015','DD.MM.YYYY'),210);

	ID_COMANDA	DATA_COMANDA	ID_SALON	PRET_TOTAL
1	310	04-DEC-15	201	(null)
2	311	11-NOV-15	202	(null)
3	312	13-NOV-15	203	(null)
4	313	14-NOV-15	204	(null)
5	314	18-NOV-15	205	(null)
6	315	20-NOV-15	206	(null)
7	316	21-NOV-15	207	(null)
8	317	23-NOV-15	208	(null)
9	318	24-NOV-15	209	(null)
10	319	28-NOV-15	210	(null)

### Rand Table Order

Insert into rand\_command values(101, 430,310);  
 Insert into rand\_order values(102, 200,311);  
 Insert into rand\_command values(103, 120,312);  
 Insert into rand\_order values(104, 100,313);  
 Insert into rand\_command values(105, 540,314);  
 Insert into rand\_command values(106, 250,315);  
 Insert into rand\_command values(107, 250,316);  
 Insert into rand\_order values(108, 300,317);  
 Insert into rand\_command values(109, 134,318);  
 Insert into rand\_command values(110, 90,319);

	ID_COM	COMANDA_TOTAL	ID_PRODUS
1	101	430	310
2	102	200	311
3	103	120	312
4	104	100	313
5	105	540	314
6	106	250	315
7	107	250	316
8	108	300	317
9	109	134	318
10	110	90	319

### Employees table

Insert into Ang values (30,'Costan Maria-Alexandra','Make-up',  
 to\_date('15.11.2015','DD.MM.YYYY'),800 ,201);

Insert into Ang values (31,'Ionescu Madalina','Cosmetician',  
 to\_date('15.11.2015','DD.MM.YYYY'), 900,201);

Insert into Ang values (32,'Aldea Mihai','Make-up',  
to\_date('17.11.2015','DD.MM.YYYY'),800,202);

Insert into Ang values (33,'Paul Marin','Cosmetician',  
to\_date('17.11.2015','DD.MM.YYYY'),900,202);

Insert into Ang values (34,'Radu Mariana','Make-up',  
to\_date('19.11.2015','DD.MM.YYYY'),800,203);

Insert into Ang values (35,'Bona Iulia','Cosmetician',  
to\_date('19.11.2015','DD.MM.YYYY'),900,203);

Insert into Ang values (36,'Marcovschi Sabina','Make-up',  
to\_date('20.11.2015','DD.MM.YYYY'),800,204);

Insert into Ang values (37,'Patrascu Sandra','Cosmetician',  
to\_date('20.11.2015','DD.MM.YYYY'),900,204);

Insert into Ang values (38,'Panciu Andreea','Make-up',  
to\_date('21.11.2015','DD.MM.YYYY'),800,205);

Insert into Ang values (39,'Miron Costina','Cosmetician',  
to\_date('21.11.2015','DD.MM.YYYY'),900,205);

ID_ANGAJAT	NUME_ANG	FUNCTIE	DATA_ANGAJARII	SALARIU	ID_SALON
30	Costan Maria-Alexandra	Make-up	15-11-2015	800	201
31	Ionescu Madalina	Cosmetician	15-11-2015	900	201
32	Aldea Mihai	Make-up	17-11-2015	800	202
33	Paul Marin	Cosmetician	17-11-2015	900	202
34	Radu Mariana	Make-up	19-11-2015	800	203
35	Bona Iulia	Cosmetician	19-11-2015	900	203
36	Marcovschi Sabina	Make-up	20-11-2015	800	204
37	Patrascu Sandra	Cosmetician	20-11-2015	900	204
38	Panciu Andreea	Make-up	21-11-2015	800	205
39	Miron Costina	Cosmetician	21-11-2015	900	205

## Reserves table

Insert into Reservations values (501,'Matei Florina', to\_date  
( '11.01.2015','DD.MM.YYYY'),1500,203);

Insert into Reservations values (502,'Sima Catalina',to\_date  
( '13.01.2015','DD.MM.YYYY'),1700,201);

Insert into Reservations values (503,'David Olivia',to\_date  
( '12.01.2015','DD.MM.YYYY'),1900,204);

Insert into Reservations values (504,'Nemtanu Teodora',to\_date  
( '17.01.2015','DD.MM.YYYY'),1200,206);

Insert into Reservations values (505,'Asavoei Georgiana',to\_date  
( '18.01.2015','DD.MM.YYYY'),1130,204);

Insert into Reservations values (506,'Stratulat Vladut',to\_date('14.01.2015','DD.MM.YYYY'),1530,203);

Insert into Reservations values (507,'Iftime Bianca',to\_date('15.01.2015','DD.MM.YYYY'),1500,205);

Insert into Reservations values (508,'Dumitrescu Malina',to\_date('10.01.2015','DD.MM.YYYY'),1630,204);

Insert into Reservations values (509,'Florea Andreea',to\_date('2.02.2015','DD.MM.YYYY'),1930,201);

Insert into Reservations values (510,'Gavril Elena',to\_date('1.01.2015','DD.MM.YYYY'),1930,204);

ID_REZERVARE	NUME_CLIENT	DATA_REZ	ORA_REZ	ID_SALON
501	Matei Florina	11-01-2015	1500	203
502	Sima Catalina	13-01-2015	1700	201
503	David Olivia	12-01-2015	1900	204
504	Nemtanu Teodora	17-01-2015	1200	206
505	Asavoaiei Georgiana	18-01-2015	1130	204
506	Stratulat Vladut	14-01-2015	1530	203
507	Iftime Bianca	15-01-2015	1500	205
508	Dumitrescu Malina	10-01-2015	1630	204
509	Florea Andreea	02-02-2015	1930	201
510	Gavril Elena	01-01-2015	1930	204

### Updating tables:

1. Insert a new product in the Products table.

Insert into Products values (111,'Primary',15,100,8);

9	109 LipStick	40	17	4
10	110 Sclipici	100	30	3
11	111 Primer	15	100	8

2. In Dobre Elena, change the name of the customer with reservation\_id equal to 503 in the Reservations table.

503	Dobre Elena	12-01-2015	1900	204
504	Nemtanu Teodora	17-01-2015	1200	206
505	Asavoaiei Georgiana	18-01-2015	1130	204

3. Increases the price for products from supplier 3 by 0.2%.



Update Products

Set price = price \* 1.2

where id\_provider=3;

9	109	LipStick	40	17	4
10	110	Scalipici	100	36	3
11	111	Primer	15	100	8

4. Increase by 14% the salaries of Make-up employees in salon number 1 in the Ang table.

Update Ang

set salary = salary \* 1.4

where function = 'Make-up' AND id\_salon=201;

ID_ANGAJAT	NUME_ANG	FUNCTIE	DATA_ANGAJARII	SALARIU	ID_SALON
1	30 Costan Maria-Alexandra	Make-up	15-11-2015	1120	201

5. Change the date of the reservation that has the value "Gavril Elena" in the name field from the Reservations table with the value 14.01.2015.

Update Reservations

set date\_rez= to\_date('14.01.2015', 'DD.MM.YYYY')

where client\_name = 'Gavril Elena';

10	510 Gavril Elena	14-01-2015	1930	204
----	------------------	------------	------	-----

6. Change the function of the employee with id\_employee=34 with the value 'Cosmetician' in the Ang table.

Update Ang

set function = 'Cosmetologist'

where id\_employee =34;

33	Paul Marin	Cosmetician	17-11-2015	900	202
34	Radu Mariana	Cosmetician	19-11-2015	800	203
35	Bona Iulia	Cosmetician	19-11-2015	900	203

7. Delete records that have employee\_id greater than 38 from the Ang table.

Delete from Eng

where id\_employee >38;

	ID_ANGAJAT	NUME_ANG	FUNCTIE	DATA_ANGAJARII	SALARIU	ID_SALON
1	30	Costan Maria-Alexandra	Make-up	15-11-2015	1120	201
2	31	Ionescu Madalina	Cosmetician	15-11-2015	900	201
3	32	Aldea Mihai	Make-up	17-11-2015	800	202
4	33	Paul Marin	Cosmetician	17-11-2015	900	202
5	34	Radu Mariana	Cosmetician	19-11-2015	800	203
6	35	Bona Iulia	Cosmetician	19-11-2015	900	203
7	36	Marcovschi Sabina	Make-up	20-11-2015	800	204
8	37	Patrascu Sandra	Cosmetician	20-11-2015	900	204
9	38	Panciu Andreea	Make-up	21-11-2015	800	205

8. Delete records from the Reservations table that have a time\_rez value greater than 1630.

Delete from Reservations  
where time\_rez >1630;

	ID_REZERVARE	NUME_CLIENT	DATA_REZ	ORA_REZ	ID_SALON
1	501	Matei Florina	11-01-2015	1500	203
2	504	Nemtanu Teodora	17-01-2015	1200	206
3	505	Asavoei Georgiana	18-01-2015	1130	204
4	506	Stratulat Vladut	14-01-2015	1530	203
5	507	Iftime Bianca	15-01-2015	1500	205
6	508	Dumitrescu Malina	10-01-2015	1630	204

9. Delete from the Reservations table the people who have an appointment at Salon 3.

Delete from Reservations  
where id\_salon =203;

	ID_REZERVARE	NUME_CLIENT	DATA_REZ	ORA_REZ	ID_SALON
1	504	Nemtanu Teodora	17-01-2015	1200	206
2	505	Asavoei Georgiana	18-01-2015	1130	204
3	507	Iftime Bianca	15-01-2015	1500	205
4	508	Dumitrescu Malina	10-01-2015	1630	204

10. Delete from the Ang table the people who work at Salonul 4 and who earn more than 800 lei.

Delete from Eng  
where id\_salon =204 and salary>800;

	ID_ANGAJAT	NUME_ANG	FUNCTIE	DATA_ANGAJARII	SALARIU	ID_SALON
1	30	Costan Maria-Alexandra	Make-up	15-11-2015	1120	201
2	31	Ionescu Madalina	Cosmetician	15-11-2015	900	201
3	32	Aldea Mihai	Make-up	17-11-2015	800	202
4	33	Paul Marin	Cosmetician	17-11-2015	900	202
5	34	Radu Mariana	Cosmetician	19-11-2015	800	203
6	35	Bona Iulia	Cosmetician	19-11-2015	900	203
7	36	Marcovschi Sabina	Make-up	20-11-2015	800	204
8	38	Panciu Andreea	Make-up	21-11-2015	800	205

## 5. Examples of queries

1. Show orders for Salon 1.

Select \* from Order  
Where id\_salon=201;

	ID_COMANDA	DATA_COMANDA	ID_SALON	PRET_TOTAL
1	310	04-12-2015	201	(null)

2. Display the name, title, and salary of employees with a salary between 900 and 1200.

Select ang\_name, position, salary  
From Eng  
Where salary between 900 and 1200  
Order by salary ASC;

	NUME_ANG	FUNCTIE	SALARIU
1	Ionescu Madalina	Cosmetician	900
2	Bona Iulia	Cosmetician	900
3	Paul Marin	Cosmetician	900
4	Costan Maria-Alexandra	Make-up	1120

3. Show the salons that have an ID lower than 205.

Select id\_salon, name\_salon, location  
From Salon  
Where id\_salon<205;

	ID_SALON	NUME_SALON	LOCATIE
1	201	Salon1	Craiova
2	202	Salon2	Bucuresti
3	203	Salon3	Bucuresti
4	204	Salon4	Timisoara

4. Display the product name and brand name

Select p.PRODUCT\_NAME, f.BRAND  
From Products p, Suppliers f  
where p.id\_supplier=f.id\_supplier;

	NUME_PRODUS	DENUMIRE
1	Crema de fata	Nivea
2	Fond de ten	MaxFactor
3	Fard	Clean
4	Dermatograf	Maybelline
5	Tus	Kallos
6	Rimel	Angelic
7	Blush	Loreal
8	Ruj	Farmec
9	LipStick	Deborah
10	Scalnic	Colistar

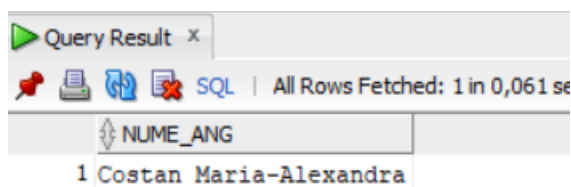
5. Display the customer's name and the name of the salon where they booked.

Select r.CLIENT\_NAME, n.SALON\_NAME  
From Reservations r, Salon n  
where r.id\_salon=n.id\_salon;

	NUME_CLIENT	NUME_SALON
1	Nemtanu Teodora	Salon6
2	Asavoaiei Georgiana	Salon4
3	Iftime Bianca	Salon5
4	Dumitrescu Malina	Salon4

6. Display the names of employees whose name starts with the letter C.

Select ang\_name from Ang  
Where name\_ang like 'C%';



Query Result x

SQL | All Rows Fetched: 1 in 0,061 s

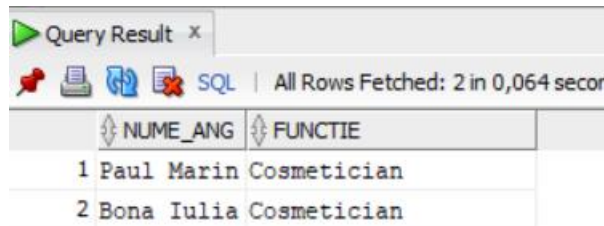
NUME_ANG
1 Costan Maria-Alexandra

7. Display the name and title of the employee whose name is the minimum length.

Select ang\_name, function

From Eng

Where length(ang\_name)=(Select Min(length(ang\_name)) From Ang);



Query Result x

SQL | All Rows Fetched: 2 in 0,064 seconds

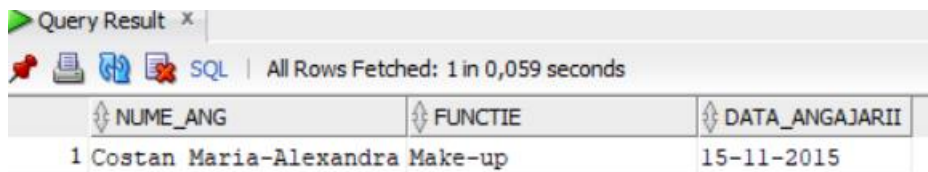
	NUME_ANG	FUNCTIE
1	Paul Marin	Cosmetician
2	Bona Iulia	Cosmetician

8. Show the name, position and year the person with the highest salary was hired.

Select name\_eng, function, date\_of employment

From Eng

Where salary=(Select Max(salary) from Ang);



Query Result x

SQL | All Rows Fetched: 1 in 0,059 seconds

	NUME_ANG	FUNCTIE	DATA_ANGAJARII
1	Costan Maria-Alexandra	Make-up	15-11-2015

9. Display the average salaries from each salon in ascending order.

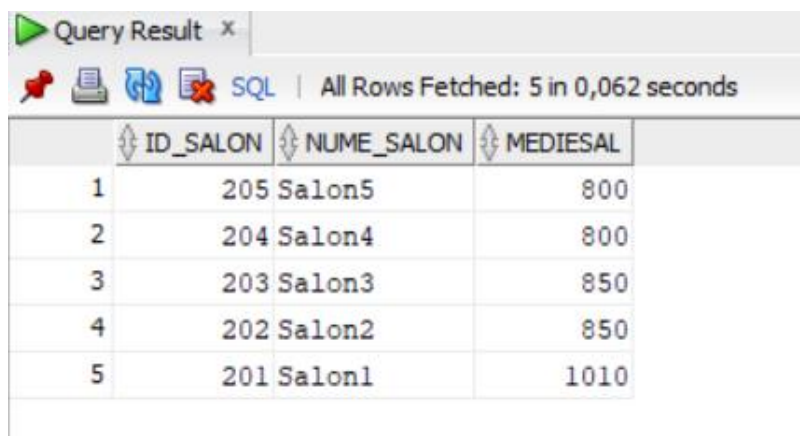
Select n.salon\_id, n.salon\_name, round(avg(a.salary),2) MedieSal

From Salon n, Ang a

Where n.id\_salon=a.id\_salon

group by n.id\_salon, n.name\_salon

order by MedieSal ASC;



Query Result x

SQL | All Rows Fetched: 5 in 0,062 seconds

	ID_SALON	NUME_SALON	MEDIESAL
1	205	Salon5	800
2	204	Salon4	800
3	203	Salon3	850
4	202	Salon2	850
5	201	Salon1	1010

10. Show dates of reservations made between 01.01.2015 and 01.15.2015

Select n.id\_salon, r.client\_name, r.date\_rez

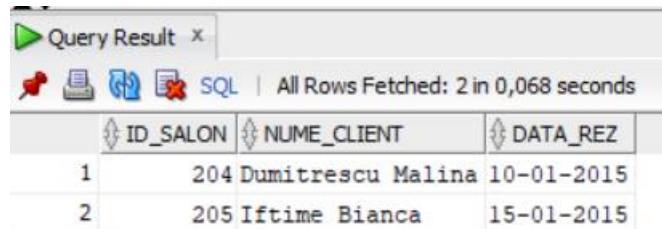
From Salon n, Reservations r

Where n.id\_salon=r.id\_salon

Group by (n.id\_salon, r.client\_name, r.date\_rez)

Having r.data\_rez between to\_date('01.01.2015','DD.MM.YYYY') and  
to\_date('15.01.2015','DD.MM.YYYY')

order by n.id\_salon;



Query Result x

SQL | All Rows Fetched: 2 in 0,068 seconds

	ID_SALON	NUME_CLIENT	DATA_REZ
1	204	Dumitrescu Malina	10-01-2015
2	205	Iftime Bianca	15-01-2015

Change board Ang add id\_manager number;

Update Ang set id\_manager=0 where id\_employee=30;

Update Ang set id\_manager=30 where id\_employee=31;

Update Ang set id\_manager=31 where id\_employee=32;

Update Ang set id\_manager=32 where id\_employee=33;

ID_ANGAJAT	NUME_ANG	FUNCTIE	DATA_ANGAJARII	SALARIU	ID_SALON	ID_MANAGER
1	30 Costan Maria-Alexandra	Make-up	15-11-2015	1120	201	0
2	31 Ionescu Madalina	Cosmetician	15-11-2015	900	201	30
3	32 Aldea Mihai	Make-up	17-11-2015	800	202	31
4	33 Paul Marin	Cosmetician	17-11-2015	900	202	32
5	34 Radu Mariana	Cosmetician	19-11-2015	800	203	(null)
6	35 Bona Iulia	Cosmetician	19-11-2015	900	203	(null)
7	36 Marcovschi Sabina	Make-up	20-11-2015	800	204	(null)
8	38 Panciu Andreea	Make-up	21-11-2015	800	205	(null)

11. Display employees starting with employee id 30.

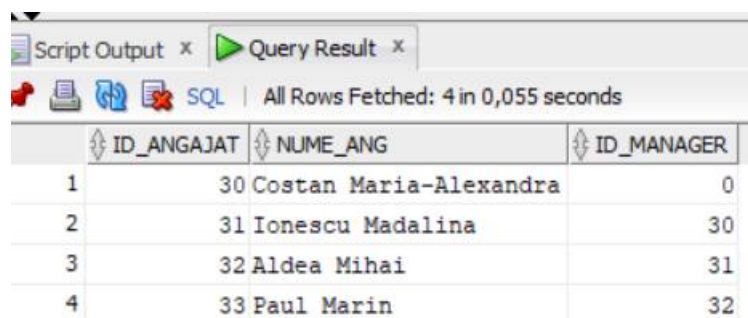
Select employee\_id, ang\_name, manager\_id

From Eng

Connect By Prior id\_employee = id\_manager

Start with id\_employee=30

order by id\_manager ASC;



Script Output x Query Result x


SQL | All Rows Fetched: 4 in 0,055 seconds

	ID_ANGAJAT	NUME_ANG	ID_MANAGER
1	30	Costan Maria-Alexandra	0
2	31	Ionescu Madalina	30
3	32	Aldea Mihai	31
4	33	Paul Marin	32

12. Display all superiors of the employee named Paul Marin.

Select employee\_id, ang\_name, manager\_id  
 From Eng  
 Connect By id\_employee = Prior id\_manager  
 Start with name\_ang = 'Paul Marin';

Script Output x Query Result x

 SQL | All Rows Fetched: 4 in 0,101 seconds

	ID_ANGAJAT	NUME_ANG	ID_MANAGER
1	33	Paul Marin	32
2	32	Aldea Mihai	31
3	31	Ionescu Madalina	30
4	30	Costan Maria-Alexandra	0

13. Increase prices between 10 and 50 by 15 and decrease prices between 60 and 100 by 15.

Select product\_id, product\_name, price,  
 Case when price between 10 and 50 then price + 15  
 when price between 60 and 100 then price - 15  
 end New\_price  
 from Products;

	ID_PR...	NUME_PRODUS	PRET	PRET_NOU
1	101	Crema de fata	20	35
2	102	Fond de ten	80	65
3	103	Fard	50	65
4	104	Dermatograf	20	35
5	105	Tus	30	45
6	106	Rimel	30	45
7	107	Blush	40	55
8	108	Ruj	40	55
9	109	LipStick	17	32
10	110	Sclipici	30	45

14. Awarding a commission based on the job held to employees working at the salon whose id is less than 206.

Select a.eng\_name, a.function, a.salary, Decode (Initcap(a.function), 'Cosmetician', 23, 'Make-up', 11, 5) Commission  
 From Ang a  
 where id\_salon < 206;

Script Output x

Query Result x

SQL
All Rows Fetched: 8 in 0,071 seconds

	NUME_ANG	FUNCTIE	SALARIU	COMISION
1	Costan Maria-Alexandra	Make-up	1120	5
2	Ionescu Madalina	Cosmetician	900	5
3	Aldea Mihai	Make-up	800	5
4	Paul Marin	Cosmetician	900	5
5	Radu Mariana	Cosmetician	800	5
6	Bona Iulia	Cosmetician	900	5
7	Marcovschi Sabina	Make-up	800	5
8	Panciu Andreea	Make-up	800	5


15. Display the newest and oldest employee.

```

Select ang_name, employment_date, Decode(employment_date, (select
max(employment_date) from Ang),'new',(select min(employment_date) from Ang),'old')
Employee_type
From Ang Where date_employees=(select max(date_employees) from Ang) Union Select
name_eng, date_employees,
Decode(date_employees,to_date('04.11.1994','DD.MM.YYYY'),'new', (select
max(date_employees ) from Ang),'old') Type_employee
From Ang Where data_employees= (select min(data_employees) from Ang);

```

Script Output x Query Result x

 | All Rows Fetched: 3 in 0,084 seconds

	NUME_ANG	DATA_ANGAJARII	TIP_ANGAJAT
1	Costan Maria-Alexandra	15-11-2015	(null)
2	Ionescu Madalina	15-11-2015	(null)
3	Panciu Andreea	21-11-2015	nou

16. Display contacts from providers whose phone numbers start with 72 or 73.

```

Select contact_name, name, phone_number
From Suppliers
minus
Select contact_name, name, phone_number
From Suppliers
where substr(nr_tel_fur,1,2)='72' or substr(nr_tel_fur,1,2)='73';

```



Script Output x Query Result x			
SQL   All Rows Fetched: 4 in 0,052 seconds			
	NUME_CONTACT	DENUMIRE	NR_TEL_FUR
1	Dov Alina	Deborah	754167302
2	Gheorghe Cristina	Collistar	744867231
3	Toma Miruna	MaxFactor	755485968
4	Voinea Elena	Maybelline	766859451

17. Increase by 0.5% the price of products whose name starts with "de" and whose price is lower than the average price in the Products table.

Update Products

set price = price \* 1.5

Where price < (Select AVG(Price) from Products)

And lower(product\_name) like 'de%';

4	104	Dermatograf	50	30	9
---	-----	-------------	----	----	---

18. Display the name and salary of the employee who is MAKE-UP and has the highest salary.

Select ang\_name, salary

From Eng

Where salary = (Select Max(salary) from Ang) and Upper (function)='MAKE-UP';

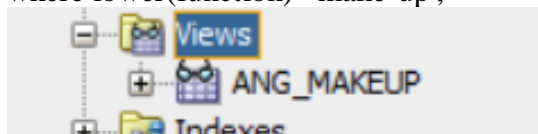
Script Output x Query Result x		
SQL   All Rows Fetched: 1 in 0,078 se		
	NUME_ANG	SALARIU
1	Costan Maria-Alexandra	1120

19. Create the virtual table that holds the data of all employees with the Make-up function.

Create View Ang\_MakeupAs Select \*

From Eng

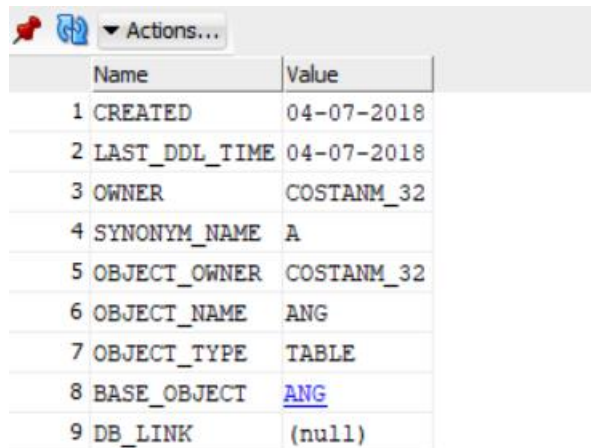
where lower(function)='make-up';



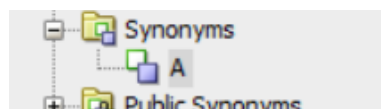
	ID_ANGAJAT	NUME_ANG	FUNCTIE	DATA_ANGAJARII	SALARIU	ID_SALON	ID_MANAGER
1	30	Costan Maria-Alexandra	Make-up	15-11-2015	1120	201	0
2	32	Aldea Mihai	Make-up	17-11-2015	800	202	31
3	36	Marcovschi Sabina	Make-up	20-11-2015	800	204	(null)
4	38	Panciu Andreea	Make-up	21-11-2015	800	205	(null)

20. Create synonyms for Ang table.

Create synonym for Ang;



▼ Actions...	
Name	Value
1 CREATED	04-07-2018
2 LAST_DDL_TIME	04-07-2018
3 OWNER	COSTANM_32
4 SYNONYM_NAME	A
5 OBJECT_OWNER	COSTANM_32
6 OBJECT_NAME	ANG
7 OBJECT_TYPE	TABLE
8 BASE_OBJECT	<a href="#">ANG</a>
9 DB_LINK	(null)



21. Create an index on the name column in the Ang table.

Create employee index  
ON Ang(ang\_name);

	INDEX_OWNER	INDEX_NAME	TABLE_OWNER	TABLE_NAME	COLUMN_NAME	COLUMN_POSITION	DESCEND
1	COSTANM_32	ANGAJATI	COSTANM_32	ANG	NUME_ANG	1	ASC

22. To create a sequence for the uniqueness of the primary key in the Ang table.

Create sequence seq\_idang  
Start with 10 increment by 2  
Maxvalue 1000 nocycle;

Welcome Page

project\_bd

SEQ\_IDANG

ails

Dependencies | SQL

Actions...

	Name	Value
1	CREATED	04-07-2018
2	LAST_DDL_TIME	04-07-2018
3	SEQUENCE_OWNER	COSTANM_32
4	SEQUENCE_NAME	SEQ_IDANG
5	MIN_VALUE	1
6	MAX_VALUE	1000
7	INCREMENT_BY	2
8	CYCLE_FLAG	N
9	ORDER_FLAG	N
10	CACHE_SIZE	20
11	LAST_NUMBER	10

