



ACADEMIA DE STUDII ECONOMICE
FACULTATEA DE CIBERNETICA, STATISTICA SI INFORMATICA ECONOMICA

Proiect baze de date

Gestiunea unui lant de cafenele

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CERINȚE PROIECT:

1. Definirea schemei bazei de date – tabele, restrictii de integritate. Se utilizează comenzile CREATE, ALTER, DROP.
2. Exemple cu operațiile de actualizare a datelor (comenzile DML – INSERT, UPDATE, DELETE, MERGE (optional) pentru înregistrări).
3. Exemple de interogări variate (SELECT):
 - Utilizarea operatorilor de comparație
 - Join-uri
 - Utilizarea funcțiilor de grup și condiții asupra acestora
 - Utilizarea funcțiilor numerice, de tip caracter, pentru data și timp
 - Construirea de expresii cu DECODE și CASE
 - Utilizarea operatorilor UNION, MINUS, INTERSECT
 - Subcereri (cereri imbricate)
4. Gestiunea altor obiecte ale bazei de date: vederi, indici, sinonime, secvențe etc.

1. Obiectivul proiectului

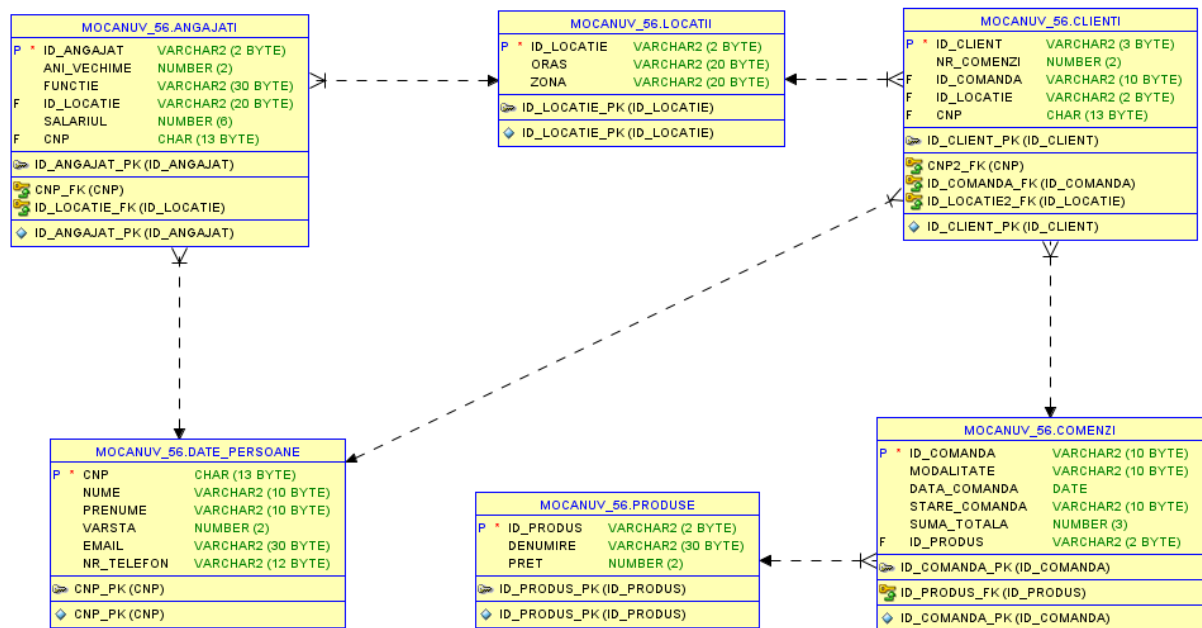
Această bază de date centralizează și supraveghează datele legate de administrarea unui lanț de cafenele. În cadrul acestui proiect se urmărește monitorizarea vânzărilor și a profitului în cadrul francizei. Prin intermediul bazei de date se vor stoca astfel următoarele informații:

- ☼ datele atât personale, cât și de contact ale angajaților și ale clienților;
- ☼ date privind comenzile făcute de client pentru facilitarea livrării acestora;
- ☼ gestionarea produselor expuse și a prețurilor acestora.

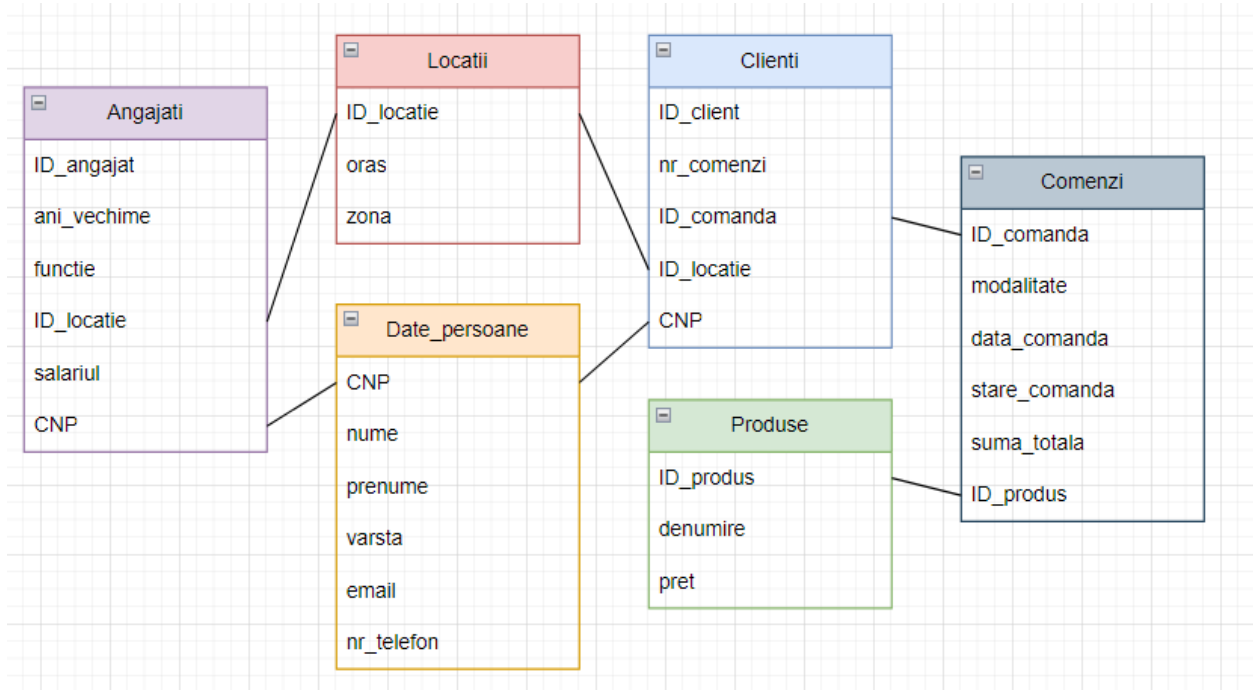
Denumire Tabela	Atribute	Tip Data	Restricții
Angajați	ID_angajat ani_vechime functie ID_locatie salariul CNP	VARCHAR(2) NUMBER(2) VARCHAR(30) VARCHAR(20) NUMBER(6) CHAR (13)	PK FK FK
Locații	ID_locatie oras zona	VARCHAR(2) VARCHAR(20) VARCHAR(20)	PK
Clienți	ID_client nr_comenzi ID_comanda ID_locatie CNP	VARCHAR(3) NUMBER(2) VARCHAR(10) VARCHAR(2) CHAR(13)	PK FK FK FK

Date_persoane	CNP nume prenume varsta email nr_telefon	CHAR(13) VARCHAR(10) VARCHAR(10) NUMBER(2) VARCHAR(30) VARCHAR(12)	PK
Comenzi	ID_comanda modalitate data_comanda stare_comanda suma_totala ID_produc	VARCHAR(10) VARCHAR(15) DATE VARCHAR(10) NUMBER(3) VARCHAR(2)	PK FK
Produse	ID_produc denumire pret	VARCHAR(2) VARCHAR(30) NUMBER(2)	PK

Tipuri de legaturi



2. Schema bazei de date



3. Crearea tabelelor

Tabela Date_persoane

```
CREATE TABLE Date_persoane
```

```
( CNP CHAR(13),
```

```
nume VARCHAR(10),
```

```
prenume VARCHAR(10),
```

```
varsta NUMBER(2),
```

```
email VARCHAR(30),
```

```
nr_telefon VARCHAR(12)
```

```
);
```

```
ALTER TABLE Date_persoane
```

```
ADD CONSTRAINT CNP_PK primary key (CNP);
```

Tabela Locatii

```
CREATE TABLE Locatii  
( ID_locatie VARCHAR(2),  
oras VARCHAR(20),  
zona VARCHAR(20)  
);
```

```
ALTER TABLE Locatii  
ADD CONSTRAINT ID_LOCATIE_PK primary key (ID_locatie);
```

Tabela Produse

```
CREATE TABLE Produse  
( ID_produs VARCHAR(2),  
denumire VARCHAR(30),  
pret NUMBER(2) );
```

```
ALTER TABLE Produse  
ADD CONSTRAINT ID_PRODUS_PK primary key (ID_produs);
```

Tabela angajati

```
CREATE TABLE Angajati  
(ID_angajat VARCHAR(2),  
ani_vechime NUMBER(2),  
functie VARCHAR(30),  
ID_locatie VARCHAR(20),  
CNP CHAR(13) );
```

```
ALTER TABLE Angajati  
ADD CONSTRAINT ID_ANGAJAT_PK primary key (ID_angajat);
```

```
ALTER TABLE Angajati
```

```
ADD CONSTRAINT ID_LOCATIE_FK foreign key (ID_locatie) references Locatii (ID_locatie);
```

```
ALTER TABLE Angajati
```

```
ADD CONSTRAINT CNP_FK foreign key (CNP) references Date_persoane (CNP);
```

Tabela comenzi

```
CREATE TABLE Comenzi
```

```
(ID_comanda VARCHAR(10),
```

```
modalitate VARCHAR(10),
```

```
data_comanda DATE,
```

```
stare_comanda VARCHAR(10),
```

```
suma_totala NUMBER(3),
```

```
ID_produs VARCHAR(2) );
```

```
ALTER TABLE Comenzi
```

```
ADD CONSTRAINT ID_COMANDA_PK primary key (ID_comanda);
```

```
ALTER TABLE Comenzi
```

```
ADD CONSTRAINT ID_PRODUS_FK foreign key (ID_produs) references Produse (ID_produs);
```

Tabela Clienti

```
CREATE TABLE Clienti
```

```
(ID_client VARCHAR(3),
```

```
nr_comenzi NUMBER(2),
```

```
ID_comanda VARCHAR(10),
```

```
ID_locatie VARCHAR(2),
```

```
CNP CHAR(13)
```

```
);
```

ALTER TABLE Clienti

ADD CONSTRAINT ID_CLIENT_PK primary key (ID_client);

ALTER TABLE Clienti

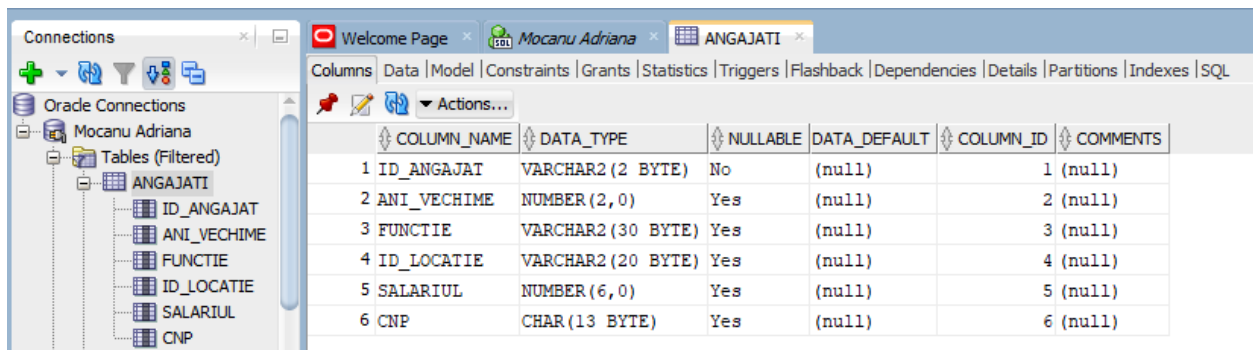
ADD CONSTRAINT ID_COMANDA_FK foreign key (ID_comanda) references Comenzi (ID_comanda);

ALTER TABLE Clienti

ADD CONSTRAINT ID_LOCATIE2_FK foreign key (ID_locatie) references Locatii (ID_locatie);

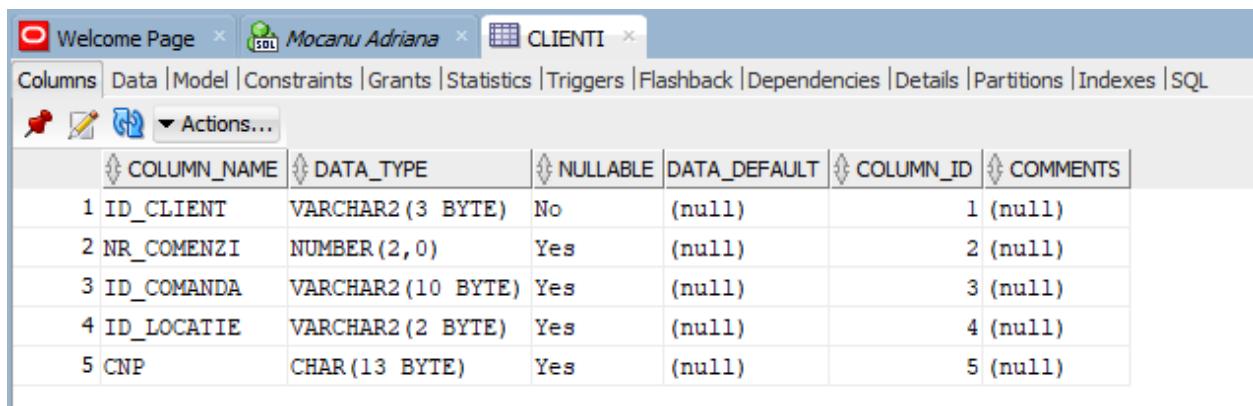
ALTER TABLE Clienti

ADD CONSTRAINT CNP2_FK foreign key (CNP) references Date_persoane (CNP);



The screenshot shows the Oracle SQL Developer interface. On the left, the 'Connections' pane displays 'Mocanu Adriana' with a tree view of tables including 'ANGAJATI'. The main window shows the 'Columns' tab for the 'ANGAJATI' table. The table has 6 columns: ID_ANGAJAT, ANI_VECHIME, FUNCTIE, ID_LOCATIE, SALARIUL, and CNP.

	COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1	ID_ANGAJAT	VARCHAR2(2 BYTE)	No	(null)	1 (null)	
2	ANI_VECHIME	NUMBER(2,0)	Yes	(null)	2 (null)	
3	FUNCTIE	VARCHAR2(30 BYTE)	Yes	(null)	3 (null)	
4	ID_LOCATIE	VARCHAR2(20 BYTE)	Yes	(null)	4 (null)	
5	SALARIUL	NUMBER(6,0)	Yes	(null)	5 (null)	
6	CNP	CHAR(13 BYTE)	Yes	(null)	6 (null)	



The screenshot shows the Oracle SQL Developer interface. On the left, the 'Connections' pane displays 'Mocanu Adriana' with a tree view of tables including 'CLIENTI'. The main window shows the 'Columns' tab for the 'CLIENTI' table. The table has 5 columns: ID_CLIENT, NR_COMENZI, ID_COMANDA, ID_LOCATIE, and CNP.

	COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1	ID_CLIENT	VARCHAR2(3 BYTE)	No	(null)	1 (null)	
2	NR_COMENZI	NUMBER(2,0)	Yes	(null)	2 (null)	
3	ID_COMANDA	VARCHAR2(10 BYTE)	Yes	(null)	3 (null)	
4	ID_LOCATIE	VARCHAR2(2 BYTE)	Yes	(null)	4 (null)	
5	CNP	CHAR(13 BYTE)	Yes	(null)	5 (null)	

Welcome Page × Mocanu Adriana × COMENZI ×						
Columns Data Model Constraints Grants Statistics Triggers Flashback Dependencies Details Partitions Indexes SQL						
Actions...						
	↕ COLUMN_NAME	↕ DATA_TYPE	↕ NULLABLE	DATA_DEFAULT	↕ COLUMN_ID	↕ COMMENTS
1	ID_COMANDA	VARCHAR2(10 BYTE)	No	(null)	1 (null)	
2	MODALITATE	VARCHAR2(10 BYTE)	Yes	(null)	2 (null)	
3	DATA_COMANDA	DATE	Yes	(null)	3 (null)	
4	STARE_COMANDA	VARCHAR2(10 BYTE)	Yes	(null)	4 (null)	
5	SUMA_TOTALA	NUMBER(3,0)	Yes	(null)	5 (null)	
6	ID_PRODUS	VARCHAR2(2 BYTE)	Yes	(null)	6 (null)	

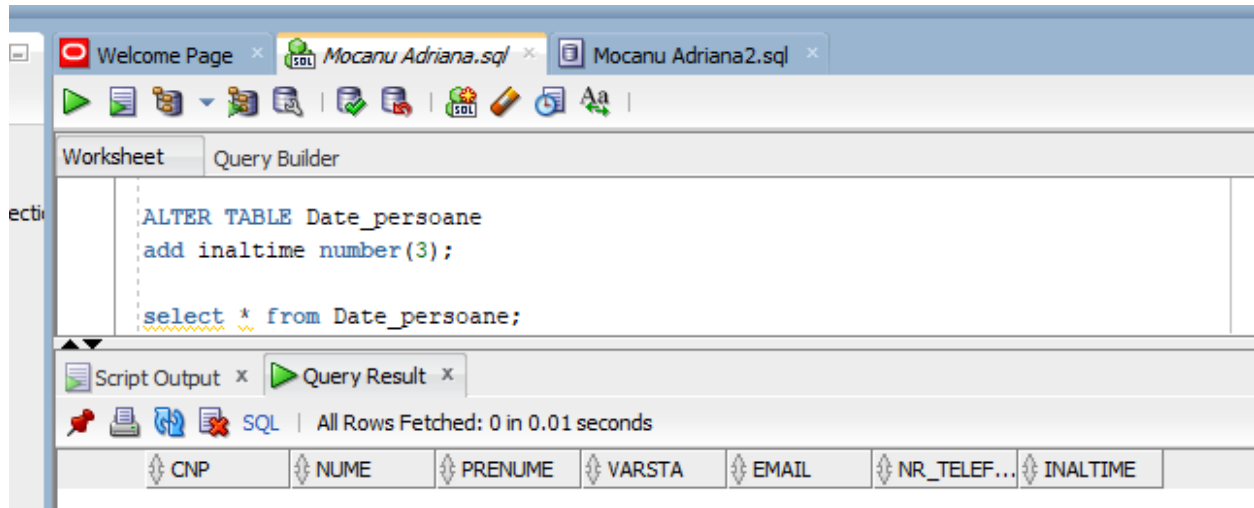
Welcome Page × Mocanu Adriana × DATE_PERSOANE ×						
Columns Data Model Constraints Grants Statistics Triggers Flashback Dependencies Details Partitions Indexes SQL						
Actions...						
	↕ COLUMN_NAME	↕ DATA_TYPE	↕ NULLABLE	DATA_DEFAULT	↕ COLUMN_ID	↕ COMMENTS
1	CNP	CHAR(13 BYTE)	No	(null)	1 (null)	
2	NUME	VARCHAR2(10 BYTE)	Yes	(null)	2 (null)	
3	PRENUME	VARCHAR2(10 BYTE)	Yes	(null)	3 (null)	
4	VARSTA	NUMBER(2,0)	Yes	(null)	4 (null)	
5	EMAIL	VARCHAR2(30 BYTE)	Yes	(null)	5 (null)	
6	NR_TELEFON	VARCHAR2(12 BYTE)	Yes	(null)	6 (null)	

Welcome Page × Mocanu Adriana × LOCATII ×						
Columns Data Model Constraints Grants Statistics Triggers Flashback Dependencies Details Partitions Indexes SQL						
Actions...						
	↕ COLUMN_NAME	↕ DATA_TYPE	↕ NULLABLE	DATA_DEFAULT	↕ COLUMN_ID	↕ COMMENTS
1	ID_LOCATIE	VARCHAR2(2 BYTE)	No	(null)	1 (null)	
2	ORAS	VARCHAR2(20 BYTE)	Yes	(null)	2 (null)	
3	ZONA	VARCHAR2(20 BYTE)	Yes	(null)	3 (null)	

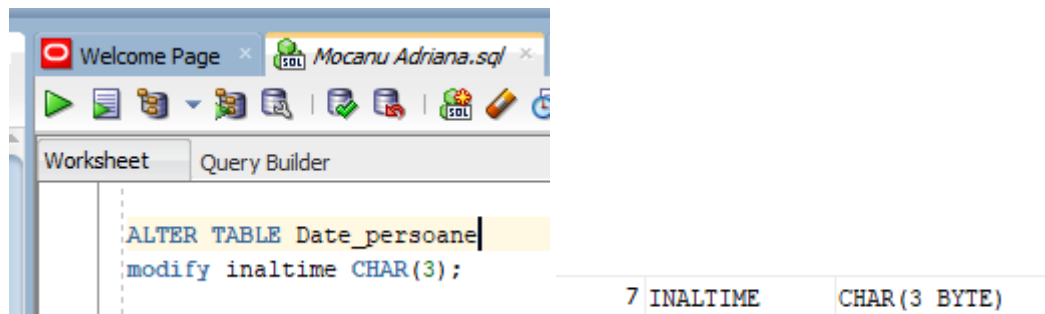
Welcome Page × Mocanu Adriana × PRODUSE ×						
Columns Data Model Constraints Grants Statistics Triggers Flashback Dependencies Details Partitions Indexes SQL						
Actions...						
	↕ COLUMN_NAME	↕ DATA_TYPE	↕ NULLABLE	DATA_DEFAULT	↕ COLUMN_ID	↕ COMMENTS
1	ID_PRODUS	VARCHAR2(2 BYTE)	No	(null)	1 (null)	
2	DENUMIRE	VARCHAR2(30 BYTE)	Yes	(null)	2 (null)	
3	PRET	NUMBER(2,0)	Yes	(null)	3 (null)	

4. Actualizarea structurii tabelelor si modificarea restrictiilor de integritate

✿ Adaugarea unei coloane noi in tabela Date_persoane.



✿ Modificarea tipului de data a coloanei inaltime.



☼ Stergerea coloanei inaltime din tabela Date_persoane.

The screenshot shows the SQL Developer interface with the 'Query Builder' tab active. The SQL editor contains the following commands:

```
ALTER TABLE Date_persoane
drop column inaltime;

select * from Date_persoane;
```

Below the editor, the 'Query Result' tab shows the execution status: 'All Rows Fetched: 0 in 0.009 seconds'. The result grid displays the following columns: CNP, NUME, PRENUME, VARSTA, EMAIL, and NR_TELEF...

☼ Adaugarea unei restrictii in tabela Date_persoane.

The screenshot shows the SQL Developer interface with the 'Query Builder' tab active. The SQL editor contains the following commands:

```
ALTER TABLE Date_persoane
ADD CONSTRAINT check_varsta CHECK (varsta>18 and varsta<65);

select * from user_constraints;
```

Below the editor, the 'Query Result' tab shows the execution status: 'All Rows Fetched: 163 in 12.237 seconds'. The result grid displays the following columns: OWNER, CONSTRAINT_NAME, CONSTRAINT_TYPE, TABLE_NAME, and SEARCH_CONDITION. The first row of data is:

OWNER	CONSTRAINT_NAME	CONSTRAINT_TYPE	TABLE_NAME	SEARCH_CONDITION
157 MOCANUV_56	CHECK_VARSTA	C	DATE_PERSOANE	varsta>18 and

☼ Dezactivarea restrictiei adaugate anterior.

The screenshot shows the SQL Developer interface with the 'Query Builder' tab active. The SQL editor contains the following commands:

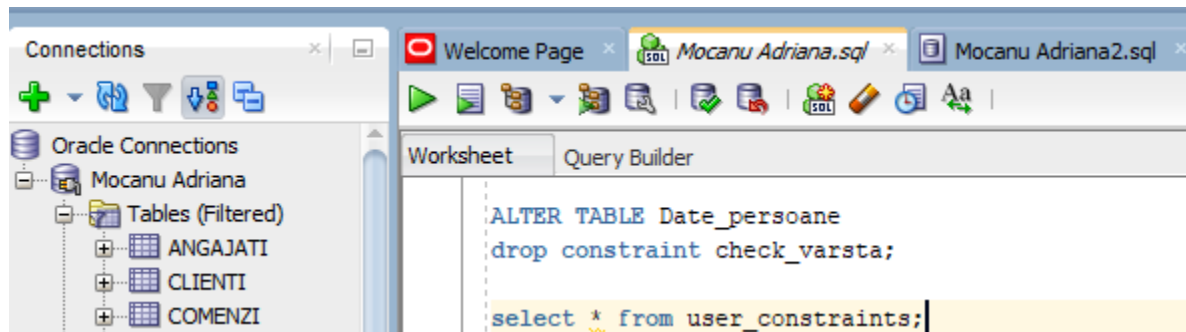
```
ALTER TABLE Date_persoane
disable constraint check_varsta;

select * from user_constraints;
```

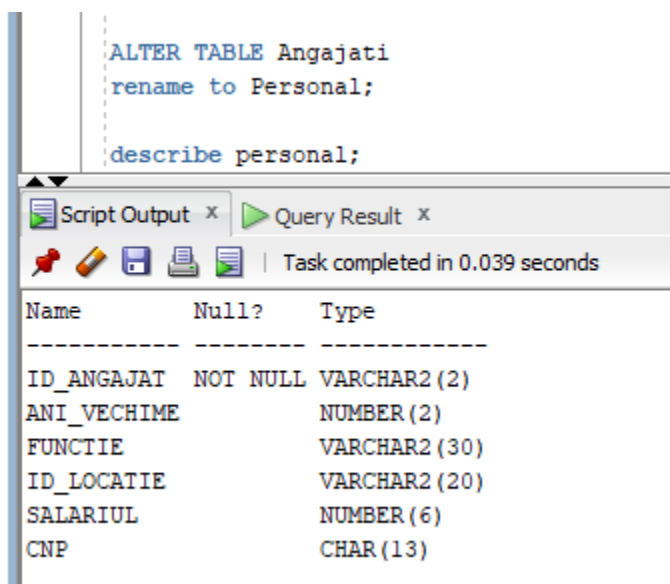
Below the editor, the 'Query Result' tab shows the execution status: 'All Rows Fetched: 163 in 5.548 seconds'. The result grid displays the following columns: OWNER, CONSTRAINT_NAME, CONSTRAINT_TYPE, TABLE_NAME, SEARCH_CONDITION, SEARCH_CONDITION_VC, R_OWNER, R_CONSTRAINT_NAME, DELETE_RULE, and STATUS. The first row of data is:

OWNER	CONSTRAINT_NAME	CONSTRAINT_TYPE	TABLE_NAME	SEARCH_CONDITION	SEARCH_CONDITION_VC	R_OWNER	R_CONSTRAINT_NAME	DELETE_RULE	STATUS
156 MOCANUV_56	CHECK_VARSTA	C	DATE_PERSOANE	varsta>18 and varsta<65	varsta>18 and varsta<65	(null)	(null)	(null)	DISA...

☼ Stergerea restrictiei check_varsta.



✿ Modificarea numelui tabelii Angajati.



5. Adăugarea de înregistrări în fiecare tabelă

✿ Adaugarea inregistrarilor in tabela Date_persoane.

```
INSERT INTO Date_persoane ( CNP, nume, prenume, varsta, email, nr_telefon)
```

```
VALUES ( '5230103407167', 'Popescu', 'Ion', 15, 'pion15@gmail.com', '+40742830285');
```

```
INSERT INTO Date_persoane ( CNP, nume, prenume, varsta, email, nr_telefon)
```

```
VALUES ('6235253404967', 'Lazar', 'Adelina', 21, 'ladelina@gmail.com', '+40748371985');
```

```
INSERT INTO Date_persoane ( CNP, nume, prenume, varsta, email, nr_telefon)
```

VALUES ('6232903474193', 'Anghel', 'Georgiana', 18, 'ageorgiana@gmail.com', '+40738921755');

INSERT INTO Date_persoane (CNP, nume, prenume, varsta, email, nr_telefon)

VALUES ('5239371628367', 'Nicolae', 'Mircea', 15, 'nmircea@gmail.com', '+40782947109');

INSERT INTO Date_persoane (CNP, nume, prenume, varsta, email, nr_telefon)

VALUES ('6468453132613', 'Mares', 'Maria', 20, 'mmaria@gmail.com', '+40727891560');

INSERT INTO Date_persoane (CNP, nume, prenume, varsta, email, nr_telefon)

VALUES ('6237591238456', 'Mocanu', 'Luna', 21, 'luna@gmail.com', '+40757819236');

INSERT INTO Date_persoane (CNP, nume, prenume, varsta, email, nr_telefon)

VALUES ('5234891576236', 'Mocanu', 'Merlin', 22, 'merlin@gmail.com', '+40778451293');

INSERT INTO Date_persoane (CNP, nume, prenume, varsta, email, nr_telefon)

VALUES ('6280305727918', 'Marinescu', 'Ioana', 30, 'mioana@gmail.com', '+40775918236');

INSERT INTO Date_persoane (CNP, nume, prenume, varsta, email, nr_telefon)

VALUES ('5120307918573', 'Tudor', 'Valentin', 35, 'tvalentin@gmail.com', '+40794682719');

INSERT INTO Date_persoane (CNP, nume, prenume, varsta, email, nr_telefon)

VALUES ('5187629438159', 'Tudoroiu', 'Eduard', 22, 'teduard@gmail.com', '+40775186329');

INSERT INTO Date_persoane (CNP, nume, prenume, varsta, email, nr_telefon)

VALUES ('5260345182976', 'Mihai', 'Adrian', 46, 'madrian@gmail.com', '+40722506934');

INSERT INTO Date_persoane (CNP, nume, prenume, varsta, email, nr_telefon)

VALUES ('6280418273619', 'Neamtu', 'Cristina', 25, 'ncristina@gmail.com', '+40717596823');

INSERT INTO Date_persoane (CNP, nume, prenume, varsta, email, nr_telefon)

VALUES ('5482916732840', 'Neacsu', 'Andrei', 18, 'nandrei@gmail.com', '+40772185976');

```
INSERT INTO Date_persoane ( CNP, nume, prenume, varsta, email, nr_telefon)
VALUES ('6182937581916', 'Marin', 'Iustin', 14, 'miustin@gmail.com', '+40729171629');
```

```
INSERT INTO Date_persoane ( CNP, nume, prenume, varsta, email, nr_telefon)
VALUES ('6618297329162', 'Militaru', 'Mihaela', 20, 'mmihaela@gmail.com', '+40759184726');
```

```
INSERT INTO Date_persoane ( CNP, nume, prenume, varsta, email, nr_telefon)
VALUES ('5190602182719', 'Ionescu', 'Pavel', 23, 'ipavel@gmail.com', '+40719482637');
```

```
INSERT INTO Date_persoane ( CNP, nume, prenume, varsta, email, nr_telefon)
VALUES ('6050203182947', 'Enache', 'Radu', 24, 'eradu@gmail.com', '+40746287391');
```

```
INSERT INTO Date_persoane ( CNP, nume, prenume, varsta, email, nr_telefon)
VALUES ('6281937482956', 'Elcu', 'Lorena', 17, 'elorena@gmail.com', '+40782595173');
```

```
INSERT INTO Date_persoane ( CNP, nume, prenume, varsta, email, nr_telefon)
VALUES ('5712973481952', 'Dinca', 'Alin', 40, 'dalin@gmail.com', '+40781296374');
```

```
INSERT INTO Date_persoane ( CNP, nume, prenume, varsta, email, nr_telefon)
VALUES ('6290718396281', 'Moise', 'Alexandra', 34, 'malexandra@gmail.com', '+40792481637');
```

```
INSERT INTO Date_persoane ( CNP, nume, prenume, varsta, email, nr_telefon)
VALUES ('5290506285349', 'Manu', 'Dan', 50, 'mdan@gmail.com', '+40718725063');
```

Oracle SQL Developer : C:\Users\PC\Desktop\Mocanu Adriana2.sql

File Edit View Navigate Run Source Team Tools Window Help

Connections

Oracle Connections

Mocanu Adriana

Tables (Filtered)

- ANGAJATI
 - ID_ANGAJAT
 - ANI_VECHIME
 - FUNCTIE
 - ID_LOCATIE
 - SALARIU
 - CNP
- CLIENTI
 - ID_CLIENT
 - NR_COMENZI
 - ID_COMANDA
 - ID_LOCATIE
 - CNP
- COMENZI
 - ID_COMANDA
 - MODALITATE
 - DATA_COMAND
 - STARE_COMAN
 - SUMA_TOTALA
 - ID_PRODUS

Reports

All Reports

- Analytic View Reports
- Data Dictionary Reports
- Data Modeler Reports
- OLAP Reports
- TimesTen Reports
- User Defined Reports

Worksheet

Query Builder

```

'Alexandra',
34,
'malexandra@gmail.com',
'+40792481637'
);

INSERT INTO Date_persoane (
CNP,
nume,
prenume,
varsta,
email,
nr_telefon
)
VALUES
(
'5290506285349',
'Manu',
'Dan',
50,
'mdan@gmail.com',
'+40718725063'
);

select * from Date_persoane;
  
```

Script Output x Query Result x

SQL | All Rows Fetched: 20 in 0.005 seconds

	CNP	NUME	PRENUME	VARSTA	EMAIL	NR_TELEFON
1	6235253404967	Lazar	Adelina	21	ladelina@gmail.com	+40748371985
2	6232903474193	Anghel	Georgiana	18	ageorgiana@gmail.com	+40738921755
3	5239371628367	Nicolae	Mircea	15	nmircea@gmail.com	+40782947109
4	6468453132613	Mares	Maria	20	mmaria@gmail.com	+40727891560
5	6237591238456	Mocanu	Luna	21	luna@gmail.com	+40757819236
6	5234891576236	Mocanu	Merlin	22	merlin@gmail.com	+40778451293
7	6280305727918	Marinescu	Ioana	30	mioana@gmail.com	+40775918236
8	5120307918573	Tudor	Valentin	35	tvalentin@gmail.com	+40794682719
9	5187629438159	Tudoroiu	Eduard	22	teduard@gmail.com	+40775186329
10	5260345182976	Mihai	Adrian	46	madrian@gmail.com	+40722506934
11	6280418273619	Neamtu	Cristina	25	ncristina@gmail.com	+40717596823
12	5482916732840	Neacsu	Andrei	18	nandrei@gmail.com	+40772185976
13	6182937581916	Marin	Iustin	14	miustin@gmail.com	+40729171629
14	6618297329162	Militaru	Mihaela	20	mmihaela@gmail.com	+40759184726
15	5190602182719	Ionescu	Pavel	23	ipavel@gmail.com	+40719482637
16	6050203182947	Enache	Radu	24	radu@gmail.com	+40746287391

Adaugarea inregistrarilor in tabela Locatii.

INSERT INTO Locatii VALUES ('1','Ploiesti','Centru');

INSERT INTO Locatii VALUES ('2','Ploiesti','Nord');

INSERT INTO Locatii VALUES ('3','Bucuresti','Romana');

INSERT INTO Locatii VALUES ('4','Bucuresti','Universitate');

INSERT INTO Locatii VALUES ('5','Bucuresti','Victoriei');

INSERT INTO Locatii VALUES ('6','Cluj-Napoca','Centru');

INSERT INTO Locatii VALUES ('7','Sibiu','Cisnadiei');

INSERT INTO Locatii VALUES ('8','Brasov','Centru');

INSERT INTO Locatii VALUES ('9','Arad','Centru');

INSERT INTO Locatii VALUES ('10','Iasi','Centru');

The screenshot shows a SQL IDE interface with a script editor and a query result window. The script editor contains a series of INSERT statements for a table named 'Locatii', followed by a SELECT statement to retrieve all data from the table. The query result window displays the output of the SELECT statement, showing 10 rows of data with columns ID_LOCATIE, ORAS, and ZONA.

```
select * from Date_persoane;

INSERT INTO Locatii VALUES ('1','Ploiesti','Centru');
INSERT INTO Locatii VALUES ('2','Ploiesti','Nord');
INSERT INTO Locatii VALUES ('3','Bucuresti','Romana');
INSERT INTO Locatii VALUES ('4','Bucuresti','Universitate');
INSERT INTO Locatii VALUES ('5','Bucuresti','Victoriei');
INSERT INTO Locatii VALUES ('6','Cluj-Napoca','Centru');
INSERT INTO Locatii VALUES ('7','Sibiu','Cisnadiei');
INSERT INTO Locatii VALUES ('8','Brasov','Centru');
INSERT INTO Locatii VALUES ('9','Arad','Centru');
INSERT INTO Locatii VALUES ('10','Iasi','Centru');

select * from locatii;
```

Script Output x Query Result x

SQL | All Rows Fetched: 10 in 0.004 seconds

ID_LOCATIE	ORAS	ZONA
1	1	Ploiesti
2	2	Ploiesti
3	3	Bucuresti
4	4	Bucuresti
5	5	Bucuresti
6	6	Cluj-Napoca
7	7	Sibiu
8	8	Brasov
9	9	Arad
10	10	Iasi

✿ Adaugarea inregistrarilor in tabela Produse.

INSERT INTO Produse VALUES ('1','Iced Caramel Macchiato', 17);

INSERT INTO Produse VALUES ('2','Cappuccino', 13);

INSERT INTO Produse VALUES ('3','Flat White', 10);

INSERT INTO Produse VALUES ('4','Matcha Green Tea Latte', 20);

INSERT INTO Produse VALUES ('5','Ceai de hibiscus', 12);

INSERT INTO Produse VALUES ('6','Gingerbread Latte', 20);

INSERT INTO Produse VALUES ('7','Ciocolata calda', 11);

INSERT INTO Produse VALUES ('8','Croissant cu zmeura', 7);

INSERT INTO Produse VALUES ('9','Chec cu banane', 5);

INSERT INTO Produse VALUES ('10','Clatite americane', 10);

The screenshot shows the SQL Developer interface. On the left, the 'Connections' pane displays a tree view of the database schema, including tables like CNP, CLIENTI, COMENZI, and DATE_PERSOANE. The main window is divided into a 'Worksheet' tab and a 'Query Builder' tab. The 'Worksheet' tab contains the following SQL statements:

```
INSERT INTO Produse VALUES ('1','Iced Caramel Macchiato', 17);  
INSERT INTO Produse VALUES ('2','Cappuccino', 13);  
INSERT INTO Produse VALUES ('3','Flat White', 10);  
INSERT INTO Produse VALUES ('4','Matcha Green Tea Latte', 20);  
INSERT INTO Produse VALUES ('5','Ceai de hibiscus', 12);  
INSERT INTO Produse VALUES ('6','Gingerbread Latte', 20);  
INSERT INTO Produse VALUES ('7','Ciocolata calda', 11);  
INSERT INTO Produse VALUES ('8','Croissant cu zmeura', 7);  
INSERT INTO Produse VALUES ('9','Chec cu banane', 5);  
INSERT INTO Produse VALUES ('10','Clatite americane', 10);  
select * from produse;
```

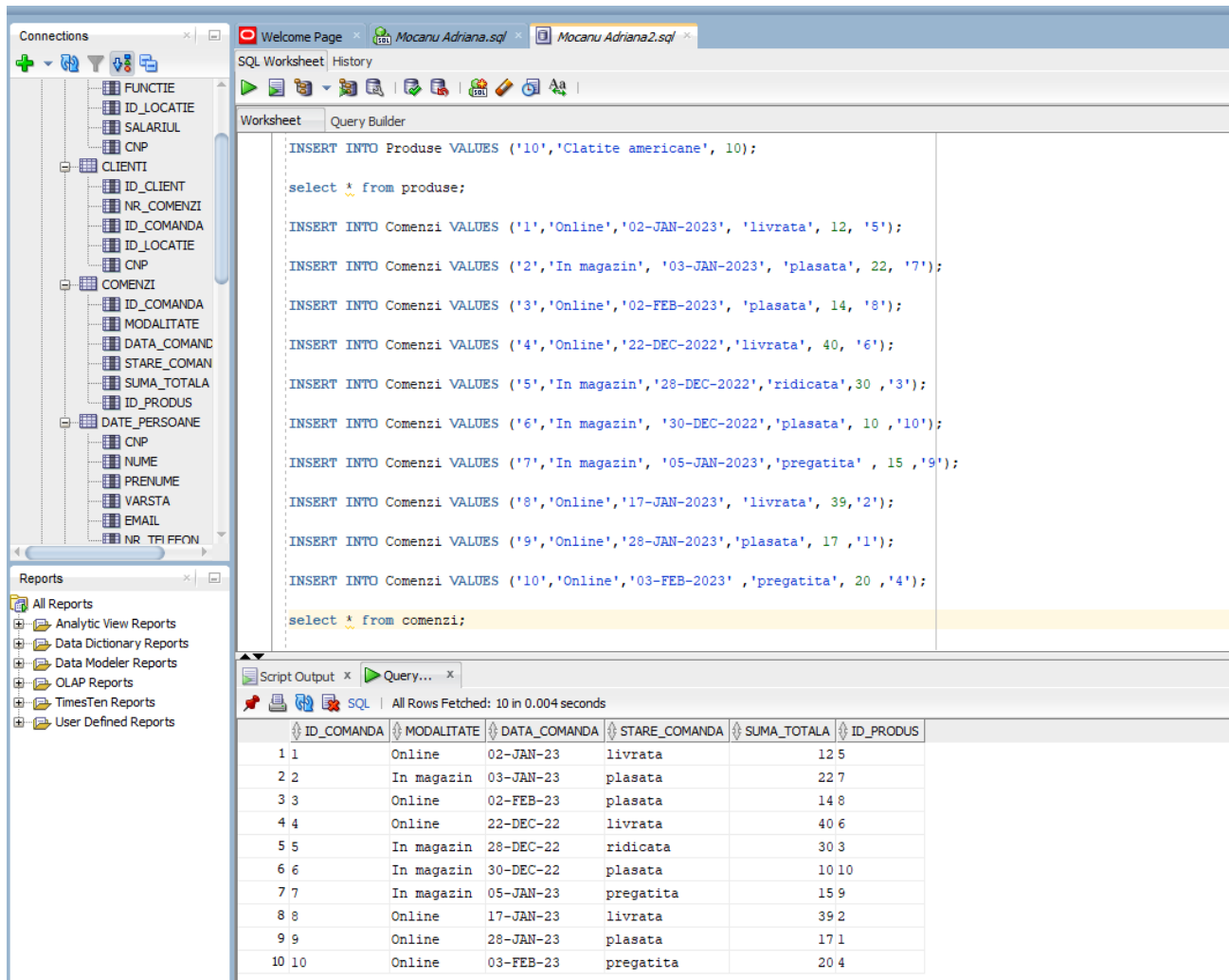
The 'Query Result' pane at the bottom shows the output of the queries, displaying 10 rows of data from the 'Produse' table:

ID_PRODUS	DENUMIRE	PRET
1	Iced Caramel Macchiato	17
2	Cappuccino	13
3	Flat White	10
4	Matcha Green Tea Latte	20
5	Ceai de hibiscus	12
6	Gingerbread Latte	20
7	Ciocolata calda	11
8	Croissant cu zmeura	7
9	Chec cu banane	5
10	Clatite americane	10

Adaugarea inregistrarilor in tabela Comenzi.

```

INSERT INTO Comenzi VALUES ('1','Online','02-JAN-2023', 'livrata', 12, '5');
INSERT INTO Comenzi VALUES ('2','In magazin', '03-JAN-2023', 'plasata', 22, '7');
INSERT INTO Comenzi VALUES ('3','Online','02-FEB-2023', 'plasata', 14, '8');
INSERT INTO Comenzi VALUES ('4','Online','22-DEC-2022','livrata', 40, '6');
INSERT INTO Comenzi VALUES ('5','In magazin','28-DEC-2022','ridicata',30 , '3');
INSERT INTO Comenzi VALUES ('6','In magazin', '30-DEC-2022','plasata', 10 , '10');
INSERT INTO Comenzi VALUES ('7','In magazin', '05-JAN-2023','pregatita' , 15 , '9');
INSERT INTO Comenzi VALUES ('8','Online','17-JAN-2023', 'livrata', 39, '2');
INSERT INTO Comenzi VALUES ('9','Online','28-JAN-2023','plasata', 17 , '1');
INSERT INTO Comenzi VALUES ('10','Online','03-FEB-2023' , 'pregatita', 20 , '4');
    
```



The screenshot shows the SQL Developer interface. On the left is the 'Connections' pane with a tree view of the database schema. The main window is titled 'Mocanu Adriana2.sql' and contains the following SQL code:

```

INSERT INTO Produse VALUES ('10','Clatite americane', 10);

select * from produse;

INSERT INTO Comenzi VALUES ('1','Online','02-JAN-2023', 'livrata', 12, '5');
INSERT INTO Comenzi VALUES ('2','In magazin', '03-JAN-2023', 'plasata', 22, '7');
INSERT INTO Comenzi VALUES ('3','Online','02-FEB-2023', 'plasata', 14, '8');
INSERT INTO Comenzi VALUES ('4','Online','22-DEC-2022','livrata', 40, '6');
INSERT INTO Comenzi VALUES ('5','In magazin','28-DEC-2022','ridicata',30 , '3');
INSERT INTO Comenzi VALUES ('6','In magazin', '30-DEC-2022','plasata', 10 , '10');
INSERT INTO Comenzi VALUES ('7','In magazin', '05-JAN-2023','pregatita' , 15 , '9');
INSERT INTO Comenzi VALUES ('8','Online','17-JAN-2023', 'livrata', 39, '2');
INSERT INTO Comenzi VALUES ('9','Online','28-JAN-2023','plasata', 17 , '1');
INSERT INTO Comenzi VALUES ('10','Online','03-FEB-2023' , 'pregatita', 20 , '4');

select * from comenzi;
    
```

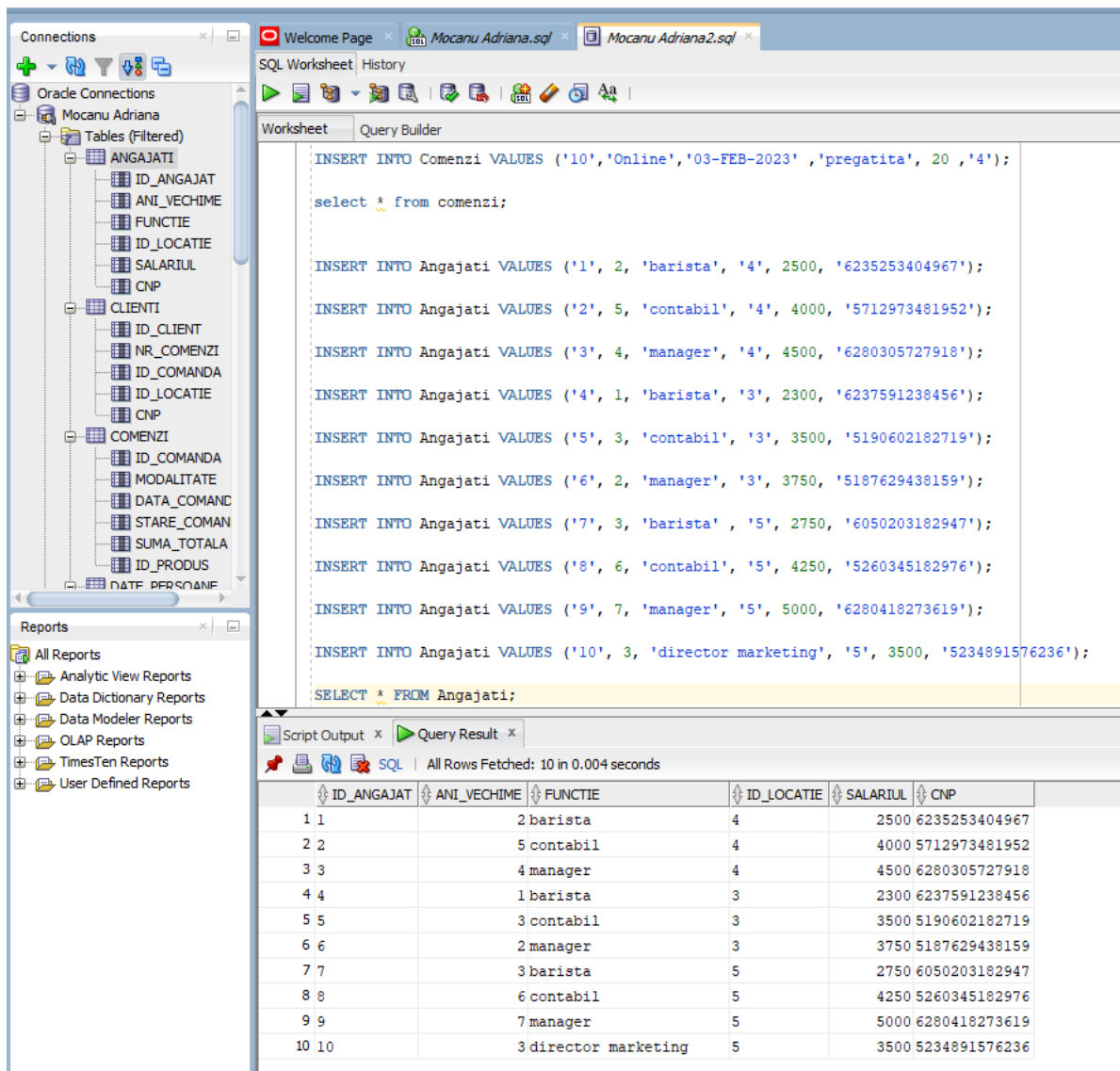
Below the query window, the 'Script Output' pane shows the results of the query. It indicates 'All Rows Fetched: 10 in 0.004 seconds' and displays a table with 10 rows of data:

ID_COMANDA	MODALITATE	DATA_COMANDA	STARE_COMANDA	SUMA_TOTALA	ID_PRODUS
1 1	Online	02-JAN-23	livrata	12 5	
2 2	In magazin	03-JAN-23	plasata	22 7	
3 3	Online	02-FEB-23	plasata	14 8	
4 4	Online	22-DEC-22	livrata	40 6	
5 5	In magazin	28-DEC-22	ridicata	30 3	
6 6	In magazin	30-DEC-22	plasata	10 10	
7 7	In magazin	05-JAN-23	pregatita	15 9	
8 8	Online	17-JAN-23	livrata	39 2	
9 9	Online	28-JAN-23	plasata	17 1	
10 10	Online	03-FEB-23	pregatita	20 4	

Adaugarea inregistrarilor in tabela Angajati

```

INSERT INTO Angajati VALUES ('1', 2, 'barista', '4', 2500, '6235253404967');
INSERT INTO Angajati VALUES ('2', 5, 'contabil', '4', 4000, '5712973481952');
INSERT INTO Angajati VALUES ('3', 4, 'manager', '4', 4500, '6280305727918');
INSERT INTO Angajati VALUES ('4', 1, 'barista', '3', 2300, '6237591238456');
INSERT INTO Angajati VALUES ('5', 3, 'contabil', '3', 3500, '5190602182719');
INSERT INTO Angajati VALUES ('6', 2, 'manager', '3', 3750, '5187629438159');
INSERT INTO Angajati VALUES ('7', 3, 'barista', '5', 2750, '6050203182947');
INSERT INTO Angajati VALUES ('8', 6, 'contabil', '5', 4250, '5260345182976');
INSERT INTO Angajati VALUES ('9', 7, 'manager', '5', 5000, '6280418273619');
INSERT INTO Angajati VALUES ('10', 3, 'director marketing', '5', 3500, '5234891576236');
    
```



The screenshot shows the SQL Developer interface with the following components:

- Connections:** Oracle Connections, Mocanu Adriana.
- Tables (Filtered):** ANGAJATI, CLIENTI, COMENZI.
- SQL Worksheet:** Contains the SQL commands for inserting data into the Angajati table.
- Query Result:** Displays the results of the SQL commands, showing 10 rows of data.

The SQL commands executed are:

```

INSERT INTO Comenzi VALUES ('10', 'Online', '03-FEB-2023', 'pregatita', 20, '4');
select * from comenzi;

INSERT INTO Angajati VALUES ('1', 2, 'barista', '4', 2500, '6235253404967');
INSERT INTO Angajati VALUES ('2', 5, 'contabil', '4', 4000, '5712973481952');
INSERT INTO Angajati VALUES ('3', 4, 'manager', '4', 4500, '6280305727918');
INSERT INTO Angajati VALUES ('4', 1, 'barista', '3', 2300, '6237591238456');
INSERT INTO Angajati VALUES ('5', 3, 'contabil', '3', 3500, '5190602182719');
INSERT INTO Angajati VALUES ('6', 2, 'manager', '3', 3750, '5187629438159');
INSERT INTO Angajati VALUES ('7', 3, 'barista', '5', 2750, '6050203182947');
INSERT INTO Angajati VALUES ('8', 6, 'contabil', '5', 4250, '5260345182976');
INSERT INTO Angajati VALUES ('9', 7, 'manager', '5', 5000, '6280418273619');
INSERT INTO Angajati VALUES ('10', 3, 'director marketing', '5', 3500, '5234891576236');

SELECT * FROM Angajati;
    
```

The Query Result shows the following data:

ID_ANGAJAT	ANI_VECHIME	FUNCTIE	ID_LOCATIE	SALARIUL	CNP
1	2	barista	4	2500	6235253404967
2	5	contabil	4	4000	5712973481952
3	4	manager	4	4500	6280305727918
4	1	barista	3	2300	6237591238456
5	3	contabil	3	3500	5190602182719
6	2	manager	3	3750	5187629438159
7	3	barista	5	2750	6050203182947
8	6	contabil	5	4250	5260345182976
9	7	manager	5	5000	6280418273619
10	3	director marketing	5	3500	5234891576236

🌸 Adaugarea inregistrarilor in tabela Clienti

```
INSERT INTO Clienti VALUES ('1', 1, '4','3', '6232903474193');
INSERT INTO Clienti VALUES ('2',3, '7','3', '5239371628367');
INSERT INTO Clienti VALUES ('3',2, '1','3', '6468453132613');
INSERT INTO Clienti VALUES ('4',1, '6','4', '5120307918573');
INSERT INTO Clienti VALUES ('5',4, '2','4', '5482916732840');
INSERT INTO Clienti VALUES ('6',1, '9','4', '6182937581916');
INSERT INTO Clienti VALUES ('7',2, '3','5', '6618297329162');
INSERT INTO Clienti VALUES ('8',3, '5','5', '6281937482956');
INSERT INTO Clienti VALUES ('9',1, '8','5', '6290718396281');
INSERT INTO Clienti VALUES ('10',1, '10','5', '5290506285349');
```

The screenshot displays the SQL Developer environment. On the left, the 'Connections' pane shows the 'Mocanu Adriana' database connection. The 'Tables (Filtered)' list includes 'ANGAJATI', 'CLIENTI', and 'COMENZI'. The 'CLIENTI' table structure is visible, showing columns: ID_CLIENT, NR_COMENZI, ID_COMANDA, ID_LOCATIE, and CNP. The 'Reports' pane on the bottom left lists various report types. The main 'SQL Worksheet' contains the following SQL code:

```
INSERT INTO Clienti VALUES ('1', 1, '4','3', '6232903474193');
INSERT INTO Clienti VALUES ('2',3, '7','3', '5239371628367');
INSERT INTO Clienti VALUES ('3',2, '1','3', '6468453132613');
INSERT INTO Clienti VALUES ('4',1, '6','4', '5120307918573');
INSERT INTO Clienti VALUES ('5',4, '2','4', '5482916732840');
INSERT INTO Clienti VALUES ('6',1, '9','4', '6182937581916');
INSERT INTO Clienti VALUES ('7',2, '3','5', '6618297329162');
INSERT INTO Clienti VALUES ('8',3, '5','5', '6281937482956');
INSERT INTO Clienti VALUES ('9',1, '8','5', '6290718396281');
INSERT INTO Clienti VALUES ('10',1, '10','5', '5290506285349');

select * from clienti;
```

The 'Query Result' pane at the bottom shows the output of the query, displaying 10 rows of data from the 'CLIENTI' table:

ID_CLIENT	NR_COMENZI	ID_COMANDA	ID_LOCATIE	CNP
1	1	4	3	6232903474193
2	2	3	7	5239371628367
3	3	2	1	6468453132613
4	4	1	6	5120307918573
5	5	4	2	5482916732840
6	6	1	9	6182937581916
7	7	2	3	6618297329162
8	8	3	5	6281937482956
9	9	1	8	6290718396281
10	10	1	10	5290506285349

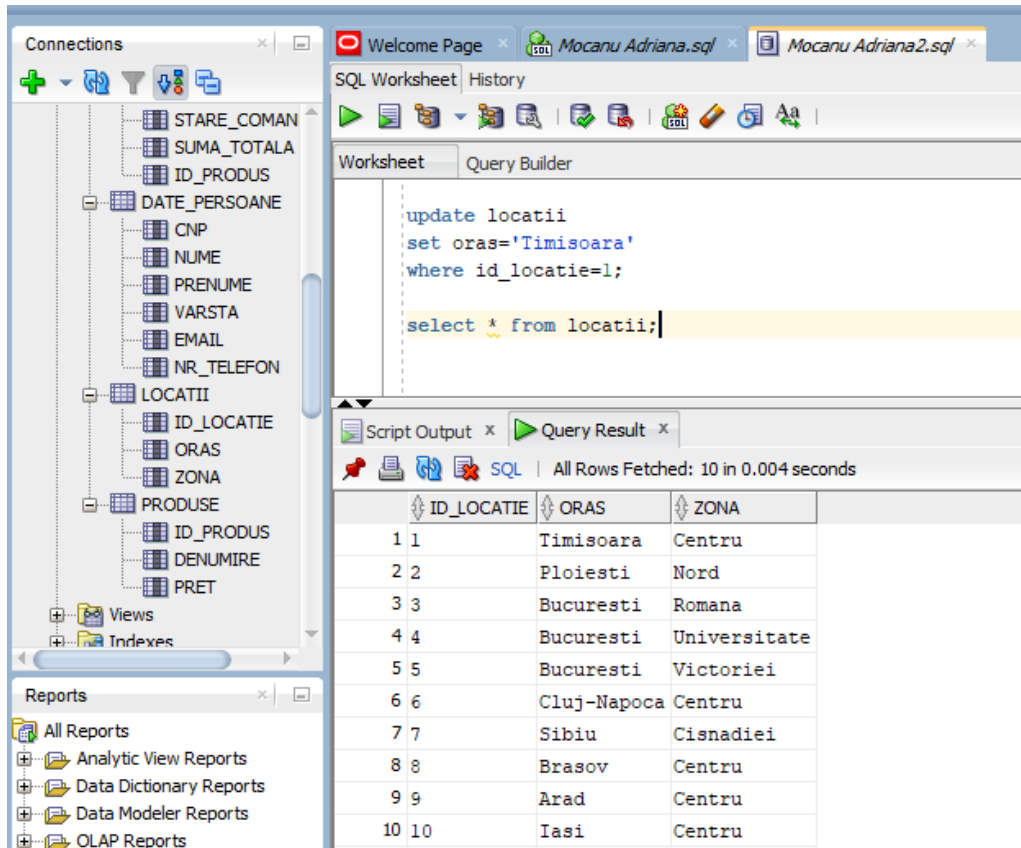
6. Actualizarea inregistrarilor

Actualizarea orasului cu id_locatie=1.

update locatii

set oras='Timisoara'

where id_locatie=1;



The screenshot displays the SQL Developer interface. On the left, the 'Connections' pane shows a tree structure of database objects, including tables like STARE_COMAN, SUMA_TOTALA, ID_PRODUS, DATE_PERSOANE, CNP, NUME, PRENUME, VARSTA, EMAIL, NR_TELEFON, LOCATII, ID_LOCATIE, ORAS, ZONA, PRODUSE, ID_PRODUS, DENUMIRE, and PRET. The 'Reports' pane is also visible. The main window shows a 'SQL Worksheet' with the following SQL code:

```
update locatii
set oras='Timisoara'
where id_locatie=1;

select * from locatii;
```

Below the worksheet, the 'Query Result' pane shows the results of the query. It indicates 'All Rows Fetched: 10 in 0.004 seconds' and displays a table with 10 rows and 3 columns: ID_LOCATIE, ORAS, and ZONA.

ID_LOCATIE	ORAS	ZONA
1	Timisoara	Centru
2	Ploiesti	Nord
3	Bucuresti	Romana
4	Bucuresti	Universitate
5	Bucuresti	Victoriei
6	Cluj-Napoca	Centru
7	Sibiu	Cisnadiei
8	Brasov	Centru
9	Arad	Centru
10	Iasi	Centru

Sa se modifice data comenzii cu suma totala mai mica decat 11.

update comenzi

set data_comanda=TO_DATE('15-JAN-2023','DD-MM-YY')

where suma_totala<11;

The screenshot shows a SQL client interface with the following components:

- Connections:** A tree view on the left showing a database schema with tables like `ID_LOCATIE`, `SALARIUL`, `CNP`, `CLIENTI`, `COMENZI`, `DATE_PERSOANE`, etc.
- SQL Worksheet:** The main area containing a SQL query:


```
update comenzi
set data_comanda=TO_DATE('15-JAN-2023','DD-MM-YY')
where suma_totala<11;

select * from comenzi;
```
- Query Result:** A table showing 10 rows of data fetched in 0.004 seconds. The columns are `ID_COMANDA`, `MODALITATE`, `DATA_COMANDA`, `STARE_COMANDA`, `SUMA_TOTALA`, and `ID_PRODUS`.

ID_COMANDA	MODALITATE	DATA_COMANDA	STARE_COMANDA	SUMA_TOTALA	ID_PRODUS
1	1	02-JAN-23	livrata	12 5	
2	2	03-JAN-23	plasata	22 7	
3	3	02-FEB-23	plasata	14 8	
4	4	22-DEC-22	livrata	40 6	
5	5	28-DEC-22	ridicata	30 3	
6	6	15-JAN-23	plasata	10 10	
7	7	05-JAN-23	pregatita	15 9	
8	8	17-JAN-23	livrata	39 2	
9	9	28-JAN-23	plasata	17 1	
10	10	03-FEB-23	pregatita	20 4	

☁️ Sa se modifice numarul de telefon al persoanei cu CNP-ul 6281937482956.

update date_persoane

set nr_telefon='+40746181917'

where CNP='6281937482956';

The screenshot shows a SQL client interface with the following components:

- Connections:** A tree view on the left showing a database schema with tables like ID_LOCATIE, SALARIUL, CNP, CLIENTI, ID_CLIENT, NR_COMENZI, ID_COMANDA, ID_LOCATIE, CNP, COMENZI, ID_COMANDA, MODALITATE, DATA_COMANDA, STARE_COMANDA, SUMA_TOTALA, ID_PRODUS, DATE_PERSOANE, CNP, NUME, and PRENUME.
- SQL Worksheet:** The main area in the center contains the following SQL query:


```
update date_persoane
set nr_telefon='+40746181917'
where CNP='6281937482956';

select * from date_persoane;
```
- Query Result:** A table on the right showing the results of the query. It has 20 rows and 6 columns: CNP, NUME, PRENUME, VARSTA, EMAIL, and NR_TELEFON. The 17th row is highlighted in blue, showing the record for CNP '6281937482956' with the updated phone number '+40746181917'.

	CNP	NUME	PRENUME	VARSTA	EMAIL	NR_TELEFON
1	6235253404967	Lazar	Adelina	21	ladelina@gmail.com	+40748371985
2	6232903474193	Anghel	Georgiana	18	ageorgiana@gmail.com	+40738921755
3	5239371628367	Nicolae	Mircea	15	nmircea@gmail.com	+40782947109
4	6468453132613	Mares	Maria	20	mmaria@gmail.com	+40727891560
5	6237591238456	Mocanu	Luna	21	luna@gmail.com	+40757819236
6	5234891576236	Mocanu	Merlin	22	merlin@gmail.com	+40778451293
7	6280305727918	Marinescu	Ioana	30	mioana@gmail.com	+40775918236
8	5120307918573	Tudor	Valentin	35	tvalentin@gmail.com	+40794682719
9	5187629438159	Tudoroiu	Eduard	22	teduard@gmail.com	+40775186329
10	5260345182976	Mihai	Adrian	46	madrian@gmail.com	+40722506934
11	6280418273619	Neamtu	Cristina	25	ncristina@gmail.com	+40717596823
12	5482916732840	Neacsu	Andrei	18	nandrei@gmail.com	+40772185976
13	6182937581916	Marin	Iustin	14	miustin@gmail.com	+40729171629
14	6618297329162	Militaru	Mihaela	20	mmihaela@gmail.com	+40759184726
15	5190602182719	Ionescu	Pavel	23	ipavel@gmail.com	+40719482637
16	6050203182947	Enache	Radu	24	eradu@gmail.com	+40746287391
17	6281937482956	Elcu	Lorena	17	elorena@gmail.com	+40746181917
18	5712973481952	Dinca	Alin	40	dalin@gmail.com	+40781296374
19	6290718396281	Moise	Alexandra	34	malexandra@gmail.com	+40792481637
20	5290506285349	Manu	Dan	50	mdan@gmail.com	+40718725063

☁ Sa se modifice modalitatea in 'online' pentru comanda cu id_produs=10.

update comenzi

set modalitate='online'

where id_produs=10;

Connections

- ID_LOCATIE
- SALARIUL
- CNP
- CLIENTI
 - ID_CLIENT
 - NR_COMENZI
 - ID_COMANDA
 - ID_LOCATIE
 - CNP
- COMENZI
 - ID_COMANDA
 - MODALITATE
 - DATA_COMANDA
 - STARE_COMANDA
 - SUMA_TOTALA
 - ID_PRODUS
- DATE_PERSOANE
 - CNP
 - NUME
 - PRENUME

Reports

- All Reports
- Analytic View Reports
- Data Dictionary Reports

SQL Worksheet

```
update comenzi
set modalitate='online'
where id_produs=10;

select * from comenzi;
```

Script Output x Query Result x

All Rows Fetched: 10 in 0.004 seconds

ID_COMANDA	MODALITATE	DATA_COMANDA	STARE_COMANDA	SUMA_TOTALA	ID_PRODUS
1 1	Online	02-JAN-23	livrata	12 5	
2 2	In magazin	03-JAN-23	plasata	22 7	
3 3	Online	02-FEB-23	plasata	14 8	
4 4	Online	22-DEC-22	livrata	40 6	
5 5	In magazin	28-DEC-22	ridicata	30 3	
6 6	online	15-JAN-23	plasata	10 10	
7 7	In magazin	05-JAN-23	pregatita	15 9	
8 8	Online	17-JAN-23	livrata	39 2	
9 9	Online	28-JAN-23	plasata	17 1	
10 10	Online	03-FEB-23	pregatita	20 4	

☁ Sa se actualizeze functia angajatilor cu peste 4 ani de vechime.

update angajati

set functie='manager'

where ani_vechime>4;

Connections

- ANGAJATI
 - ID_ANGAJAT
 - ANI_VECHIME
 - FUNCTIE
 - ID_LOCATIE
 - SALARIUL
 - CNP
- CLIENTI
 - ID_CLIENT
 - NR_COMENZI
 - ID_COMANDA
 - ID_LOCATIE
 - CNP
- COMENZI
 - ID_COMANDA
 - MODALITATE
 - DATA_COMANDA
 - STARE_COMANDA
 - SUMA_TOTALA

Reports

- All Reports
- Analytic View Reports
- Data Dictionary Reports

SQL Worksheet

```
update angajati
set functie='manager'
where ani_vechime>4;

select * from angajati;
```

Script Output x Query Result x

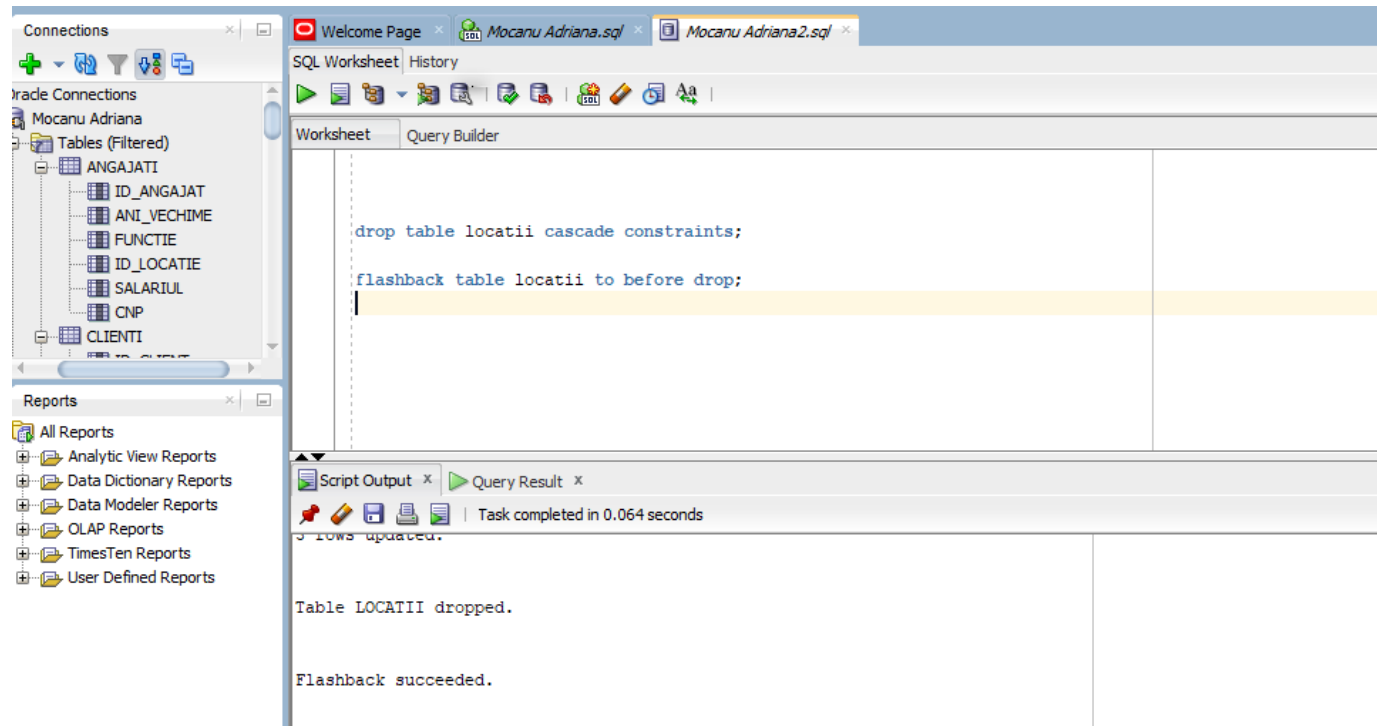
All Rows Fetched: 10 in 0.012 seconds

ID_ANGAJAT	ANI_VECHIME	FUNCTIE	ID_LOCATIE	SALARIUL	CNP
1 1	2	barista	4	2500	6235253404967
2 2	5	manager	4	4000	5712973481952
3 3	4	manager	4	4500	6280305727918
4 4	1	barista	3	2300	6237591238456
5 5	3	contabil	3	3500	5190602182719
6 6	2	manager	3	3750	5187629438159
7 7	3	barista	5	2750	6050203182947
8 8	6	manager	5	4250	5260345182976
9 9	7	manager	5	5000	6280418273619
10 10	3	director marketing	5	3500	5234891576236

7. Stergerea si recuperarea unei tabele

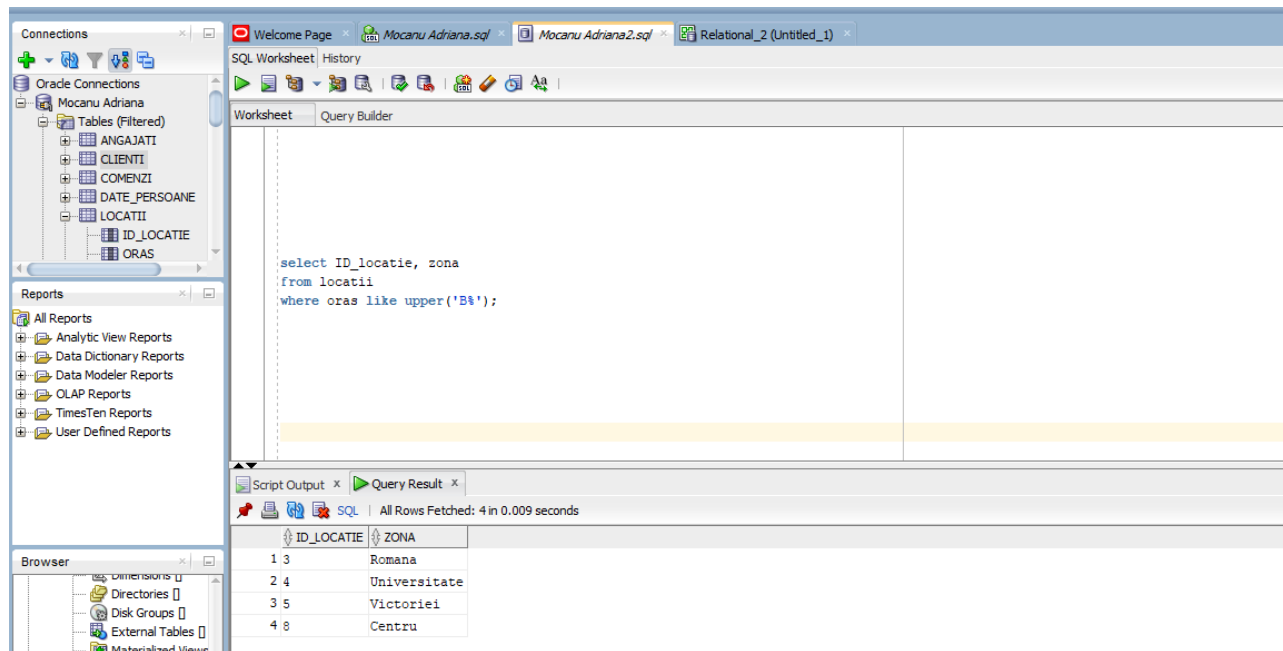
drop table locatii cascade constraints;

flashback table locatii to before drop;



8. Exemple de interogări variate

- 1. Sa se selecteze id-ul si zonele oraselor a căror nume incepe cu litera B (upper functie single-row).
select ID_locatie, zona
from locatii
where oras like upper('B%');



2. Sa se afiseze numele, CNP-ul si email-ul persoanelor al caror prenume incepe cu litera M.

```
select nume, CNP, email
from date_persoane
where prenume like 'M%';
```

The screenshot shows the SQL Developer interface with the following components:

- Connections:** A tree view on the left showing a database connection with tables like ID_PRODUS, DATE_PERSOANE, CNP, NUME, PRENUME, VARSTA, EMAIL, NR_TELEFON, LOCATII, ID_LOCATIE, and ORAS.
- Reports:** A section below Connections listing various report types like Analytic View Reports, Data Dictionary Reports, etc.
- Worksheet:** The main area containing the SQL query:


```
select nume, CNP,email
from date_persoane
where prenume like 'M%';
```
- Query Result:** A table at the bottom showing the results of the query:

	NUME	CNP	EMAIL
1	Nicolae	5239371628367	nmircea@gmail.com
2	Mares	6468453132613	mmaria@gmail.com
3	Mocanu	5234891576236	merlin@gmail.com
4	Militaru	6618297329162	mmihaela@gmail.com

3.Sa se selecteze toate comenzile care au fost plasate pana pe 1 ianuarie 2023.

```
select * from comenzi
where data_comanda < TO_DATE('01.01.2023','DD.MM.YYYY');
```

The screenshot shows the SQL Developer interface with the following components:

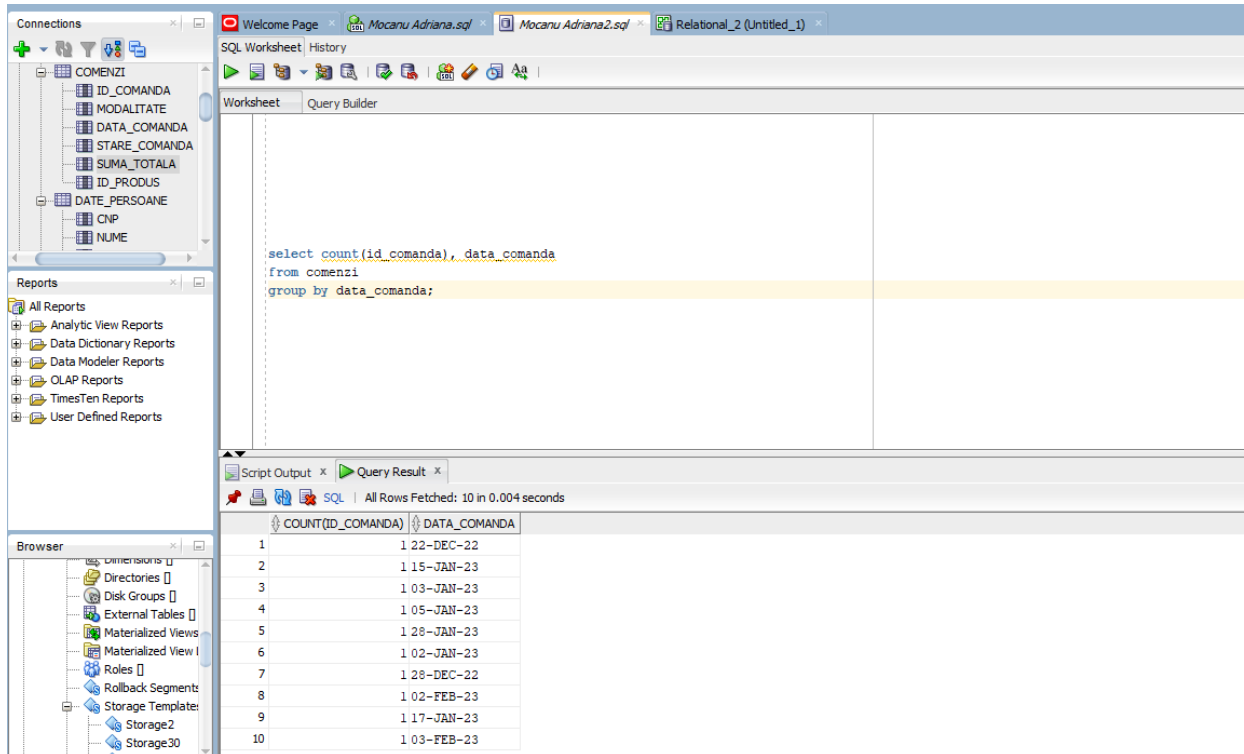
- Connections:** A tree view on the left showing a database connection with tables like COMENZI, ID_COMANDA, MODALITATE, DATA_COMANDA, STARE_COMANDA, SUMA_TOTALA, ID_PRODUS, DATE_PERSOANE, CNP, NUME, and PRFN IMF.
- Reports:** A section below Connections listing various report types like Analytic View Reports, Data Dictionary Reports, etc.
- Worksheet:** The main area containing the SQL query:


```
select * from comenzi
where data_comanda < TO_DATE('01.01.2023','DD.MM.YYYY');
```
- Query Result:** A table at the bottom showing the results of the query:

	ID_COMANDA	MODALITATE	DATA_COMANDA	STARE_COMANDA	SUMA_TOTALA	ID_PRODUS
1	4	Online	22-DEC-22	livrata	40.6	
2	5	In magazin	28-DEC-22	ridicata	30.3	

4. Sa se afiseze datele in care s-au plasat comenzi si numarul acestora pentru fiecare data (functia count).

```
select count(id_comanda), data_comanda
from comenzi
group by data_comanda;
```



The screenshot shows a SQL IDE interface with a query editor and a results pane. The query editor contains the following SQL statement:

```
select count(id_comanda), data_comanda
from comenzi
group by data_comanda;
```

The results pane displays the output of the query, showing 10 rows of data. The columns are labeled COUNT(ID_COMANDA) and DATA_COMANDA.

COUNT(ID_COMANDA)	DATA_COMANDA
1	22-DEC-22
2	15-JAN-23
3	03-JAN-23
4	05-JAN-23
5	28-JAN-23
6	02-JAN-23
7	28-DEC-22
8	02-FEB-23
9	17-JAN-23
10	03-FEB-23

5. Sa se selecteze CNP, nume, prenume, varsta din tabela date_persoane si functie din tabela angajati si sa se realizeze jonctiunea dintre cele doua tabele.

```
select d.CNP, d.nume, d.prenume, d.varsta, a.functie
from date_persoane d, angajati a
where d.CNP=a.CNP;
```

The screenshot shows a SQL database management tool interface. On the left, there is a 'Connections' pane with a tree view of database objects including 'ANGAJATI', 'CLIENTI', 'COMENZI', 'ID_COMANDA', 'MODALITATE', 'DATA_COMANDA', 'STARE_COMANDA', 'SUMA_TOTALA', 'ID_PRODUS', 'DATE_Persoane', and 'CNP'. Below this is a 'Reports' pane with options like 'All Reports', 'Analytic View Reports', 'Data Dictionary Reports', 'Data Modeler Reports', 'OLAP Reports', 'TimesTen Reports', and 'User Defined Reports'. At the bottom left is a 'Browser' pane showing a tree view of system objects like 'Directories', 'Disk Groups', 'External Tables', 'Materialized Views', 'Materialized View I', 'Roles', 'Rollback Segments', 'Storage Template', 'Storage2', 'Storage30', and 'Storage34'.

The main window displays a 'SQL Worksheet' with a query:

```
select d.CNP, d.num, d.prenume, d.varsta, a.functie
from date_persoane d, angajati a
where d.CNP=a.CNP;
```

Below the query, the 'Query Result' pane shows the output of the query, displaying 10 rows of data. The status bar indicates 'All Rows Fetched: 10 in 0.004 seconds'.

	CNP	NUME	PRENUME	VARSTA	FUNCTIE
1	5187629438159	Tudoroiu	Eduard	22	manager
2	5190602182719	Ionescu	Pavel	23	contabil
3	5234891576236	Mocanu	Merlin	22	director marketing
4	5260345182976	Mihai	Adrian	46	contabil
5	5712973481952	Dinca	Alin	40	contabil
6	6050203182947	Enache	Radu	24	barista
7	6235253404967	Lazar	Adelina	21	barista
8	6237591238456	Mocanu	Luna	21	barista
9	6280305727918	Marinescu	Ioana	30	manager
10	6280418273619	Neamtu	Cristina	25	manager

6. Sa se afiseze cu litere mari prenumele persoanelor cu varsta peste 25 de ani din tabela date_persoane.

```
select upper(prenume)
from date_persoane
where varsta>25;
```

The screenshot shows a database management tool interface with several panes:

- Connections:** A tree view on the left showing a database structure with tables like ANGAJATI, CLIENTI, COMENZI, ID_COMANDA, MODALITATE, DATA_COMANDA, STARE_COMANDA, SUMA_TOTALA, ID_PRODUS, DATE_PERSOANE, and PRODUS.
- Reports:** A pane below Connections showing various report types like Analytic View Reports, Data Dictionary Reports, etc.
- Browser:** A pane at the bottom left showing a tree view of database objects like Directories, Disk Groups, External Tables, etc.
- SQL Worksheet:** The main area on the right where a SQL query is entered:


```
select upper(prenume)
from date_persoane
where varsta>25;
```
- Query Result:** A pane at the bottom right showing the results of the query in a table format:

UPPER(PRENUME)
1 IOANA
2 VALENTIN
3 ADRIAN
4 ALIN
5 ALEXANDRA
6 DAN

7. Sa se afiseze denumirea produselor si pretul.

```
select 'Produsul: ' || initcap(denumire) || ' are pretul ' || pret
from produse;
```

The screenshot shows a SQL IDE interface. The left pane displays a database schema with tables like ANGAJATI, CLIENTI, and COMENZI. The top pane shows the SQL Worksheet with a query. The bottom pane shows the Query Result with 10 rows of data.

SQL Worksheet:

```
select 'Produsul: ' || initcap(denumire) || ' are pretul ' || pret
from produse;
```

Query Result:

	PRODUSUL:' INITCAP(DENUMIRE) 'AREPRETUL' PRET
1	Produsul: Iced Caramel Macchiato are pretul 17
2	Produsul: Cappuccino are pretul 13
3	Produsul: Flat White are pretul 10
4	Produsul: Matcha Green Tea Latte are pretul 20
5	Produsul: Ceai De Hibiscus are pretul 12
6	Produsul: Gingerbread Latte are pretul 20
7	Produsul: Ciocolata Calda are pretul 11
8	Produsul: Croissant Cu Zmeura are pretul 7
9	Produsul: Chec Cu Banane are pretul 5
10	Produsul: Clatite Americane are pretul 10

8. Sa se afiseze comenzile plasate intre 5 ianuarie si 5 februarie 2023.

select id_comanda, data_comanda

from comenzi

where data_comanda between TO_DATE('05-JAN-23', 'DD-MON-YY') AND TO_DATE('05-FEB-23', 'DD-MON-YY');

The screenshot shows a database management tool interface. On the left, there is a 'Connections' pane with a tree view of database objects including 'ANGAJATI', 'CLIENTI', 'COMENZI', 'ID_COMANDA', 'MODALITATE', 'DATA_COMANDA', 'STARE_COMANDA', 'SUMA_TOTALA', 'ID_PRODUS', and 'DATE_PERSOANE'. Below this is a 'Reports' pane with options like 'All Reports', 'Analytic View Reports', 'Data Dictionary Reports', 'Data Modeler Reports', 'OLAP Reports', 'TimesTen Reports', and 'User Defined Reports'. At the bottom left is a 'Browser' pane showing a tree view of database objects including 'Dimensions', 'Directories', 'Disk Groups', 'External Tables', 'Materialized Views', 'Materialized View I', and 'Roles'.

The main window displays a SQL query in the 'Query Builder' tab:

```
select id_comanda, data_comanda
from comenzi
where data_comanda between TO_DATE( '05-JAN-23', 'DD-MON-YY') AND TO_DATE( '05-FEB-23', 'DD-MON-YY');
```

Below the query, the 'Query Result' tab shows the results of the query. The results are displayed in a table with two columns: 'ID_COMANDA' and 'DATA_COMANDA'. The table contains 6 rows of data:

ID_COMANDA	DATA_COMANDA
1 3	02-FEB-23
2 6	15-JAN-23
3 7	05-JAN-23
4 8	17-JAN-23
5 9	28-JAN-23
6 10	03-FEB-23

9. Sa se afiseze prenumele, numarul de telefon, si email-ul pentru fiecare client.

```
select prenume, nr_telefon, email
from date_persoane d, clienti c
where d.CNP=c.CNP;
```

The screenshot shows a SQL IDE interface with the following components:

- Connections:** A tree view on the left showing a database connection with tables like STARE_COMANDA, SUMA_TOTALA, ID_PRODUS, DATE_PERSOANE, CNP, NUME, PRENUME, VARSTA, EMAIL, NR_TELEFON, and LOCATI.
- Reports:** A section below Connections listing various report types like Analytic View Reports, Data Dictionary Reports, etc.
- Browser:** A section at the bottom left showing a tree view of database objects like Dimensions, Directories, Disk Groups, etc.
- SQL Worksheet:** The main area for writing SQL queries. The current query is:


```
select prenume, nr_telefon, email
from date_persoane d, clienti c
where d.CNP=c.CNP;
```
- Query Result:** A table at the bottom right displaying the results of the query. It has 10 rows and 3 columns: PRENUME, NR_TELEFON, and EMAIL.

	PRENUME	NR_TELEFON	EMAIL
1	Valentin	+40794682719	tvalentin@gmail.com
2	Mircea	+40782947109	nmircea@gmail.com
3	Dan	+40718725063	mdan@gmail.com
4	Andrei	+40772185976	nandrei@gmail.com
5	Iustin	+40729171629	miustin@gmail.com
6	Georgiana	+40738921755	ageorgiana@gmail.com
7	Lorena	+40746181917	elorena@gmail.com
8	Alexandra	+40792481637	malexandra@gmail.com
9	Maria	+40727891560	mmaria@gmail.com
10	Mihaela	+40759184726	mmihaela@gmail.com

10. Sa se afiseze toate persoanele cu aceeasi varsta.

```
select count(prenume), varsta
from date_persoane
group by varsta;
```


The screenshot shows a SQL IDE interface with the following components:

- Connections:** A tree view on the left showing a database connection with tables like STARE_COMANDA, SUMA_TOTALA, ID_PRODUS, DATE_Persoane, CNP, NUME, PRENUME, VARSTA, EMAIL, NR_TELEFON, LOCATII, ID_LOCATIE, ORAS, and ZONA.
- Reports:** A section below Connections showing various report types like All Reports, Analytic View Reports, Data Dictionary Reports, etc.
- Browser:** A section at the bottom left showing a file system view with folders like Directories, Disk Groups, External Tables, etc.
- SQL Worksheet:** The main area on the right where a query is entered:


```
select count(prenume), varsta
from date_persoane
group by varsta;
```
- Query Result:** A table below the worksheet showing the results of the query. It has two columns: COUNT(PRENUME) and VARSTA. The results are as follows:

COUNT(PRENUME)	VARSTA
1	22
2	30
3	25
4	34
5	21
6	20
7	14
8	46
9	24
10	35
11	23
12	17
13	40
14	50
15	18
16	15

11. Sa se afiseze numele si prenumele angajatilor al caror numar de telefon are primele 4 cifre comune (+4077).

select nume, prenume

from date_persoane d, angajati a

where d.CNP=a.CNP

and nr_telefon like '+4077%'

The screenshot shows the SQL Developer interface. On the left, the 'Connections' pane displays a tree structure of database objects, including 'STARE_COMANDA', 'SUMA_TOTALA', 'ID_PRODUS', 'DATE_Persoane', 'CNP', 'NUME', 'PRENUME', 'VARSTA', 'EMAIL', 'NR_TELEFON', 'LOCATII', 'ID_LOCATIE', and 'ORAS'. Below this is the 'Reports' pane with various report types. The main window is titled 'Mocanu Adriana.sql' and contains the following SQL query:

```
select nume, prenume
from date_persoane d, angajati a
where d.CNP=a.CNP
and nr_telefon like '+4077%'
```

The 'Query Result' pane at the bottom shows the results of the query, which are 3 rows of data:

	NUME	PRENUME
1	Tudoroiu	Eduard
2	Mocanu	Merlin
3	Marinescu	Ioana

12. Sa se afiseze toate coloanele din tabela produse unde id.produș este un numar par.
- ```
select * from produse
where id_produș in(2,4,6,8);
```

The screenshot shows the SQL Developer interface. On the left, the 'Connections' pane displays a tree structure of database objects, including 'STARE\_COMANDA', 'SUMA\_TOTALA', 'ID\_PRODUS', 'DATE\_Persoane', 'CNP', 'NUME', 'PRENUME', 'VARSTA', 'EMAIL', 'NR\_TELEFON', 'LOCATII', 'ID\_LOCATIE', and 'ORAS'. Below this is the 'Reports' pane with various report types. The main window is titled 'Mocanu Adriana2.sql' and contains the following SQL query:

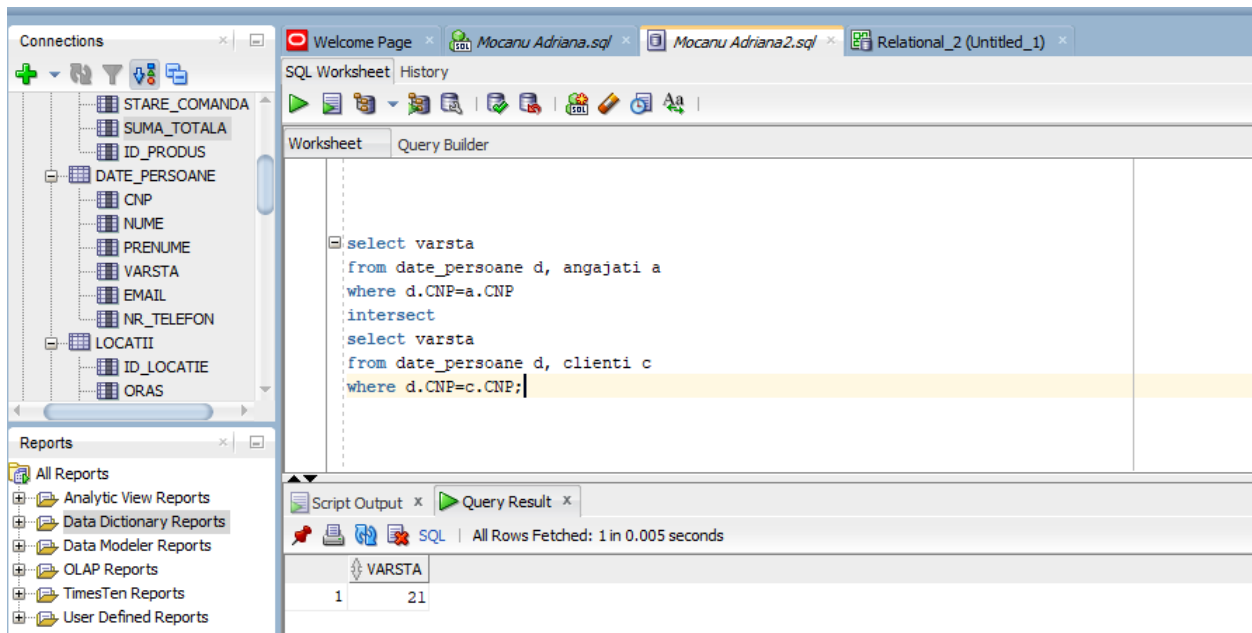
```
select * from produse
where id_produș in(2,4,6,8);
```

The 'Query Result' pane at the bottom shows the results of the query, which are 4 rows of data:

|   | ID_PRODUS | DENUMIRE               | PRET |
|---|-----------|------------------------|------|
| 1 | 2         | Cappuccino             | 13   |
| 2 | 4         | Matcha Green Tea Latte | 20   |
| 3 | 6         | Gingerbread Latte      | 20   |
| 4 | 8         | Croissant cu zmeura    | 7    |

13. Sa se afiseze varsta pe care o au in comun clientii si angajatii cafenelei.

```
select varsta
from date_persoane d, angajati a
where d.CNP=a.CNP
intersect
select varsta
from date_persoane d, clienti c
where d.CNP=c.CNP;
```



14. Sa se afiseze denumirea produselor din comenzile cu id numar impar.

```
select denumire
from produse p, comenzi c
where p.id_produs=c.id_produs
and id_comanda in (1,3,5,7,9);
```

The screenshot shows the Oracle SQL Developer interface. On the left, the 'Connections' pane is open, showing the 'Mocanu Adriana' connection. The 'Tables (Filtered)' list includes 'ID\_COMANDA', 'MODALITATE', 'DATA\_COMANDA', 'STARE\_COMANDA', 'SUMA\_TOTALA', 'ID\_PRODUS', and 'DATE\_PERSOANE'. The 'Reports' pane shows various report types. The main window displays a SQL query in the 'Worksheet' tab:

```
select denumire
from produse p, comenzi c
where p.id_produs=c.id_produs
and id_comanda in (1,3,5,7,9);
```

The 'Query Result' tab shows the results of the query:

| DENUMIRE                 |
|--------------------------|
| 1 Iced Caramel Macchiato |
| 2 Flat White             |
| 3 Ceai de hibiscus       |
| 4 Croissant cu zmeura    |
| 5 Chec cu banane         |

15. Sa se afiseze starea comenzilor si denumirile produselor din fiecare comanda.

```
select stare_comanda, denumire
from comenzi c, produse p
where c.id_produs=p.id_produs;
```

The screenshot shows the Oracle SQL Developer interface. On the left, the 'Connections' pane is open, showing the 'Mocanu Adriana' connection. The 'Tables (Filtered)' list includes 'ID\_COMANDA', 'MODALITATE', 'DATA\_COMANDA', 'STARE\_COMANDA', 'SUMA\_TOTALA', 'ID\_PRODUS', and 'DATE\_PERSOANE'. The 'Reports' pane shows various report types. The main window displays a SQL query in the 'Worksheet' tab:

```
select stare_comanda, denumire
from comenzi c, produse p
where c.id_produs=p.id_produs;
```

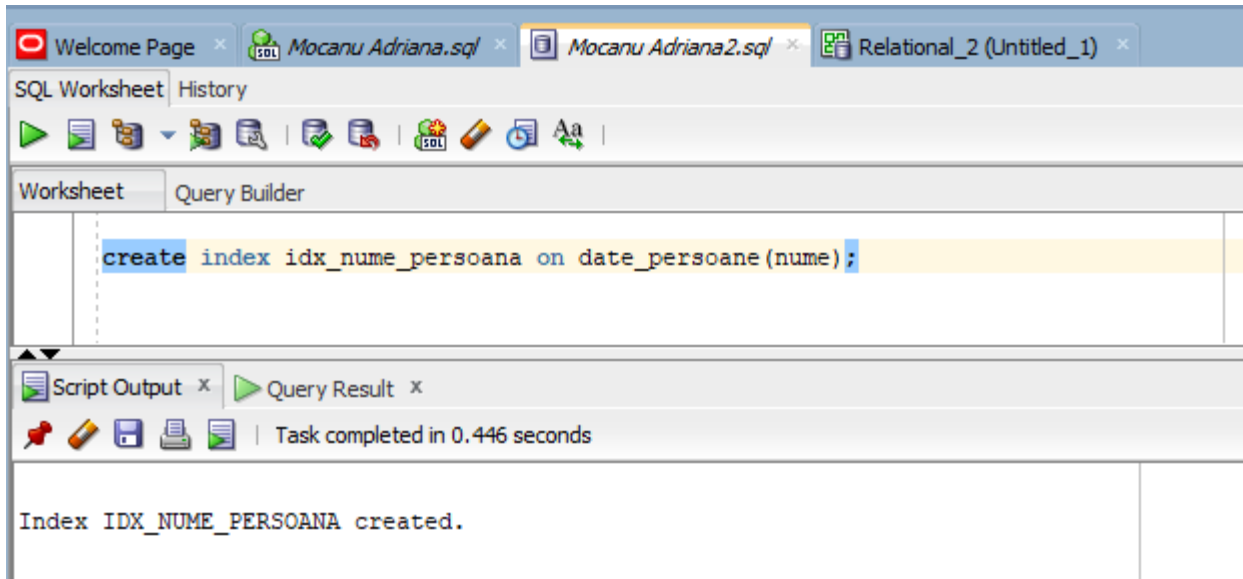
The 'Query Result' tab shows the results of the query:

| STARE_COMANDA | DENUMIRE               |
|---------------|------------------------|
| 1 plasata     | Iced Caramel Macchiato |
| 2 plasata     | Clatite americane      |
| 3 livrata     | Cappuccino             |
| 4 ridicata    | Flat White             |
| 5 pregatita   | Matcha Green Tea Latte |
| 6 livrata     | Ceai de hibiscus       |
| 7 livrata     | Gingerbread Latte      |
| 8 plasata     | Ciocolata calda        |
| 9 plasata     | Croissant cu zmeura    |
| 10 pregatita  | Chec cu banane         |

## 9. Gestiunea altor obiecte ale bazei de date: vederi, indecsi, sinonime, secvente.

### Indeksi

- ☼ Sa se creeze un index pe tabela date\_persoane pe coloana nume.  
`create index idx_num_persoana on date_persoane(nume);`



The screenshot shows the SQL Developer interface. The top toolbar includes icons for running queries, saving, and other database operations. The main window displays the SQL Worksheet with the following SQL statement:

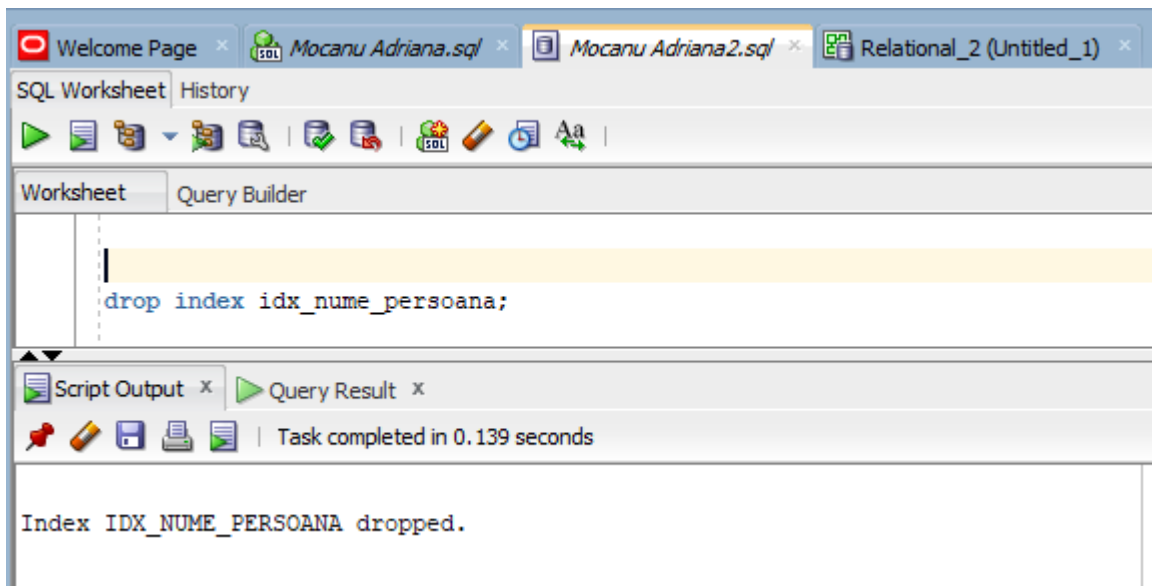
```
create index idx_num_persoana on date_persoane(nume);
```

Below the worksheet, the Script Output pane shows the result of the execution:

```
Index IDX_NUM_PERSOANA created.
```

The status bar at the bottom indicates that the task was completed in 0.446 seconds.

- ☼ Sa se stearga indexul creat anterior.  
`drop index idx_num_persoana;`



The screenshot shows the SQL Developer interface. The top toolbar includes icons for running queries, saving, and other database operations. The main window displays the SQL Worksheet with the following SQL statement:

```
drop index idx_num_persoana;
```

Below the worksheet, the Script Output pane shows the result of the execution:

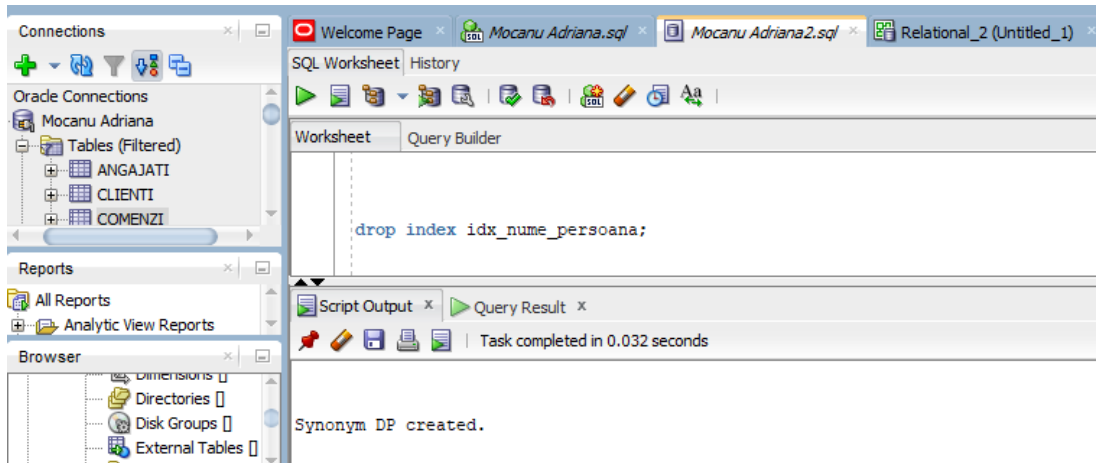
```
Index IDX_NUM_PERSOANA dropped.
```

The status bar at the bottom indicates that the task was completed in 0.139 seconds.

## Sinonime

☁ Sa se creeze un sinonim pentru tabela date\_persoane.

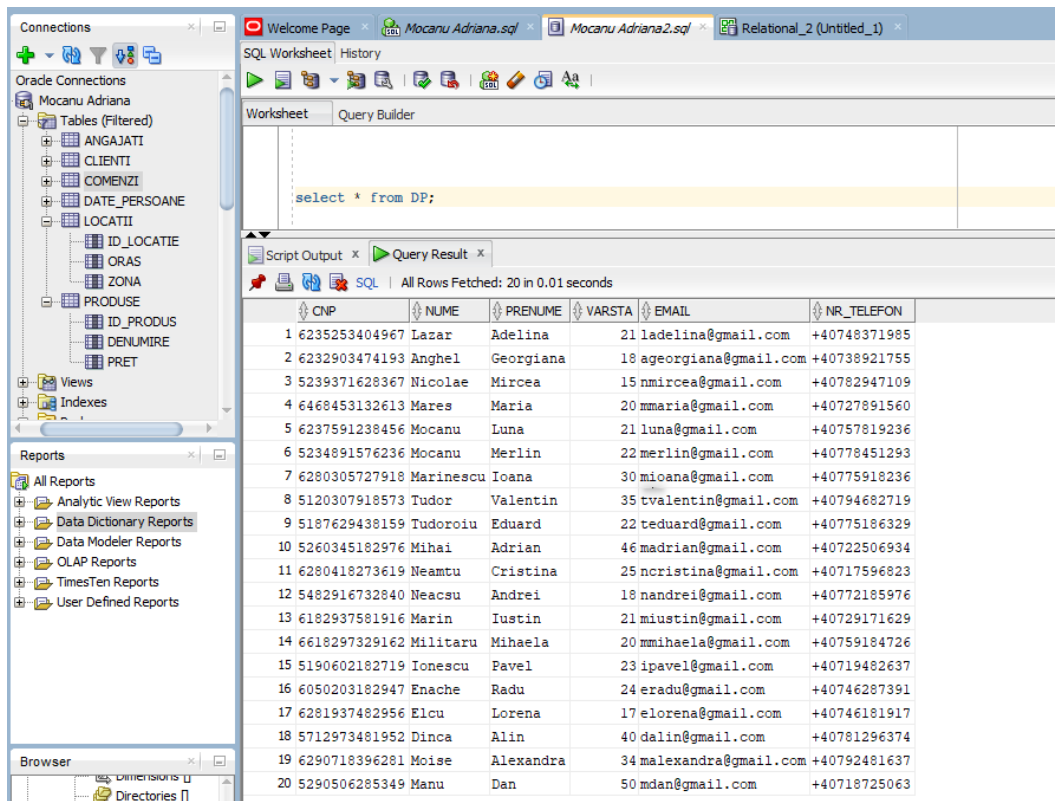
create synonym DP for date\_persoane;



The screenshot shows the Oracle SQL Developer interface. On the left, the 'Connections' pane shows the 'Mocanu Adriana' connection. The 'Tables (Filtered)' list includes 'ANGAJATI', 'CLIENTI', and 'COMENZI'. The 'Script Output' pane at the bottom shows the message 'Synonym DP created.' The main SQL Worksheet contains the command: `drop index idx_nume_persoana;`

☁ Sa se vizualizeze sinonimul.

select \* from DP;



The screenshot shows the Oracle SQL Developer interface with the 'Script Output' pane displaying the results of the query `select * from DP;`. The results are shown in a table with 6 columns: CNP, NUME, PRENUME, VARSTA, EMAIL, and NR\_TELEFON. The table contains 20 rows of data.

| CNP              | NUME      | PRENUME   | VARSTA | EMAIL                | NR_TELEFON   |
|------------------|-----------|-----------|--------|----------------------|--------------|
| 1 6235253404967  | Lazar     | Adelina   | 21     | ladelina@gmail.com   | +40748371985 |
| 2 6232903474193  | Anghel    | Georgiana | 18     | ageorgiana@gmail.com | +40738921755 |
| 3 5239371628367  | Nicolae   | Mircea    | 15     | nmircea@gmail.com    | +40782947109 |
| 4 6468453132613  | Mares     | Maria     | 20     | mmaria@gmail.com     | +40727891560 |
| 5 6237591238456  | Mocanu    | Luna      | 21     | luna@gmail.com       | +40757819236 |
| 6 5234891576236  | Mocanu    | Merlin    | 22     | merlin@gmail.com     | +40778451293 |
| 7 6280305727918  | Marinescu | Ioana     | 30     | mioana@gmail.com     | +40775918236 |
| 8 5120307918573  | Tudor     | Valentin  | 35     | tvalentin@gmail.com  | +40794682719 |
| 9 5187629438159  | Tudoroiu  | Eduard    | 22     | teduard@gmail.com    | +40775186329 |
| 10 5260345182976 | Mihai     | Adrian    | 46     | madrian@gmail.com    | +40722506934 |
| 11 6280418273619 | Neamtu    | Cristina  | 25     | ncristina@gmail.com  | +40717596823 |
| 12 5482916732840 | Neacsu    | Andrei    | 18     | nandrei@gmail.com    | +40772185976 |
| 13 6182937581916 | Marin     | Iustin    | 21     | miustin@gmail.com    | +40729171629 |
| 14 6618297329162 | Militaru  | Mihaela   | 20     | mmihaela@gmail.com   | +40759184726 |
| 15 5190602182719 | Ionescu   | Pavel     | 23     | ipavel@gmail.com     | +40719482637 |
| 16 6050203182947 | Enache    | Radu      | 24     | eradu@gmail.com      | +40746287391 |
| 17 6281937482956 | Elcu      | Lorena    | 17     | elorena@gmail.com    | +40746181917 |
| 18 5712973481952 | Dinca     | Alin      | 40     | dalin@gmail.com      | +40781296374 |
| 19 6290718396281 | Moise     | Alexandra | 34     | malexandra@gmail.com | +40792481637 |
| 20 5290506285349 | Manu      | Dan       | 50     | mdan@gmail.com       | +40718725063 |

- ☼ Sa se stearga sinonimul creat anterior.  
drop synonym DP;

