

Proiect baze de date

Gestionarea unor service-uri auto din Bucureşti

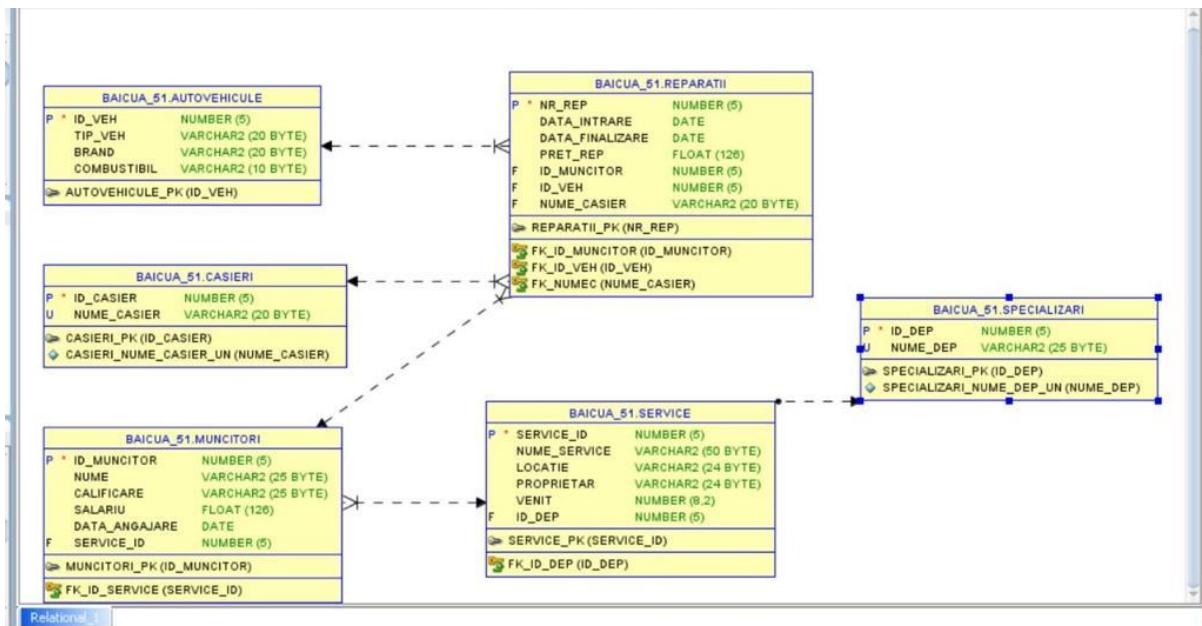
1. Descrierea bazei de date

Tema acestui proiect este gestiunea activitatii unor service-uri din Bucuresti. Am realizat o baza de date pentru a ajuta oamenii sa aiba o evidenta a masinilor ce necesita sau au necesitat o reparatie, pentru o perspectiva mai obiectiva asupra service-urilor, preturilor si mecanicilor. Datorita acestor informatii, oamenii pot vedea care este cel mai potrivit service pentru nevoile lor.

In primul rand, am creat un tabel cu toate specializarile posibile pentru a identifica specializarea fiecaruia, apoi am prezentat numele service-urilor impreuna cu ID-ul acestora, numele proprietarilor, locatia si cifra de afaceri.

In al doilea rand, am creat un tabel cu toti angajatii service-urilor, in care am afisat numele fiecaruia, id-ul, salariul, data angajarii, calificarea dar si id-ul service-ului la care lucreaza. Alaturi de tabelul cu autovehicule in care prezint tipul fiecarui vehicul, brandul si combustibilul, am creat si un tabel in care am adaugat fiecare reparatie, dar si un tabel cu casierii din fiecare service.

2.Schema bazei de date



3.Crearea tabelelor

Au fost create 6 tabele-SPECIALIZARI, SERVICE, MUNCITORI, CASIERI, REPARATII, AUTOVEHICULE.

a.Specializari

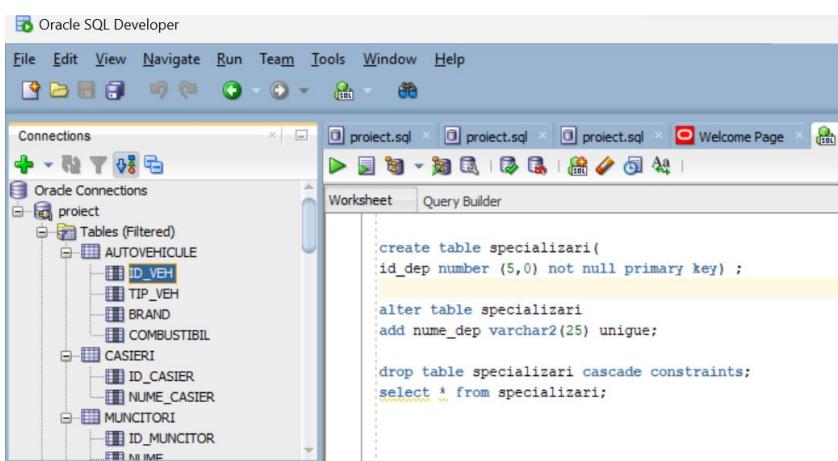
create table specializari(

id_dep number (5,0) not null primary key);

alter table specializari

add nume_dep varchar2(25) unique;

select * from specializari;



b.Muncitori

```
create table muncitori(  
    id_muncitor number(5,0) not null primary key,  
    nume varchar2(25),  
    calificare varchar2(25),  
    salariu float,  
    data_angajare date,  
    service_id number(5,0));
```

The screenshot shows the Oracle SQL Developer interface. The 'Connections' sidebar on the left shows a connection named 'project' which is connected to the database 'baicua_51@//193.226.34.57:1521/orclpdb.docker.internal'. The 'Tables (Filtered)' section under the 'project' connection lists several tables: project, CASIERI, MUNCITORI, COMBUSTIBIL, and some temporary tables like #TEMP_1. The 'Worksheet' tab in the center contains the SQL code for creating the 'muncitori' table and adding a foreign key constraint:

```
table muncitori(  
    id_muncitor number(5,0) not null primary key,  
    nume varchar2(25),  
    calificare varchar2(25),  
    salariu float,  
    data_angajare date,  
    service_id number(5,0));  
  
alter table muncitori  
add constraint fk_id_service foreign key  
(service_id) references service(service_id);
```

The 'Script Output' tab at the bottom right shows the message "Task completed in 0,131 seconds".

This screenshot shows the same Oracle SQL Developer interface after the 'muncitori' table has been created. The 'Tables (Filtered)' section now includes the 'service' table. The 'Worksheet' tab contains the SQL code for creating the 'service' table:

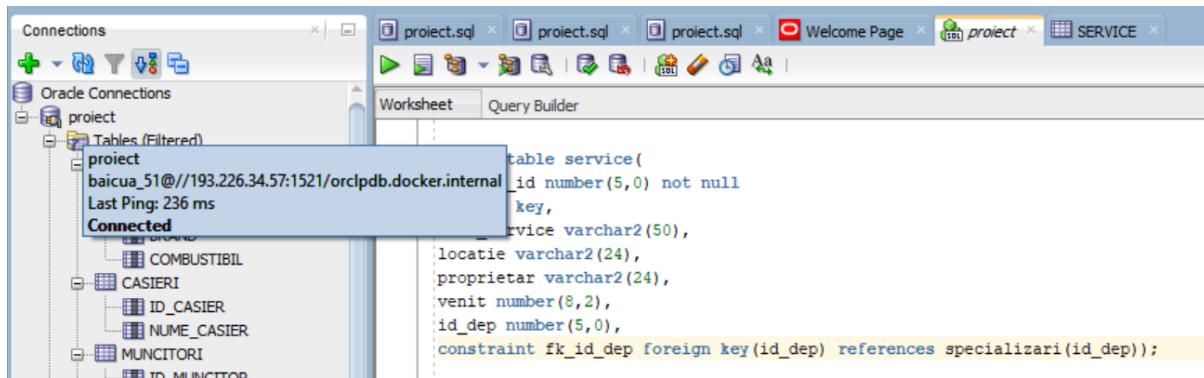
```
table service(  
    service_id number(5,0) not null primary key,  
    nume_service varchar2(50),  
    den_dep varchar2(20));  
  
alter table muncitori  
add constraint fk_id_service foreign key  
(service_id) references service(service_id);  
  
alter table muncitori  
add den_dep varchar2(20);
```

The 'Script Output' tab again shows the message "Task completed in 0,131 seconds".

c.Service

```
create table service(  
    service_id number(5,0) not null  
    primary key,  
    nume_service varchar2(50),
```

locatie varchar2(24),
proprietar varchar2(24),
venit number(8,2),
id_dep number(5,0),
constraint fk_id_dep foreign key(id_dep) references specializari(id_dep));

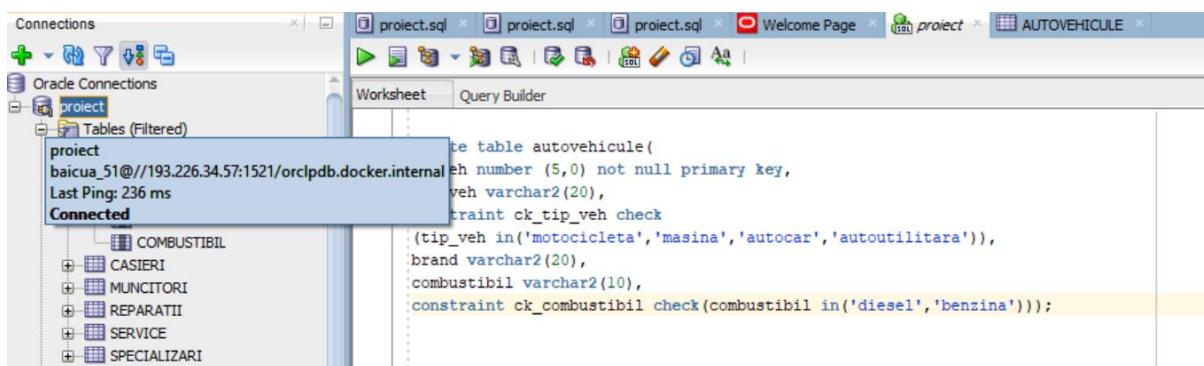


The screenshot shows the Oracle SQL Developer interface. On the left, the 'Connections' sidebar shows an 'Oracle Connections' section with a single connection named 'project'. The 'Tables (Filtered)' section under 'project' lists several tables: COMBUSTIBIL, CASIERI, ID_CASIER, NUME_CASIER, MUNCITORI, and REPARATII. The 'Connected' status is shown. On the right, the 'Worksheet' tab is active, displaying the SQL code for creating the 'SERVICE' table:

```
table service(
    id number(5,0) not null
    key,
    locatie varchar2(50),
    proprietar varchar2(24),
    venit number(8,2),
    id_dep number(5,0),
    constraint fk_id_dep foreign key(id_dep) references specializari(id_dep));
```

d.Autovehicule

create table autovehicule(
id_veh number (5,0) not null primary key,
tip_veh varchar2(20),
constraint ck_tip_veh check
(tip_veh in('motocicleta','masina','autocar','autoutilitara')),
brand varchar2(20),
combustibil varchar2(10),
constraint ck_combustibil check(combustibil in('diesel','benzina')));

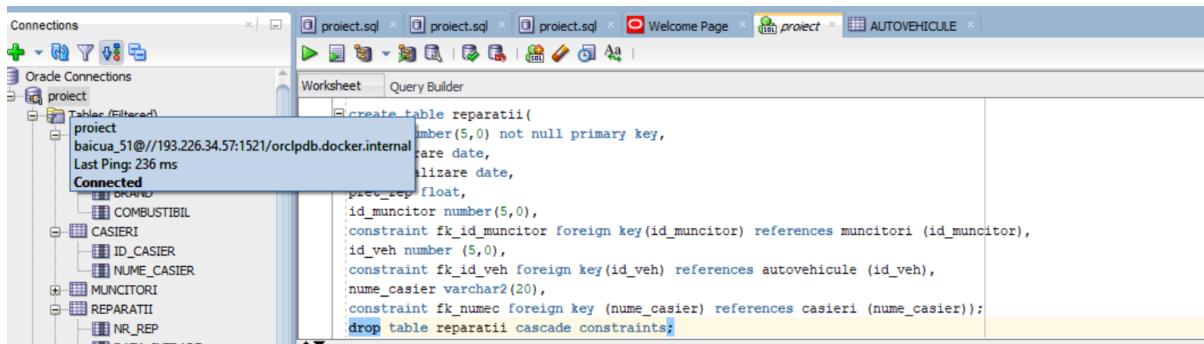


The screenshot shows the Oracle SQL Developer interface. On the left, the 'Connections' sidebar shows an 'Oracle Connections' section with a single connection named 'project'. The 'Tables (Filtered)' section under 'project' lists several tables: COMBUSTIBIL, CASIERI, MUNCITORI, REPARATII, SERVICE, and SPECIALIZARI. The 'Connected' status is shown. On the right, the 'Worksheet' tab is active, displaying the SQL code for creating the 'AUTOVEHICULE' table:

```
create table autovehicule(
    id_veh number (5,0) not null primary key,
    tip_veh varchar2(20),
    constraint ck_tip_veh check
        (tip_veh in('motocicleta','masina','autocar','autoutilitara')),
    brand varchar2(20),
    combustibil varchar2(10),
    constraint ck_combustibil check(combustibil in('diesel','benzina')));
```

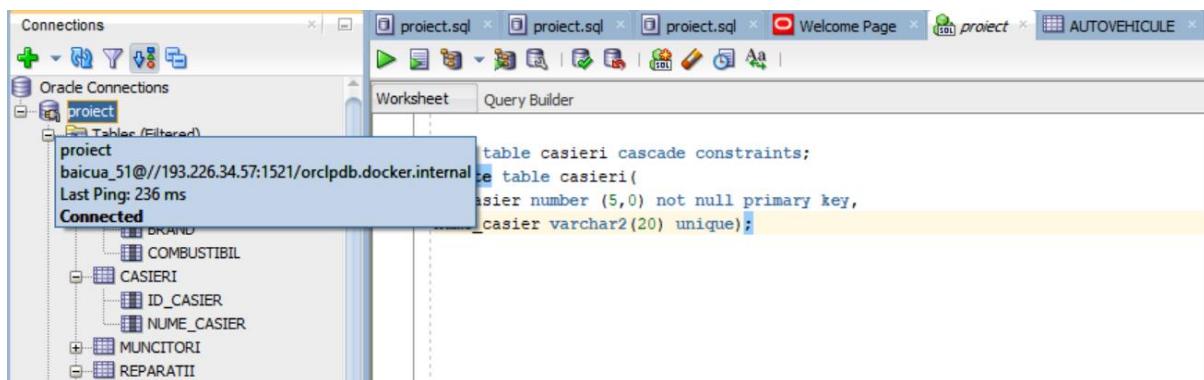
e.Reparatii

```
create table reparatii(  
    nr_rep number(5,0) not null primary key,  
    data_intrare date,  
    data_finalizare date,  
    pret_rep float,  
    id_muncitor number(5,0),  
    constraint fk_id_muncitor foreign key(id_muncitor) references muncitori (id_muncitor),  
    id_veh number (5,0),  
    constraint fk_id_veh foreign key(id_veh) references autovehicule (id_veh),  
    nume_casier varchar2(20),  
    constraint fk_numec foreign key (nume_casier) references casieri (nume_casier));  
drop table reparatii cascade constraints;
```



f. Casieri

```
drop table casieri cascade constraints;  
create table casieri(  
    id_casier number (5,0) not null primary key,  
    nume_casier varchar2(20) unique);
```

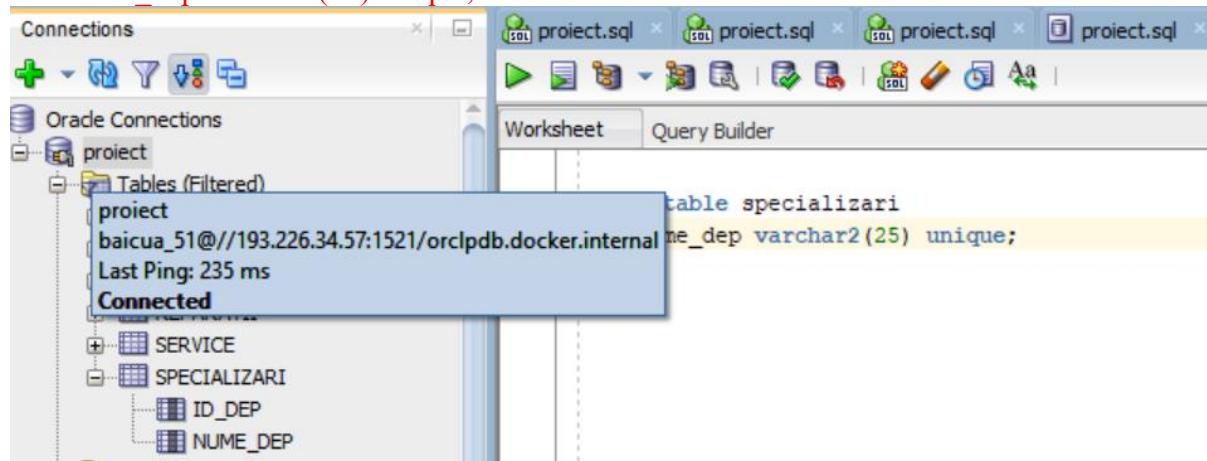


4. Actualizarea structurii tabelelor si modificarea restrictiilor de integritate

a. Am adaugat in tabela specializari coloana nume_dep:

alter table specializari

add nume_dep varchar2(25) unique;



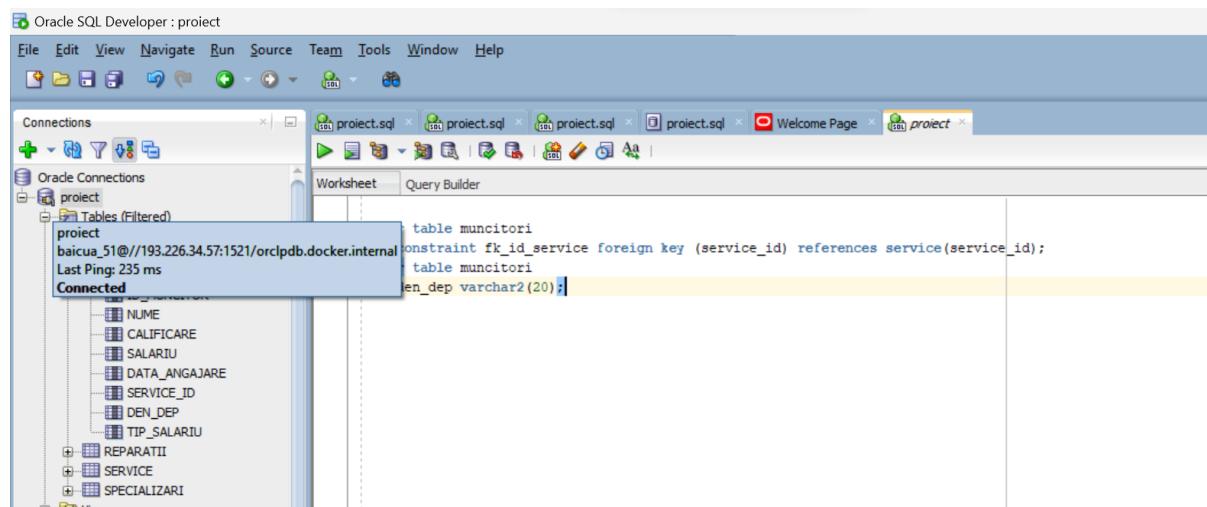
b. Am adaugat in tabela muncitori o cheie externa si o coloana noua

2. alter table muncitori

add constraint fk_id_service foreign key (service_id) references service(service_id);

alter table muncitori

add den_dep varchar2(20);

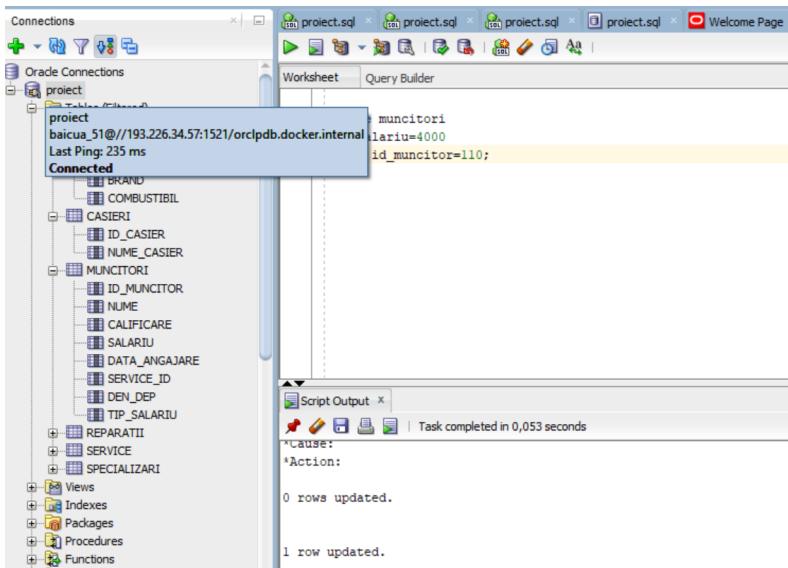


c. Am actualizat salariul muncitorului cu id 110.

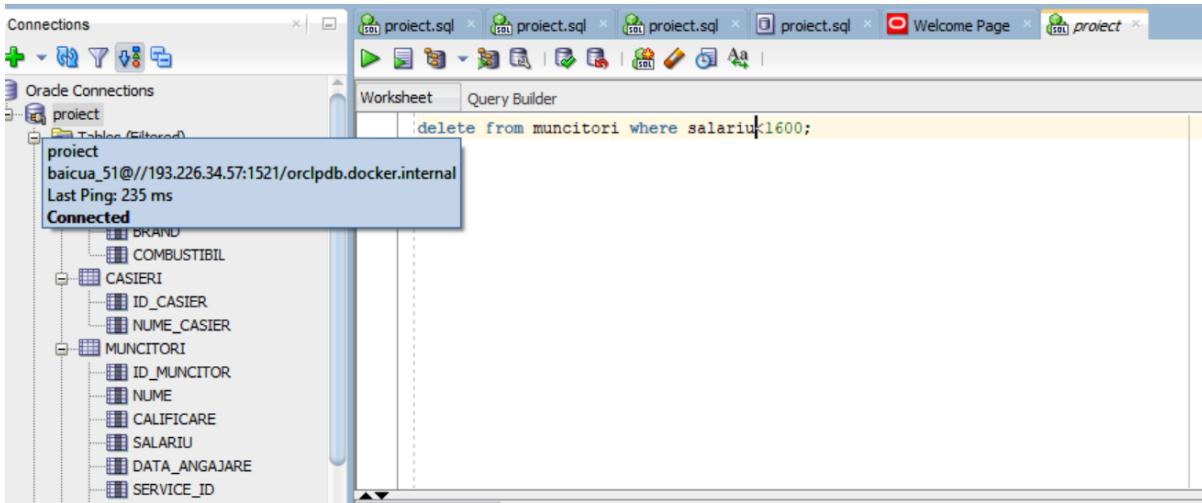
update muncitori

set salariu=4000

where id_muncitor=110;



d. Sterge salariul mai mic decat 1600 de lei



5. Adăugarea (min 10) de înregistrări în fiecare tabelă

Inregistrari in tabela specializari

```
insert into specializari(id_dep, nume_dep)
values(1, 'Mecanica');

insert into specializari(id_dep, nume_dep)
values(2, 'Mecanica usoara');

insert into specializari(id_dep, nume_dep)
values(3, 'Vopsitorie');

insert into specializari(id_dep, nume_dep)
values(4, 'Tinichigerie');

insert into specializari(id_dep, nume_dep)
```

```
values(5, 'Electrica');

insert into specializari(id_dep, nume_dep)
values(6, 'Vulcanizare');

insert into specializari(id_dep, nume_dep)
values(7, 'Sisteme de iluminare');

insert into specializari(id_dep, nume_dep)
values(8, 'Sisteme de franare');

insert into specializari(id_dep, nume_dep)
values(9, 'Sisteme de direcție și suspensie');

insert into specializari(id_dep, nume_dep)
values(10, 'Curatatorie');
```

ID_DEP	NUME_DEP
2	Mecanica usoara
3	Vopsitorie
4	Finisajere
5	Electrica
6	Vulcanizare
7	Sisteme de iluminare
8	Sisteme de franare
9	Sisteme de directie
10	Curatatorie

ID_DEP	NUME_DEP
2	Mecanica usoara
3	Vopsitorie
4	Finisajere
5	Electrica
6	Vulcanizare
7	Sisteme de iluminare
8	Sisteme de franare
9	Sisteme de directie
10	Curatatorie

Inregistrari in tabela service

```
insert into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values ( 10, 'Vericu', 'Aviator Popisteau', 'Baicu Alexandra', 12321,1);

insert into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (11, 'Vericu', 'Traian Vsaille' , 'Baicu Alexandra', 10322,2);

insert into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (12, 'Jerol','Expozitie','Vasile Alex',9320,2);

insert into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (13, 'La Mertzanu', 'Militari','Adumitresei Mihai', 3213,3);

insert into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (14, 'Mardi', 'Berceni','Alexandru Robert', 15435,4);

insert into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (15,'Autosoft','Berceni','Apetroaie Catalina', 14323,5);

insert into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (16,'Breddi','Piata Romana', 'Arsene Marian',20321,5);

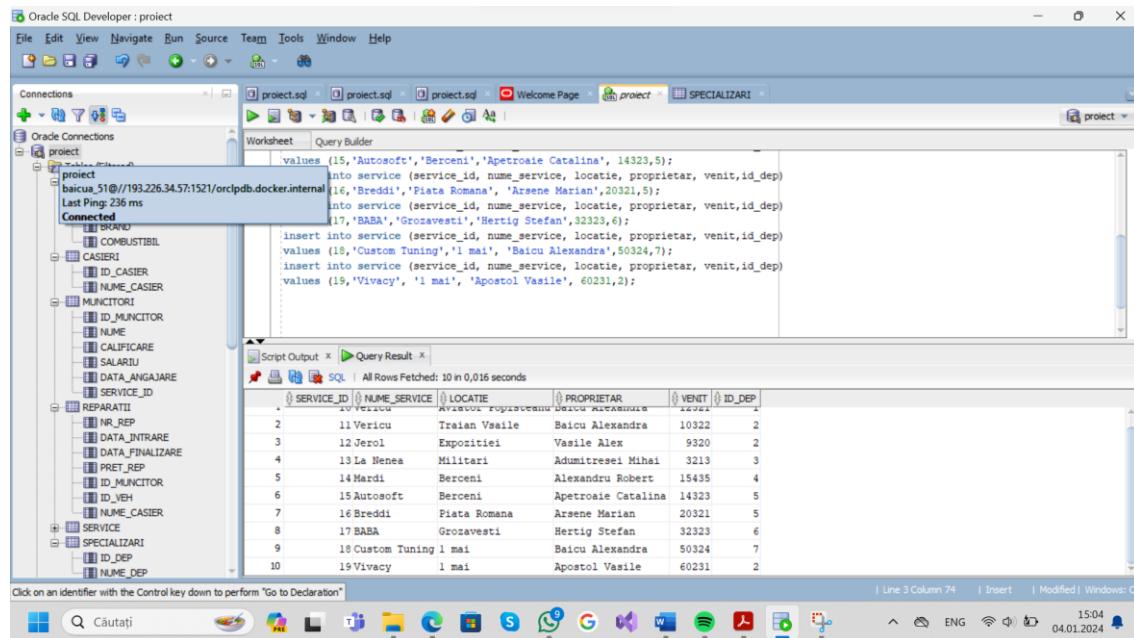
insert into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (17,'BABA','Grozavesti','Hertig Stefan',32323,6);

insert into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (18,'Custom Tuning','1 mai', 'Baicu Alexandra',50324,7);

insert into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (19,'Vivacy', '1 mai', 'Apostol Vasile', 60231,2);
```

The screenshot shows the Oracle SQL Developer interface. The 'Connections' sidebar displays a connection named 'project' which is currently connected to 'baicua_51@//193.226.34.57:1521/orclpdb.docker.internal'. The 'Script Output' tab at the bottom shows the execution of the SQL script, indicating 'All Rows Fetched: 10 in 0.016 seconds'. The 'Query Result' tab displays the resulting data from the 'service' table:

service_id	nume_service	locatie	proprietar	venit	id_dep
1	Vericu	Aviator Popisteau	Baicu Alexandra	12321	1
2	11 Vericu	Traian Vsaille	Baicu Alexandra	10322	2
3	12 Jerol	Expozitie	Vasile Alex	9320	2
4	13 La Nenea	Militari	Adumitresei Mihai	3213	3
5	14 Mardi	Berceni	Alexandru Robert	15435	4
6	15 Autosoft	Berceni	Apetroaie Catalina	14323	5
7	16 Breddi	Piata Romana	Arsene Marian	20321	5
8	17 BABA	Grozavesti	Hertig Stefan	32323	6
9	18 Custom Tuning	1 mai	Baicu Alexandra	50324	7
10	19 Vivacy	1 mai	Apostol Vasile	60231	2



The screenshot shows the Oracle SQL Developer interface. In the Worksheet pane, there is a query being run:

```

values (15,'Autosoft','Berceni','Apetroale Catalina', 14323,5);
into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (16,'Breddi','Pista Romana', 'Arsene Marian',20321,5);
into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (17,'BABA','Grozavesti','Hertig Stefan',32323,6);
insert into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (18,'Custom Tuning','1 mai', 'Baicu Alexandra',50324,7);
insert into service (service_id, nume_service, locatie, proprietar, venit,id_dep)
values (19,'Vivacy', '1 mai', 'Apostol Vasile', 60231,2);

```

The Script Output pane shows the results of the query:

SERVICE_ID	NUME_SERVICE	LOCATIE	PROPRIETAR	VENTI	ID_DEP
2	11 Vericu	Traian Vasile	Baicu Alexandra	10322	2
3	12 Jerol	Expozitie	Vasile Alex	9320	2
4	13 La Nenea	Militari	Adumitresei Mihai	3213	3
5	14 Mardi	Berceni	Alexandru Robert	15435	4
6	15 Autosoft	Berceni	Apetroale Catalina	14323	5
7	16 Breddi	Pista Romana	Arsene Marian	20321	5
8	17 BABA	Grozavesti	Hertig Stefan	32323	6
9	18 Custom Tuning	1 mai	Baicu Alexandra	50324	7
10	19 Vivacy	1 mai	Apostol Vasile	60231	2

Inregistrari in tabela muncitori

```

insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id,
den_dep)

values (100, 'Mitrut Vasile', 'Mecanic', 2400, TO_DATE('27.10.2010','DD.MM.YYYY'), 10,
'Mecanica usoara');

insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id,
den_dep)

values (101, 'Mihai Ion', 'Tinichigiu', 2000,TO_DATE('25.10.2011','DD.MM.YYYY'), 11,
'Tinichigerie');

insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id,
den_dep)

values (102, 'Alexandru Ionel', 'Vopsitor', 3000,TO_DATE('25.10.2012','DD.MM.YYYY')
,12, 'Vopsitorie');

insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id,
den_dep)

values (103, 'Popescu Alex', 'Mecanic', 2800,TO_DATE('04.03.2016','DD.MM.YYYY') ,13,
'Mecanica usoara');

insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id,
den_dep)

values (104, 'Popescu Mihai', 'Electrician', 2200, TO_DATE('04.09.2018','DD.MM.YYYY')
,14, 'Electronica');

```

```
insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (105, 'Popescu Vasile', 'Vopsitor', 4000, TO_DATE('10.09.2019','DD.MM.YYYY') ,15,
'Vopsitorie');

insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (106, 'Popescu Ion', 'Vopsitor', 3000, TO_DATE('11.09.2020','DD.MM.YYYY') ,16,
'Vopsitorie');

insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (107, 'Oprisan Vasile', 'Electrician', 2800,
TO_DATE('12.09.2020','DD.MM.YYYY'),17, 'Electronica');

insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (108, 'Mihai Ion', 'Mecanic', 1600,
TO_DATE('12.09.2020','DD.MM.YYYY'),18,'Curatatorie');

insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (110, 'Micu Ionel', 'Mecanic', 6000, TO_DATE('12.09.2020','DD.MM.YYYY'),19,
'Mecanica usoara');
```

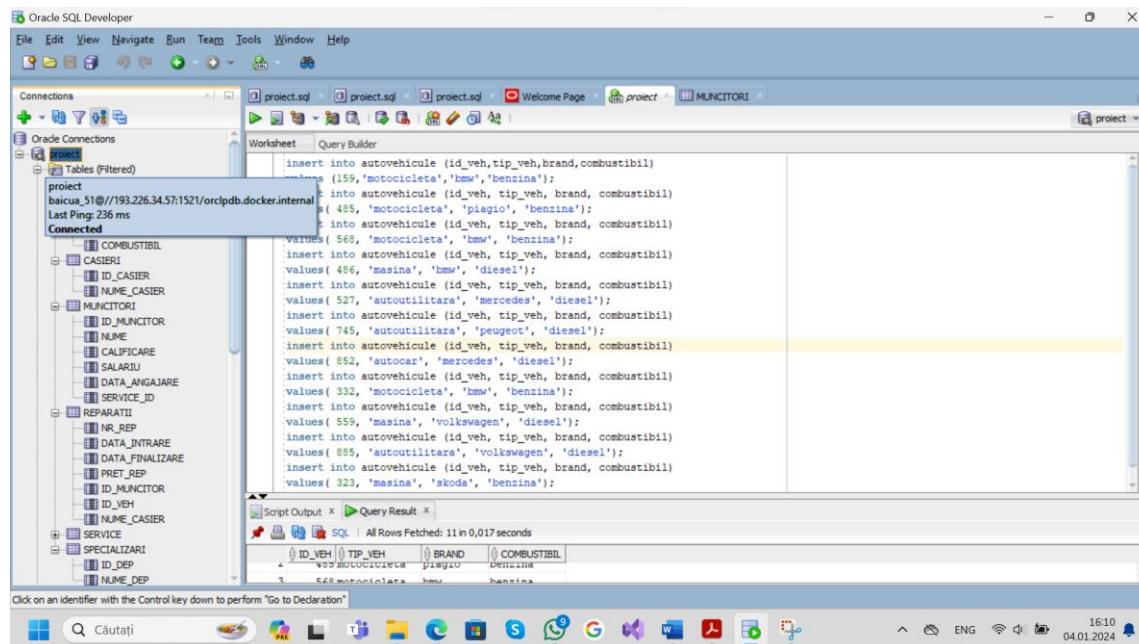
```
insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (100, 'Mitrut Vasile', 'Mecanic', 2400, TO_DATE('27.10.2010','DD.MM.YYYY'), 10, 'Mecanica usoara' );
insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (101, 'Mihai Ion', 'Tinichigiu', 2000,TO_DATE('25.10.2011','DD.MM.YYYY'), 11, 'Tinichigerie');
insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (102, 'Alexandru Ionel', 'Vopsitor', 3000,TO_DATE('25.10.2012','DD.MM.YYYY'),12, 'Vopsitorie');
insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (103, 'Popescu Alex', 'Mecanic', 2800,TO_DATE('04.03.2016','DD.MM.YYYY') ,13, 'Mecanica usoara');
insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (104, 'Popescu Mihai', 'Electrician', 2200, TO_DATE('04.09.2018','DD.MM.YYYY'),14, 'Electronica');
insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (105, 'Popescu Vasile', 'Vopsitor', 4000, TO_DATE('10.09.2019','DD.MM.YYYY') ,15, 'Vopsitorie');
insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (106, 'Popescu Ion', 'Vopsitor', 3000, TO_DATE('11.09.2020','DD.MM.YYYY') ,16, 'Vopsitorie');
insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (107, 'Oprisan Vasile', 'Electrician', 2800, TO_DATE('12.09.2020','DD.MM.YYYY'),17, 'Electronica');
insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (108, 'Mihai Ion', 'Mecanic', 1600, TO_DATE('12.09.2020','DD.MM.YYYY'),18,'Curatatorie');
insert into muncitori (id_muncitor, nume, calificare, salariu, data_angajare, service_id, den_dep)
values (110, 'Micu Ionel', 'Mecanic', 6000, TO_DATE('12.09.2020','DD.MM.YYYY'),19, 'Mecanica usoara');
```

All Rows Fetched: 10 in 0,016 seconds

ID_MUNCITOR	NUME	CALIFICARE	SALARIU	DATA_ANGAJARE	SERVICE_ID	DEN_DEP
2	100 Mitrut Vasile	Mecanic	2400	27-10-2010	10	Mecanica usoara
	101 Mihai Ion	Tinichigiu	2000	25-10-2011	11	Tinichigerie

Inregistrari in tabela autovehicule

```
insert into autovehicule (id_veh,tip_veh,brand,combustibil)  
values (159,'motocicleta','bmw','benzina');  
  
insert into autovehicule (id_veh, tip_veh, brand, combustibil)  
values( 485, 'motocicleta', 'piaggio', 'benzina');  
insert into autovehicule (id_veh, tip_veh, brand, combustibil)  
values( 568, 'motocicleta', 'bmw', 'benzina');  
insert into autovehicule (id_veh, tip_veh, brand, combustibil)  
values( 486, 'masina', 'bmw', 'diesel');  
insert into autovehicule (id_veh, tip_veh, brand, combustibil)  
values( 527, 'autoutilitara', 'mercedes', 'diesel');  
insert into autovehicule (id_veh, tip_veh, brand, combustibil)  
values( 745, 'autoutilitara', 'peugeot', 'diesel');  
insert into autovehicule (id_veh, tip_veh, brand, combustibil)  
values( 852, 'autocar', 'mercedes', 'diesel');  
  
insert into autovehicule (id_veh, tip_veh, brand, combustibil)  
values( 332, 'motocicleta', 'bmw', 'benzina');  
insert into autovehicule (id_veh, tip_veh, brand, combustibil)  
values( 559, 'masina', 'volkswagen', 'diesel');  
insert into autovehicule (id_veh, tip_veh, brand, combustibil)  
values( 885, 'autoutilitara', 'volkswagen', 'diesel');  
insert into autovehicule (id_veh, tip_veh, brand, combustibil)  
values( 323, 'masina', 'skoda', 'benzina');
```

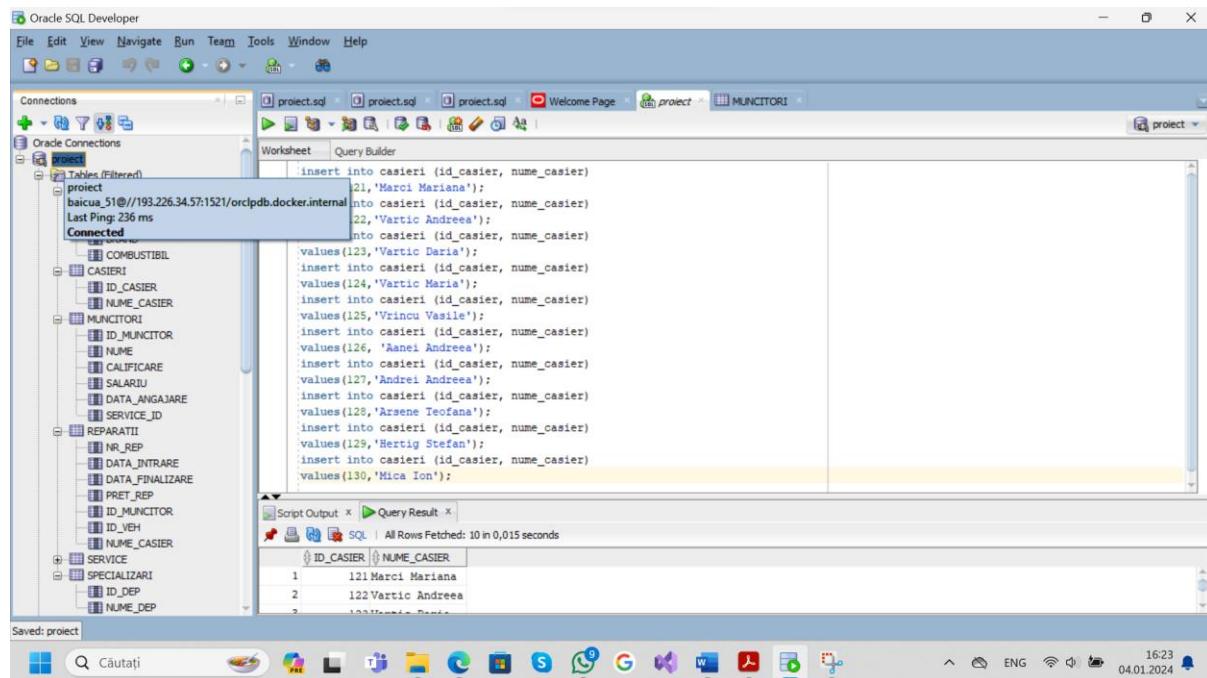


The screenshot shows the Oracle SQL Developer interface. The 'Connections' sidebar displays a connection named 'project' which is currently selected. The 'Tables (Filtered)' section under 'Connected' shows tables such as 'COMBUSTIBIL', 'CASIERI', 'ID_CASIER', 'NUME_CASIER', 'MUNCITORI', 'ID_MUNCITOR', 'NUME', 'CALIFICARE', 'SALARIU', 'DATA_ANGAJARE', 'SERVICE_ID', 'REPARATII', 'NR_REP', 'DATA_INTRARE', 'DATA_FINALIZARE', 'PRET_REP', 'ID_VEH', 'NUME_VEH', 'SERVICE', 'SPECIALIZARI', 'ID_DEP', and 'NUME_DEP'. The 'Worksheet' tab contains the SQL code for inserting data into the 'autovehicule' table. The 'Query Result' tab shows the output of the query, displaying 11 rows of data. The status bar at the bottom right indicates the date and time as 04.01.2024 16:10.

Inregistrari in tabela casieri

```
insert into casieri (id_casier, nume_casier)  
values(121,'Marci Mariana');  
insert into casieri (id_casier, nume_casier)
```

```
values(122,'Vartic Andreea');  
insert into casieri (id_casier, nume_casier)  
values(123,'Vartic Daria');  
insert into casieri (id_casier, nume_casier)  
values(124,'Vartic Maria');  
insert into casieri (id_casier, nume_casier)  
values(125,'Vrincu Vasile');  
insert into casieri (id_casier, nume_casier)  
values(126, 'Aanei Andreea');  
insert into casieri (id_casier, nume_casier)  
values(127,'Andrei Andreea');  
insert into casieri (id_casier, nume_casier)  
values(128,'Arsene Teofana');  
insert into casieri (id_casier, nume_casier)  
values(129,'Hertig Stefan');  
insert into casieri (id_casier, nume_casier)  
values(130,'Mica Ion');
```



Inregistrari in tabela reparatii

```
insert into reparatii (nr_rep, data_intrare, data_finalizare, pret_rep, id_muncitor, id_veh,  
nume_casier)  
  
values(12443, TO_DATE('25.10.2020','DD.MM.YYYY'),  
TO_DATE('27.10.2020','DD.MM.YYYY'), 356.32, 100, 159, 'Marci Mariana');  
  
insert into reparatii (nr_rep, data_intrare, data_finalizare, pret_rep, id_muncitor, id_veh,  
nume_casier)  
  
values(12408, TO_DATE('28.11.2020','DD.MM.YYYY'),  
TO_DATE('30.11.2020','DD.MM.YYYY'), 3214, 100, 332, 'Vartic Andreea');
```

```
insert into reparatii (nr_rep, data_intrare, data_finalizare, pret_rep, id_muncitor, id_veh,  
nume_casier)  
  
values(12409, TO_DATE('02.05.2020','DD.MM.YYYY'),  
TO_DATE('06.05.2020','DD.MM.YYYY'), 322, 101, 485, 'Vartic Andreea');  
  
insert into reparatii (nr_rep, data_intrare, data_finalizare, pret_rep, id_muncitor, id_veh,  
nume_casier)  
  
values(12403, TO_DATE('02.08.2020','DD.MM.YYYY'),  
TO_DATE('06.08.2020','DD.MM.YYYY'), 555, 102, 568, 'Hertig Stefan');  
  
insert into reparatii (nr_rep, data_intrare, data_finalizare, pret_rep, id_muncitor, id_veh,  
nume_casier)  
  
values(12434, TO_DATE('01.09.2021','DD.MM.YYYY'),  
TO_DATE('06.09.2021','DD.MM.YYYY'), 555, 103, 486, 'Mica Ion');  
  
insert into reparatii (nr_rep, data_intrare, data_finalizare, pret_rep, id_muncitor, id_veh,  
nume_casier)  
  
values(12486, TO_DATE('01.09.2022','DD.MM.YYYY'),  
TO_DATE('06.09.2022','DD.MM.YYYY'), 336.5, 104, 527, 'Vartic Maria');  
  
insert into reparatii (nr_rep, data_intrare, data_finalizare, pret_rep, id_muncitor, id_veh,  
nume_casier)  
  
values(12643, TO_DATE('12.03.2022','DD.MM.YYYY'),  
TO_DATE('16.03.2022','DD.MM.YYYY'), 33, 105, 745, 'Arsene Teofana');  
  
insert into reparatii (nr_rep, data_intrare, data_finalizare, pret_rep, id_muncitor, id_veh,  
nume_casier)  
  
values(12545, TO_DATE('16.03.2021','DD.MM.YYYY'),  
TO_DATE('20.03.2021','DD.MM.YYYY'), 1223, 106, 852, 'Andrei Andreea');  
  
insert into reparatii (nr_rep, data_intrare, data_finalizare, pret_rep, id_muncitor, id_veh,  
nume_casier)  
  
values(12654, TO_DATE('22.04.2021','DD.MM.YYYY'),  
TO_DATE('26.04.2021','DD.MM.YYYY'), 1223, 106, 852, 'Vartic Andreea');  
  
insert into reparatii (nr_rep, data_intrare, data_finalizare, pret_rep, id_muncitor, id_veh,  
nume_casier)  
  
values(12435, TO_DATE('26.06.2021','DD.MM.YYYY'),  
TO_DATE('30.06.2021','DD.MM.YYYY'), 165, 107, 559, 'Vrincu Vasile');
```

```

insert into reparatii (nr_rep, data_intrare, data_finalizare, pret_rep, id_muncitor, id_veh, nume_casier)
values(12443, TO_DATE('25.10.2020', 'DD.MM.YYYY'), TO_DATE('27.10.2020', 'DD.MM.YYYY'), 356.32, 100, 159, 'Marcia Mariana');

```

6. Actualizarea inregistrarilor

Am actualizat tabela **reparatii** si tabela **autovehicule**

update reparatii

set nume_casier='Marcia Mariana'

where nr_rep=12443;

```

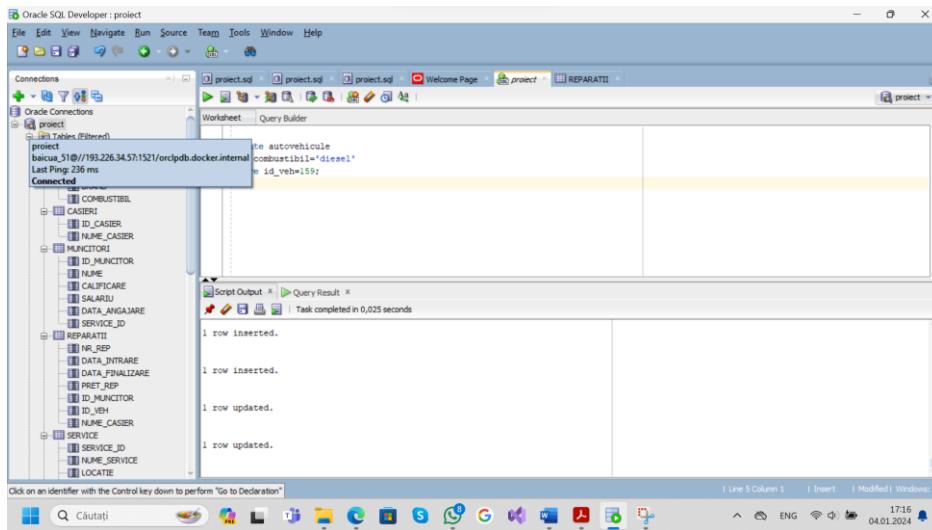
update reparatii
set nume_casier='Marcia Mariana'
where nr_rep=12443;

```

update autovehicule

set combustibil='diesel'

where id_veh=159;



7. Stergerea si recuperarea unei tabele

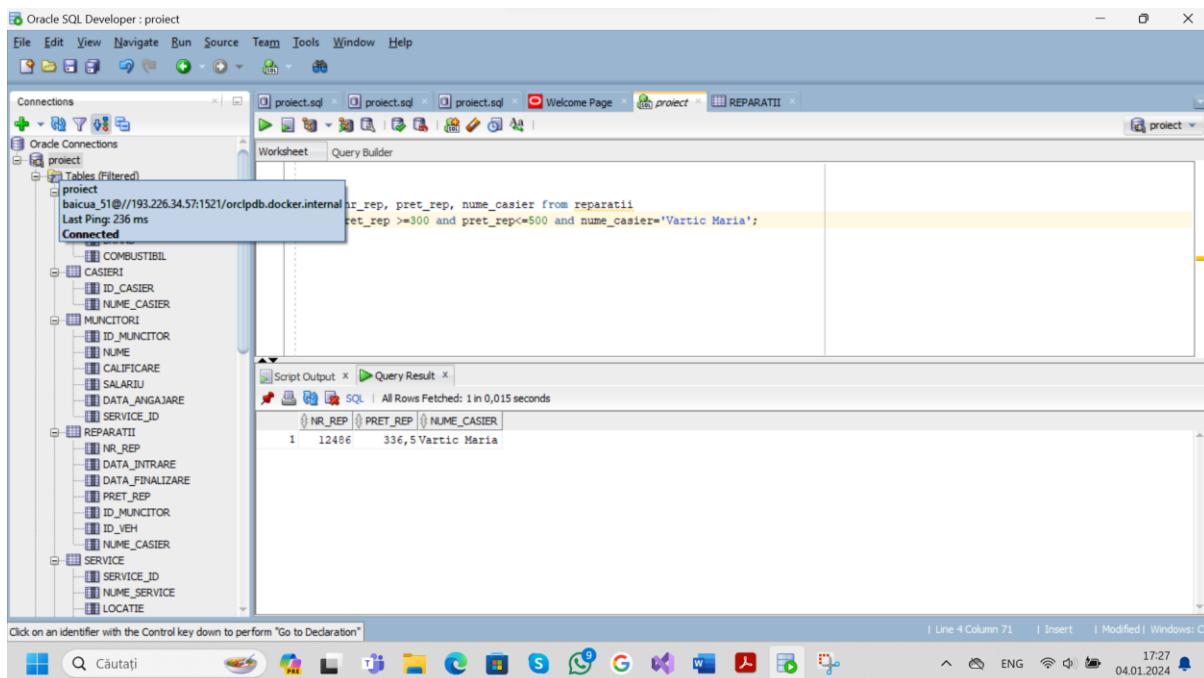
Am ales sa sterg tabela autovehicule
drop table autovehicule cascade constraints ;
Si am reucuperat- o cu flashback.
flashback table autovehicule to before drop;

8. Exemple de interogari variate

1 Sa se afiseze toate reparatiile cu valoarea mai mare de 300 si mai mica decat 500 cu casierul Vartic Maria

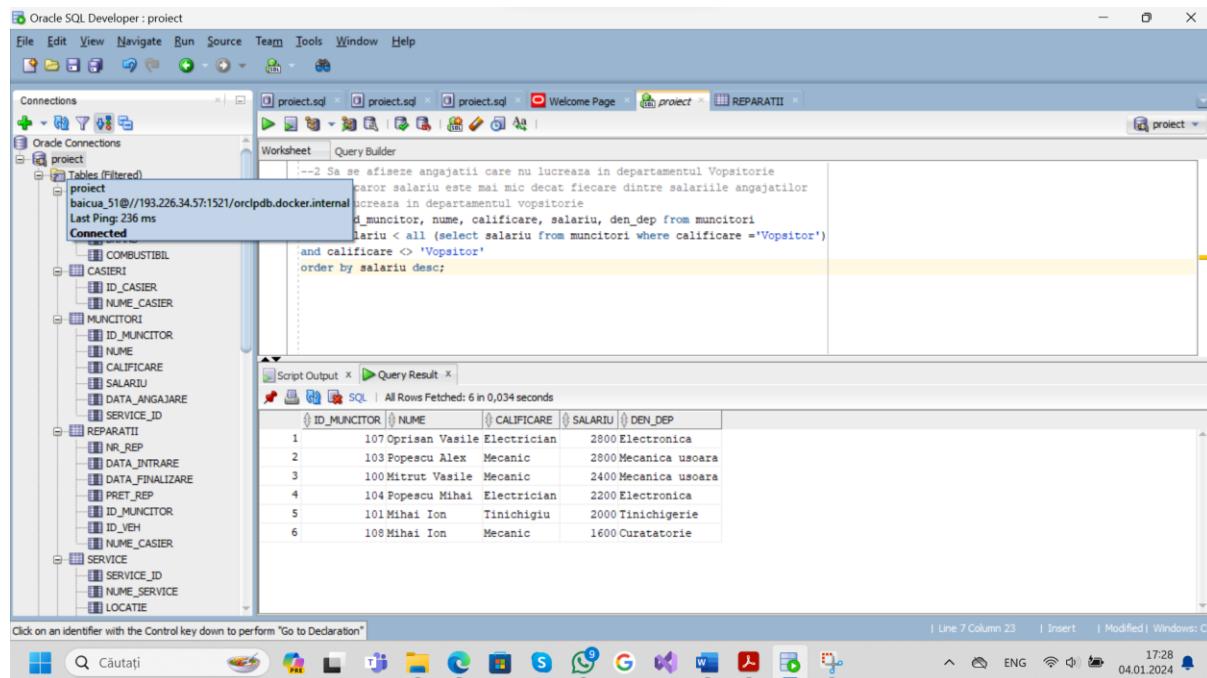
select nr_rep, pret_rep, nume_casier from reparatii

where pret_rep >=300 and pret_rep<=500 and nume_casier='Vartic Maria';



2. Sa se afiseze angajatii care nu lucreaza in departamental Vopsitorie si al caror salariu este mai mic decat fiecare dintre salariile angajatilor care lucreaza in departamental vopsitorie

```
select id_muncitor, nume, calificare, salariu, den_dep from muncitori
where salariu < all (select salariu from muncitori where calificare ='Vopsitor')
and calificare <> 'Vopsitor'
order by salariu desc;
```

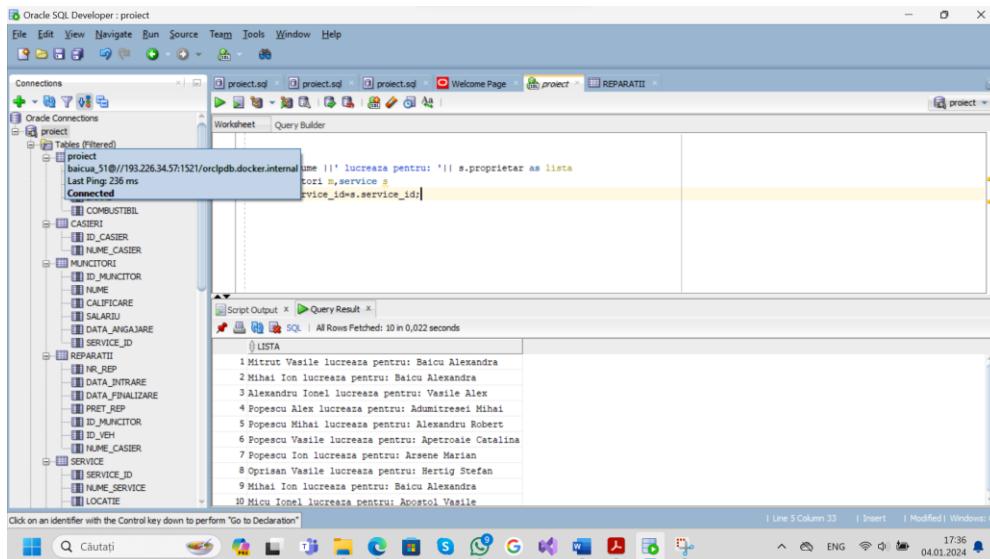


The screenshot shows the Oracle SQL Developer interface. The left pane displays the database schema with tables like CASIERI, MUNCITORI, and REPARATII. The central pane contains the SQL query. The bottom pane shows the results of the query execution.

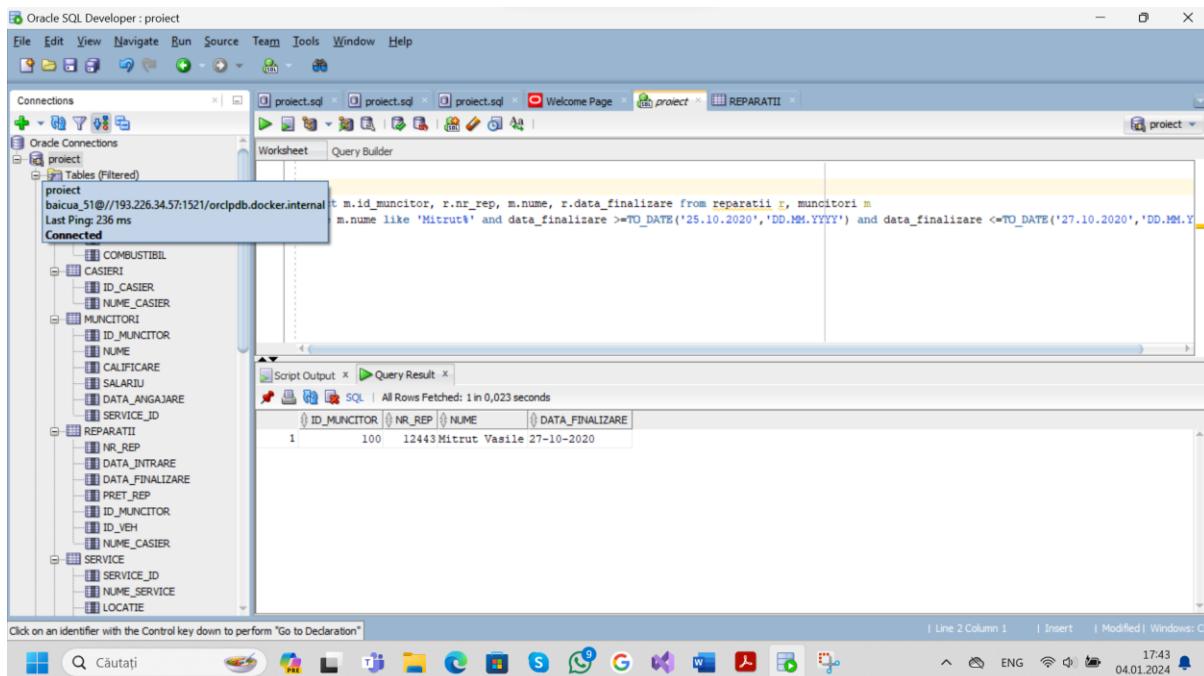
ID_MUNCITOR	NUME	CALIFICARE	SALARIU	DEN_DEPEND
1	Oprisan Vasile	Electrician	2800	Electronica
2	Popescu Alex	Mecanic	2800	Mecanica usoara
3	Mitruț Vasile	Mecanic	2400	Mecanica usoara
4	Popescu Mihai	Electrician	2200	Electronica
5	Mihai Ion	Tinichigiu	2000	Tinichigerie
6	Mihai Ion	Mecanic	1600	Curatatorie

3. Sa se afiseze numele fiecarui muncitor si numele sefului(cel care detine service-ul la care lucreaza)

```
select m.nume||' lucreaza pentru: '|s.proprietar as lista
from muncitori m, service s
where m.service_id=s.service_id;
```



4. Sa se afiseze reparatiile ce s-au finalizat intre 25 si 27 octombrie de catre angajatii cu numele Mitrut

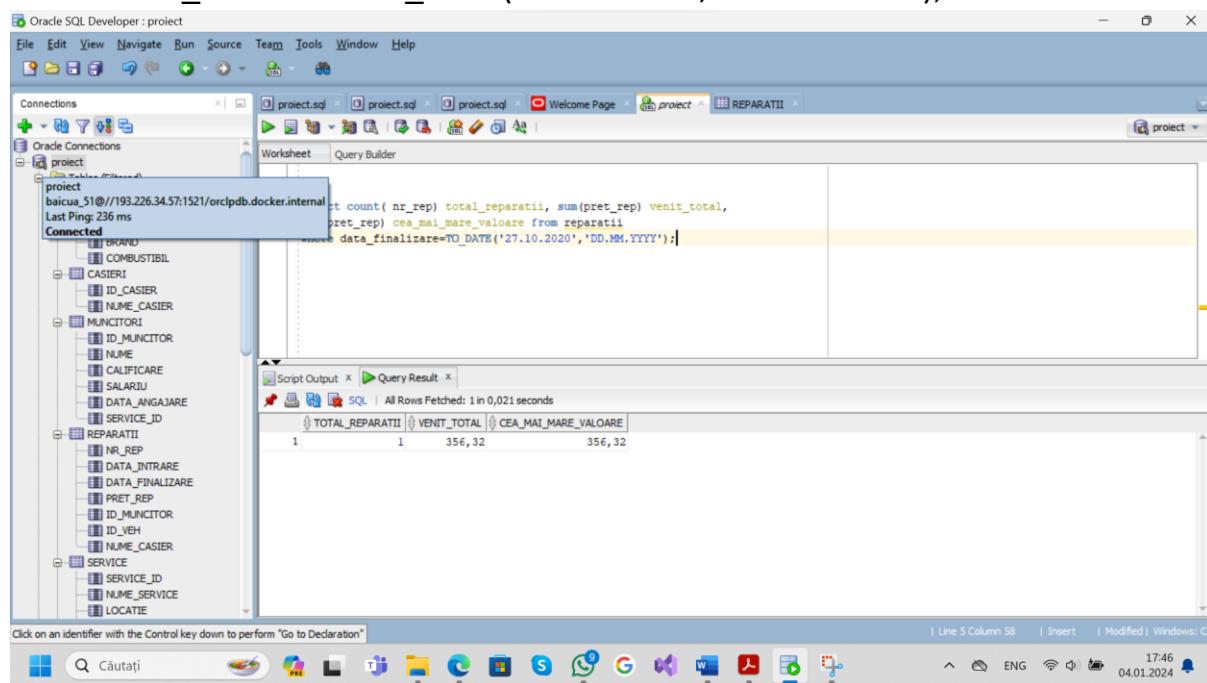


5. Sa se afiseze venitul total, numarul de reparatii si cea mai costisitoare reparatie

de la data 27.10.2023

```
select count(nr_rep) total_reparatii, sum(pret_rep) venit_total,  
max(pret_rep) cea_mai_mare_valoare from reparatii
```

where data_finalizare= TO_DATE('27.10.2020','DD.MM.YYYY');



The screenshot shows the Oracle SQL Developer interface. The connections pane shows a connection named 'project' to 'baicu_51@//193.226.34.57:1521/orclpdb.docker.internal'. The workspace shows a query in the worksheet tab:

```
SELECT count( nr_rep ) total_reparatii , sum( pret_rep ) venit_total ,
       pret_rep cea_mai_mare_valoare from reparatii
      where data_finalizare=TO_DATE('27.10.2020','DD.MM.YYYY');
```

The query result is displayed in the 'Query Result' tab:

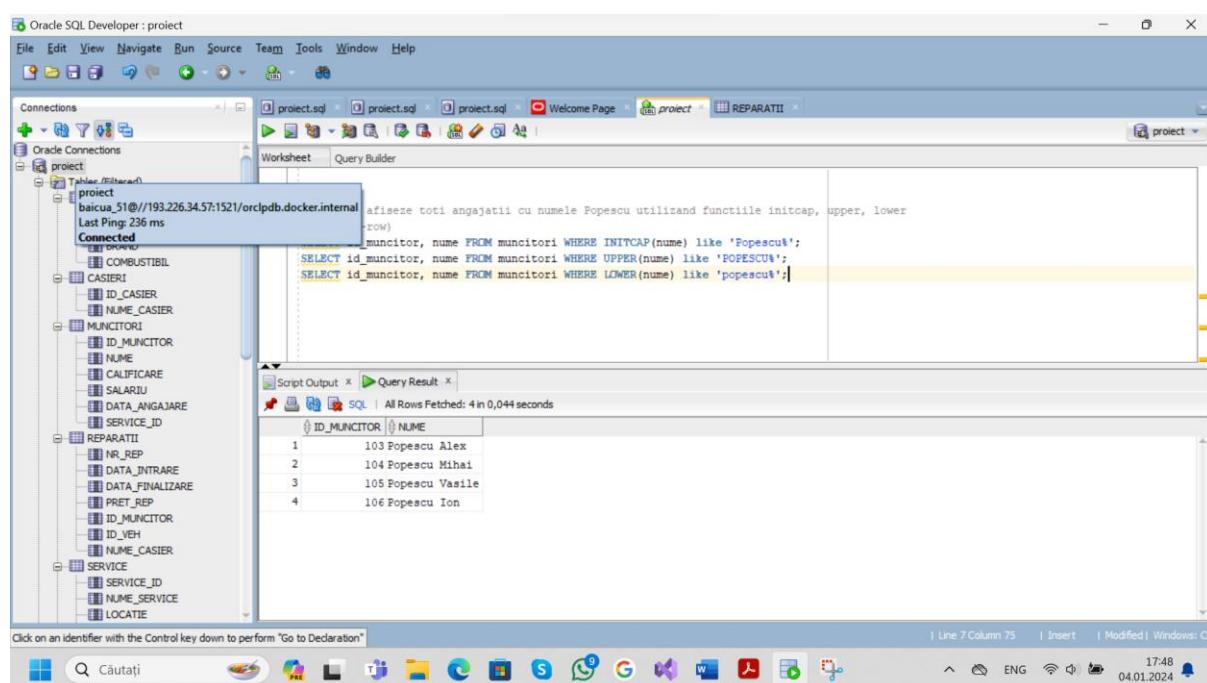
TOTAL_REPARATII	VENIT_TOTAL	CEA_MAI_MARE_VALOARE
1	356,32	356,32

6. Sa se afiseze toti angajatii cu numele Popescu utilizand functiile initcap, upper, lower
 (single-row)

SELECT id_muncitor, nume FROM muncitori WHERE INITCAP(nume) like 'Popescu%';

SELECT id_muncitor, nume FROM muncitori WHERE UPPER(nume) like 'POPESCU%';

SELECT id_muncitor, nume FROM muncitori WHERE LOWER(nume) like 'popescu%';



The screenshot shows the Oracle SQL Developer interface. The connections pane shows a connection named 'project' to 'baicu_51@//193.226.34.57:1521/orclpdb.docker.internal'. The workspace shows a query in the worksheet tab:

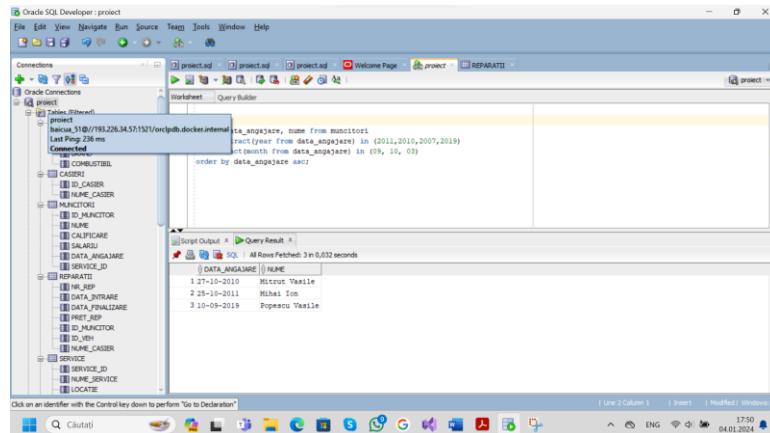
```
afiseaza toti angajatii cu numele Popescu utilizand functiile initcap, upper, lower
SELECT id_muncitor, nume FROM muncitori WHERE INITCAP(nume) like 'Popescu%';
SELECT id_muncitor, nume FROM muncitori WHERE UPPER(nume) like 'POPESCU%';
SELECT id_muncitor, nume FROM muncitori WHERE LOWER(nume) like 'popescu%';
```

The query result is displayed in the 'Query Result' tab:

ID_MUNCITOR	NUME
1	103 Popescu Alex
2	104 Popescu Mihai
3	105 Popescu Vasile
4	106 Popescu Ion

7. Sa se afiseze persoanele angajate in anii 2011, 2010, 2007 si 2019 lunile sep, oct, mar

```
select data_angajare, nume from muncitori
where extract(year from data_angajare) in (2011,2010,2007,2019)
and extract(month from data_angajare) in (09, 10, 03)
order by data_angajare asc;
```



The screenshot shows the Oracle SQL Developer interface. The workspace contains a query window with the following SQL code:

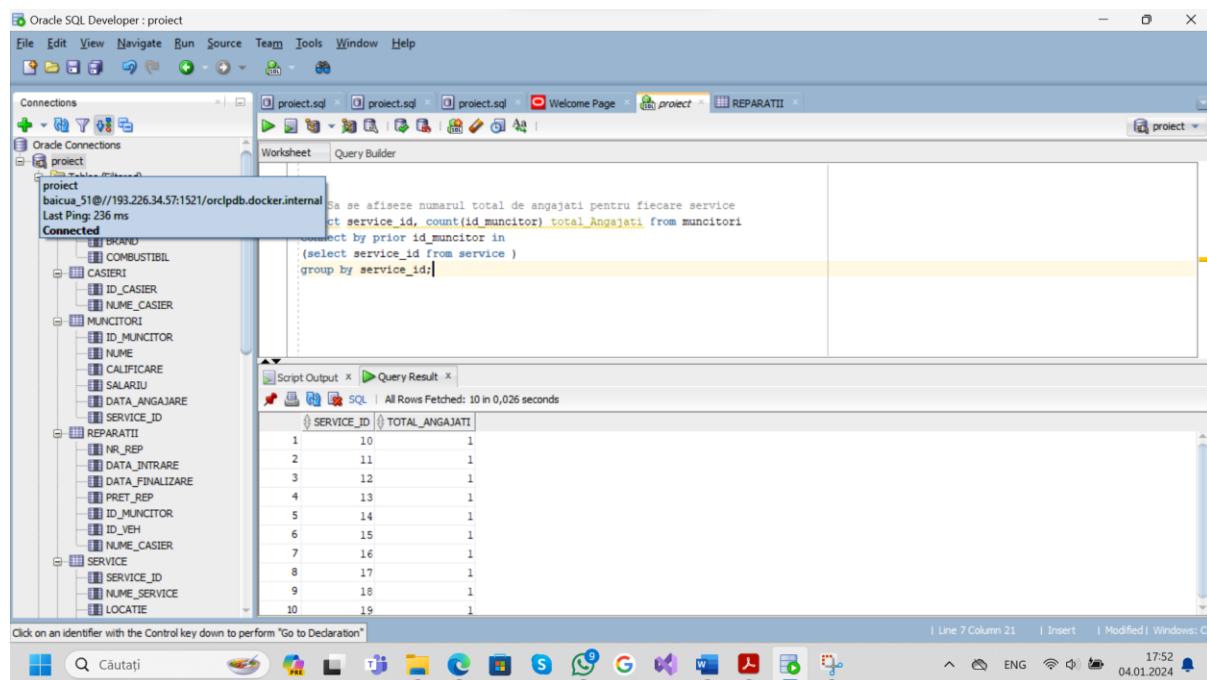
```
select data_angajare, nume from muncitori
where extract(year from data_angajare) in (2011,2010,2007,2019)
and extract(month from data_angajare) in (09, 10, 03)
order by data_angajare asc;
```

The script output shows the results:

DATA_ANGAJARE	NUME
1 27-10-2010	Mirnici Vasile
2 25-10-2011	Mihai Ion
3 10-09-2019	Popescu Vasile

8. Sa se afiseze numarul total de angajati pentru fiecare service

```
select service_id, count(id_muncitor) total_angajati from muncitori
connect by prior id_muncitor in
(select service_id from service )
group by service_id;
```



The screenshot shows the Oracle SQL Developer interface. The workspace contains a query window with the following SQL code:

```
Sa se afiseze numarul total de angajati pentru fiecare service
select service_id, count(id_muncitor) total_angajati from muncitori
connect by prior id_muncitor in
(select service_id from service )
group by service_id;
```

The script output shows the results:

SERVICE_ID	TOTAL_ANGAJATI
1	10
2	11
3	12
4	13
5	14
6	15
7	16
8	17
9	18
10	19

9. Sa se afiseze toti angajatii descendente dupa salariu incepand de la 2500 de lei

```
select id_muncitor, nume, salariu from muncitori
where salariu <= 2500
```

order by salariu desc;

The screenshot shows the Oracle SQL Developer interface. In the 'Worksheet' tab, there is a query window with the following SQL code:

```
select id_muncitor, nume, salariu from muncitor
where salariu <= 2500
order by salariu desc;
```

The results are displayed in a 'Query Result' table:

ID_MUNCITOR	NUME	SALARU
1	Mitrut Vasile	2400
2	Popescu Mihai	2200
3	Mihai Ion	2000
4	Mihai Ion	1600

10. Sa se realizeze o tabela virtuala cu toti muncitorii cu calificarea electrician

create view angajati_electricieni

as select id_muncitor, nume from muncitor

where calificare like 'Electrician';

select * from angajati_electricieni;

The screenshot shows the Oracle SQL Developer interface. In the 'Worksheet' tab, there is a query window with the following SQL code:

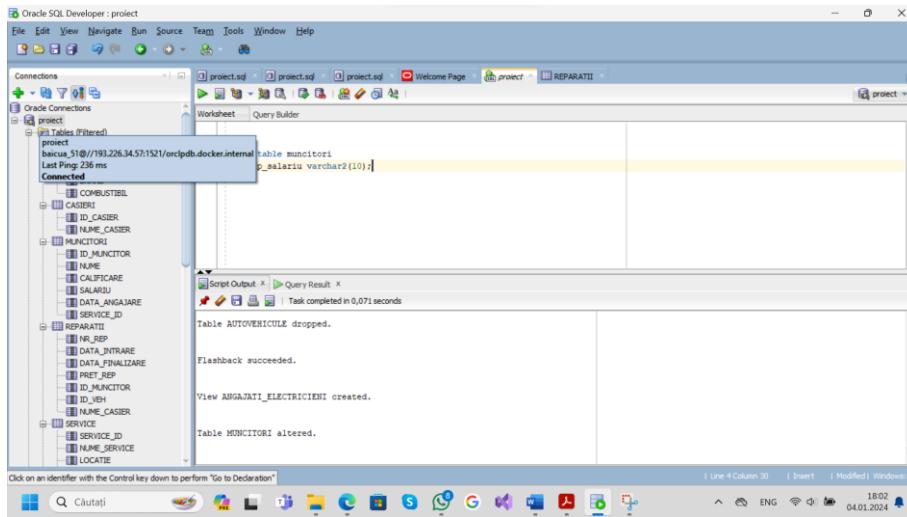
```
create view angajati_electricieni
as select id_muncitor, nume from muncitor
where calificare like 'Electrician';
select * from angajati_electricieni;
```

The results are displayed in a 'Query Result' table:

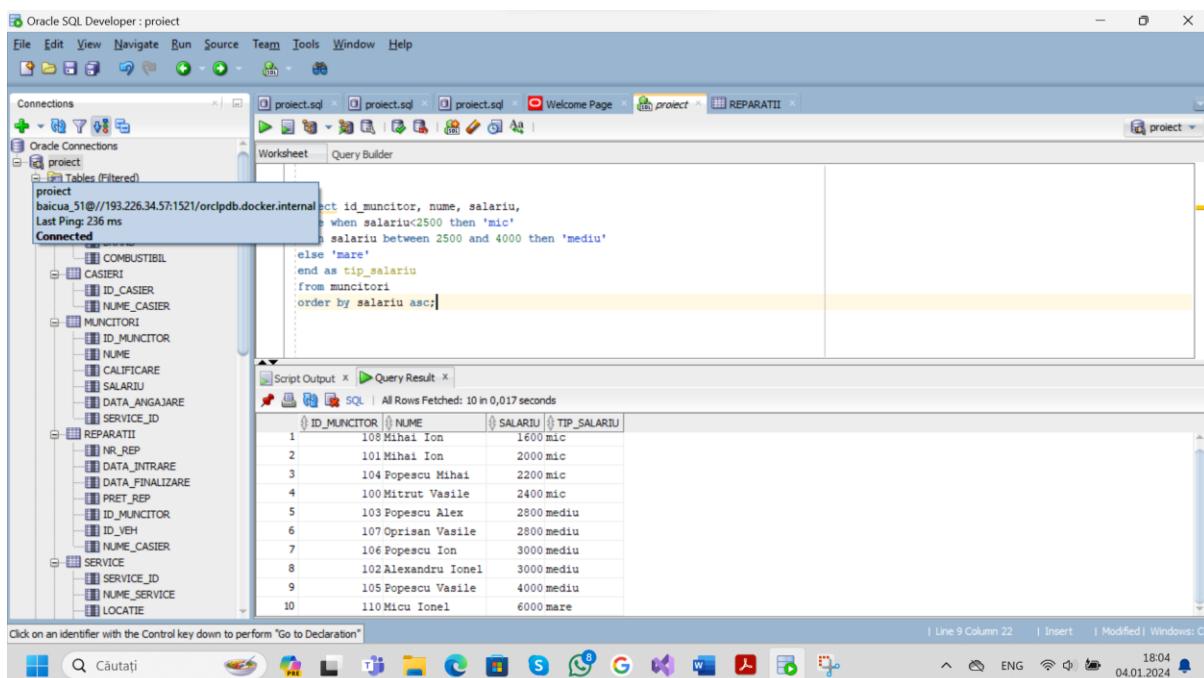
ID_MUNCITOR	NUME
104	Popescu Mihai
107	Oprisan Vasile

11. Sa se realizeze 2 metode de modificari asupra salariului

alter table muncitori
add tip_salariu varchar2(10);



```
select id_muncitor, nume, salariu,
case when salariu<2500 then 'mic'
when salariu between 2500 and 4000 then 'mediu'
else 'mare'
end as tip_salariu
from muncitori
order by salariu asc;
```



12. Maresti salariul vopsitorilor cu 20%
update muncitori

```
set salariu=salariu+0.2*salariu
where calificare='Vopsitor';
select venit from service;
```

The screenshot shows the Oracle SQL Developer interface. In the top navigation bar, the connection is set to 'baicu_51@//193.226.34.57:1521/orclpdb.docker.internal'. The workspace contains a worksheet with the following SQL code:

```
update muncitor
set salariu=salariu+0.2*salariu
where calificare='Vopsitor';
select venit from service;
```

The 'Script Output' tab shows the results of the query:

VENIT
1 12321
2 10322
3 9320
4 3213
5 15435
6 14323
7 20321
8 32323
9 50324
10 60231

13. Sa se selecteze toti muncitorii care au reparat doar vehicule mercedes cu combustibil diesel

```
select r.id_muncitor, m.nume, a.brand, a.combustibil from muncitori m,
reparatii r, autovehicule a
where m.id_muncitor=r.id_muncitor and r.id_veh=a.id_veh and a.brand =
'mercedes' and a.combustibil='diesel';
```

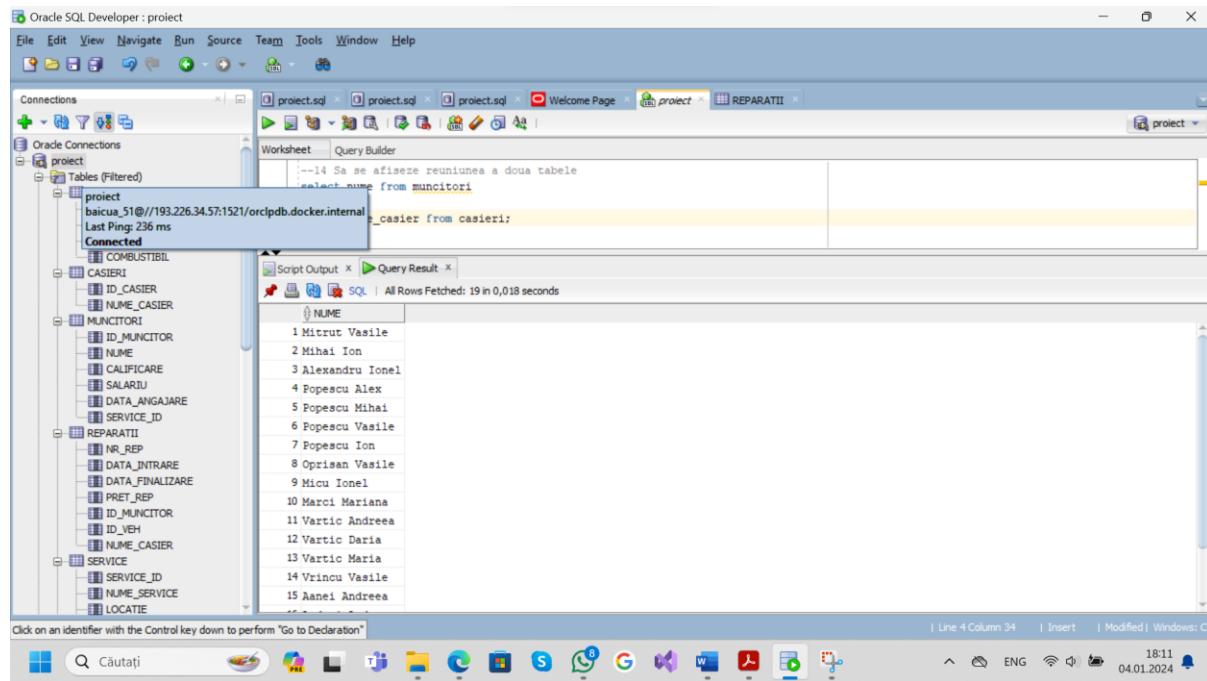
The screenshot shows the Oracle SQL Developer interface. In the top navigation bar, the connection is set to 'baicu_51@//193.226.34.57:1521/orclpdb.docker.internal'. The workspace contains a worksheet with the following SQL code:

```
-- selecteaza toti muncitorii care au reparat doar vehicule mercedes cu combustibil diesel
select r.id_muncitor, m.nume, a.brand, a.combustibil
from muncitori m, reparatii r, autovehicule a
where m.id_muncitor=r.id_muncitor and r.id_veh=a.id_veh and a.brand = 'mercedes' and a.combustibil='diesel';
```

The 'Script Output' tab shows the results of the query:

ID_MUNCITOR	NUME	BRAND	COMBUSTIBIL
104	Popescu Mihai	mercedes	diesel
106	Popescu Ion	mercedes	diesel
106	Popescu Ion	mercedes	diesel

14. Sa se afiseze reunirea a doua tabele
select nume from muncitori
union
select nume_casier from casieri;



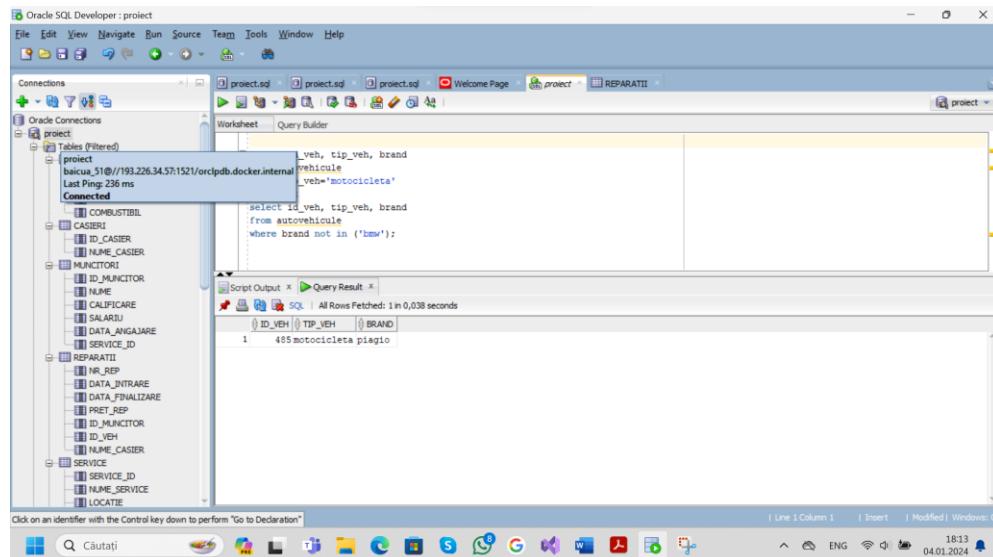
The screenshot shows the Oracle SQL Developer interface. The 'Connections' pane on the left shows a connection named 'project' to 'baicu_51@//193.226.34.57:1521/orclpdb.docker.internal'. The 'Tables (Filtered)' section lists tables such as 'COMBUSTIBIL', 'CASIERI', 'MUNCITORI', 'REPARATII', 'SERVICE', and 'LOCATIE'. The 'Worksheet' pane contains the following SQL query:

```
--14 Sa se afiseze reunirea a doua tabele
select nume from muncitori
union
select nume_casier from casieri;
```

The 'Query Result' pane displays the results of the query:

NUME
1 Mitruț Vasile
2 Mihai Ion
3 Alexandru Ionel
4 Popescu Alex
5 Popescu Mihai
6 Popescu Vasile
7 Popescu Ion
8 Oprisan Vasile
9 Micu Ionei
10 Marci Mariana
11 Vartic Andreia
12 Vartic Daria
13 Vartic Maria
14 Vrincu Vasile
15 Aanei Andreea

15. Sa se selecteze motocicletele dar care nu au brandul bmw
select id_veh, tip_veh, brand
from autovehicule
where tip_veh='motocicleta'
intersect
select id_veh, tip_veh, brand
from autovehicule
where brand not in ('bmw');



The screenshot shows the Oracle SQL Developer interface. The 'Connections' pane on the left shows a connection named 'project' to 'baicu_51@//193.226.34.57:1521/orclpdb.docker.internal'. The 'Tables (Filtered)' section lists tables such as 'COMBUSTIBIL', 'CASIERI', 'MUNCITORI', 'REPARATII', 'SERVICE', and 'LOCATIE'. The 'Worksheet' pane contains the following SQL query:

```
select id_veh, tip_veh, brand
from autovehicule
where tip_veh='motocicleta'
intersect
select id_veh, tip_veh, brand
from autovehicule
where brand not in ('bmw');
```

The 'Query Result' pane displays the results of the query:

ID_VEH	TIPI_VEH	BRAND
1	485	motocicleta

16. Sa se afiseze vehicule ce au fost reparate cu brand-ul bmw

```
select a.id_veh, a.tip_veh, a.brand, r.nr_rep, r.pret_rep
from autovehicule a
inner join reparatii r on
a.id_veh=r.id_veh
where brand = 'bmw';
```

The screenshot shows the Oracle SQL Developer interface. The 'Connections' panel on the left shows a connection named 'project' to 'baicua_51@//193.226.34.57:1521/orclpdb.docker.internal'. The 'Worksheet' tab contains the SQL query from question 16. The 'Script Output' tab shows the results of the query, which are:

ID_VEH	TIPO_VEH	BRAND	NR REP	PRET REP
1	159 motocicleta	bmw	12443	356,32
2	332 motocicleta	bmw	12408	3214
3	568 motocicleta	bmw	12403	555
4	486 masina	bmw	12434	555

17. Sa se realizeze o tabela virtuala cu toate reparatiile ce au valoarea mai mare de 300 de lei si sa se stearga cele care au valoarea mai mica de 400 de lei

```
create view reparatii_medii
as select * from reparatii
where pret_rep > 300;
delete from reparatii_medii
where pret_rep < 400;
```

The screenshot shows the Oracle SQL Developer interface. In the Connections pane, a connection named 'project' is selected. In the Worksheet pane, a query is being run:

```
CREATE OR REPLACE VIEW REPARATII_MEDIU AS
SELECT * FROM reparatii
WHERE pret_rep > 300;
DELETE FROM reparatii
WHERE pret_rep<400;
```

The Script Output pane shows the results of the query execution:

```
ORA-00905: cuvant cheie lipse?
00905. 00000 - "missing keyword"
*Cause:
*Action:
View REPARATII_MEDIU created.

0 rows deleted.

3 rows deleted.
```

18. Sa se creeze un sinonim pentru tabela Muncitori
create synonym nume for muncitori;
select* from user_synonyms;
drop synonym nume;

The screenshot shows the Oracle SQL Developer interface. In the Connections pane, a connection named 'project' is selected. In the Worksheet pane, a query is being run:

```
CREATE SYNONYM nume FOR muncitori;
SELECT * FROM user_synonyms;
DROP SYNONYM nume;
```

The Script Output pane shows the results of the query execution:

```
0 rows deleted.

3 rows deleted.

Synonym NUME created.

Synonym NUME dropped.
```

19. Să se afișeze perioada de timp corespunzătoare (în săptămâni) între data încheierii comenzi și data curentă:

SELECT

r.nr_rep,

ROUND((SYSDATE - r.data_finalizare) / 7) AS perioada_in_saptamani

FROM reparatii r;

The screenshot shows the Oracle SQL Developer interface with a query window containing the following SQL code:

```
SELECT
    r.nr_reparatie,
    ROUND((SYSDATE - r.data_finalizare) / 7) AS perioada_in_saptamani
FROM
    reparatii r;
```

The results are displayed in a table titled "Query Result" with columns "NR_REP" and "PERIOADA_IN_SAPTAMANI". The data is as follows:

NR_REP	PERIOADA_IN_SAPTAMANI
1	12408
2	12403
3	12434
4	12643
5	12545
6	12654
7	12435

20. Să se afișeze comenzi și data încheierii în formatul initial și în formatul "MM/YY".

The screenshot shows the Oracle SQL Developer interface with a query window containing the following SQL code:

```
SELECT
    r.nr_reparatie,
    TO_CHAR(data_finalizare, 'DD.MM') AS data_incheierii_format_initial
FROM
    reparatii r;
```

The results are displayed in a table titled "Query Result" with columns "DATA_FINALIZARE" and "DATA_INCHEIERII_FORMAT_INITIAL". The data is as follows:

DATA_FINALIZARE	DATA_INCHEIERII_FORMAT_INITIAL
1 30-11-2020	30.11
2 06-08-2020	06.08
3 06-09-2021	06.09
4 16-03-2022	16.03
5 20-03-2021	20.03
6 26-04-2021	26.04
7 30-06-2021	30.06

21. Sa se extraga luna din data finalizarii, apoi folosind **substr** sa obtine primele 5 caractere (ziua si luna), reparatiei cu id-ul=12408.

```
SELECT rep,
       data_finalizare,
       TRACT(MONTH FROM data_finalizare) AS luna_incheiere,
       BSTR(TO_CHAR(data_finalizare, 'DD.MM.YYYY'), 1, 5) AS ziua_si_luna_incheiere
FROM reparatii
WHERE nr_rep = 12408;
```

NR REP	DATA_FINALIZARE	LUNA_INCHEIERE	ZIUA_SI_LUNA_INCHEIERE
1	12408 30-11-2020	11	30.11

22. Sa se creeze o secventa pentru asigurarea unicitatii cheii primare din tabela casieri

```
create sequence seq_id_casier
  start with 121 increment by 10
  max value 130 nocycle; drop sequence seq_id_casier;
```

Script Output X | Query Result X

*Cause:
*Action:
0 rows deleted.
Sequence SEQ_ID_CASIER created.