



PROIECT

BAZE DE DATE

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Seria C

Grupa 1051

1. DESCRIEREA PROBLEMEI

Proiectul are ca scop evidența unui aeroport. Proiectul conține noțiuni fundamentale de baze de date, descrierea lucrării, tabele, atribute, relații, restricții, schema tabelelor, codul SQL pentru tabele și comenzi SQL.

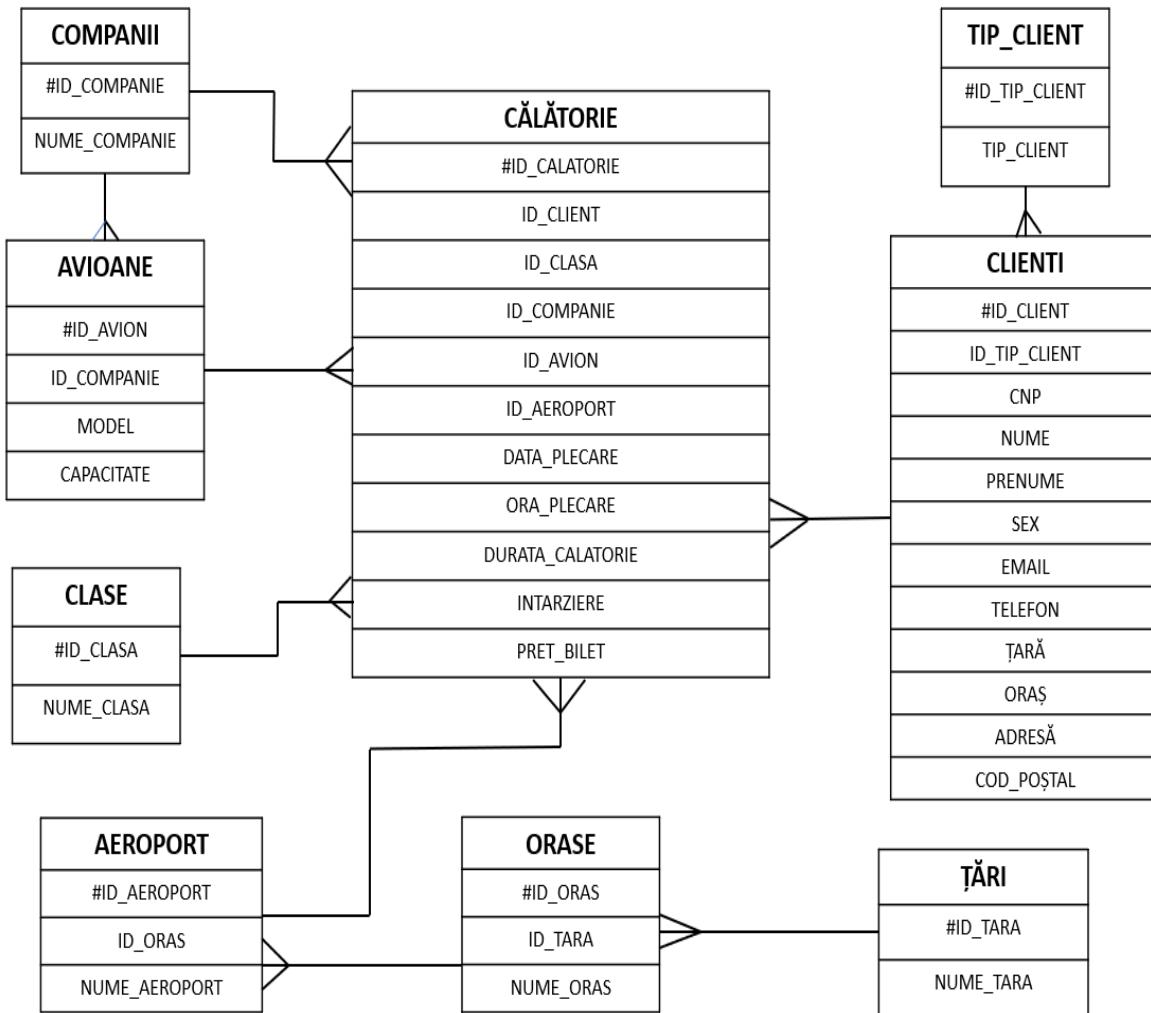
Acesta bază de date conține informații despre clienți (id, nume, prenume, cnp, date de contact, adresa) și tipul acestora (persoană juridică sau fizică), clase (business sau economic) companiile aeriene și avioanele deținute de acestea, aeroporturile, orașele și țările de unde au loc zborurile, cât și o evidență clară a tuturor călătoriilor (data și ora plecării, durata zborului, întârzieri, prețul biletelor).

Tema aleasă are ca scop organizarea, evidența și gestiunea clientilor, călătoriilor și a altor elemente dintr-un aeroport. Așadar această bază de date corespunde nevoilor organizatorice și de gestiune ale unui aeroport deoarece:

- **baza de date** păstrează înregistrarea întregii activități, realizând activitatea mai ușor de gestionat;
- **baza de date** prezintă legături logice între principalele elemente din proiect (clienți, călătorii, avioane, aeroporturi, companii aeriene etc.);

ENTITĂȚI	TIP RELAȚIE	RELAȚII
1. TIP_CLIENT - CLIENTI	One to many	Mai mulți clienți pot fi persoane fizice sau persoane juridice. O persoană fizică sau juridică poate fi un singur client.
2. CLIENTI - CALATORIE	One to many	Un client poate avea mai multe călătorii. O călătorie poate apartine unui singur client.
3. COMPANII - CALATORIE	One to many	O companie poate organiza mai multe călătorii. O călătorie poate fi organizată de o singură companie.
4. COMPANII - AVIOANE	One to many	O companie poate detine mai multe avioane. Un avion poate fi deținut de o singură companie.
5. AVIOANE - CALATORIE	One to many	Un avion poate realiza mai multe călătorii. O călătorie poate fi realizată doar de un avion.
6. CLASE - CALATORIE	One to many	Atât clasa business, cât și clasa economic pot organiza mai multe călătorii. O călătorie poate fi organizată de o singură clasă (economic sau business).
7. AEROPORT - CALATORIE	One to many	Pe un aeroport au loc mai multe zboruri. Un zbor poate avea loc doar de pe un singur aeroport.
8. ORASE - AEROPORT	One to many	Un oraș poate avea mai multe aeroporturi. Un aeroport aparține doar unui oraș.
9. TARI - ORASE	One to many	O țară are mai multe orașe. Un oraș aparține doar unei țări.

2. SCHEMA BAZEI DE DATE



3. CREAREA TABELELOR

- **TABELA TIP_CLIENT:**

```
create table TIP_CLIENT (
    ID_TIP_CLIENT number(5) primary key,
    TIP_CLIENT varchar2(20)
constraint TIP_CLIENT_CK check(TIP_CLIENT in('PERSOANA FIZICA', 'PERSOANA JURIDICA'));
```

- **TABELA CLIENTI:**

```
create table CLIENTI (
    ID_CLIENT number(5) primary key,
    ID_TIP_CLIENT number(5),
    CNP number(13),
    NUME varchar2(20),
    PRENUME varchar2(20),
    SEX varchar2(10),
    EMAIL varchar2(30),
    TELEFON varchar2(15),
    TARA varchar2(20),
    ORAS varchar2(20),
    ADRESA varchar2(30),
    COD_POSTAL number(6),
constraint ID_TIP_CLIENT_FK foreign key(ID_TIP_CLIENT) references
TIP_CLIENT(ID_TIP_CLIENT),
constraint CNP_UQ unique(CNP),
constraint NUME_nn check(NUME is not null),
constraint SEX_CK check(SEX in('FEMININ', 'MASCULIN')));
```

- **TABELA COMPANII:**

```
create table COMPANII (
    ID_COMPANIE number(5) primary key,
    NUME_COMPANIE varchar2(20));
```

- **TABELA CLASA:**

```
create table CLASA (
    ID_CLASA number(3) primary key,
    NUME_CLASA varchar2(10)
constraint NUME_CLASA_CK check(NUME_CLASA in('ECONOMIC', 'BUSINESS')));
```

- **TABELA AVIOANE:**

```
create table AVIOANE (
    ID_AVION number(5) primary key,
    ID_COMPANIE number(5),
    MODEL varchar2(20),
    CAPACITATE number(4),
constraint ID_COMPANIE_FK foreign key(ID_COMPANIE) references
COMPANII(ID_COMPANIE));
```

- **TABELA TARI:**

```
create table TARI
    (ID_TARA number(5) primary key,
    NUME_TARA varchar2(20));
```

- **TABELA ORASE:**

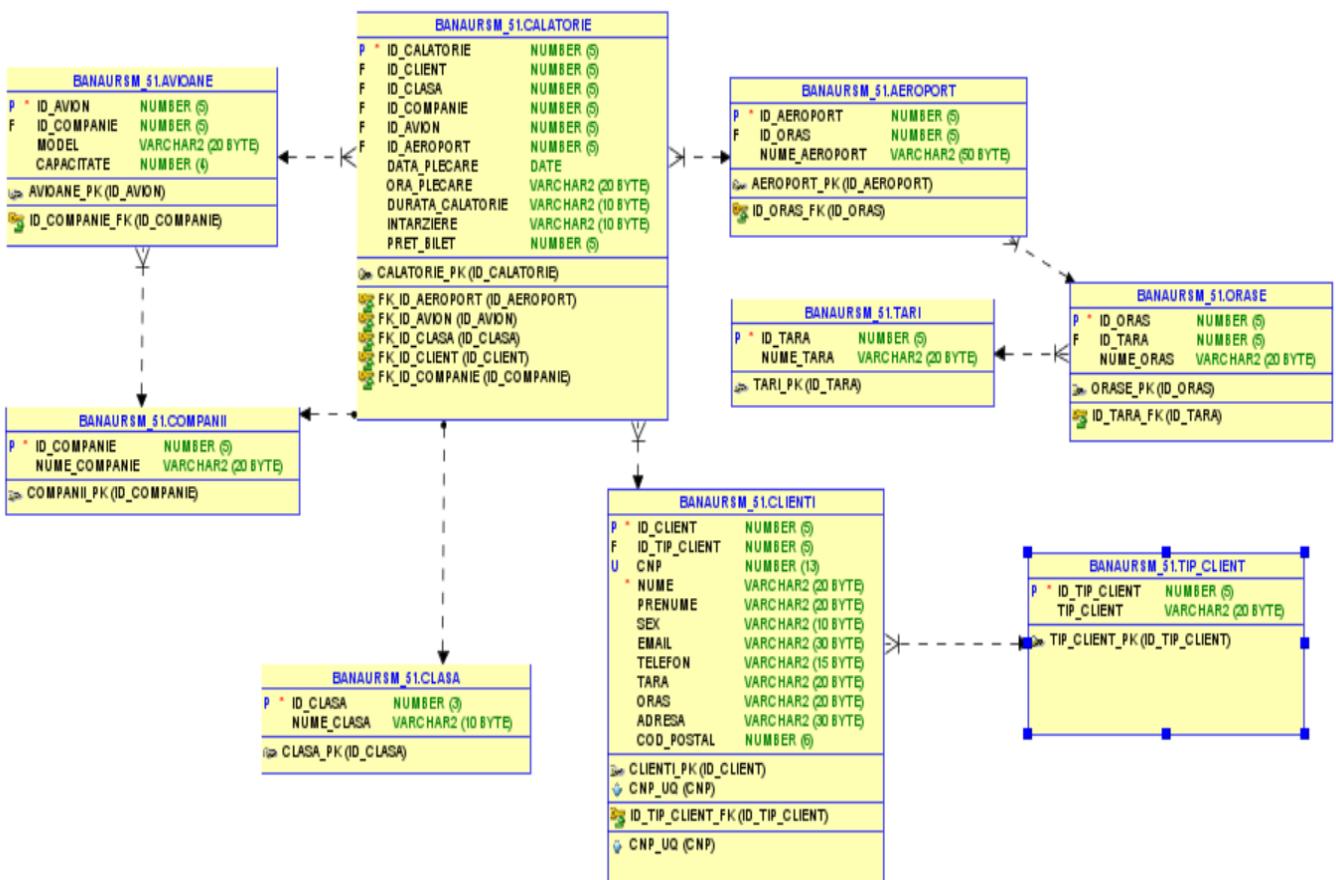
```
create table ORASE
    (ID_ORAS number(5) primary key,
    ID_TARA number(5),
    NUME_ORAS varchar2(20),
constraint ID_TARA_FK foreign key(ID_TARA) references TARI(ID_TARA));
```

- **TABELA AEROPORT:**

```
create table AEROPORT  
(ID_AEROPORT number(5) primary key,  
ID_ORAS number(5),  
NUME_AEROPORT varchar2(50),  
constraint ID_ORAS_FK foreign key(ID_ORAS) references ORASE(ID_ORAS));
```

- **TABELA CALATORIE:**

```
create table CALATORIE (  
ID_CALATORIE number(5) primary key,  
ID_CLIENT number(5),  
ID_CLASA number(5),  
ID_COMPANIE number(5),  
ID_AVION number(5),  
ID_AEROPORT number(5),  
DATA_PLECARE date,  
ORA_PLECARE varchar2(20),  
DURATA_CALATORIE varchar2(10),  
INTARZIERE varchar2(10),  
PRET_BILET number(5),  
constraint FK_ID_CLIENT foreign key(ID_CLIENT) references CLIENTI(ID_CLIENT),  
constraint FK_ID_CLASA foreign key(ID_CLASA) references CLASA(ID_CLASA),  
constraint FK_ID_COMPANIE foreign key(ID_COMPANIE) references  
COMPANII(ID_COMPANIE),  
constraint FK_ID_AVION foreign key(ID_AVION) references AVIOANE(ID_AVION),  
constraint FK_ID_AEROPORT foreign key(ID_AEROPORT) references  
AEROPORT(ID_AEROPORT);
```



4. ADĂUGAREA DE ÎNREGISTRĂRI ÎN FIECARE TABELĂ

- Adaugarea inregistrarilor in tabela TIP_CLIENT:

```

insert into TIP_CLIENT values (101, 'PERSONA FIZICA');

insert into TIP_CLIENT values (102, 'PERSONA FIZICA');

insert into TIP_CLIENT values (103, 'PERSONA JURIDICA');

insert into TIP_CLIENT values (104, 'PERSONA FIZICA');

insert into TIP_CLIENT values (105, 'PERSONA JURIDICA');

insert into TIP_CLIENT values (106, 'PERSONA JURIDICA');

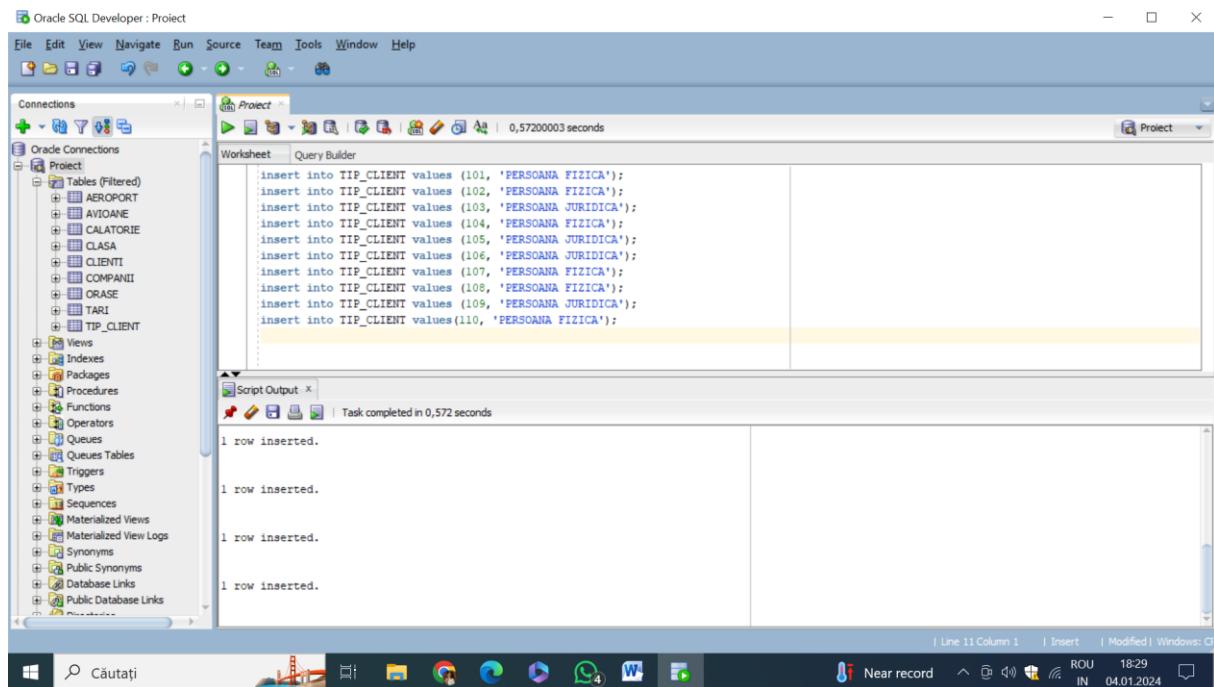
insert into TIP_CLIENT values (107, 'PERSONA FIZICA');

insert into TIP_CLIENT values (108, 'PERSONA FIZICA');

insert into TIP_CLIENT values (109, 'PERSONA JURIDICA');

insert into TIP_CLIENT values(110, 'PERSONA FIZICA');

```



- **Adaugarea inregistrarilor in tabela CLIENTI:**

```
insert into CLIENTI values(111,101, 1921203735981, 'Banaurs', 'Magdalena', 'FEMININ',  
'banaurs.magdalena@gmail.com', '0725.946.780', 'Romania', 'Buzau', 'strada Armoniei,  
nr.898', 127070);
```

```
insert into CLIENTI values(112,102, 1800223338845, 'George', 'Andrei','MASCULIN', 'george-  
andrei25@gmail.com', '0774.734.855', 'Romania', 'Iasi', 'strada Traian, nr. 123', 634210);
```

```
insert into CLIENTI values(113,103, 2780630678239, 'Dragan', 'Silviu', 'MASCULIN',  
'dragan.silviu78@hotmail.com', '0758.933.990', 'Romania', 'Brasov', 'strada Decebal, nr. 14',  
736839);
```

```
insert into CLIENTI values(114,104, 2801020375912, 'Marinescu', 'Oana',  
'FEMININ','marinescu.oana20@yahoo.com', '0767.873,890', 'Romania', 'Constanta', 'strada  
Herta, nr. 10', 627267);
```

```
insert into CLIENTI values(115,105, 1890225764329, 'Grigore', 'Florin', 'MASCULIN',  
'grigore.florin98@yahoo.com', '0766.552.611', 'Romania', 'Urziceni', 'strada Teilor, nr. 7',  
952300);
```

```
insert into CLIENTI values(116,106, 2690412754387, 'Neagu', 'Diana',  
'FEMININ','neagu.diana44@hotmail.com', '0735.856.890', 'Romania', 'Bucuresti', 'strada C-  
tin Brancusi, nr. 24', 573907);
```

```
insert into CLIENTI values(117,107, 2920511657493, 'Nedelcu', 'Elena',  
'FEMININ','elena.nedelcu11@yahoo.com', '0775.121.829', 'Romania', 'Bucuresti', 'strada  
Codlea, nr. 91',383647);
```

```

insert into CLIENTI values(118,108, 1901221876543, 'Stanciu', 'Vlad', 'MASCULIN',
'vlad.stanciu21@gmail.com', '0747.985.214', 'Romania', 'Craiova', 'strada Cobalcescu, nr.
23',847658);

insert into CLIENTI values(119,109, 2891101420061, 'Safta', 'Madalina',
'FEMININ','mada.safta@hotmail.com', '0775.697.039', 'Romania', 'Vaslui', 'strada Lalelelor,
nr. 20',746589);

insert into CLIENTI values(120,110, 1600616758264, 'Radu', 'Sorin', 'MASCULIN',
'radu_sorin@gmail.ro', '0766.875.967', 'Romania', 'Slobozia', 'strada Socolui, nr. 86',387568);

select * from clienti;

```

The screenshot shows the Oracle SQL Developer interface. In the 'Worksheet' tab, a multi-line SQL script is pasted, which inserts 119 rows into the 'CLIENTI' table. The 'Script Output' tab below it shows the results of the query, displaying 119 rows of data. The columns are labeled: ID_CLIENT, ID_TIP_CLIENT, CNP_NUME, PRENUME, SEX, EMAIL, TELEFON, and TARA. The data includes various names, genders, emails, and phone numbers, mostly from Romania.

ID_CLIENT	ID_TIP_CLIENT	CNP_NUME	PRENUME	SEX	EMAIL	TELEFON	TARA
111	101	1.9212E+12	Banaura	FEMININ	banaura.magdalena@gmail.com	0725.946.780	Romania
112	102	1.8002E+12	George	MASCULIN	george.andrei25@gmail.com	0774.734.855	Romania
113	103	2.7806E+12	Dragan	MASCULIN	dragan.silviu78@hotmail.com	0758.933.990	Romania
114	104	2.8010E+12	Marinescu	FEMININ	marinescu.oana20@yahoo.com	0767.873.890	Romania
115	105	1.8902E+12	Grigore	MASCULIN	grigore.florin8@yahoo.com	0766.552.611	Romania
116	106	2.6904E+12	Neagu	FEMININ	neagu.diana44@hotmail.com	0735.856.890	Romania
117	107	2.9205E+12	Nedelcu	FEMININ	elena.nedelcul1@yahoo.com	0775.121.829	Romania
118	108	1.9012E+12	Stanciu	MASCULIN	vlad.stanciu21@gmail.com	0747.985.214	Romania
119	109	2.8911E+12	Safta	FEMININ	mada.safta@hotmail.com	0775.697.039	Romania

- Adaugarea inregistrarilor in tabela COMPANII:

```

insert into COMPANII values(211, 'Blue Air');

insert into COMPANII values(212, 'TAROM');

insert into COMPANII values(213, 'Al Italia');

insert into COMPANII values(214, 'Air France');

insert into COMPANII values(215, 'Wizz Air');

insert into COMPANII values(216, 'Lufthansa');

```

```

insert into COMPANII values(217, 'TAROM');

insert into COMPANII values(218, 'KLM');

insert into COMPANII values(219, 'American Airlines');

insert into COMPANII values(220, 'Etihad Airways');

select * from companii;

```

The screenshot shows the Oracle SQL Developer interface. The 'Worksheet' tab displays the following SQL script:

```

insert into COMPANII values(211, 'Blue Air');
insert into COMPANII values(212, 'TAROM');
insert into COMPANII values(213, 'Al Italia');
insert into COMPANII values(214, 'Air France');
insert into COMPANII values(215, 'Wizz Air');
insert into COMPANII values(216, 'Lufthansa');
insert into COMPANII values(217, 'TAROM');
insert into COMPANII values(218, 'KLM');
insert into COMPANII values(219, 'American Airlines');
insert into COMPANII values(220, 'Etihad Airways');
select * from companii;

```

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

```

213 Al Italia
214 Air France
215 Wizz Air
216 Lufthansa
217 TAROM
218 KLM
219 American Airlines
220 Etihad Airways
10 rows selected.

```

- Adaugarea inregistrarilor in tabela CLASA :**

```

insert into CLASA values(311, 'BUSINESS');

insert into CLASA values(312, 'ECONOMIC');

insert into CLASA values(313, 'BUSINESS');

insert into CLASA values(314, 'ECONOMIC');

insert into CLASA values(315, 'ECONOMIC');

insert into CLASA values(316, 'BUSINESS');

insert into CLASA values(317, 'ECONOMIC');

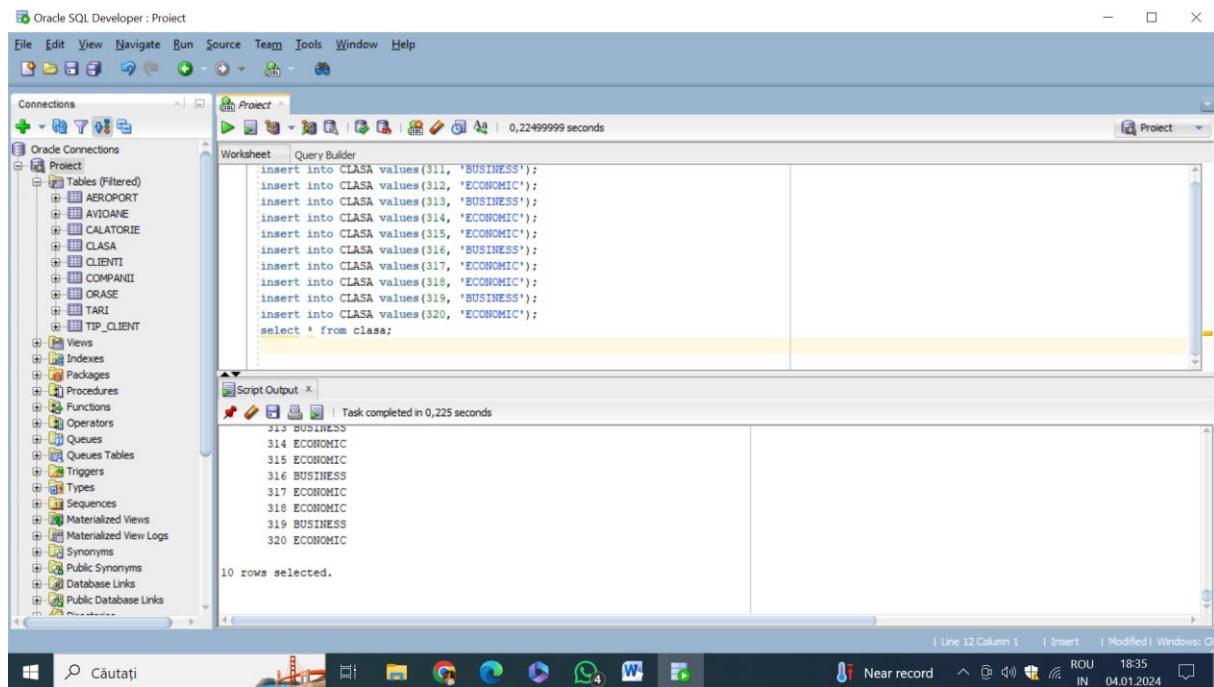
insert into CLASA values(318, 'ECONOMIC');

insert into CLASA values(319, 'BUSINESS');

insert into CLASA values(320, 'ECONOMIC');

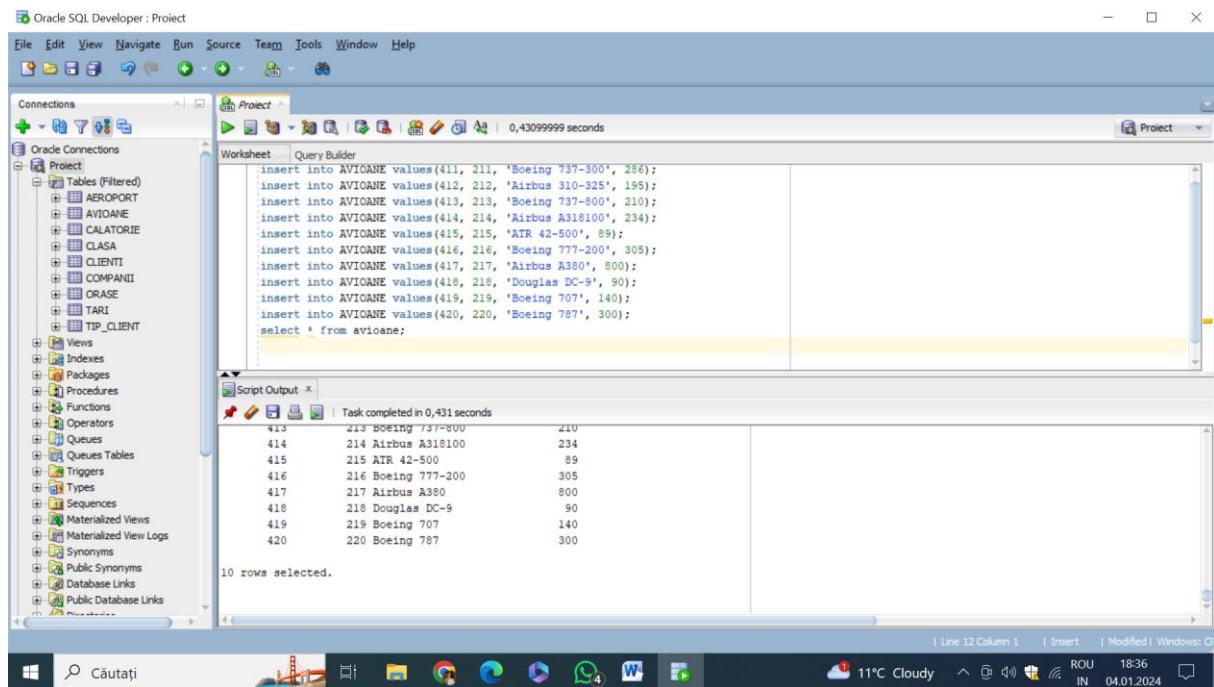
select * from clasa;

```



- **Adaugarea inregistrarilor in tabela AVIOANE :**

```
insert into AVIOANE values(411, 211, 'Boeing 737-300', 286);
insert into AVIOANE values(412, 212, 'Airbus 310-325', 195);
insert into AVIOANE values(413, 213, 'Boeing 737-800', 210);
insert into AVIOANE values(414, 214, 'Airbus A318100', 234);
insert into AVIOANE values(415, 215, 'ATR 42-500', 89);
insert into AVIOANE values(416, 216, 'Boeing 777-200', 305);
insert into AVIOANE values(417, 217, 'Airbus A380', 800);
insert into AVIOANE values(418, 218, 'Douglas DC-9', 90);
insert into AVIOANE values(419, 219, 'Boeing 707', 140);
insert into AVIOANE values(420, 220, 'Boeing 787', 300);
select * from avioane;
```



- Adaugarea inregistrarilor in tabela TARI :**

```
insert into TARI values(511, 'Romania');
```

```
insert into TARI values(512, 'Germania');
```

```
insert into TARI values(513, 'Italia');
```

```
insert into TARI values(514, 'Franta');
```

```
insert into TARI values(515, 'Canada');
```

```
insert into TARI values(516, 'Grecia');
```

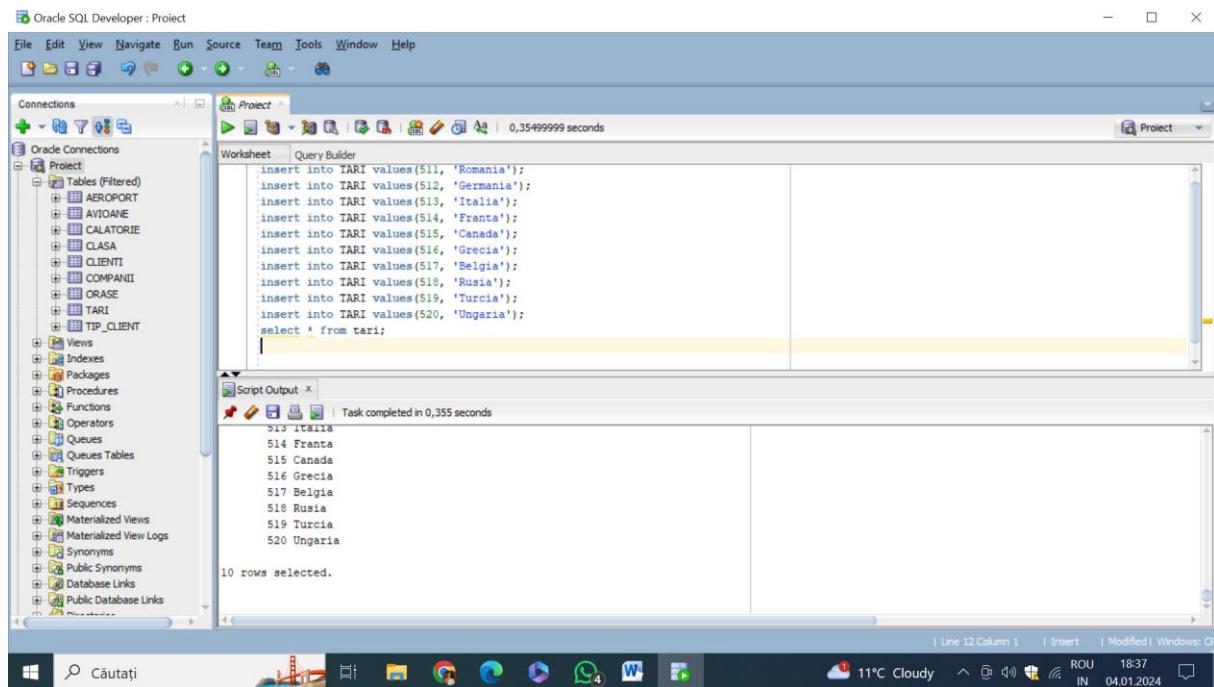
```
insert into TARI values(517, 'Belgia');
```

```
insert into TARI values(518, 'Rusia');
```

```
insert into TARI values(519, 'Turcia');
```

```
insert into TARI values(520, 'Ungaria');
```

```
select * from tari;
```



- **Adaugarea inregistrarilor in tabela ORASE :**

```
insert into ORASE values(611, 511, 'Bucuresti');

insert into ORASE values(612, 512, 'Berlin');

insert into ORASE values(613, 513, 'Roma');

insert into ORASE values(614, 514, 'Paris');

insert into ORASE values(615, 515, 'Montréal');

insert into ORASE values(616, 516, 'Atena');

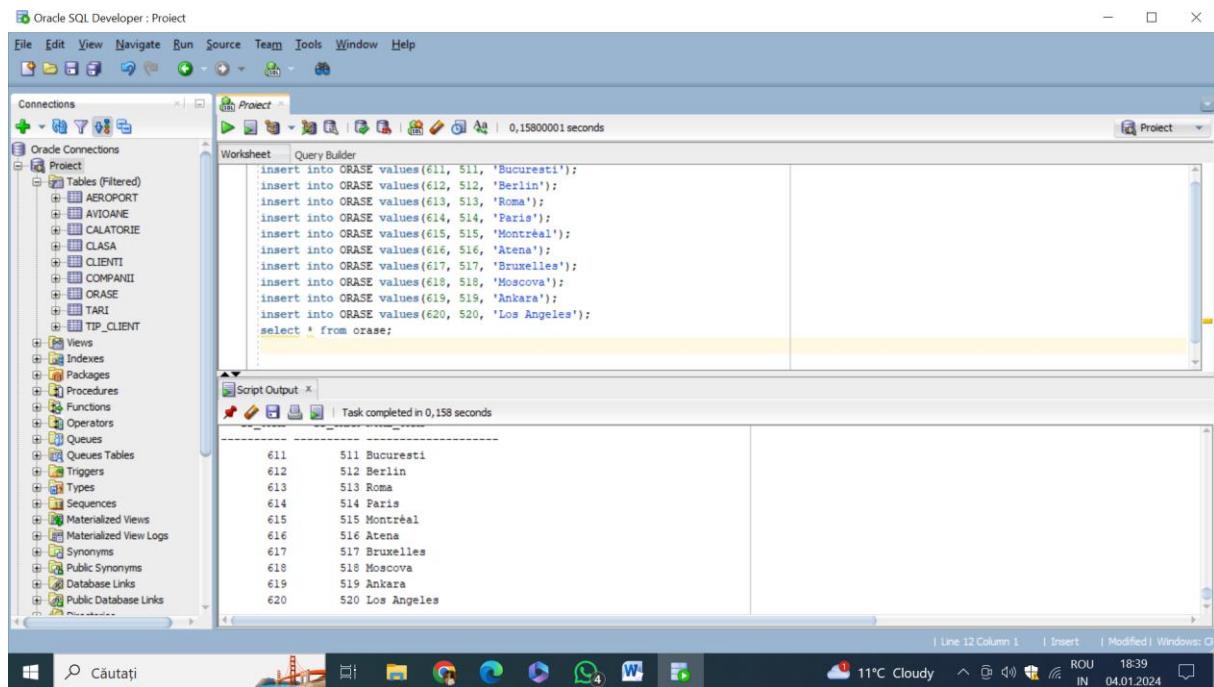
insert into ORASE values(617, 517, 'Bruxelles');

insert into ORASE values(618, 518, 'Moscova');

insert into ORASE values(619, 519, 'Ankara');

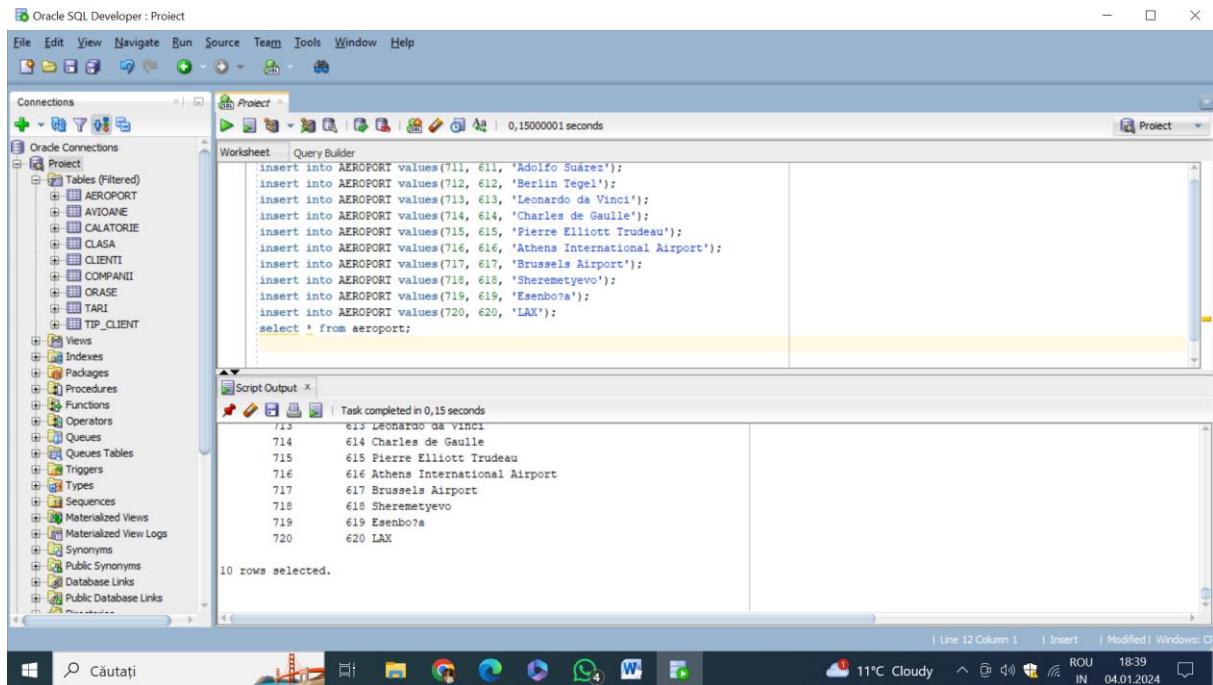
insert into ORASE values(620, 520, 'Los Angeles');

select * from orase;
```



- Adaugarea inregistrarilor in tabela AEROPORT :**

```
insert into AEROPORT values(711, 611, 'Adolfo Suárez');
insert into AEROPORT values(712, 612, 'Berlin Tegel');
insert into AEROPORT values(713, 613, 'Leonardo da Vinci');
insert into AEROPORT values(714, 614, 'Charles de Gaulle');
insert into AEROPORT values(715, 615, 'Pierre Elliott Trudeau');
insert into AEROPORT values(716, 616, 'Athens International Airport');
insert into AEROPORT values(717, 617, 'Brussels Airport');
insert into AEROPORT values(718, 618, 'Sheremetyevo');
insert into AEROPORT values(719, 619, 'Esenbo?a');
insert into AEROPORT values(720, 620, 'LAX');
select * from aeroport;
```



- Adaugarea inregistrarilor in tabela CALATORIE :**

```
insert into CALATORIE values(801, 111, 311, 211, 411, 711,
to_date('01.01.2024','dd.mm.yyyy'), '09:00', '4 ore', '15 minute', 450);
```

```
insert into CALATORIE values(802, 112, 312, 212, 412, 712,
to_date('02.02.2024','dd.mm.yyyy'), '14:30', '2 ore', '30 minute', 400);
```

```
insert into CALATORIE values(803, 113, 313, 213, 413, 713,
to_date('03.03.2024','dd.mm.yyyy'), '18:45', '3 ore','fara', 289);
```

```
insert into CALATORIE values(804, 114, 314, 214, 414, 714,
to_date('04.04.2024','dd.mm.yyyy'), '10:30', '1 ora', '10 minute', 349);
```

```
insert into CALATORIE values(805, 115, 315, 215, 415, 715,
to_date('05.05.2024','dd.mm.yyyy'), '06:30', '12 ore', 'fara', 129);
```

```
insert into CALATORIE values(806, 116, 316, 216, 416, 716,
to_date('06.06.2024','dd.mm.yyyy'), '08:15', '2 ore', '5 minute', 500);
```

```
insert into CALATORIE values(807, 117, 317, 217, 417, 717,
to_date('07.07.2024','dd.mm.yyyy'), '11:45', '1 ora', '10 minute', 220);
```

```
insert into CALATORIE values(808, 118, 318, 218, 418, 718,
to_date('08.08.2024','dd.mm.yyyy'), '20:30', '4 ore', 'fara', 500);
```

```
insert into CALATORIE values(809, 119, 319, 219, 419, 719,
to_date('09.09.2024','dd.mm.yyyy'), '13:45', '4 ore', '10 minute', 499);
```

```
insert into CALATORIE values(810, 120, 320, 220, 420, 720,
to_date('10.10.2024','dd.mm.yyyy'), '04:00', '16 ore', '5 minute', 370);
```

```

insert into CALATORIE values(801, 111, 311, 211, 411, 711, to_date('01.01.2024','dd.mm.yyyy'), '09:00', '4 ore', '15 minute', 450);
insert into CALATORIE values(802, 112, 312, 212, 412, 712, to_date('02.02.2024','dd.mm.yyyy'), '14:30', '2 ore', '30 minute', 400);
insert into CALATORIE values(803, 113, 313, 213, 413, 713, to_date('03.03.2024','dd.mm.yyyy'), '18:45', '3 ore', 'fara', 289);
insert into CALATORIE values(804, 114, 314, 214, 414, 714, to_date('04.04.2024','dd.mm.yyyy'), '10:30', '1 ora', '10 minute', 349);
insert into CALATORIE values(805, 115, 315, 215, 415, 715, to_date('05.05.2024','dd.mm.yyyy'), '06:30', '12 ore', 'fara', 129);
insert into CALATORIE values(806, 116, 316, 216, 416, 716, to_date('06.06.2024','dd.mm.yyyy'), '08:15', '2 ore', '5 minute', 500);
insert into CALATORIE values(807, 117, 317, 217, 417, 717, to_date('07.07.2024','dd.mm.yyyy'), '11:45', '1 ora', '10 minute', 220);
insert into CALATORIE values(808, 118, 318, 218, 418, 718, to_date('08.08.2024','dd.mm.yyyy'), '20:30', '4 ore', 'fara', 500);
insert into CALATORIE values(809, 119, 319, 219, 419, 719, to_date('09.09.2024','dd.mm.yyyy'), '13:45', '4 ore', '10 minute', 499);
insert into CALATORIE values(810, 120, 320, 220, 420, 720, to_date('10.10.2024','dd.mm.yyyy'), '04:00', '16 ore', '5 minute', 370);

1 row inserted.

1 row inserted.

1 row inserted.

1 row inserted.

```

ID_CALATORIE	ID_CLIENT	ID_CLASA	ID_COMPANIE	ID_AVION	ID_AEROPORT	DATA_PLECARE	ORA_PLECARE	DURATA_CALATORIE	INTARZIERE	PRET_BILET
1	801	111	311	211	411	711 01-01-2024	09:00	4 ore	15 minute	450
2	802	112	312	212	412	712 02-02-2024	14:30	2 ore	30 minute	400
3	803	113	313	213	413	713 03-03-2024	18:45	3 ore	fara	289
4	804	114	314	214	414	714 04-04-2024	10:30	1 ora	10 minute	349
5	805	115	315	215	415	715 05-05-2024	06:30	12 ore	fara	129
6	806	116	316	216	416	716 06-06-2024	08:15	2 ore	5 minute	500
7	807	117	317	217	417	717 07-07-2024	11:45	1 ora	10 minute	220
8	808	118	318	218	418	718 08-08-2024	20:30	4 ore	fara	500
9	809	119	319	219	419	719 09-09-2024	13:45	4 ore	10 minute	499
10	810	120	320	220	420	720 10-10-2024	04:00	16 ore	5 minute	370

5. ACTUALIZAREA INREGISTRARILOR

1) Să se dubleze prețul biletului pentru calatoria cu ID-ul 808 :

update CALATORIE

set pret_bilet = 2*pret_bilet

where id_calatorie='808';

select * from CALATORIE;

Oracle SQL Developer : Projekt

File Edit View Navigate Run Source Team Tools Window Help

Connections Project

Worksheet Query Builder

```
update CALATORIE
set pret_bilet = 2*pret_bilet
where id_calatorie='808';
select * from CALATORIE;
```

Script Output X | Task completed in 0,328 seconds

ID_CALATORIE	ID_CLIENT	ID_CLASA	ID_COMPANIE	ID_AVION	ID_AEROPORT	DATA_PLECAR	ORA_PLECARE	DURATA_CAL	INTARZIERE	PRET_BILET
801	111	311	211	411	711	01-01-2024	09:00	4 ore	15 minute	450
802	112	312	212	412	712	02-02-2024	14:30	2 ore	30 minute	400
803	113	313	213	413	713	03-03-2024	18:45	3 ore	fara	289
804	114	314	214	414	714	04-04-2024	10:30	1 ora	10 minute	349
805	115	315	215	415	715	05-05-2024	06:30	12 ore	fara	129
806	116	316	216	416	716	06-06-2024	08:15	2 ore	5 minute	500
807	117	317	217	417	717	07-07-2024	11:45	1 ora	10 minute	220
808	118	318	218	418	718	08-08-2024	20:30	4 ore	fara	1000
809	119	319	219	419	719	09-09-2024	13:45	4 ore	10 minute	499

| Line 5 Column 1 | Insert | Modified | Windows: C

Căutați ROU 17:44 IN 05.01.2024

2) Actualizarea numelui clientului al carui ID este 111 :

update CLIENTI

set NUME='Popescu'

where ID_CLIENT=111;

select * from CLIENTI;

Oracle SQL Developer : Projekt

File Edit View Navigate Run Source Team Tools Window Help

Connections Project

Worksheet Query Builder

```
update CLIENTI
set NUME='Popescu'
where ID_CLIENT=111;
select * from CLIENTI;
```

Script Output X | Task completed in 0,091 seconds

ID_CLIENT	ID_TIP_CLIENT	CNP_NUME	PRENUME	SEX	EMAIL	TELEFON	TARA
111	101 1.9212E+12	Popescu	Magdalena	FEMININ	bansurs.magdalena@gmail.com	0725.946.780	Romania
112	102 1.8002E+12	George	Andrei	MASCULIN	george-andrei125@gmail.com	0774.734.855	Romania
113	103 2.7806E+12	Dragan	Silviu	MASCULIN	dragan.silviu78@hotmail.com	0755.933.990	Romania
114	104 2.8010E+12	Marinescu	Oana	FEMININ	marinescu.oana20@yahoo.com	0767.873.890	Romania
115	105 1.8902E+12	Grigore	Florin	MASCULIN	grigore.florin8@yahoo.com	0766.552.611	Romania
116	106 2.6904E+12	Neagu	Diana	FEMININ	neagu.diana44@hotmail.com	0735.856.890	Romania
117	107 2.9205E+12	Nedelcu	Elena	FEMININ	elena.nedelcu11@yahoo.com	0775.121.829	Romania
118	108 1.9012E+12	Stanciu	Vlad	MASCULIN	vlad.stanciu21@gmail.com	0747.985.214	Romania
119	109 2.8911E+12	Safta	Madalina	FEMININ	mada.safta@hotmail.com	0775.697.039	Romania

| Line 2 Column 18 | Insert | Modified | Windows: C

Căutați ROU 17:47 IN 05.01.2024

3) Să se modifice prenumele clientului Andrei în Ramian :

update CLIENTI

```
set prenume = 'Ramian'
```

```
where prenume = 'Andrei';
```

```
select* from CLIENTI;
```

The screenshot shows the Oracle SQL Developer interface. In the 'Worksheet' tab, there is a SQL script:

```
update CLIENTI
set prenume = 'Ramian'
where prenume = 'Andrei';
select* from CLIENTI;
```

Below the script, the 'Script Output' window shows the results of the query. A table is displayed with columns: ID_CLIENT, ID_TIP_CLIENT, CNP NUME, PRENUME, SEX, EMAIL, TELEFON, and TARA. The PRENUME column is highlighted, showing the value 'Ramian' for the row where CNP NUME is '102 1.8002E+12 George'. The rest of the table data is as follows:

ID_CLIENT	ID_TIP_CLIENT	CNP NUME	PRENUME	SEX	EMAIL	TELEFON	TARA
111	101 1.9212E+12	Bansurs	Magdalena	FEMININ	bansurs.magdalena@gmail.com	0725.946.780	Romania
112	102 1.8002E+12	George	Ramian	MASCULIN	george-andre125@gmail.com	0774.734.855	Romania
113	103 2.7806E+12	Dragan	Silviu	MASCULIN	dragan.silviu78@hotmail.com	0758.933.990	Romania
114	104 2.8010E+12	Marinescu	Oana	FEMININ	marinescu.oana20@yahoo.com	0767.873.890	Romania
115	105 1.8902E+12	Grigore	Florin	MASCULIN	grigore.florin98@yahoo.com	0766.552.611	Romania
116	106 2.8904E+12	Weagu	Diana	FEMININ	neagu.diana44@hotmail.com	0735.856.890	Romania
117	107 2.9205E+12	Nedelcu	Elena	FEMININ	elena.nedelcu11@yahoo.com	0775.121.829	Romania
118	108 1.9012E+12	Stanciu	Vlad	MASCULIN	vlad.stanciu21@gmail.com	0747.985.214	Romania
119	109 2.8911E+12	Safta	Madalina	FEMININ	mada.safta@hotmail.com	0775.697.039	Romania

4) Sa se modifice ora de plecare a avionului al carui id este 413 :

update CALATORIE

```
set ora_plecare = '20:00'
```

```
where id_avion = '413';
```

```
select * from CALATORIE;
```

Oracle SQL Developer : Project

File Edit View Navigate Run Source Team Tools Window Help

Connections Project

Worksheet Query Builder

```
update CALATORIE
set ora_plecare = '20:00'
where id_avion = '413';
select * from CALATORIE;
```

Script Output X | Task completed in 0,066 seconds

ID_CALATORIE	ID_CLIENTI	ID_CLASA	ID_COMPANIE	ID_AVION	ID_AEROPORTI	DIA_PLECARE	DURATA_CAL	INIASZIERE	FREI_BILEI
801	111	311	211	411	711	01-01-2024 09:00	4 ore	15 minute	450
802	112	312	212	412	712	02-02-2024 14:30	2 ore	30 minute	400
803	113	313	213	413	713	03-03-2024 20:00	3 ore	fara	289
804	114	314	214	414	714	04-04-2024 10:30	1 ora	10 minute	349
805	115	315	215	415	715	05-05-2024 06:30	12 ore	fara	129
806	116	316	216	416	716	06-06-2024 08:15	2 ore	5 minute	500
807	117	317	217	417	717	07-07-2024 11:45	1 ora	10 minute	220
808	118	318	218	418	718	08-08-2024 20:30	4 ore	fara	1000
809	119	319	219	419	719	09-09-2024 13:45	4 ore	10 minute	499
810	120	320	220	420	720	10-10-2024 04:00	16 ore	5 minute	370

I Line 5 Column 1 | Insert | Modified | Windows: C

Căutați 11°C Cloudy ROU 17:51 IN 05.01.2024

5) Sa se actualizeze aeroportul al carui id este 718 :

update AEROPORT

set nume_aeroport = 'Avram Iancu'

where id_aeroport = '718';

select * from AEROPORT;

Oracle SQL Developer : Project

File Edit View Navigate Run Source Team Tools Window Help

Connections Project

Worksheet Query Builder

```
update AEROPORT
set nume_aeroport = 'Avram Iancu'
where id_aeroport = '718';
select * from AEROPORT;
```

Script Output X | Task completed in 0,074 seconds

713	613 Leonardo da Vinci
714	614 Charles de Gaulle
715	615 Pierre Elliott Trudeau
716	616 Athens International Airport
717	617 Brussels Airport
718	618 Avram Iancu
719	619 Esenboğa
720	620 LAX

10 rows selected.

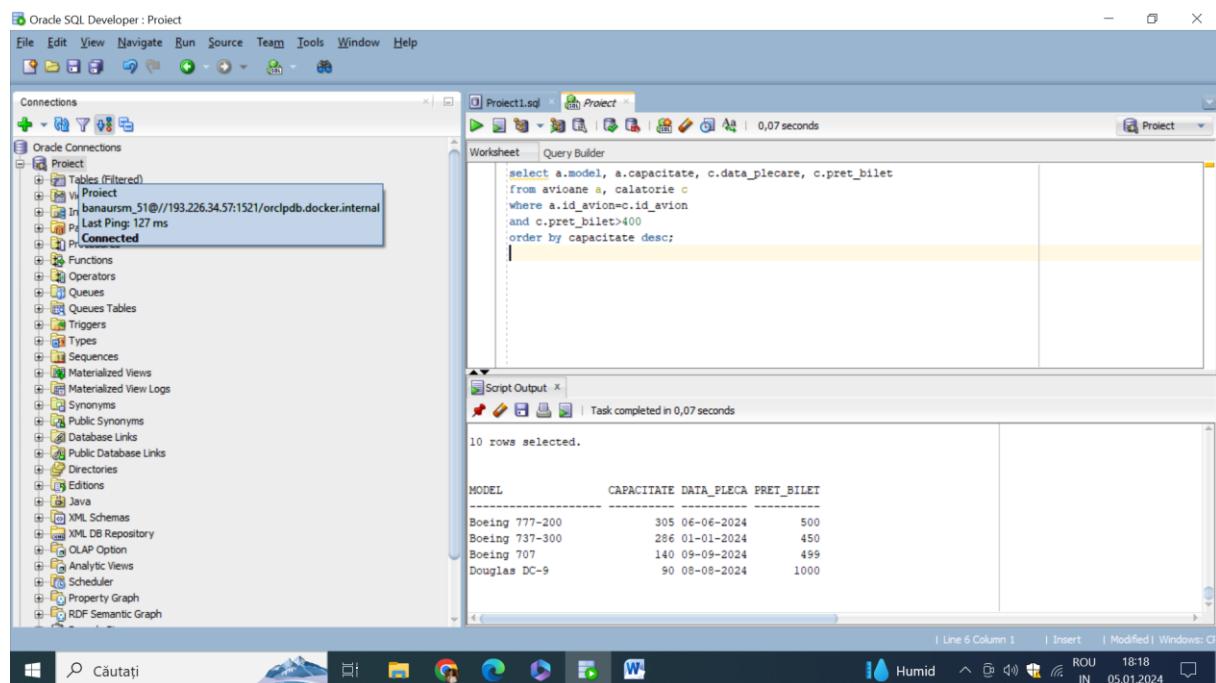
I Line 8 Column 24 | Insert | Modified | Windows: C

Căutați 11°C Cloudy ROU 17:52 IN 05.01.2024

6. EXEMPLE DE INTEROGARI

1)Sa se afiseze modelul si capacitatea avioanelor dar si data in care pleaca si pretul biletului(sa fie peste 400) ordonate descrescator in functie de capacitate (JONCTIUNE):

```
select a.model, a.capacitate, c.data_plecare, c.pret_bilet  
from avioane a, calatorie c  
where a.id_avion=c.id_avion  
and c.pret_bilet>400  
order by capacitate desc;
```



The screenshot shows the Oracle SQL Developer interface. The left pane displays the project structure with a connection to 'banaurom_51@//193.226.34.57:1521/orclpdb.docker.internal'. The central pane contains the SQL query:`select a.model, a.capacitate, c.data_plecare, c.pret_bilet
from avioane a, calatorie c
where a.id_avion=c.id_avion
and c.pret_bilet>400
order by capacitate desc;`

The right pane shows the execution results in a table format:

MODEL	CAPACITATE	DATA_PLECA	PRET_BILET
Boeing 777-200	305	06-06-2024	500
Boeing 737-300	286	01-01-2024	450
Boeing 707	140	09-09-2024	499
Douglas DC-9	90	08-08-2024	1000

2) Sa se afiseze numele, prenumele si id-ul clientilor dar si data in care acestia pleaca intr-o calatorie si pretul biletului(sa fie peste 300) ordonati ascendent in functie de pretul biletului (JONCTIUNE)

```
select cl.ID_CLIENT, cl.NUME, cl.PRENUME, c.DATA_PLECARE, c.PRET_BILET  
from CLIENTI cl, CALATORIE c  
where cl.ID_CLIENT=c.ID_CLIENT and PRET_BILET>300  
order by pret_bilet asc;
```

```

select cl.ID_CLIENT, cl.NUME, cl.PRENUME, c.DATA_PLECARE, c.PRET_BILET
from CLIENTI cl, CALATORIE c
where cl.ID_CLIENT=c.ID_CLIENT and PRET_BILET>300
order by pret_bilet asc;

```

ID_CLIENT	NUME	PRENUME	DATA_PLECARE	PRET_BILET
114	Marinescu	Oana	04-04-2024	349
120	Radu	Sorin	10-10-2024	370
112	George	Ramian	02-02-2024	400
111	Banauș	Magdalena	01-01-2024	450
119	Safta	Madalina	09-09-2024	499
116	Neagu	Diana	06-06-2024	500
118	Stanciu	Vlad	08-08-2024	1000

3) Sa se afiseze numele clientilor care contin litera G mare

```

SELECT nume FROM clientii
WHERE nume like upper('G%');

```

```

SELECT nume FROM clientii
WHERE nume like upper('G%');

```

ERROR report -

ORA-00942: tabelul sau vizualizarea nu există
00942. 00000 - "table or view does not exist"

*Cause:
*Action:

NUME
George
Grigore

4) Să se afiseze id-ul clientilor, numele concatenat cu prenumele, doar pentru clientii care au primele 3 cifre ale numarului de telefon '076'(substr)

```

select id_client, nume||' '||prenume as NUME_PRENUME from CLIENTII
where substr (telefon,1,3)='076';

```

Oracle SQL Developer : Proiect

File Edit View Navigate Run Source Team Tools Window Help

Connections

Project

Tables (Filtered)

- Project
- banaurom_51@//193.226.34.57:1521/orclpdb.docker.internal
- Last Ping: 127 ms
- Connected
- CLIENTI
 - ID_CLIENT
 - ID_TIP_CLIENT
 - CNP
 - NUME
 - PRENUME
 - SEX
 - EMAIL
 - TELEFON
 - TARA
 - ORAS
 - ADRESA
 - COD_POSTAL
- COMPANII
- ORASE
- TARI
- TIP_CLIENT

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Worksheet Query Builder

```
select id_client, nume||' '||prenume as NUME_PRENUME from CLIENTI
where substr (telefon,1,3)='076';
```

Script Output X

Task completed in 0,12 seconds

George
Grigore

ID_CLIENT NUME_PRENUME

114 Marinescu Oana
115 Grigore Florin
120 Radu Sorin

I Line 1 Column 67 | Insert | Modified | Windows: Cl

Căutați

Near record

ROU 18:33
ROS 05.01.2024

5) Sa se afiseze toate calatoriile dupa 20 May 2024(>to_date) :

select * from CALATORIE

where data_plecare>to_date('20-06-2024', 'DD-MM-YYYY');

Oracle SQL Developer : Proiect

File Edit View Navigate Run Source Team Tools Window Help

Connections

Project

Tables (Filtered)

- Project
- banaurom_51@//193.226.34.57:1521/orclpdb.docker.internal
- Last Ping: 127 ms
- Connected
- CLIENTI
- COMPANII
- ORASE
- TARI
- TIP_CLIENT

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Public Database Links

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Worksheet Query Builder

```
select * from CALATORIE
where data_plecare>to_date('20-06-2024', 'DD-MM-YYYY');
```

Script Output X

Task completed in 0,106 seconds

ID_CALATORIE	ID_CLIENT	ID_CLASA	ID_COMPANIE	ID_AVION	ID_AEROPORT	DATA_PLECARE	ORA_PLECARE	DURATA_CAL	INTARZIERE	PRET_BILET
807	117	317	217	417	717	07-07-2024	11:45	1 ora	10 minute	220
808	118	318	218	418	718	08-08-2024	20:30	4 ore	fara	1000
809	119	319	219	419	719	09-09-2024	13:45	4 ore	10 minute	499
810	120	320	220	420	720	10-10-2024	04:00	16 ore	5 minute	370

I Line 3 Column 1 | Insert | Modified | Windows: Cl

Căutați

9°C Cloudy

ROU 17:47
IN 06.01.2024

6) Să se afișeze prețul mediu pentru fiecare calatorie. Să se ordoneze după preț (se utilizează funcția avg() și clauza group by() pentru gruparea datelor în funcție de id_calatorie).

```
SELECT id_calatorie, avg(pret_bilet) medie_pret
from calatorie
group by id_calatorie
order by medie_pret;
```

Oracle SQL Developer : Project

File Edit View Navigate Run Source Team Tools Window Help

Connections Worksheet Query Builder

```
SELECT id_calatorie, avg(pret_bilet) medie_pret
from calatorie
group by id_calatorie
order by medie_pret;
```

Script Output X Script Output 1 X | Task completed in 0,05 seconds

ID_CALATORIE	MEDIE_PRET
805	129
807	220
803	289
804	349
810	370
802	400
801	450
809	499
806	500
808	1000

10 rows selected.

I Line 5 Column 1 | Insert | Modified | Windows: Cl

Căutări 9°C Cloudy 17:55 ROU IN 06.01.2024

7) Afisam calatorile care au pretul biletului sub 300 lei folosind operatorul minus :

SELECT ID_CALATORIE, DATA_PLECARE, PRET_BILET FROM CALATORIE MINUS

SELECT ID_CALATORIE, DATA_PLECARE, PRET_BILET FROM CALATORIE WHERE PRET_BILET > 300

Oracle SQL Developer : Project

File Edit View Navigate Run Source Team Tools Window Help

Connections Worksheet Query Builder

```
SELECT ID_CALATORIE, DATA_PLECARE, PRET_BILET FROM CALATORIE MINUS
SELECT ID_CALATORIE, DATA_PLECARE, PRET_BILET FROM CALATORIE WHERE PRET_BILET > 300
```

Script Output X Script Output 1 X | Task completed in 0,077 seconds

ID_CALATORIE	DATA_PLECARE	PRET_BILET
807	07-07-2024	220
803	03-03-2024	289
805	05-05-2024	129

I Line 3 Column 1 | Insert | Modified | Windows: Cl

Căutări 9°C Cloudy 17:57 ROU IN 06.01.2024

8) Se afiseaza ora de plecare si durata calatoriei care au pretul biletului mai mare de 400 de lei folosind intersect:

SELECT ORA_PLECARE, DURATA_CALATORIE FROM CALATORIE INTERSECT

SELECT ORA_PLECARE, DURATA_CALATORIE FROM CALATORIE WHERE PRET_BILET > 400;

```

SELECT ORA_FLECARE, DURATA_CALATORIE FROM CALATORIE INTERSECT
SELECT ORA_FLECARE, DURATA_CALATORIE FROM CALATORIE WHERE PRET_BILET>400;

```

ORA_FLECARE	DURATA_CAL
09:00	4 ore
08:15	2 ore
20:30	4 ore
13:45	4 ore

9) Sa se afiseze avionul cu id-ul 417 si capacitatea sa fie mai mica cu 100(subcere) :

```

update AVIOANE
set CAPACITATE=CAPACITATE-100
where CAPACITATE in (select CAPACITATE from AVIOANE where ID_AVION=417);
select id_avion, capacitate from avioane
where id_avion = 417;

```

```

update AVIOANE
set CAPACITATE=CAPACITATE-100
where CAPACITATE in (select CAPACITATE from AVIOANE where ID_AVION=417);
select id_avion, capacitate from avioane
where id_avion = 417;

```

ID_AVION	CAPACITATE
417	700

10) Sa se afiseze calatoria cu id-ul 805 si pretul dublat :

```

update CALATORIE
set pret_bilet=pret_bilet*2
where pret_bilet in (select pret_bilet from calatorie where id_calatorie =805);

```

```
select id_calatorie, pret_bilet from calatorie
```

```
where id_calatorie = 805;
```

```
update CALATORIE  
set pret_bilet=pret_bilet*2  
where pret_bilet in (select pret_bilet from calatorie where id_calatorie = 805);  
select id_calatorie, pret_bilet from calatorie  
where id_calatorie = 805;
```

1 row updated.

ID_CALATORIE	PRET_BILET
805	258

11) Să se realizeze o tabelă virtuală cu toți clientii care sunt de sex Masculin (tab virtuală)

```
create or replace view v_clienti
```

```
as select* from clienti
```

```
where sex = 'MASCULIN';
```

```
select * from v_clienti;
```

```
create or replace view v_clienti  
as select* from clienti  
where sex = 'MASCULIN';  
select * from v_clienti;
```

View V_CLIENTI created.

ID_CLIENT	ID_TIP_CLIENT	CNP_NUME	PRENUME	SEX	EMAIL	TELEFON	TR
112	102	1.8002E+12	George	MASCULIN	george-andrei25@gmail.com	0774.734.855	Rc
113	103	2.780E+12	Dragan	MASCULIN	dragan.silviu78@hotmail.com	0758.933.990	Rc
115	105	1.8902E+12	Grigore	MASCULIN	grigore.florin98@yahoo.com	0766.552.611	Rc
118	108	1.9012E+12	Stanciu	MASCULIN	vlad.stanciu18@gmail.com	0747.985.214	Rc
120	110	1.6006E+12	Radu	MASCULIN	radu_sorin@gmail.ro	0766.875.967	Rc

12)Să se realizeze o tabelă virtuală clientului cu id ul 113 si sa se actualizeze numele lui în Minoiu :

```
create or replace view V_CLIENTI_113
```

```

as select * from CLIENTI
where ID_CLIENT=113;
update V_CLIENTI_113
set NUME='Minoiu';
select * from v_clienti_113

```

The screenshot shows the Oracle SQL Developer interface. The 'Worksheet' tab contains the following SQL code:

```

create or replace view V_CLIENTI_113
as select * from CLIENTI
where ID_CLIENT=113;
update V_CLIENTI_113
set NUME='Minoiu';
select * from v_clienti_113

```

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

```

View V_CLIENTI_113 created.

1 row updated.

ID_CLIENT ID_TIP_CLIENT      CNP NUME          PRENUME        SEX      EMAIL           TELEFON
113          103 2.7806E+12 Minoiu        Silviu       MASCULIN dragan.silviu78@hotmail.com 0750.933.990

```

13) Sa realizeze o tabela virtuala cu toate calatoriile care au pretul > 300 :

```

CREATE OR REPLACE VIEW v_calatorie
AS SELECT * FROM calatorie
WHERE pret_bilet>300;
SELECT * FROM v_calatorie;

```

The screenshot shows the Oracle SQL Developer interface. The 'Worksheet' tab contains the following SQL code:

```

CREATE OR REPLACE VIEW v_calatorie
AS SELECT * FROM calatorie
WHERE pret_bilet>300;
SELECT * FROM v_calatorie;

```

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

ID_CALATORIE	ID_CLIENT	ID_CELOR	ID_COMPANY	ID_AVION	ID_AEROPORTI	DATA_FIECARA	ORA_FIECARA	DURATA_CAL	INIASARE	FREI_BILET
801	111	311	211	411	711	01-01-2024	09:00	4 ore	15 minute	450
802	112	312	212	412	712	02-02-2024	14:30	2 ore	30 minute	400
804	114	314	214	414	714	04-04-2024	10:30	1 ora	10 minute	349
806	116	316	216	416	716	06-06-2024	08:15	2 ore	5 minute	500
808	118	318	218	418	718	08-08-2024	20:30	4 ore	fara	1000
809	119	319	219	419	719	09-09-2024	13:45	4 ore	10 minute	499
810	120	320	220	420	720	10-10-2024	04:00	16 ore	5 minute	370

7 rows selected.

14) Se creaza un sinonim pentru PRODUSE_VANZARE si se afiseaza :

CREATE SYNONYM CLNT FOR CLIENTI;

SELECT* FROM CLNT;

The screenshot shows the Oracle SQL Developer interface. In the top navigation bar, the project is named 'Project'. The left sidebar shows the database structure with tables like AEROPORT, AVIOANE, CALATORIE, CLASA, CLIENTI, COMPANII, ORASE, TARI, and TIP_CLIENT. The main workspace contains a 'Worksheet' tab with the following SQL code:

```
CREATE SYNONYM CLNT FOR CLIENTI;
SELECT* FROM CLNT;
```

Below the worksheet is a 'Script Output' tab showing the results of the query. The results are as follows:

ID_CLIENT	ID_TIP_CLIENT	CNP	NUME	PRENUME	SEX	EMAIL	TELEFON	TARA
111	101	1.9212E+12	Banaurs	Magdalena	FEMININ	banaurs.magdalena@gmail.com	0725.946.780	Rc
112	102	1.8002E+12	George	Ramian	MASCULIN	george-andrei25@gmail.com	0774.734.855	Rc
113	103	2.7806E+12	Minoiu	Silviu	MASCULIN	dragan.silviu78@hotmail.com	0758.933.990	Rc
114	104	2.8010E+12	Marinescu	Oana	FEMININ	marinescu.oana20@yahoo.com	0767.873.890	Rc
115	105	1.8902E+12	Grigore	Florin	MASCULIN	grigore.florin9@yahoo.com	0766.552.611	Rc
116	106	2.6904E+12	Neagu	Diana	FEMININ	neagu.diana44@hotmail.com	0735.856.890	Rc
117	107	2.9205E+12	Nedelcu	Elena	FEMININ	elena.nedelcul1@yahoo.com	0775.121.829	Rc
118	108	1.9012E+12	Stanciu	Vlad	MASCULIN	vlad.stanciu21@gmail.com	0747.985.214	Rc
119	109	2.8911E+12	Safta	Madalina	FEMININ	mada.safeta@hotmail.com	0775.697.039	Rc
120	110	1.6006E+12	Radu	Sorin	MASCULIN	radu_sorin@gmail.ro	0766.875.967	Rc

15) Se creaza indexuri pentru coloana nume din tabela CLIENTII:

CREATE INDEX NAME_IDX ON CLIENTII(NUME);

The screenshot shows the Oracle SQL Developer interface. The main workspace displays the 'CLIENTII' table with 10 rows of data. The table structure is as follows:

ID_CLIENT	ID_TIP_CLIENT	CNP	NUME	PRENUME	SEX	EMAIL	TELEFON	TARA	ORAS	ADRESA
1	111	101 1921203735981	Banaurs	Magdalena	FEMININ	banaurs.magdalena@gmail.com	0725.946.780	Romania	Buzau	strada Ai
2	112	102 1800223338845	George	Ramian	MASCULIN	george-andrei25@gmail.com	0774.734.855	Romania	Iasi	strada Ti
3	113	103 2780630678239	Minoiu	Silviu	MASCULIN	dragan.silviu78@hotmail.com	0758.933.990	Romania	Brasov	strada De
4	114	104 2801020375912	Marinescu	Oana	FEMININ	marinescu.oana20@yahoo.com	0767.873.890	Romania	Constanta	strada He
5	115	105 1890225764329	Grigore	Florin	MASCULIN	grigore.florin9@yahoo.com	0766.552.611	Romania	Urziceni	strada Te
6	116	106 2690412754387	Neagu	Diana	FEMININ	neagu.diana44@hotmail.com	0735.856.890	Romania	Bucuresti	strada C-
7	117	107 2920511657493	Nedelcu	Elena	FEMININ	elena.nedelcul1@yahoo.com	0775.121.829	Romania	Bucuresti	strada Co
8	118	108 1901221876543	Stanciu	Vlad	MASCULIN	vlad.stanciu21@gmail.com	0747.985.214	Romania	Craiova	strada Ca
9	119	109 2891101420061	Safta	Madalina	FEMININ	mada.safeta@hotmail.com	0775.697.039	Romania	Vaslui	strada Le
10	120	110 1600616758264	Radu	Sorin	MASCULIN	radu_sorin@gmail.ro	0766.875.967	Romania	Slobozia	strada Sc

15) Sa se afiseze ID-ul călătoriei, data plecării și un status bazat pe relația cu data curentă.

```
SELECT ID_CALATORIE, DATA_PLECARE,
CASE
    WHEN DATA_PLECARE > SYSDATE THEN 'Programata'
    WHEN DATA_PLECARE = SYSDATE THEN 'Astazi'
```

```

ELSE 'Incheiata'
END AS STATUS
FROM CALATORIE;

```

```

SELECT ID_CALATORIE, DATA_PLECARE,
CASE
    WHEN DATA_PLECARE > SYSDATE THEN 'Programata'
    WHEN DATA_PLECARE = SYSDATE THEN 'Astazi'
    ELSE 'Incheiata'
END AS STATUS
FROM CALATORIE;

```

ID_CALATORIE	DATA_PLECARE	STATUS
801	01-01-2024	Incheiata
802	02-02-2024	Programata
803	03-03-2024	Programata
804	04-04-2024	Programata
805	05-05-2024	Programata
806	06-06-2024	Programata
807	07-07-2024	Programata
808	08-08-2024	Programata
809	09-09-2024	Programata
810	10-10-2024	Programata

16) Afisează clientii care au cel puțin 2 călătorii programate

```

SELECT C.ID_CLIENT, C.NUME, C.PRENUME, COUNT(*) AS NUMAR_CALATORII
FROM CLIENTI C
JOIN CALATORIE CA ON C.ID_CLIENT = CA.ID_CLIENT
GROUP BY C.ID_CLIENT, C.NUME, C.PRENUME
HAVING COUNT(*) >= 2;

```

```

SELECT C.ID_CLIENT, C.NUME, C.PRENUME, COUNT(*) AS NUMAR_CALATORII
FROM CLIENTI C
JOIN CALATORIE CA ON C.ID_CLIENT = CA.ID_CLIENT
GROUP BY C.ID_CLIENT, C.NUME, C.PRENUME
HAVING COUNT(*) >= 2;

```

ID_CLIENT	NUME	PRENUME	NUMAR_CALATORII
111	Banaurs	Magdalena	2

17) Afiseaza numele tuturor clientilor, fie de sex feminin sau masculin(union)

```

SELECT NUME FROM CLIENTI WHERE SEX = 'FEMININ'
UNION

```

SELECT NUME FROM CLIENTI WHERE SEX = 'MASCULIN';

The screenshot shows the Oracle SQL Developer interface. The 'Connections' sidebar lists several tables: DATA_PLECARE, ORA_PLECARE, DURATA_CALATORIE, INTARZIERE, PRET_BILET, CLASA, CLIENTI, COMPANII, ORASE, and TARI. The 'Worksheet' tab contains the following SQL code:

```
SELECT NUME FROM CLIENTI WHERE SEX = 'FEMININ'  
UNION  
SELECT NUME FROM CLIENTI WHERE SEX = 'MASCULIN';
```

The 'Script Output' pane displays the results of the query:

NUME
Banu
Marinescu
Neagu
Nedelcu
Safta
George
Minoiu
Grigore
Stanciu
Radu

Below the table, it says '10 rows selected.'

18) Formateaza toatae datele de plecare dupa sablonul 'DD.MM.YYYY'

SELECT TO_CHAR(DATA_PLECARE, 'DD.MM.YYYY') AS DATA_FORMATATA

FROM CALATORIE;

The screenshot shows the Oracle SQL Developer interface. The 'Connections' sidebar lists the same tables as before. The 'Worksheet' tab contains the following SQL code:

```
SELECT TO_CHAR(DATA_PLECARE, 'DD.MM.YYYY') AS DATA_FORMATATA  
FROM CALATORIE;
```

The 'Script Output' pane displays the results of the query:

DATA_FORMATATA
04.04.2024
01.01.2024
02.02.2024
03.03.2024
04.04.2024
05.05.2024
06.06.2024
07.07.2024

19) Afiseaza toate datele despre clientii de sex FEMININ(cu IN)

SELECT * FROM CLIENTI WHERE SEX IN ('FEMININ');

The screenshot shows the Oracle SQL Developer interface. In the Connections pane, there is a tree view of database objects under the 'ORASE' connection. The 'CLIENTI' node is expanded, showing sub-fields like ID_CLIENT, ID_TIP_CLIENT, CNP, NUME, PRENUME, SEX, EMAIL, TELEFON, TARA, ORAS, ADRESA, COD_POSTAL, and TIP_CLIENT. In the Worksheet pane, a query is written:

```
SELECT * FROM CLIENTI WHERE SEX IN ('FEMININ');
```

The Script Output pane shows the results of the query:

ID_CLIENT	ID_TIP_CLIENT	CNP	NUME	PRENUME	SEX	EMAIL	TELEFON	TARA
111	101	1.9212E+12	Banaurs	Magdalena	FEMININ	banaurs.magdalena@gmail.com	0725.946.780	Rc
114	104	2.8010E+12	Marinescu	Oana	FEMININ	marinescu.oana20@yahoo.com	0767.073.890	Rc
116	106	2.6904E+12	Neagu	Diana	FEMININ	neagu.diana44@hotmail.com	0735.856.890	Rc
117	107	2.9205E+12	Nedelcu	Elena	FEMININ	elena.nedelcu11@yahoo.com	0775.121.829	Rc
119	109	2.8911E+12	Safta	Madalina	FEMININ	mada.safta@hotmail.com	0775.697.039	Rc

The status bar at the bottom indicates 'Line 1 Column 48 | Insert | Modified | Windows: O'.

20) Afiseaza anul in care are loc calatoria cu id=802

```
SELECT EXTRACT(YEAR FROM DATA_PLECARE) AS AN
FROM CALATORIE
WHERE ID_CALATORIE = 802;
```

The screenshot shows the Oracle SQL Developer interface. In the Connections pane, there is a tree view of database objects under the 'ORASE' connection. The 'CLIENTI' node is expanded, showing sub-fields like ID_CLIENT, ID_TIP_CLIENT, CNP, NUME, PRENUME, SEX, EMAIL, TELEFON, TARA, ORAS, ADRESA, COD_POSTAL, and TIP_CLIENT. In the Worksheet pane, a query is written:

```
SELECT EXTRACT(YEAR FROM DATA_PLECARE) AS AN
FROM CALATORIE
WHERE ID_CALATORIE = 802;
```

The Script Output pane shows the results of the query:

AN
2024
2024
2024

The status bar at the bottom indicates 'Line 4 Column 1 | Insert | Modified | Windows: O'.