Proiect Baze de Date

Cerinta 1

Tema proiectului meu este intitulata “Ciocolaterie”. Cu ajutorul bazelor de date am implementat o gestionare cat mai facila a datelor unui acest tip de restaurant. In proiectul meu am luat in calcul diferitele relatiile dintre comenzi si clienti, cat si probleme de gestionare interna ce pot aparea in fiecare dintre filiale. Fiecare filiala are o anumita locatie, un anumit program si un meniu. De asemenea, un client poate plasa o comanda in oricare dintre filiale.

Cerinta 2

Cheile primare sunt unice si nenule, la fel si toate referintele catre celelalte tabele.

Cerinta 3

Entitatea Ciololaterie are cheia primara id_ciocolaterie si contine date cu privire la fiecare filiala.

Entitatea Comanda are cheia primara id_comanda si contine date cu privire la clientul ce a plasat-o, pretul acesteia, cat si filiala in care a fost plasata comanda.

Entitatea Meniu are cheia primara id_meniu, contine date cu privire la filiala corespunzatoare si face referire la produsele ce se afla in meniu.

Entitatea Program are cheia primara id_program cotine informatii cu privire la programul fiecarei filiale.

Entitatea Locatie are cheia id_locatie si contine date cu privire la locatia fiecarei ciocolaterii.

Cerinta 4

Ciocolaterie-Meniu (one-to-one)

Meniu-Categorie (one-to-many)

Categorie-Produs (one-to-many)

Produs-ProdusSpecial (one-to-many)

Ciocolaterie-Locatie (one-to-many)

Ciocolaterie-Program (one-to-many)

Ciocolaterie-Comanda (one-to-many)

Client-Comanda (one-to-many)

StatusComanda-Comanda (one-to-many)

Comanda-ComandaProdus (one-to-many)

Cerinta 5

Ciocolaterie

id_ciocolaterie -pk, int, not null

id_locatie - fk, int, poate fi null

id_meniu - fk, int, not null

nume - varchar, not null

Locatie

id_locatie -pk, int, not null

adresa -varchar, not null

Program

id_program -pk, int, not null

id_restaurant -fk, int, not null

id_zi -fk, int, not null

ora_deschidere -int, not null

ora_inchidere -int, not null

Meniu

id_meniu -pk, int, not null

nume -varchar, not null

id_ciocolaterie -fk, int, not null

Comanda

id_comanda -pk, int, not null

id_status -fk, int, not null

pret- int, not null

data_plasare- date, not null

Client

id_client -pk, int, not null

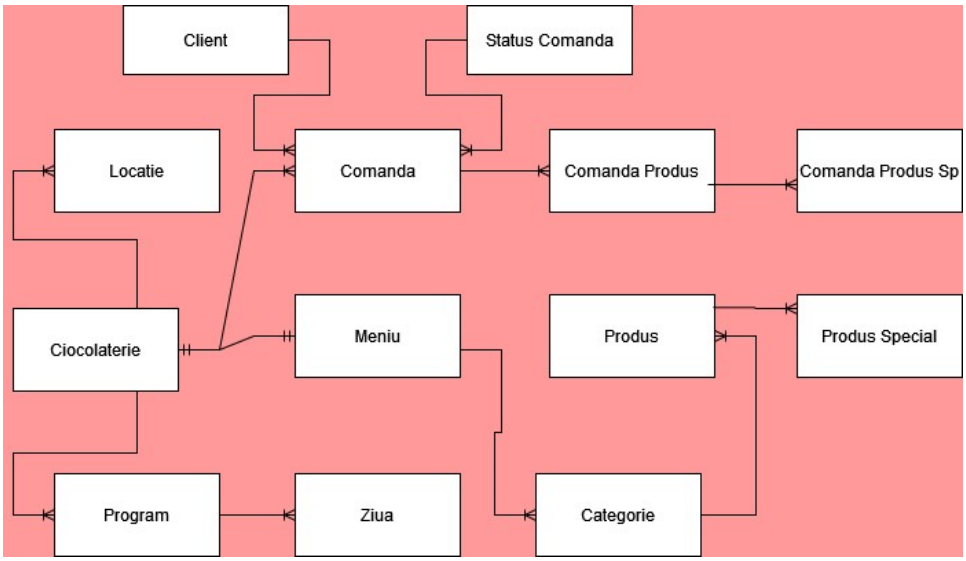
nume -varchar, not null

prenume -varchar, not null

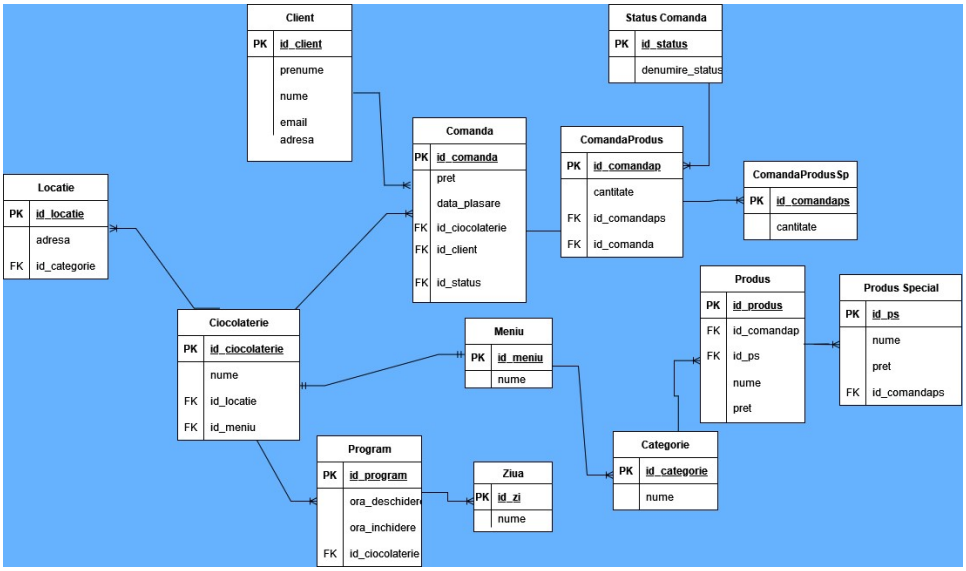
email -varchar, not null

adresa -varchar, not null

Cerinta 6



Cerinta 7



Cerinta 8

Ciocolaterie-Meniu (one-to-one)

O ciocolaterie are un meniu si numai unul.

Meniu-Categorie (one-to-many)

Un meniu are una sau mai multe categorii.

Categorie-Produs (one-to-many)

O categorie are unul sau mai multe produse.

Produs-ProdusSpecial (one-to-many)

Un produs are unul sau mai multe produse speciale.

Ciocolaterie-Locatie (one-to-many)

O ciocolaterie are una sau mai multe locatii.

Ciocolaterie-Program (one-to-many)

O ciocolaterie are are unul sau mai multe programe.

Ciocolaterie-Comanda (one-to-many)

O ciocolaterie poate primi una sau mai multe comenzi.

Client-Comanda (one-to-many)

Un client poate plasa una sau mai multe comenzi.

StatusComanda-Comanda (one-to-many)

Un status apartine uneia sau mai multor comenzi.

Comanda-ComandaProdus (one-to-many)

O comanda contine unul sau mai multe produse.

Cerinta 9

Exemplu non-FN1:

In entitatea client, exista un singur atribut nume ce contine atat numele cat si prenumele.

Rezolvare: Construim atribute separate pentru nume si prenume.

Exemplu non-FN2:

Entitatea Produs ar fi continut date despre cantitatile comandate.

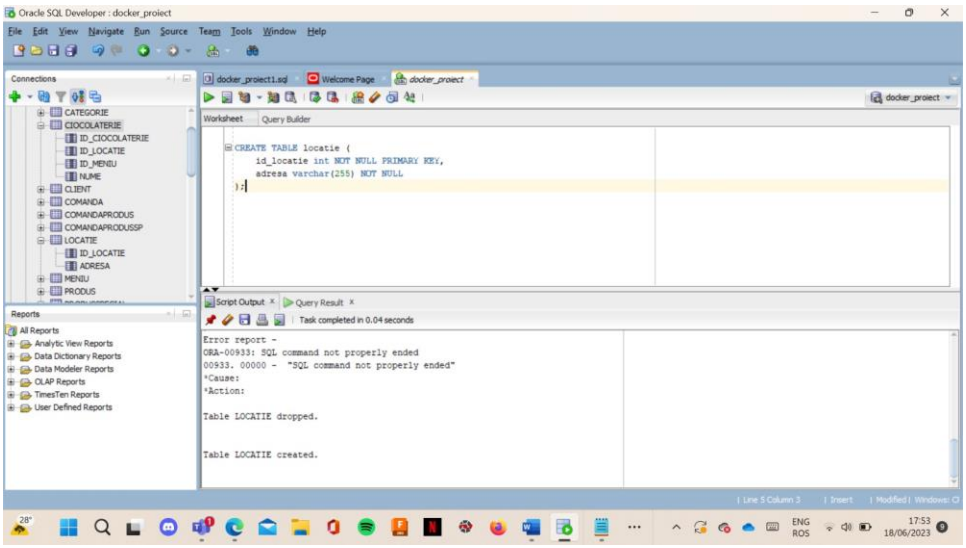
Rezolvare: Construim 2 entitati separate: ComandaProdus si Produs.

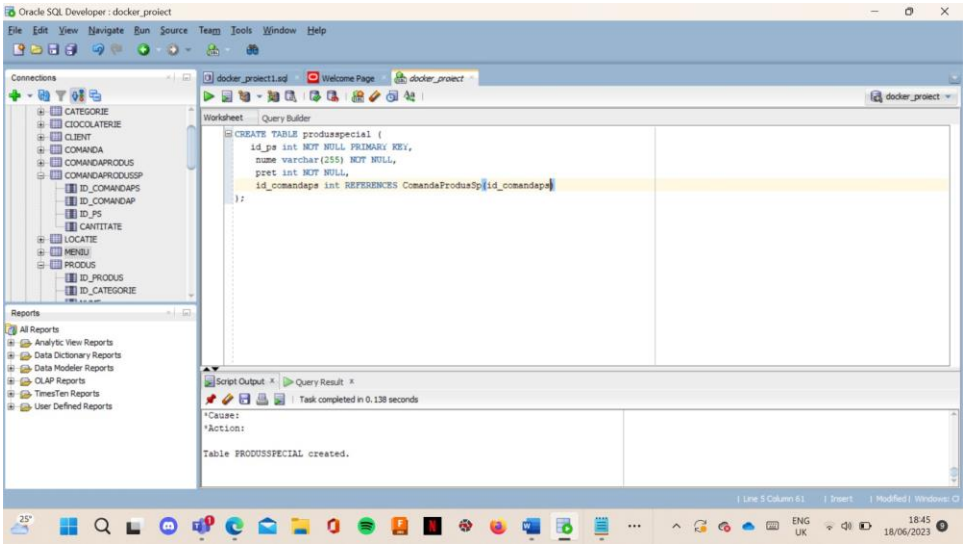
Exemplu non-FN3:

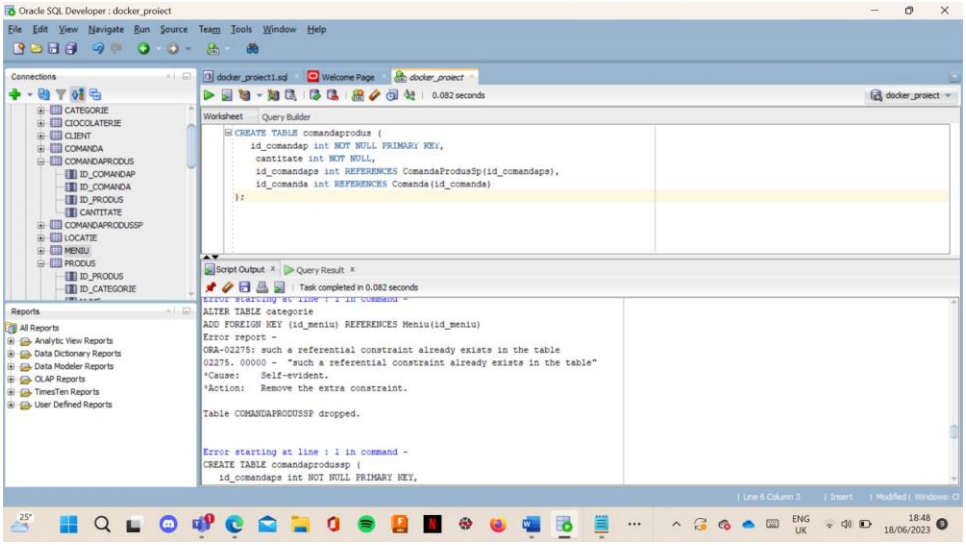
Entitatea Ciocolaterie ar fi continut si campul adresa.

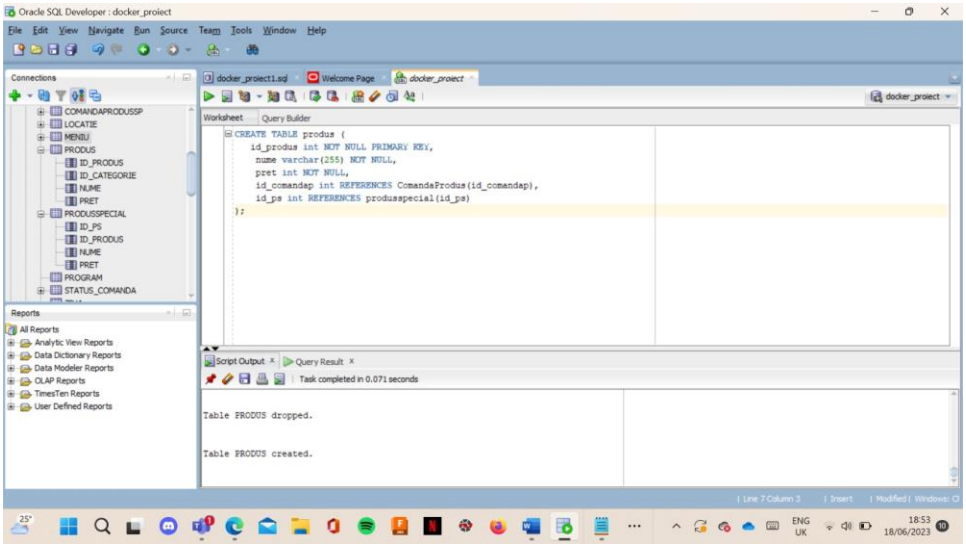
Rezolvare: Construim entitatea Locatie unde vom avea campul adresa.

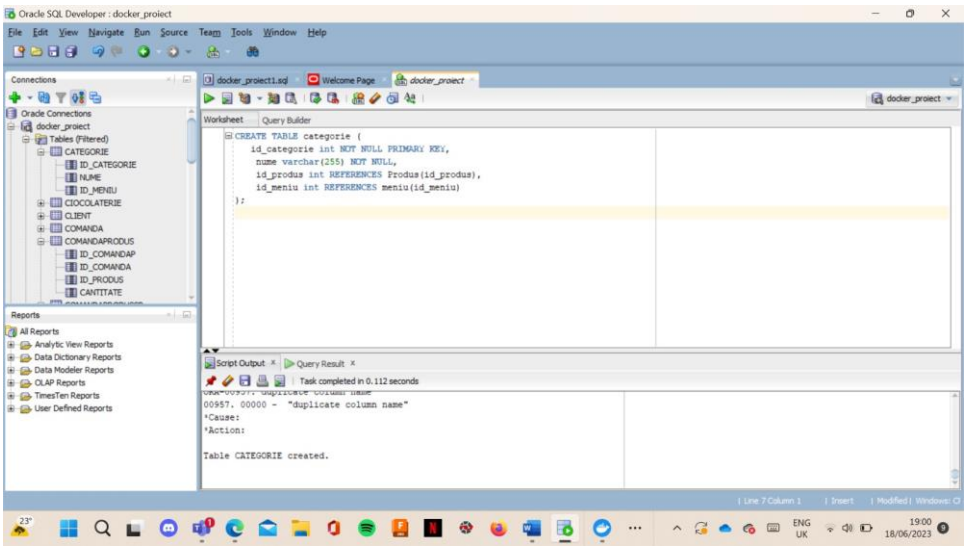
Cerinta 10

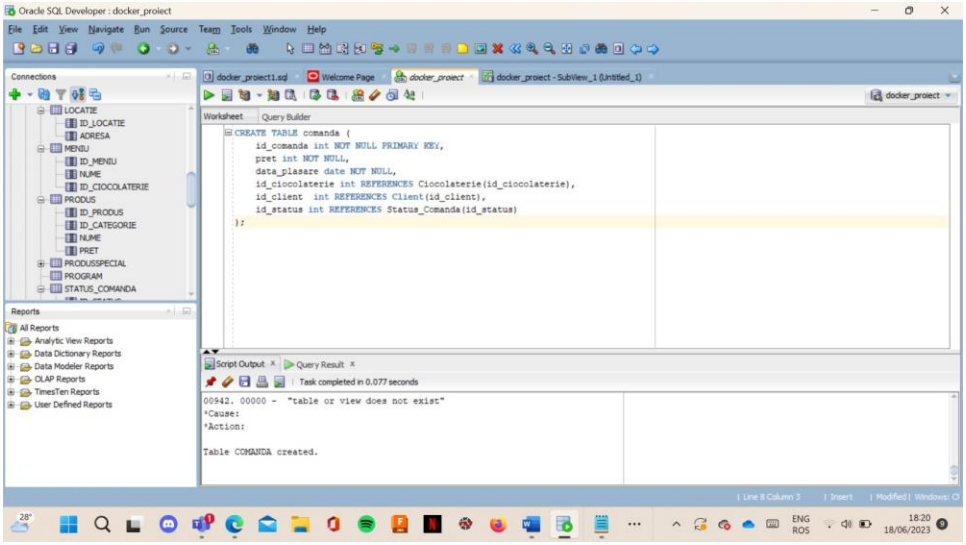




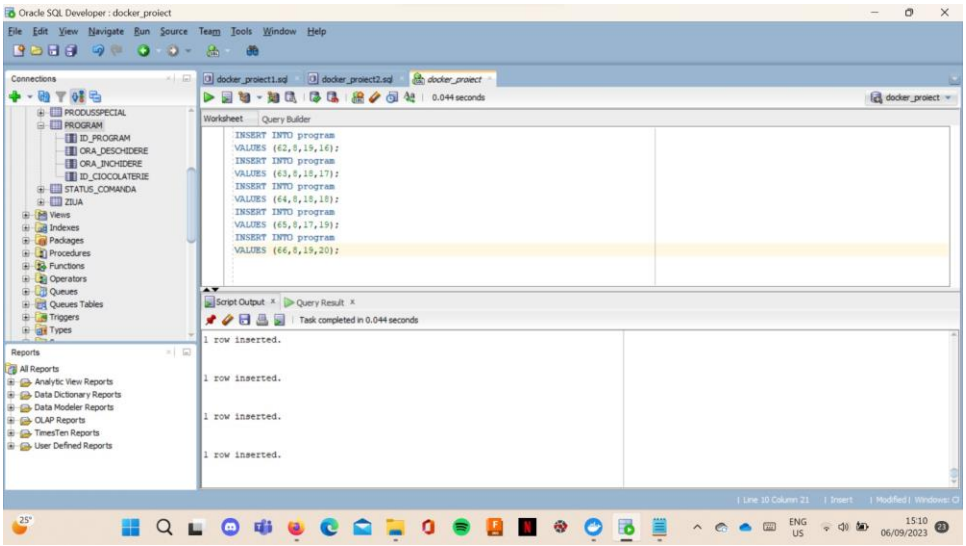

Oracle SQL Developer : docker_proiect
docker_proiect1.sql
Welcome Page
docker_proiect
0.082 seconds
Worksheet
Query Builder
CREATE TABLE comandaprodus (
id_comandap int NOT NULL PRIMARY KEY,
cantitate int NOT NULL,
id_comandaps int REFERENCES ComandaProdusSp(id_comandaps),
id_comanda int REFERENCES Comanda(id_comanda)
);
Script Output
Query Result
Task completed in 0.082 seconds
ALTER TABLE categorie
ADD FOREIGN KEY (id_meniu) REFERENCES Meniu(id_meniu)
Error report -
ORA-02275: such a referential constraint already exists in the table
02275. 00000 - "such a referential constraint already exists in the table"
*Cause: Self-evident.
*Action: Remove the extra constraint.
Table COMANDAPRODUSSP dropped.
Error starting at line : 1 in command -
CREATE TABLE comandaprodussp (
id_comandaps int NOT NULL PRIMARY KEY,

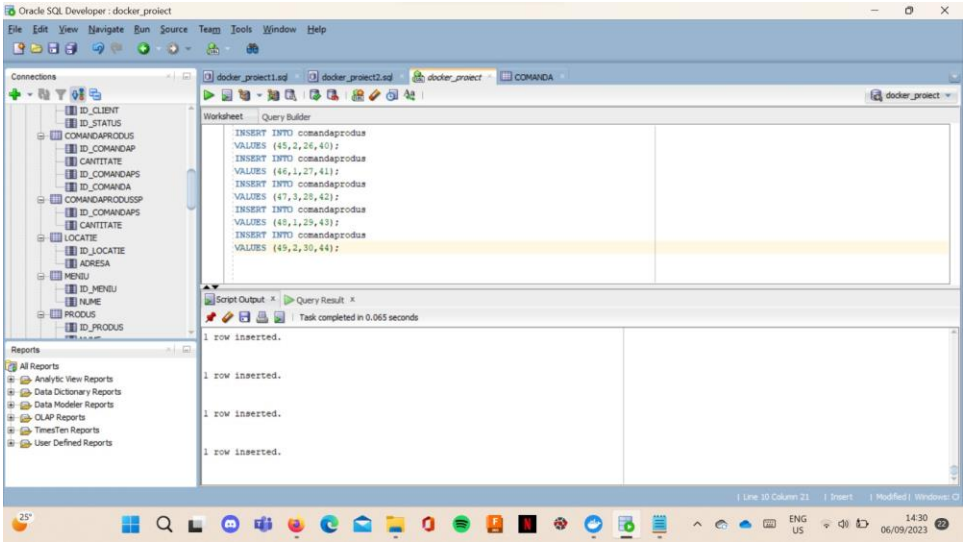

Oracle SQL Developer : docker_proiect
docker_proiect1.sql
Welcome Page
docker_proiect
Worksheet
Query Builder
CREATE TABLE produs (
id_produs int NOT NULL PRIMARY KEY,
nume varchar(255) NOT NULL,
pret int NOT NULL,
id_comandap int REFERENCES ComandaProdus(id_comandap),
id_ps int REFERENCES produsspecial(id_ps)
);
Script Output
Query Result
Task completed in 0.071 seconds
Table PRODUS dropped.
Table PRODUS created.

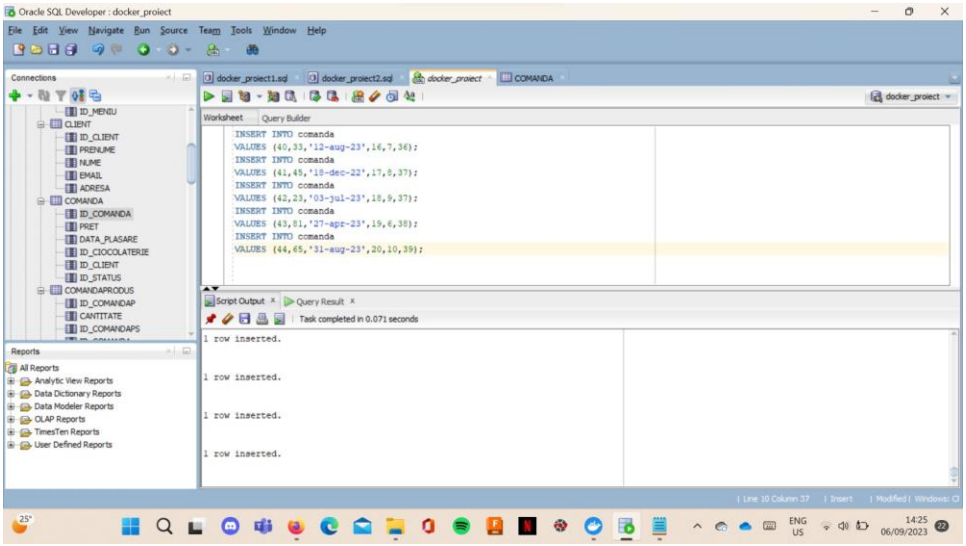

Oracle SQL Developer : docker_proiect
docker_proiect1.sql
Welcome Page
docker_proiect
Worksheet
Query Builder
CREATE TABLE categorie (
id_categorie int NOT NULL PRIMARY KEY,
nume varchar(255) NOT NULL,
id_produs int REFERENCES Produs(id_produs),
id_meniu int REFERENCES meniu(id_meniu)
);
Script Output
Query Result
Task completed in 0.112 seconds
00957. 00000 - "duplicate column name"
*Cause:
*Action:
Table CATEGORIE created.

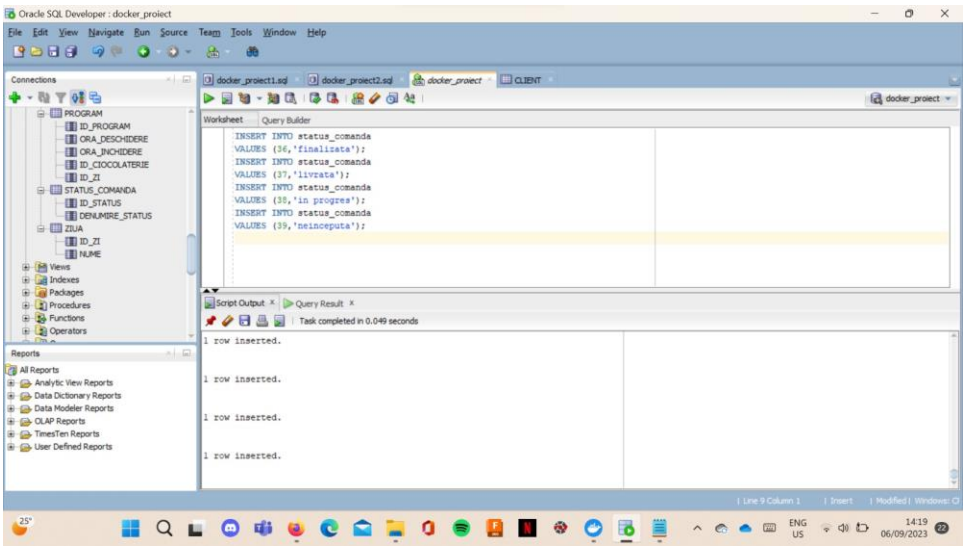

Oracle SQL Developer : docker_proiect
CREATE TABLE comanda (
id_comanda int NOT NULL PRIMARY KEY,
pret int NOT NULL,
data_plasare date NOT NULL,
id_ciocolaterie int REFERENCES Ciocolaterie(id_ciocolaterie),
id_client int REFERENCES Client(id_client),
id_status int REFERENCES Status_Comanda(id_status)
);
Task completed in 0.077 seconds
00942. 00000 - "table or view does not exist"
*Cause:
*Action:
Table COMANDA created.

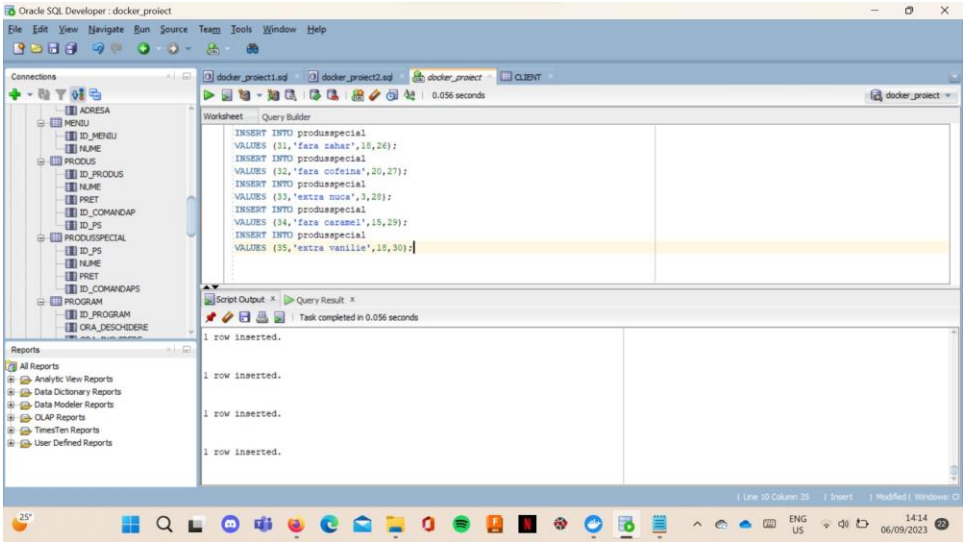
Cerinta 11

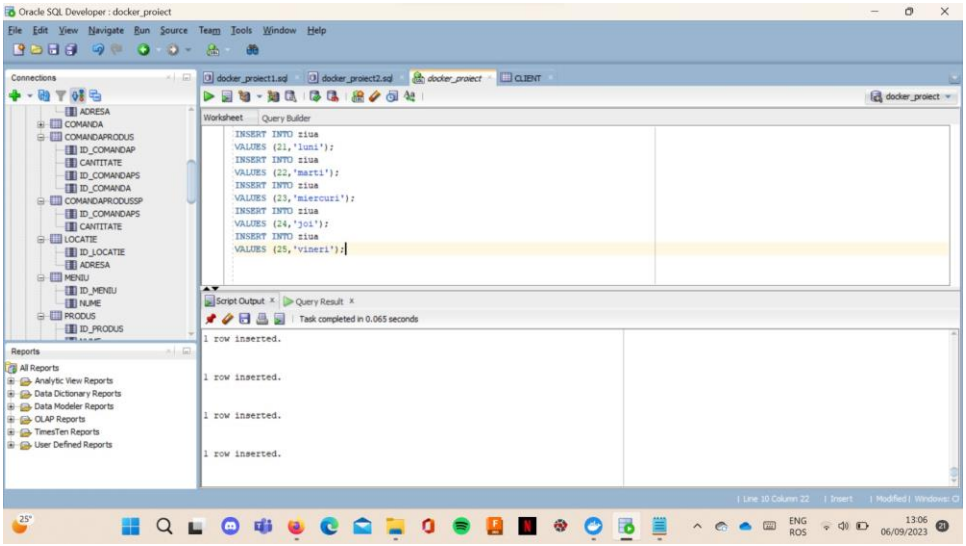

Oracle SQL Developer : docker_proiect
INSERT INTO program
VALUES (62,8,19,16);
INSERT INTO program
VALUES (63,8,18,17);
INSERT INTO program
VALUES (64,8,18,18);
INSERT INTO program
VALUES (65,8,17,19);
INSERT INTO program
VALUES (66,8,19,20);
Task completed in 0.044 seconds
1 row inserted.
1 row inserted.
1 row inserted.
1 row inserted.


Oracle SQL Developer : docker_proiect
File Edit View Navigate Run Source Team Tools Window Help
Connections
ID_CLIENT
ID_STATUS
COMANDAPRODUS
ID_COMANDAP
CANTITATE
ID_COMANDAPS
ID_COMANDA
COMANDAPRODUSSP
ID_COMANDAPS
CANTITATE
LOCATIE
ID_LOCATIE
ADRESA
MENIU
ID_MENIU
NUME
PRODUS
ID_PRODUS
Reports
All Reports
Analytic View Reports
Data Dictionary Reports
Data Modeler Reports
OLAP Reports
TimesTen Reports
User Defined Reports
docker_proiect1.sql
docker_proiect2.sql
docker_proiect
COMANDA
Worksheet
Query Builder
INSERT INTO comandaprodus
VALUES (45,2,26,40);
INSERT INTO comandaprodus
VALUES (46,1,27,41);
INSERT INTO comandaprodus
VALUES (47,3,28,42);
INSERT INTO comandaprodus
VALUES (48,1,29,43);
INSERT INTO comandaprodus
VALUES (49,2,30,44);
Script Output
Query Result
Task completed in 0.065 seconds
1 row inserted.
1 row inserted.
1 row inserted.
1 row inserted.
Line 10 Column 21
Insert
Modified
Windows: CR
25°
ENG
US
14:30
06/09/2023

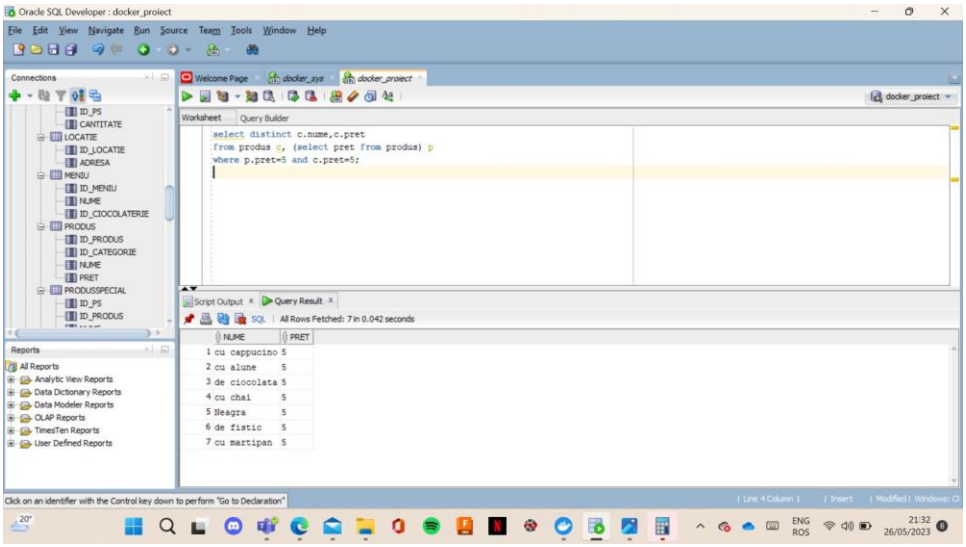

Oracle SQL Developer : docker_proiect
File Edit View Navigate Run Source Team Tools Window Help
Connections
ID_MENIU
CLIENT
ID_CLIENT
PRENUME
NUME
EMAIL
ADRESA
COMANDA
ID_COMANDA
PRET
DATA_PLASARE
ID_CIOCOLATERIE
ID_CLIENT
ID_STATUS
COMANDAPRODUS
ID_COMANDAP
CANTITATE
ID_COMANDAPS
Reports
All Reports
Analytic View Reports
Data Dictionary Reports
Data Modeler Reports
OLAP Reports
TimesTen Reports
User Defined Reports
docker_proiect1.sql
docker_proiect2.sql
docker_proiect
COMANDA
Worksheet
Query Builder
INSERT INTO comanda
VALUES (40,33,'12-aug-23',16,7,36);
INSERT INTO comanda
VALUES (41,45,'18-dec-22',17,8,37);
INSERT INTO comanda
VALUES (42,23,'03-jul-23',18,9,37);
INSERT INTO comanda
VALUES (43,81,'27-apr-23',19,6,38);
INSERT INTO comanda
VALUES (44,65,'31-aug-23',20,10,39);
Script Output
Query Result
Task completed in 0.071 seconds
1 row inserted.
1 row inserted.
1 row inserted.
1 row inserted.
Line 10 Column 37
Insert
Modified
Windows: CR
25°
ENG
US
14:25
06/09/2023

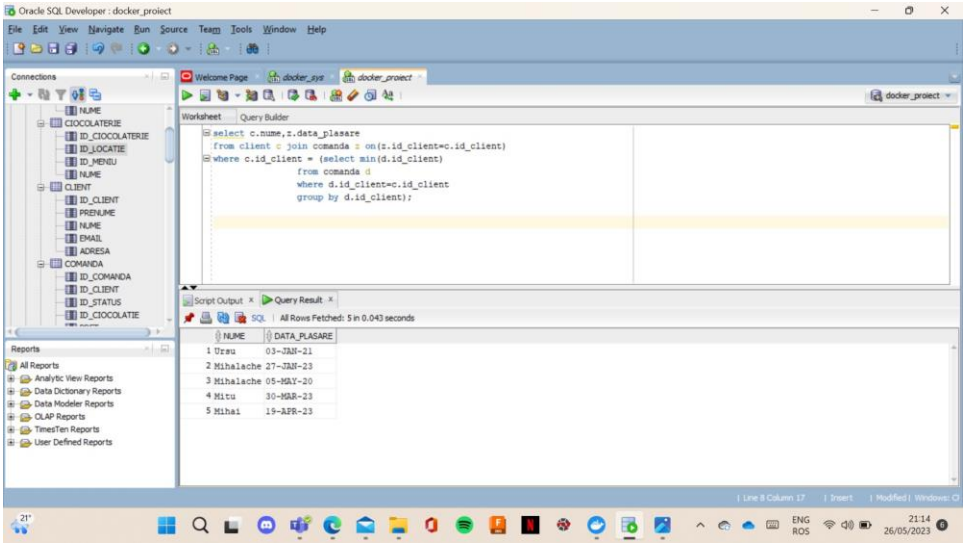

Oracle SQL Developer : docker_proiect
File Edit View Navigate Run Source Team Tools Window Help
Connections
PROGRAM
ID_PROGRAM
ORA_DESCHIDERE
ORA_INCHIDERE
ID_CIOCOLATERIE
ID_ZI
STATUS_COMANDA
ID_STATUS
DENUMIRE_STATUS
ZIUA
ID_ZI
NUME
Views
Indexes
Packages
Procedures
Functions
Operators
Reports
All Reports
Analytic View Reports
Data Dictionary Reports
Data Modeler Reports
OLAP Reports
TimesTen Reports
User Defined Reports
docker_proiect1.sql
docker_proiect2.sql
docker_proiect
CLIENT
Worksheet
Query Builder
INSERT INTO status_comanda
VALUES (36,'finalizata');
INSERT INTO status_comanda
VALUES (37,'livrata');
INSERT INTO status_comanda
VALUES (38,'in progres');
INSERT INTO status_comanda
VALUES (39,'neinceputa');
Script Output
Query Result
Task completed in 0.049 seconds
1 row inserted.
1 row inserted.
1 row inserted.
1 row inserted.
Line 9 Column 1
Insert
Modified
Windows: CR
25°
ENG
US
14:19
06/09/2023

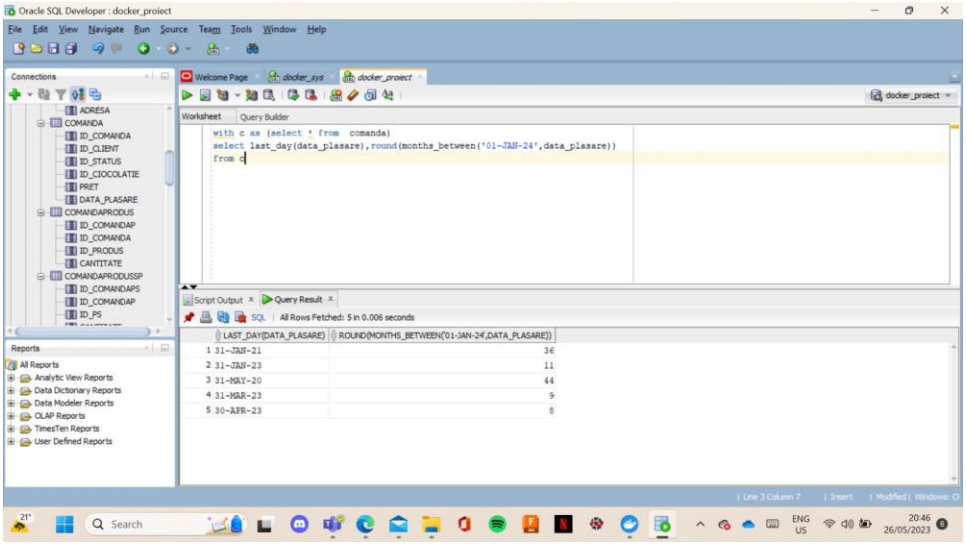

Oracle SQL Developer : docker_proiect
File Edit View Navigate Run Source Team Tools Window Help
Connections
ADRESA
MENIU
ID_MENIU
NUME
PRODUS
ID_PRODUS
NUME
PRET
ID_COMANDAP
ID_PS
PRODUSSPECIAL
ID_PS
NUME
PRET
ID_COMANDAPS
PROGRAM
ID_PROGRAM
ORA_DESCHIDERE
Reports
All Reports
Analytic View Reports
Data Dictionary Reports
Data Modeler Reports
OLAP Reports
TimesTen Reports
User Defined Reports
docker_proiect1.sql
docker_proiect2.sql
docker_proiect
CLIENT
0.056 seconds
docker_proiect
Worksheet
Query Builder
INSERT INTO produsspecial
VALUES (31,'fara zahar',18,26);
INSERT INTO produsspecial
VALUES (32,'fara cofeina',20,27);
INSERT INTO produsspecial
VALUES (33,'extra nuca',3,28);
INSERT INTO produsspecial
VALUES (34,'fara caramel',15,29);
INSERT INTO produsspecial
VALUES (35,'extra vanilie',18,30);
Script Output
Query Result
Task completed in 0.056 seconds
1 row inserted.
1 row inserted.
1 row inserted.
1 row inserted.
Line 10 Column 35
Insert
Modified
Windows:
25°
ENG
US
14:14
06/09/2023

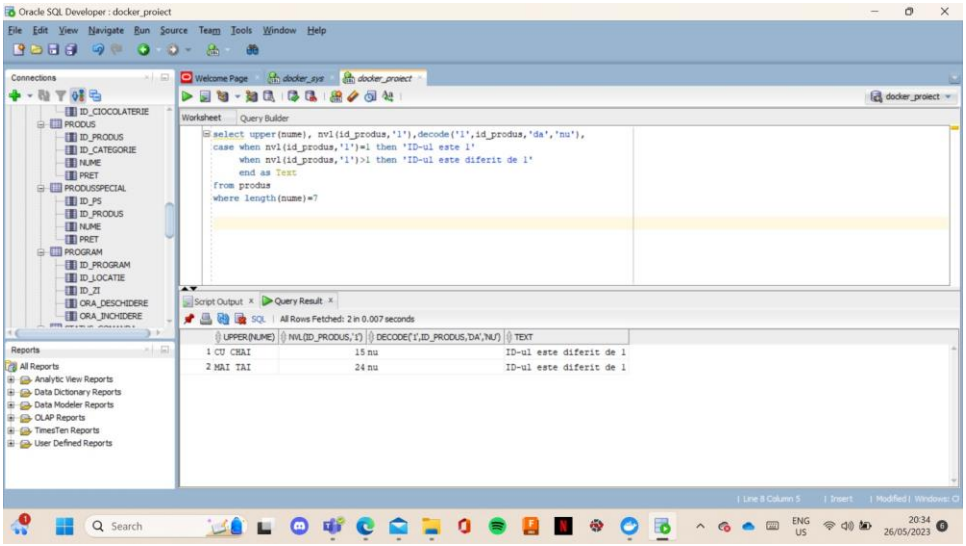

Oracle SQL Developer : docker_proiect
File Edit View Navigate Run Source Team Tools Window Help
Connections
ADRESA
COMANDA
COMANDAPRODUS
ID_COMANDAP
CANTITATE
ID_COMANDAPS
ID_COMANDA
COMANDAPRODUSSP
ID_COMANDAPS
CANTITATE
LOCATIE
ID_LOCATIE
ADRESA
MENIU
ID_MENIU
NUME
PRODUS
ID_PRODUS
Reports
All Reports
Analytic View Reports
Data Dictionary Reports
Data Modeler Reports
OLAP Reports
TimesTen Reports
User Defined Reports
docker_proiect1.sql
docker_proiect2.sql
docker_proiect
CLIENT
docker_proiect
Worksheet
Query Builder
INSERT INTO ziua
VALUES (21,'luni');
INSERT INTO ziua
VALUES (22,'marti');
INSERT INTO ziua
VALUES (23,'miercuri');
INSERT INTO ziua
VALUES (24,'joi');
INSERT INTO ziua
VALUES (25,'vineri');
Script Output
Query Result
Task completed in 0.065 seconds
1 row inserted.
1 row inserted.
1 row inserted.
1 row inserted.
Line 10 Column 22
Insert
Modified
Windows:
25°
ENG
ROS
13:06
06/09/2023

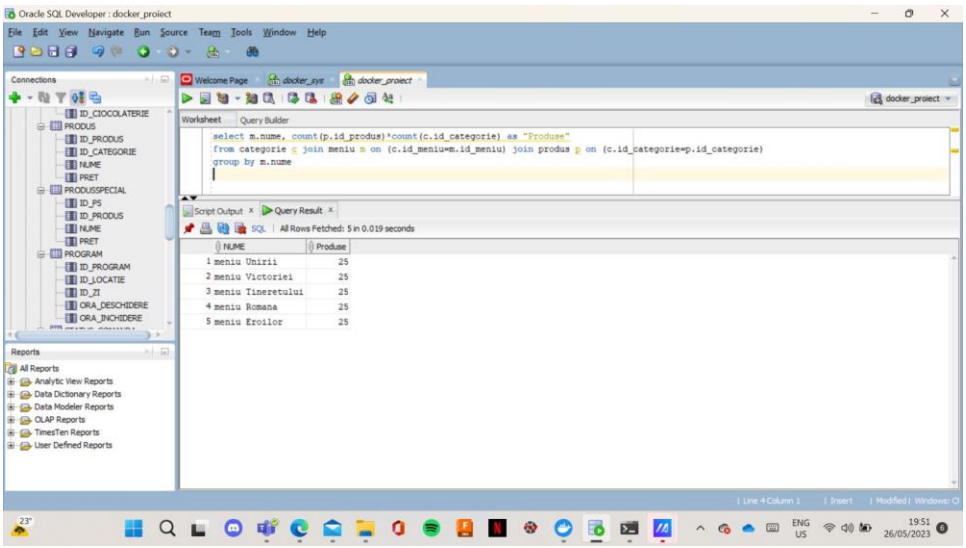
Cerinta 12


Oracle SQL Developer : docker_proiect
select distinct c.nume,c.pret
from produs c, (select pret from produs) p
where p.pret=5 and c.pret=5;
All Rows Fetched: 7 in 0.042 seconds
NUME PRET
1 cu cappucino 5
2 cu alune 5
3 de ciocolata 5
4 cu chai 5
5 Neagra 5
6 de fistic 5
7 cu martipan 5

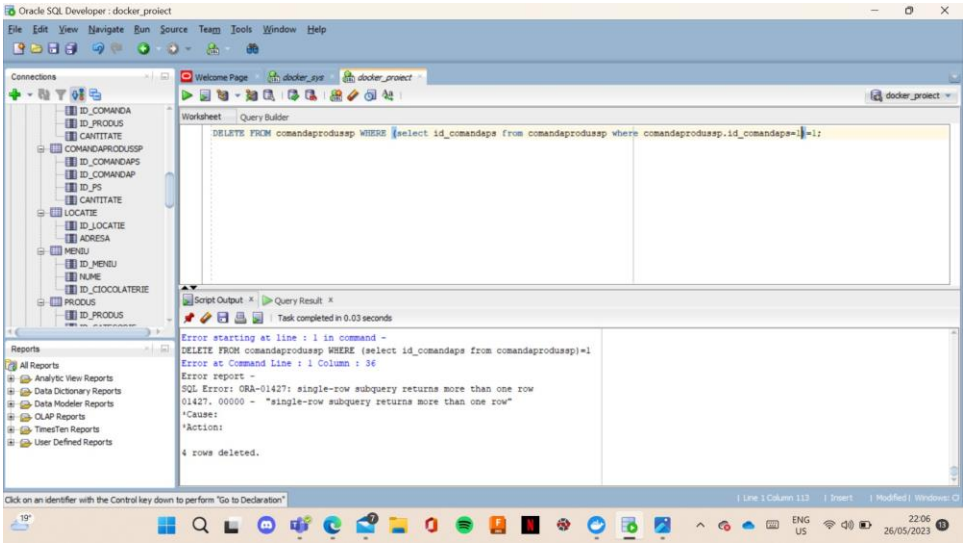

Oracle SQL Developer : docker_proiect
select c.nume,z.data_plasare
from client c join comanda z on(z.id_client=c.id_client)
where c.id_client = (select min(d.id_client)
from comanda d
where d.id_client=c.id_client
group by d.id_client);
All Rows Fetched: 5 in 0.043 seconds
NUME DATA_PLASARE
1 Ursu 03-JAN-21
2 Mihalache 27-JAN-23
3 Mihalache 05-MAY-20
4 Mitu 30-MAR-23
5 Mihai 19-APR-23

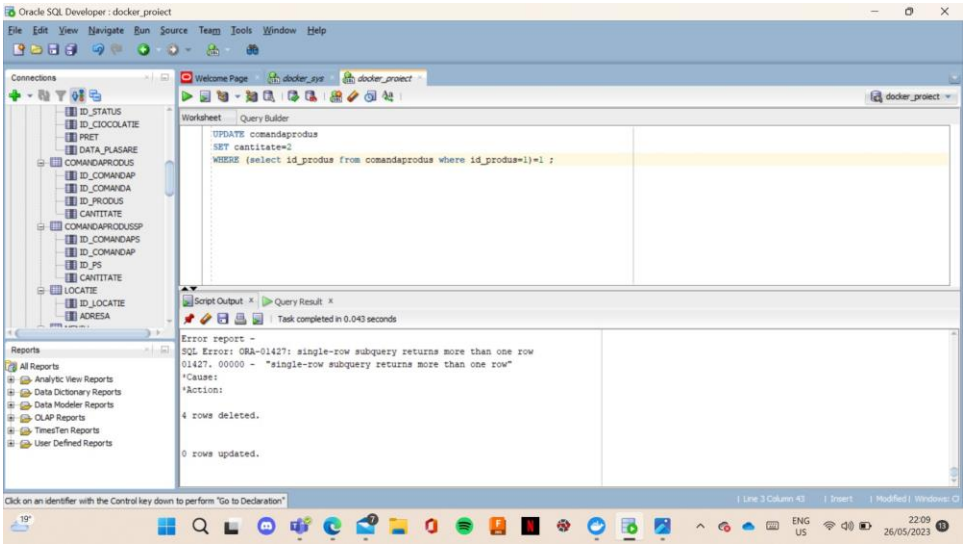

Oracle SQL Developer : docker_proiect
with c as (select * from comanda)
select last_day(data_plasare),round(months_between('01-JAN-24',data_plasare))
from c
All Rows Fetched: 5 in 0.006 seconds
1 31-JAN-21 36
2 31-JAN-23 11
3 31-MAY-20 44
4 31-MAR-23 9
5 30-APR-23 8

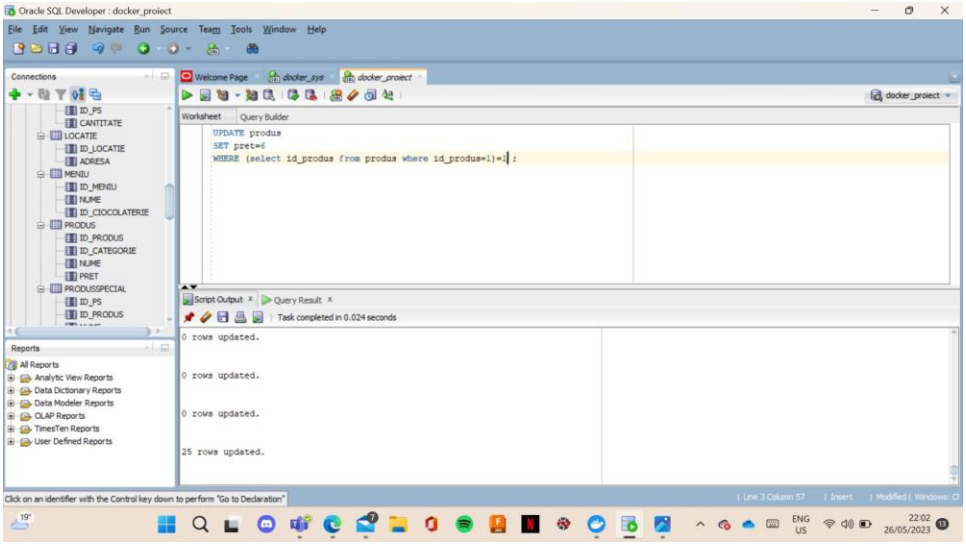

Oracle SQL Developer : docker_proiect
select upper(nume), nvl(id_produs,'1'),decode('1',id_produs,'da','nu'),
case when nvl(id_produs,'1')=1 then 'ID-ul este 1'
when nvl(id_produs,'1')>1 then 'ID-ul este diferit de 1'
end as Text
from produs
where length(nume)=7
All Rows Fetched: 2 in 0.007 seconds
1 CU CREI 15 nu ID-ul este diferit de 1
2 MAI TAI 24 nu ID-ul este diferit de 1


Oracle SQL Developer : docker_proiect
select m.nume, count(p.id_produs)*count(c.id_categorie) as "Produse"
from categorie c join meniu m on (c.id_meniu=m.id_meniu) join produs p on (c.id_categorie=p.id_categorie)
group by m.nume
All Rows Fetched: 5 in 0.019 seconds
1 meniu Unirii 25
2 meniu Victoriei 25
3 meniu Tineretului 25
4 meniu Romana 25
5 meniu Eroilor 25

Cerinta 13


Oracle SQL Developer : docker_proiect
DELETE FROM comandaprodussp WHERE (select id_comandasp from comandaprodussp where comandaprodussp.id_comandasp=1)=1;
Error starting at line : 1 in command -
DELETE FROM comandaprodussp WHERE (select id_comandasp from comandaprodussp)=1
Error at Command Line : 1 Column : 36
Error report -
SQL Error: ORA-01427: single-row subquery returns more than one row
01427. 00000 - "single-row subquery returns more than one row"
*Cause:
*Action:
4 rows deleted.


Oracle SQL Developer : docker_proiect
UPDATE comandaprodus
SET cantitate=2
WHERE (select id_produs from comandaprodus where id_produs=1)=1 ;
Error report -
SQL Error: ORA-01427: single-row subquery returns more than one row
01427. 00000 - "single-row subquery returns more than one row"
*Cause:
*Action:
4 rows deleted.
0 rows updated.


Oracle SQL Developer : docker_proiect
File Edit View Navigate Run Source Team Tools Window Help
Connections
ID_PS
CANTITATE
LOCATIE
ID_LOCATIE
ADRESA
MENIU
ID_MENIU
NUME
ID_CIOCOLATERIE
PRODUS
ID_PRODUS
ID_CATEGORIE
NUME
PRET
PRODUSSPECIAL
ID_PS
ID_PRODUS
Reports
All Reports
Analytic View Reports
Data Dictionary Reports
Data Modeler Reports
OLAP Reports
TimesTen Reports
User Defined Reports
Welcome Page
docker_sys
docker_proiect
docker_proiect
Worksheet
Query Builder
UPDATE produs
SET pret=6
WHERE (select id_produs from produs where id_produs=1)=1;
Script Output
Query Result
Task completed in 0.024 seconds
0 rows updated.
0 rows updated.
0 rows updated.
25 rows updated.
Click on an identifier with the Control key down to perform "Go to Declaration"
Line 3 Column 57
Insert
Modified
Windows: C
19°
ENG
US
22:02
26/05/2023