

Proiect  
Baze De Date

Profesor:Niculae Andreea

Student:Marcu Leonard Stefan

## Descrierea Bazei de Date

Am creat o baza de date ce are ca scop imbunatatirea gestionarii unei gradini cu copaci fructiferi. Aceasta poate presupune mai multe tipuri de activități, precum ingrijirea (remedierea) copaciilor vinderea productiei de fructe,etc.

De asemenea, gestionarea eficientă a gradinii ajută firmele să diminueze riscurile asociate investiției în grădiniile oamenilor ce se ocupa cu acest domeniu.

Urmand ca pentru acesta sa fie incluse urmatoarele tabele:

Tabela **GRADINARI** contine informatii despre gradinari gradini ce au grija in totalitate de copacii nostri.Pentru fiecare dintre ei ,se pastreaza informatii despre nume,prenume,adresa si nr\_telefon fiind identificatii printr un numar unic cu rol de cheia primara.

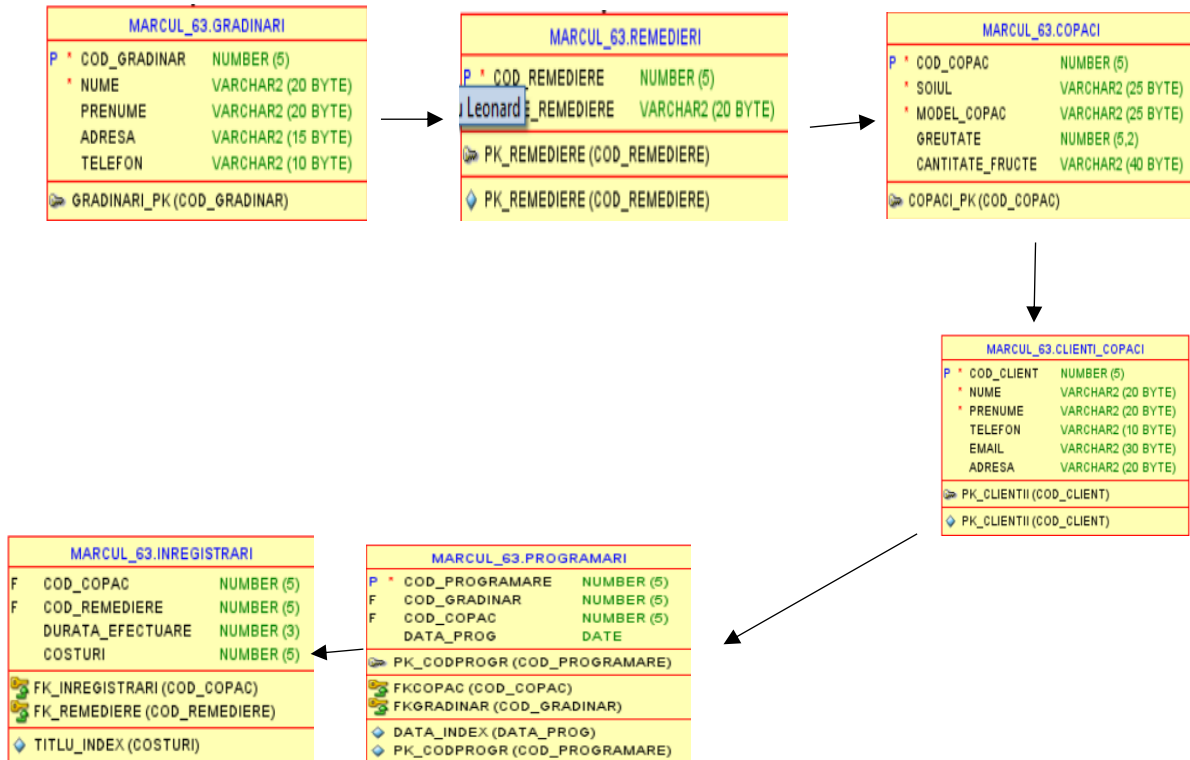
Tabela **REMEDIERI** contine date despre remedierile constante ale pomiilor stricati de factorii naturali ,acestia fiind identificati printr un cod\_remedire(primary key) si nume\_remediere(care nu poate avea valoarea NULL)

Tabela **COPACI** contine informatii despre numele pomului.Pentru fiecare dintre copaci , se pastreaza informatii despre soiul pomului ,modelul , greutatea si cantitatea pusa spre vanzare

Tabela **CLIENTI** ofera informatii despre clienti gradinii ce achizitioneaza copaci avand ca si cheie primara cod\_client.

Tabela **PROGRAMARI** are drept cheie primara campul cod\_programare iar cele 2 campuri cod\_gradinar si cod\_copac sunt chei externe din tabelele Gradinari si Copaci.Se pastreaza informatii despre data programarii ce are restrictie NOT NULL.

Tabela **INREGISTRARI** contine cheia externa cod\_copaci din tabela Copaci si cheia externa cod\_remediat din tabela Remedieri. Aceasta mai contine informatii referitoare la durata de efectuare a remedierii copacului.



# Comenzii LDD

## 1.Creare tabel GRADINARI

Create table gradinari

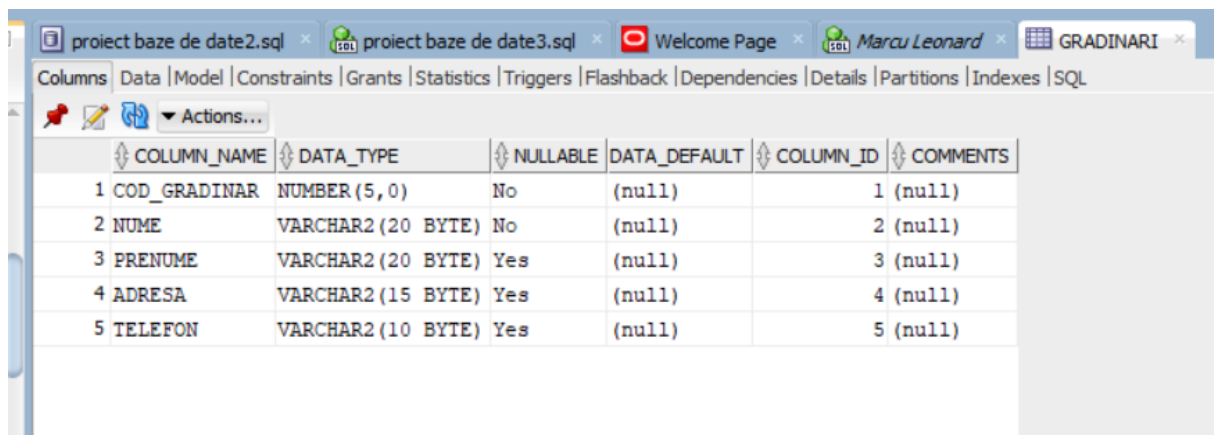
(cod\_gradinar number(5) primary key,

Nume varchar2(20) not null,

Prenume varchar2(20),

Adresa varchar2(15),

Telefon varchar2(10));



The screenshot shows a database management tool interface with the 'GRADINARI' table selected. The 'Columns' tab is active, displaying a table with the following structure:

	COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1	COD_GRADINAR	NUMBER (5,0)	No	(null)	1	(null)
2	NUME	VARCHAR2 (20 BYTE)	No	(null)	2	(null)
3	PRENUME	VARCHAR2 (20 BYTE)	Yes	(null)	3	(null)
4	ADRESA	VARCHAR2 (15 BYTE)	Yes	(null)	4	(null)
5	TELEFON	VARCHAR2 (10 BYTE)	Yes	(null)	5	(null)

## 2.Creare tabel COPACI

Create table copaci

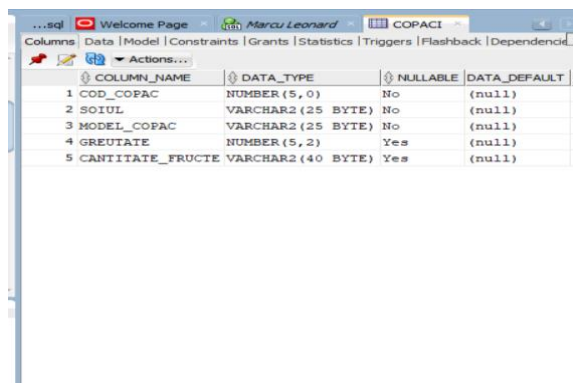
(cod\_copac number(5) primary key,

soiul varchar2(25) not null,

Model\_copac varchar2(25)not null,

Greutate number(5,2),

Cantitate\_fructe varchar2(40));



The screenshot shows a database management tool interface with a table named 'COPACI'. The table structure is displayed in a grid with the following columns: COLUMN\_NAME, DATA\_TYPE, NULLABLE, and DATA\_DEFAULT. The rows represent the table's columns: 1. COD\_COPAC (NUMBER(5,0), No, (null)), 2. SOIUL (VARCHAR2(25 BYTE), No, (null)), 3. MODEL\_COPAC (VARCHAR2(25 BYTE), No, (null)), 4. GREUTATE (NUMBER(5,2), Yes, (null)), and 5. CANTITATE\_FRUCTE (VARCHAR2(40 BYTE), Yes, (null)).

	COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT
1	COD_COPAC	NUMBER(5,0)	No	(null)
2	SOIUL	VARCHAR2(25 BYTE)	No	(null)
3	MODEL_COPAC	VARCHAR2(25 BYTE)	No	(null)
4	GREUTATE	NUMBER(5,2)	Yes	(null)
5	CANTITATE_FRUCTE	VARCHAR2(40 BYTE)	Yes	(null)

## 3.Creare tabel CLIENTI COPACI

Create table clienti\_copaci

(cod\_client number(5) constraint pk\_clientii primary key,

Nume varchar2(20) not null,

Prenume varchar2(20)not null,

Telefon varchar2(10),

Email varchar2(30),

Adresa varchar2(20));

COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1 COD_CLIENT	NUMBER(5,0)	No	(null)	1	(null)
2 NUME	VARCHAR2(20 BYTE)	No	(null)	2	(null)
3 PRENUME	VARCHAR2(20 BYTE)	No	(null)	3	(null)
4 TELEFON	VARCHAR2(10 BYTE)	Yes	(null)	4	(null)
5 EMAIL	VARCHAR2(30 BYTE)	Yes	(null)	5	(null)
6 ADRESA	VARCHAR2(20 BYTE)	Yes	(null)	6	(null)

## 4.Creare tael PROGRAMARI

Create table programari

(cod\_programare number(5) constraint pk\_codprogr primary key,

Cod\_gradinar number(5),

Cod\_copac number(5),

Data\_prog date,

Constraint FKgradinar Foreign Key (cod\_gradinar) References

Gradinari(cod\_gradinar),

Constraint FKcopac Foreign Key (cod\_copac) References copaci(cod\_copac));

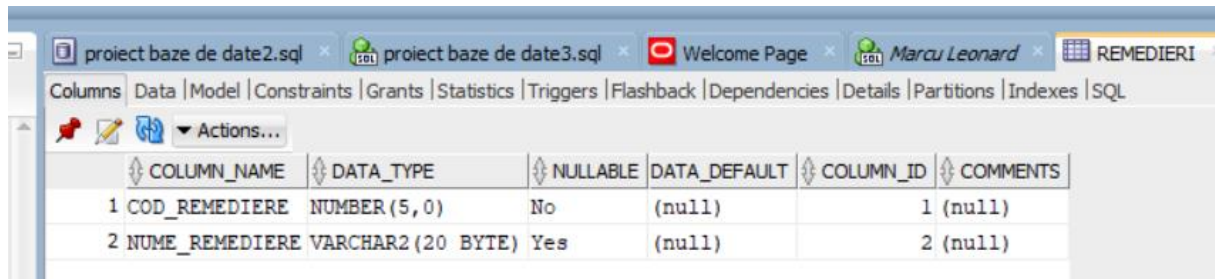
COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1 COD_PROGRAMARE	NUMBER(5,0)	No	(null)	1	(null)
2 COD_GRADINAR	NUMBER(5,0)	Yes	(null)	2	(null)
3 COD_COPAC	NUMBER(5,0)	Yes	(null)	3	(null)
4 DATA_PROG	DATE	Yes	(null)	4	(null)

## 5. Creare tabel REMEDIERI

Create table remedieri

(cod\_remediere number(5) constraint pk\_remediere primary key,

Nume\_remediere varchar2(20));



The screenshot shows the 'Columns' tab in SQL Developer for the 'REMEDIERI' table. The table has two columns: 'COD\_REMEDIERE' (NUMBER(5,0), Not Null, Column ID 1) and 'NUME\_REMEDIERE' (VARCHAR2(20 BYTE), Yes, Column ID 2). Both columns have a default value of (null).

	COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1	COD_REMEDIERE	NUMBER(5,0)	No	(null)	1	(null)
2	NUME_REMEDIERE	VARCHAR2(20 BYTE)	Yes	(null)	2	(null)

## 6. Creare Tabel INREGISTRARI

Create table inregistrari

(cod\_copac number(5), constraint fk\_inregistrari FOREIGN KEY (cod\_copac) References

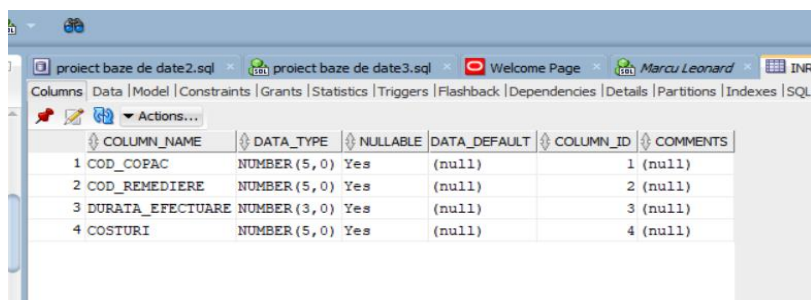
Copaci(cod\_copac),

Cod\_remediere number(5), constraint fk\_remediere FOREIGN KEY (cod\_remediere) REFERENCES

Remedieri(cod\_remediere),

Durata\_efectuare number(3),

Costuri number(5));



The screenshot shows the 'Columns' tab in SQL Developer for the 'INREGISTRARI' table. The table has four columns: 'COD\_COPAC' (NUMBER(5,0), Yes, Column ID 1), 'COD\_REMEDIERE' (NUMBER(5,0), Yes, Column ID 2), 'DURATA\_EFECTUARE' (NUMBER(3,0), Yes, Column ID 3), and 'COSTURI' (NUMBER(5,0), Yes, Column ID 4). All columns have a default value of (null).

	COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1	COD_COPAC	NUMBER(5,0)	Yes	(null)	1	(null)
2	COD_REMEDIERE	NUMBER(5,0)	Yes	(null)	2	(null)
3	DURATA_EFECTUARE	NUMBER(3,0)	Yes	(null)	3	(null)
4	COSTURI	NUMBER(5,0)	Yes	(null)	4	(null)

## **ACTUALIZAREA STRUCTURII TABELELOR**

1.Sa se adauge o restrictie conform careia numarul de telefon sa fie unic.

ALTER table gradinari

ADD constraint uq\_gradinari unique(telefon);

2.Sa se stearga tabela Gradinari

Drop table Gradinari

3.Sa se modifice numele remedierilor din tabela remedieri.

Alter table remedieri

Modify (nume\_remediere varchar2(40));

4.Sa se schimbe numele tabelei Clienti cu Clienti copaci.

Alter table clienti

Rename to client copaci;



## COMENZI LMD

### Gradinari

insert into gradinari values

('100','Vasile','Alex','Buzau','0789234567');

insert into gradinari values

('101','Bebe','Ion','Targoviste','0789212367');

insert into gradinari values

('102','Buze','Alin','Iasi','0789076567');

insert into gradinari values

('103','Bob','Boby','Fieni','0789234567');

insert into gradinari values

('104','Vio','Grigore','Bacau','0789246267');

insert into gradinari values

('105','Ahmet','Abdul','Arabia Saudita','0789296867');

insert into gradinari values

('106','Gavrila','Alex','Buzau','0789215967');

insert into gradinari values

('107','Vlad','Alin','Targoviste','0789235287')

insert into gradinari values

('108','Marcu','Leonard','Targoviste','0789367927')

	COD_GRA...	NUME	PRENUME	ADRESA	TELEFON
1	100	Petre	Alex	Buzau	0789234567
2	101	Bebe	Ion	Targoviste	0789212367
3	102	Buze	Alin	Iasi	0789076567
4	103	Bob	Boby	Fieni	0789234567
5	104	Vio	Grigore	Bacau	0789246267
6	105	Ahmet	Abdul	Arabia ...	0789296867
7	106	Gavrilă	Alex	Buzau	0789215967
8	107	Vlad	Alin	Targoviste	0789235287
9	108	Marcu	Leonard	Targoviste	0789367927

## Copaci

Insert into copaci values (202,'Mar','Florina',1,'10 kg');

Insert into copaci values (203,'Prune','Grase',1,'10 kg');

Insert into copaci values (204,'Pere','De Vara',1,'10 kg');

Insert into copaci values (205,'Mar','Ionatan',1,'10 kg');

Insert into copaci values (206,'Mar','Bot de iepure',1,'10 kg');

Insert into copaci values (207,'Mar','Florina',1,'20 kg');

Insert into copaci values (208,'Mar','Golden',1,'10 kg');

Insert into copaci values (209,'Prun','Anaspet',1,'10 kg');

	COD_COP...	SOIUL	MODEL_C...	GREUTATE	CANTITA...
1	203	Prune	Grase	1 10	kg
2	204	Pere	De Vara	1 10	kg
3	205	Mar	Ionatan	1 10	kg
4	206	Mar	Bot de ...	1 10	kg
5	207	Mar	Florina	1 20	kg
6	208	Mar	Golden	1 10	kg
7	209	Prun	Anaspet	1 10	kg
8	202	Mar	Florina	1 10	kg

## Programari

Insert into programari values

('300','100','203','12-07-2022');

Insert into programari values

('301','101','202','14-08-2022');

Insert into programari values

('302','102','204','15-07-2022');

Insert into programari values

('303','103','205','16-07-2022');

Insert into programari values

('304','104','206','17-07-2022');

Insert into programari values

('305','105','207','18-07-2022');

Insert into programari values

('306','106','208','19-07-2022');

Insert into programari values

('307','107','209','20-07-2022');

	COD_PRO...	COD_GRA...	COD_COPAC	DATA_PROG
1	300	100		203 12-07-2022
2	301	101		202 14-08-2022
3	302	102		204 15-07-2022
4	303	103		205 16-07-2022
5	304	104		206 17-07-2022
6	305	105		207 18-07-2022
7	306	106		208 19-07-2022
8	307	107		209 20-07-2022

## Clienti Copaci

Insert into clienti\_copaci values

(402,'Popescu','Cosmin','0725663901','cosminpopescu@yahoo.com','Braila');

Insert into clienti\_copaci values

(403,'Popescu','Alin','0725690901','calin@yahoo.com','Iasi');

Insert into clienti\_copaci values

(404,'Chitu','Bebe','0721233901','bebe@yahoo.com','Focsani');

Insert into clienti\_copaci values

(405,'Chitu','Florin','0709663901','flo@yahoo.com','Zalau');

Insert into clienti\_copaci values

(406,'Popescu','Hagi','0725607801','hagi@yahoo.com','Constanta');

Insert into clienti\_copaci values

(407,'Matei','Irinel','0725601901','iri@yahoo.com','Braila');

Insert into clienti\_copaci values

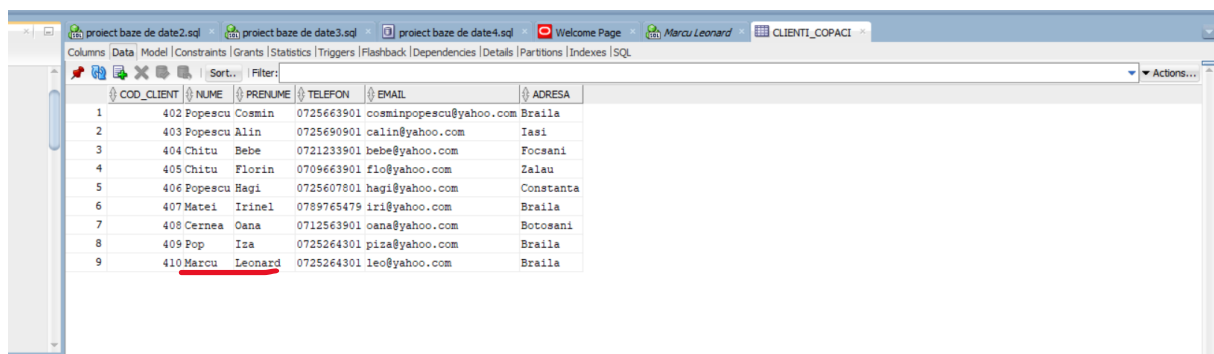
(408,'Cernea','Oana','0712563901','oana@yahoo.com','Botosani');

Insert into clienti\_copaci values

(409,'Pop','Iza','0725264301','piza@yahoo.com','Braila');

Insert into clienti\_copaci values

(410,'Marcu','Leonard','0725264301','leo@yahoo.com','Braila');



	COD_CLIENT	NUME	PRENUME	TELEFON	EMAIL	ADRESA
1	402	Popescu	Cosmin	0725663901	cosminpopescu@yahoo.com	Braila
2	403	Popescu	Alin	0725690901	calin@yahoo.com	Iasi
3	404	Chitu	Bebe	0721233901	bebe@yahoo.com	Focsani
4	405	Chitu	Florin	0709663901	flo@yahoo.com	Zalau
5	406	Popescu	Hagi	0725607801	hagi@yahoo.com	Constanta
6	407	Matei	Irinel	0789765479	iri@yahoo.com	Braila
7	408	Cernea	Oana	0712563901	oana@yahoo.com	Botosani
8	409	Pop	Iza	0725264301	piza@yahoo.com	Braila
9	410	Marcu	Leonard	0725264301	leo@yahoo.com	Braila

## Inregistrari

Insert into inregistrari values

('202','502','2','50');

insert into inregistrari values

('203','503','2','50');

insert into inregistrari values

('204','504','1','40');

insert into inregistrari values

('205','505','2','35');

insert into inregistrari values

('206','506','3','50');

insert into inregistrari values

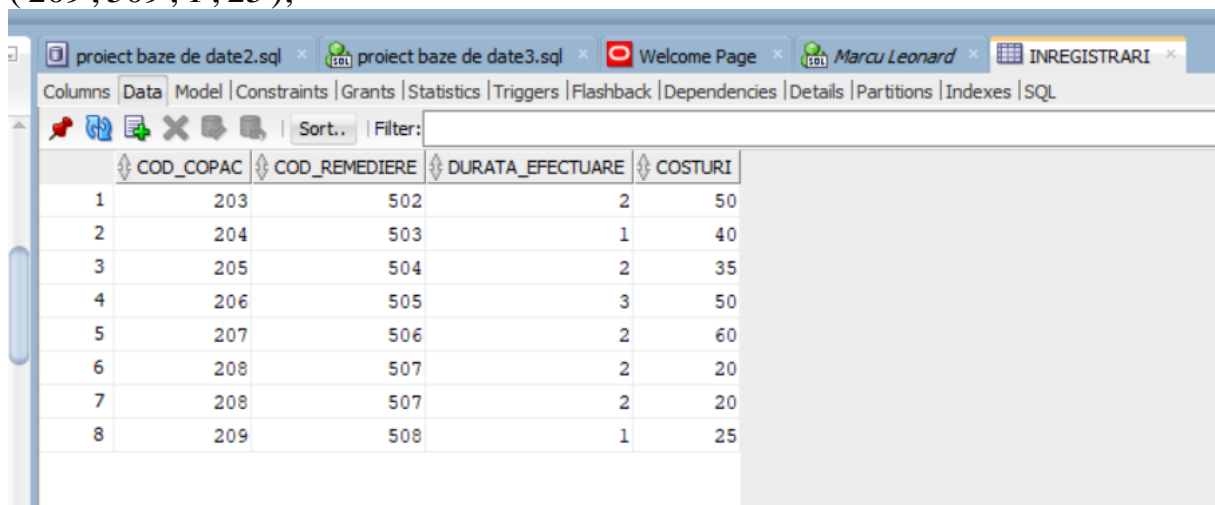
('207','507','2','60');

insert into inregistrari values

('208','508','2','20');

insert into inregistrari values

('209','509','1','25');



The screenshot shows a database management interface with several tabs at the top: 'proiect baze de date2.sql', 'proiect baze de date3.sql', 'Welcome Page', 'Marcu Leonard', and 'INREGISTRARI'. The 'INREGISTRARI' tab is active, displaying a table with the following columns: 'COD\_COPAC', 'COD\_REMEDIERE', 'DURATA\_EFECTUARE', and 'COSTURI'. The table contains 8 rows of data, numbered 1 through 8 in the first column.

	COD_COPAC	COD_REMEDIERE	DURATA_EFECTUARE	COSTURI
1	203	502	2	50
2	204	503	1	40
3	205	504	2	35
4	206	505	3	50
5	207	506	2	60
6	208	507	2	20
7	208	507	2	20
8	209	508	1	25

## Remedieri

insert into remedieri values

('502','remediam mucegaiul');

insert into remedieri values

('503','remediam frunzele');

insert into remedieri values

('504','remediam tulpina');

insert into remedieri values

('505','remediam radacina');

insert into remedieri values

('506','remediam radacina');

insert into remedieri values

('507','remediam scoarta');

insert into remedieri values

('508','remediam florile');

insert into remedieri values

('509','remediam mucegaiul');

	COD_REMEDIERE	NUME_REMEDIERE
1	502	remedii mucegaiul
2	503	remedii frunzele
3	504	remedii tulpina
4	505	remedii radacina
5	506	remedii radacina
6	507	remedii scoarta
7	508	remedii florile
8	509	remedii mucegaiul

## Modificarea datelor

1.Sa se schimbe numele gradinarului avand codul 100 in Petre

## Update gradinari

```
Set nume='Petre'
```

Where cod\_gradinar= 100;



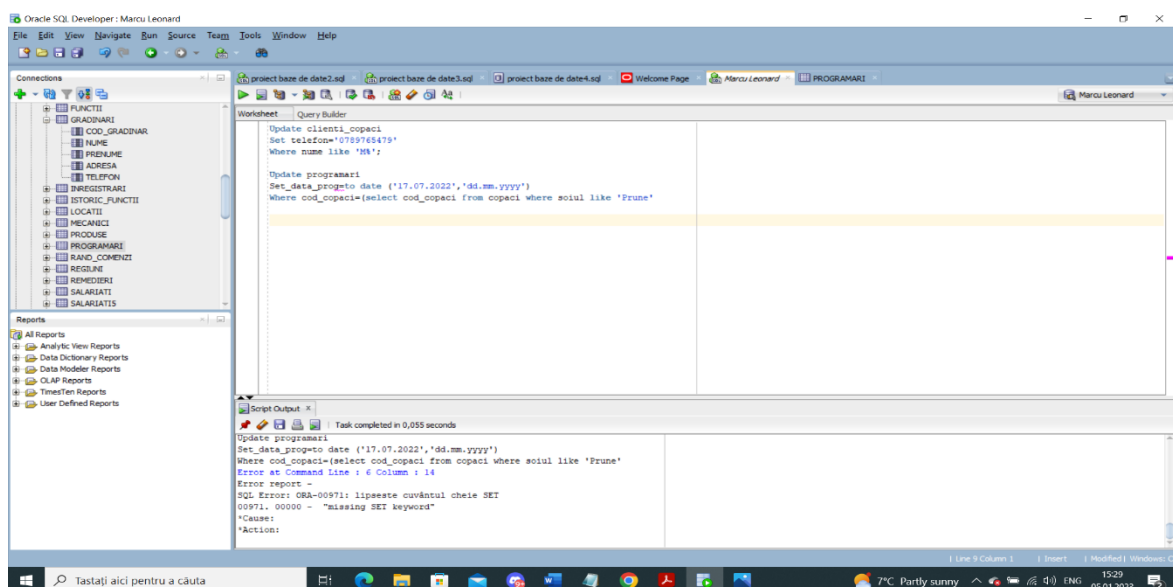
	COD_GRA...	NUME	PRENUME	ADRESA	TELEFON
1	108	Marcu	Leonard	Targoviste	0789367927
2	100	Petre	Alex	Buzau	0789234567
3	101	Bebe	Ion	Targoviste	0789212367
4	102	Buze	Alin	Iasi	0789076567
5	103	Bob	Boby	Fieni	0789234567
6	104	Vio	Grigore	Bacau	0789246267
7	105	Ahmet	Abdul	Arabia ...	0789296867
8	106	Gavrila	Alex	Buzau	0789215967
9	107	Vlad	Alin	Targoviste	0789235287

2.Sa se modifice data programari de plantatie pentru Prunele Grase

Update programari

Set\_data\_prog=to date ('17.07.2022','dd.mm.yyyy')

Where cod\_copaci=(select cod\_copaci from copaci where soiul like 'Prune' .



3.Sa se schimbe numarul de telefon al clientilor care incep cu litera M.

Update clienti\_copaci

Set telefon='0789765479'

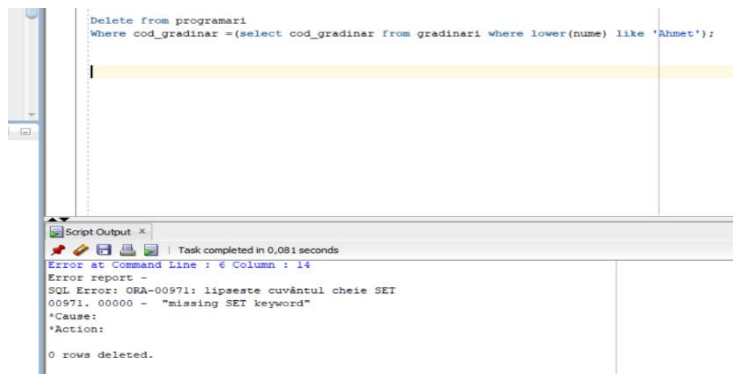
Where nume like 'M%';

	COD_CLIENT	NUME	PRENUME	TELEFON	EMAIL	ADRESA
1	402	Popescu	Cosmin	0725663901	cosminpopescu@yahoo.com	Braila
2	410	Marcu	Leonard	0789761239	leo@yahoo.com	Braila
3	403	Popescu	Alin	0725690901	calin@yahoo.com	Iasi
4	404	Chitu	Bebe	0721233901	bebe@yahoo.com	Focsani
5	405	Chitu	Florin	0709663901	flo@yahoo.com	Zalau
6	406	Popescu	Hagi	0725607801	hagi@yahoo.com	Constanta
7	407	Matei	Irinel	0789761239	iri@yahoo.com	Braila
8	408	Cernea	Oana	0712563901	oana@yahoo.com	Botosani
9	409	Pop	Iza	0725264301	piza@yahoo.com	Braila

4.Sa se stearga programarile gradinarului Ahmet.

Delete from programari

Where cod\_gradinar =(select cod\_gradinar from gradinari where lower(nume) like 'Ahmet');



5.Sa se stearga din tabela inregistrari copacul cu costurile cele mai mari.

Delete from inregistrari

Where costuri=(select max(costuri) from inregistrari);

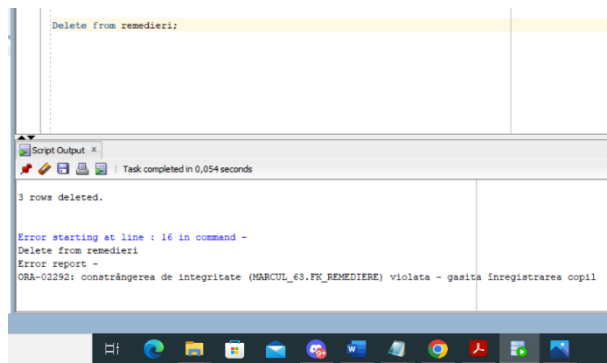
STRARI@Marcu Leonard

The screenshot shows a SQL database window with the following table structure and data:

	COD_C...	COD_REMEDIERE	DURATA_EFECTUARE	COSTURI
1	209	509	1	25
2	208	508	2	20
3	205	505	2	35
4	204	504	1	40

6.Sa se stearga toate inregistrarile din tabela remedieri.

Delete from remedieri;



## Interograri

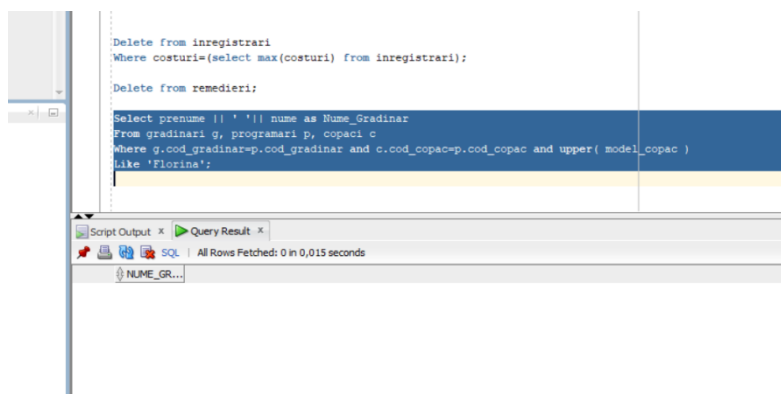
1.Sa se afiseze numele si prenumele gradinariilor ce au avut grija de meri.

Select prenume || ' ' || nume as Nume\_Gradinar

From gradinari g, programari p, copaci c

Where g.cod\_gradinar=p.cod\_gradinar and c.cod\_copac=p.cod\_copac and  
upper( model\_copac )

Like 'Florina';

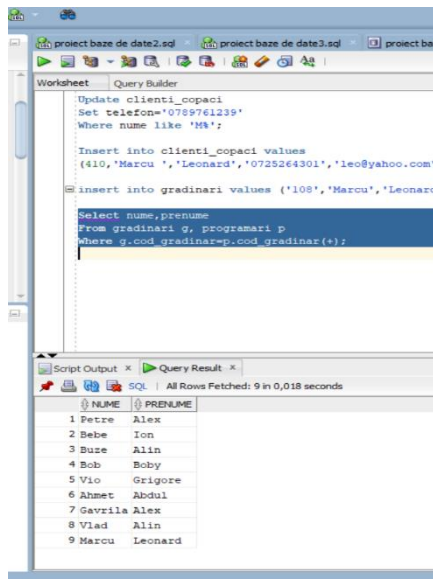


2.Sa se afiseze gradinari ce nu au programare.

Select nume,prenume

From gradinari g, programari p

Where g.cod\_gradinar=p.cod\_gradinar(+);



3.Sa se afisieze numele remedierilor care au codul intre 503 si 506 si durata de remediere a copaciilor mai mica de 2 saptamani.

Select nume\_remediere

From remedieri

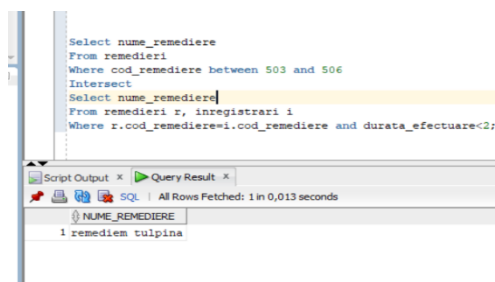
Where cod\_remediere between 503 506

Intersect

Select nume\_remediere

From remedieri r, inregistrari i

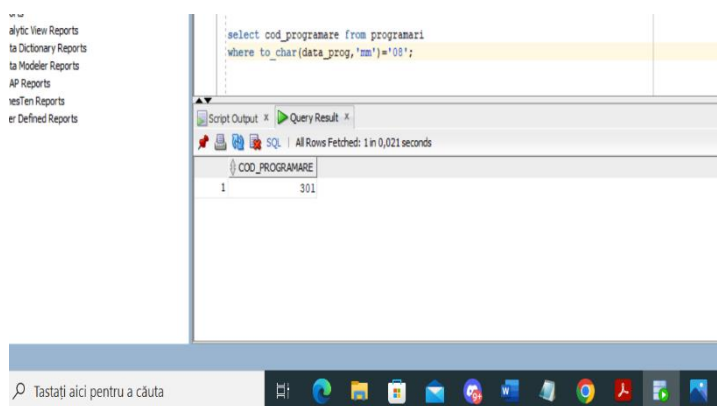
Where r.cod\_remediere=i.cod\_remediere and durata\_efectuare<2;



4.Sa se afiseze codul programari pentru autoturismele programate in luna august.

```
select cod_programare from programari
```

```
where to_char(data_prog,'mm')='08';
```

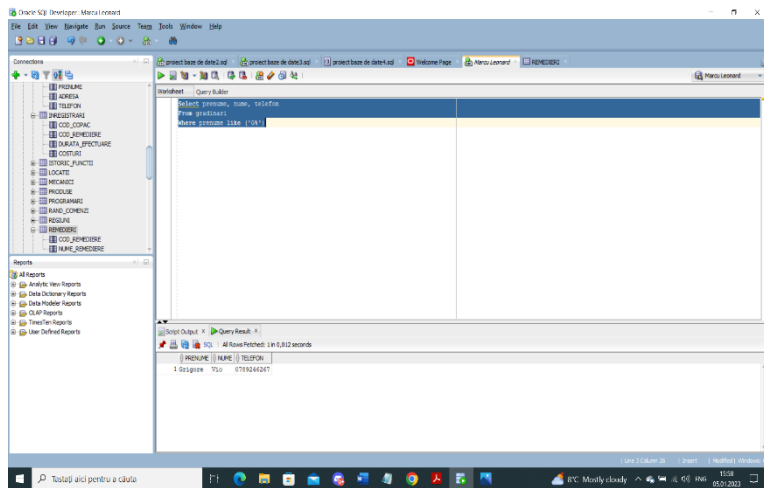


5.Sa se afiseze numle prenumele si telefonul gradinarului a carui nume incepe cu litera G.

```
Select prenume, nume, telefon
```

```
From gradinari
```

```
Where prenume like ('G%')
```

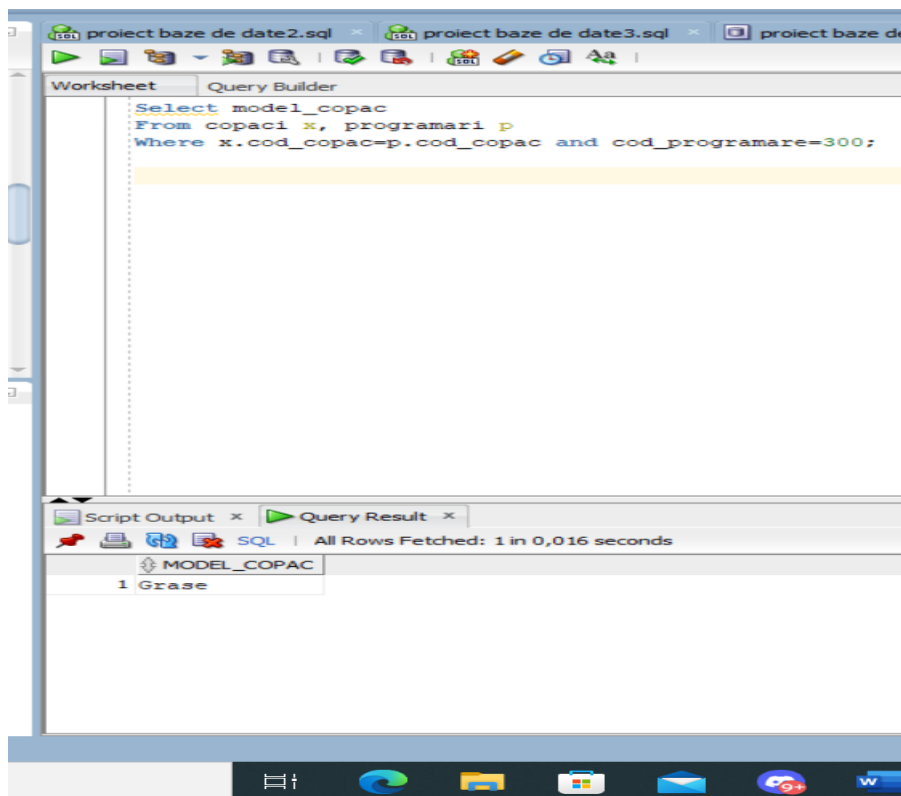


6.Sa se afiseze modelul copacului cu codul de programare 300.

Select model\_copac

From copaci x, programari p

Where x.cod\_copac=p.cod\_copac and cod\_programare=300;



7.Sa se afiseze gradinari care au copaci programati spre vanzare intre 12.07.2022 si data curenta.

Select cod\_gradinar,nume

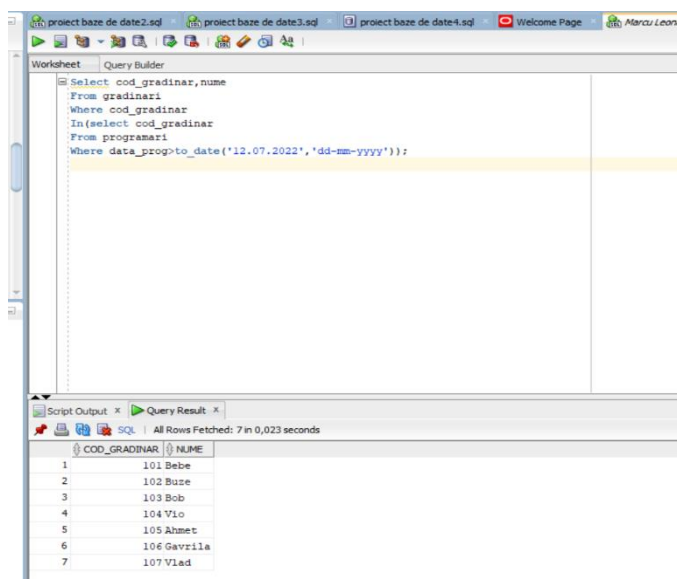
From gradinari

Where cod\_gradinar

In(select cod\_gradinar

From programari

Where data\_prog>to\_date('12.07.2022','dd-mm-yyyy'));



The screenshot shows a SQL query editor with a query window and a results window. The query window contains the following SQL code:

```
Select cod_gradinar,nume
From gradinari
Where cod_gradinar
In(select cod_gradinar
From programari
Where data_prog>to_date('12.07.2022','dd-mm-yyyy'));
```

The results window shows the output of the query, which is a table with two columns: COD\_GRADINAR and NUME. The table contains 7 rows of data.

	COD_GRADINAR	NUME
1	101	Bebe
2	102	Buze
3	103	Bob
4	104	Vlo
5	105	Ahmet
6	106	Gavrila
7	107	Vlad

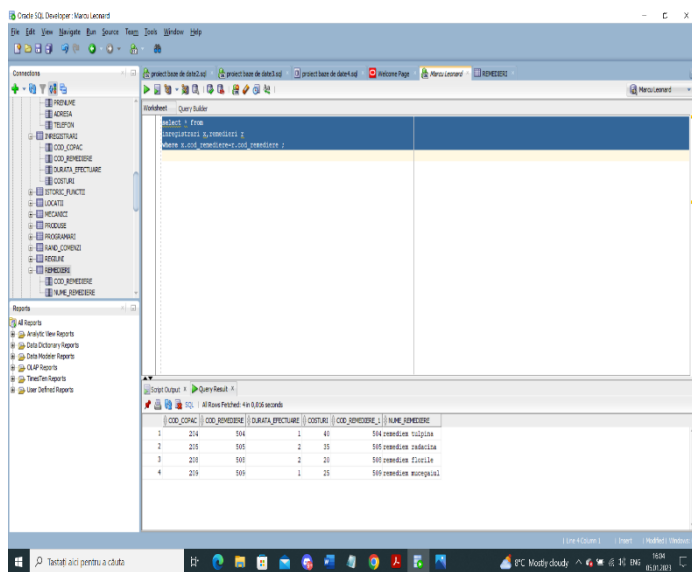


8.Sa se afiseze atat inregistrarile cat si remedierile.

select \* from

inregistrari x,remedieri r

where x.cod\_remediere=r.cod\_remediere ;



The screenshot shows the Oracle SQL Developer interface. The 'Connections' pane on the left lists several databases, with 'REMEDIERE' selected. The 'Query Builder' window in the center displays a SQL query: `select * from inregistrari x,remedieri r where x.cod_remediere=r.cod_remediere ;`. The 'Results' pane at the bottom shows the query result, which is a table with 5 columns: `COD_COPAC`, `COD_REMEDIERE`, `DURATA_PECTURARE`, `COSTURI`, and `NUM_REMEDIERE`. The table contains 4 rows of data.

	COD_COPAC	COD_REMEDIERE	DURATA_PECTURARE	COSTURI	NUM_REMEDIERE
1	204	504	1	40	504 remedieri tulgcea
2	205	505	2	35	505 remedieri raducita
3	203	500	2	20	500 remedieri forcile
4	209	509	1	25	509 remedieri murgului

# Tabele virtuale

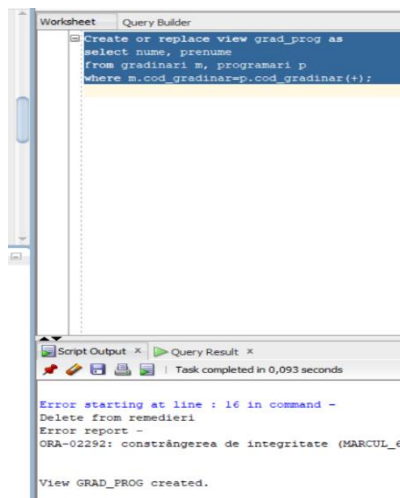
1.Creati o tabela virtuala care sa cuprinda si gradinari ce nu au programare.

Create or replace view grad\_prog as

select nume, prenume

from gradinari m, programari p

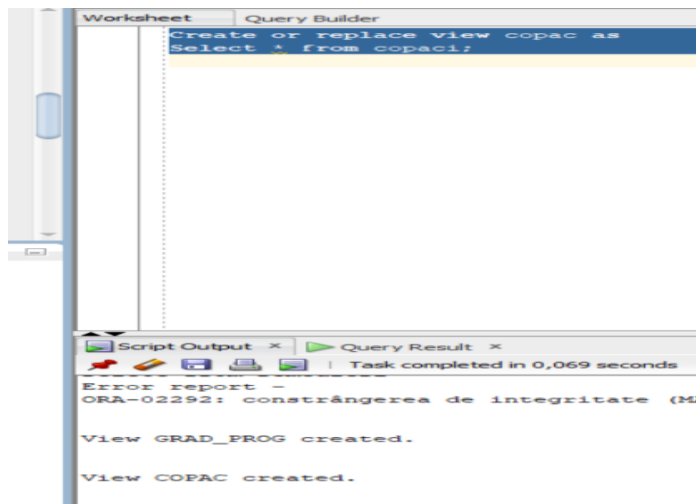
where m.cod\_gradinar=p.cod\_gradinar(+);



2.Creati o tabela virtuala care sa cuprinda toate informatiile despre copaci

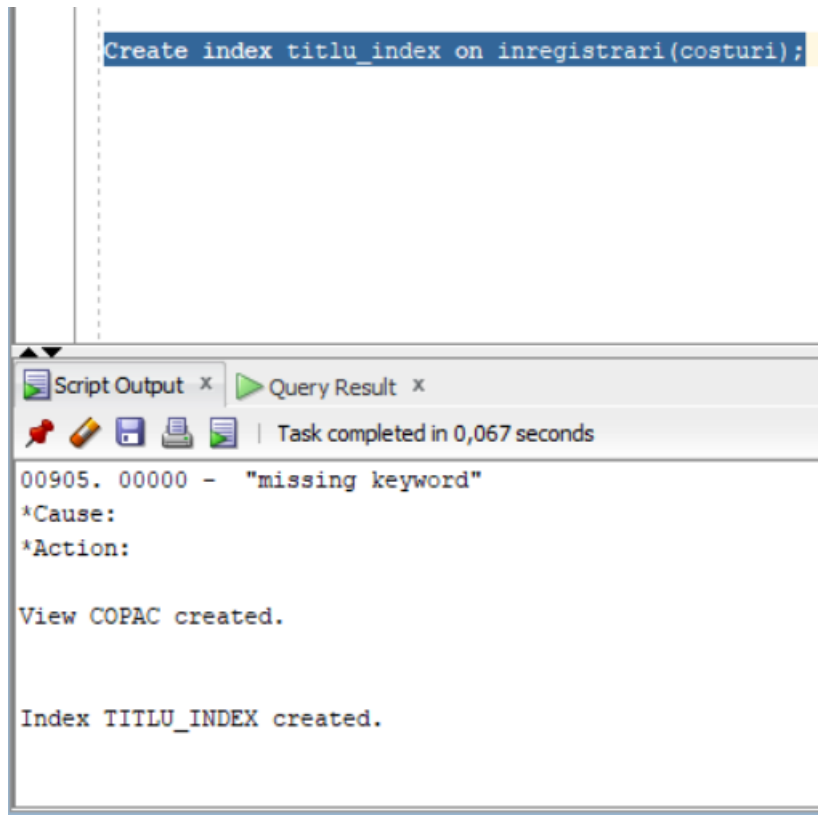
Create or replace view copac as

Select \* from copaci;



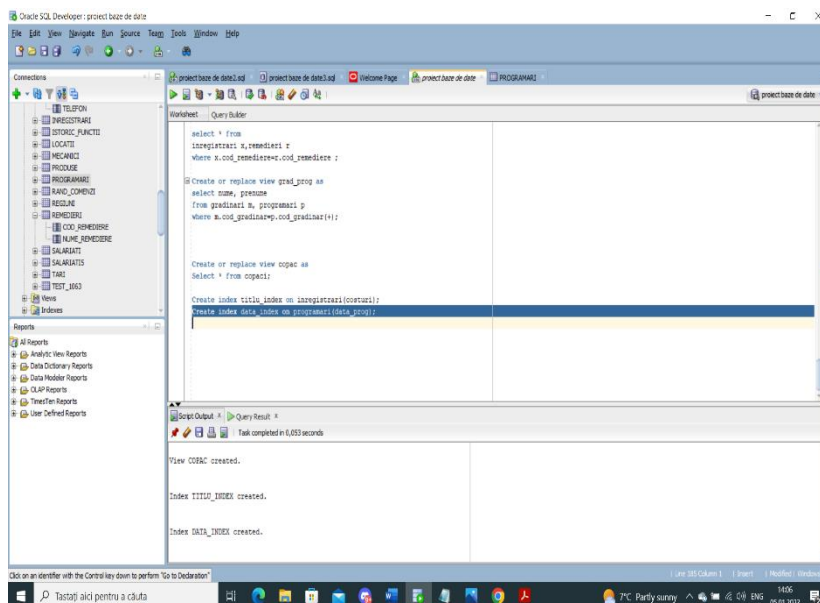
3.Sa se creeze un index dupa coloana costuri din tabela inregistrari.

Create index titlu\_index on inregistrari(costuri);



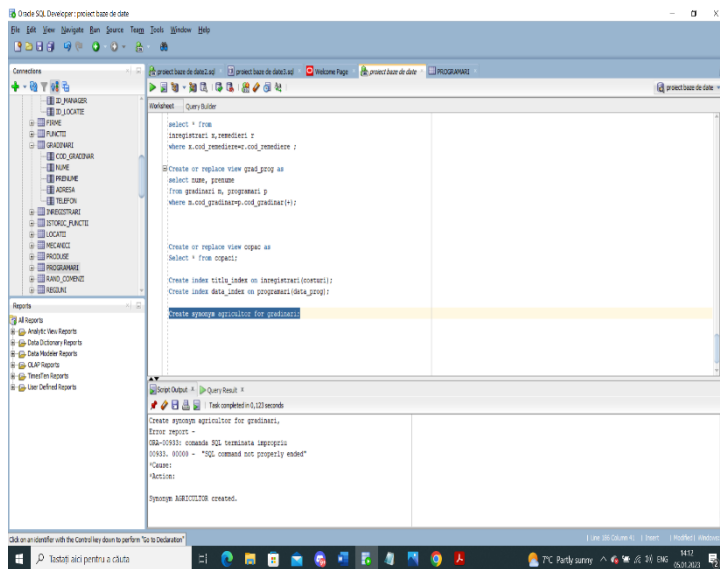
4.Sa se creeze in index dupa coloanal data\_prog din tabela programari.

Create index data\_index on programari(data\_prog);



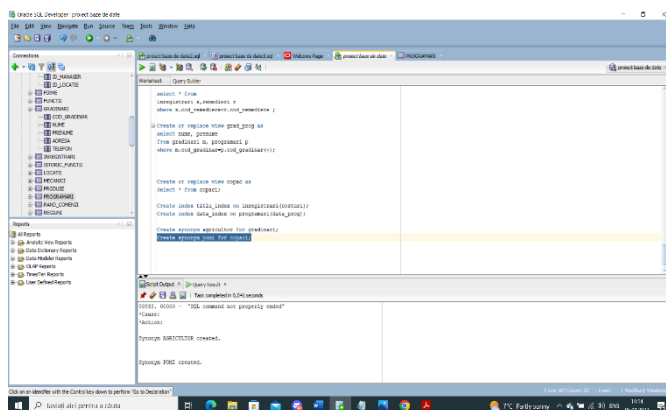
5.Sa se creeze un sinonim pentru tabela gradinari.

Create synonym agricultor for gradinari;



6.Sa se creeze un sinonim pentru tabela copaci.

Create synonym pomi for copaci;



7.Sa se creeze o secventa pentru asigurarea unicitatii cheii primare din tabela copaci.

Create sequence seq\_copac

Start with 20

Increment by 1

Maxvalue 100

Nocycle;

