# PROIECT BAZE DE DATE - 2022

## **DUMITRU ANDREI-VICTOR**

grupa 241

### <u>1.</u>

Modelul ales prezinta achizitia unor diverse produse de catre alte firme mai mari ce au in componenta lor angajati specializati in diverse domenii, dar si experti in negociere (cei care se ocupa efectiv de achizitii)

In modelul creat am stabilit ca furnizorul are o locatie unica(a sediului, a fabricii) si de asemenea ca angajatii nu pot sa fie angajati ai mai multor firme(ci doar una singura).

De asemenea, am stabilit ca firmele trebuie sa apartina unei "aliante" (prin aceasta alianta m-am referit la o asociere de firme ce lucreaza in acelasi domeniu).

IN RANDURILE URMATOARE AM DESCRIS IN DETALIU BAZA DE DATE(ENTITATILE, LEGATURILE ETC.)

#### Entitatile create sunt:

- a)CONTINENT -> reprezinta continentele; are drept cheie primara "cod continent".
- b)REGIUNE -> reprezinta regiunile "strategice"(Orientul Mijlociu, Europa de Vest); are drept cheie primara "id regiune".
  - c)TARA -> reprezinta tarile; are drept cheie primara "id\_tara"
- d)LOCATIE -> reprezinta partea mai specifica a adresei(cod postal, oras); are drept cheie primara "id locatie".
  - e)FURNIZOR -> reprezinta producatorii mici si medii; cheia primara este "id\_furnizor".
- f)OFERTA -> reprezinta oferta pe care o face un agent din cadrul unei firme unui furnizor(ofertele nu sunt unice, sunt in general oferte-tip care au un pret destul de stabil); cheia primara este "id oferta".
- g)ANGAJAT -> reprezinta angajatii firmelor mari, acestia sunt de doua tipuri:agenti(cei ce negociaza si stabilesc contractele cu firmele) si specialistii in celelalte domenii(indiferent de domeniu); cheia primara este "cod ang".
- h)VINDE -> reprezinta un tabel asociativ stabilit intre ANGAJAT, OFERTA si FURNIZOR; cheia primara este compusa "id furnizor, suma, cod ang".
  - i)FIRMA -> reprezinta firmele mari, cele ce se unesc in diverse aliante; cheia primara este "id\_firma".
  - j)ACT CARITATE -> reprezinta diversele donatii facute de firme; cheia primara este "id act".
  - k)ALIANTA -> reprezinta aliantele firmelor; cheia primara este "cod alianta".
- l)DOMENIU -> reprezinta domeniul de activitate al aliantelor(in modelul meu am presupus ca firmele din FIRMA nu pot exista in afara aliantelor);

cheia primara este "cod domeniu".

#### Avem relatiile:

a)are(many-to-one):entitatile REGIUNE si CONTINENT

b)este(many-to-one):entitatile TARA si REGIUNE

c)exista(many-to-one):entitatile LOCATIE si TARA

d)se stabileste(one-to-one):entitatile FURNIZOR si LOCATIE

e)se propune(relatie de tip 3):entitatile ANGAJAT, OFERTA si FURNIZOR

f)lucreaza(many-to-one):entitatile ANGAJAT si FIRMA

g)face(many-to-one):entitatile FIRMA si ACT CARITATE

h)face parte(many-to-one):entitatile FIRMA si ALIANTA

i)este in(many-to-one):entitatile ALIANTA si DOMENIU

Avem urmatoarele atribute pentru entitatile:

```
a)CONTINENT
         -denumire varchar2(20)
                                    -> poate retine un sir de pana la 20 de caractere(bineinteles, dimensiunea se
poate incrementa)
                                            -> nu poate fi null si de asemenea trebuie sa fie unic
                                            -> retine numele unui continent
         -cod continent number(4)
                                    ->cheie primara
                                    ->poate retine un numar de pana la 4 cifre
  b)REGIUNE:
         -id regiune number(4)
                                    ->cheie primara
                                    ->poate retine un numar de pana la 4 cifre
         -nume regiune varchar2(20)
                                    ->poate retine un sir de pana la 20 de caractere
                                    ->retine numele regiunii geografice
                                    ->nu poate fi null si de asemenea trebuie sa fie unic
         -importanta_regiune number(4)
                                    ->nu poate fi null
                                    ->retine o valoare de tip scor care sa sugereze importanta zonei din punct de
vedere comercial
         -cod continent(4)
                                    ->foreign key ce refera cheia primara din tabelul
CONTINENT(cod continent)
  c)TARA:
         -id tara number(4)
                                    ->cheie primara
         -nume tara varchar2(20)
                                    ->nu poate fi null
                                    ->este unic
                                    ->retine numele unei tari
         -id regiune number(4)
                                    ->foreign key ce refera cheia primara din tabelul REGIUNE(id_regiune)
                                    ->nu poate fi null
  d)LOCATIE:
         -id locatie number(4)
                                    ->cheie primara
         -oras varchar2(20)
                                    ->diferit de null
                                    ->retine numele oraselor
         -id tara number(4)
                                    ->diferit de null
                                    ->foreign key ce refera cheia primara din tabelul TARA(id tara)
         -cod postal number(8)
```

#### ->retine o valoare

```
e)FURNIZOR:
         -id furnizor number(6)
                                   ->cheie primara
         -id_locatie number(4)
                                   ->foreign key ce refera cheia primara din tabelul LOCATIE(id locatie)
                                   ->diferit de null
         -nume furnizor varchar(20)
                                   ->retine numele furnizorului, trebuie sa fie unic
  f)DOMENIU:
         -cod_domeniu number(6)
                                   ->cheie primara
         -popularitate number(4)
                                   ->retine un numar ce are rolul de a se comporta ca un rating(prin
comparatie) al popularitatii domeniului respectiv
                                   ->nu poate fi null
  g)ALIANTA:
         -cod alianta number(6)
                                   ->cheie primara
         -cod domeniu number(6)
                                   ->foreign key ce refera cheia primara din tabelul
DOMENIU(cod domeniu)
                                   ->diferit de null
  h)FIRMA:
         -id_firma number(6)
                                   ->cheie primara
         -cod alianta number(6)
                                   ->foreign key ce refera cheia primara din tabelul ALIANTA(cod_alianta)
                                   ->diferit de null
         -data_infiintare date
                                   ->data infiintarii firmei(valoarea default este chiar sysdate)
         -nume fondator varchar2(20)
                                   ->retine numele fondatorului firmei
                                   ->valoarea default este "UNKNOWN"
  i)ACT CARITATE
         -id act number(4)
                                   ->cheie primara
         -bani donati number(10,2)
                                   ->retine suma donata in campania respectiva
                                   ->nu poate fi null
         -id firma number(6)
```

```
->id-ul firmelor care au contribuit cu donatia respectiva
                                 ->poate fi null(o firma nu doreste sa faca publica informatica)
       -cod_angajat number(6)
                                 ->cheie primara
      -last name varchar2(15)
                                 ->numele de familie al angajatului
                                 ->nu poate fi null
      -first name varchar2(15)
                                 ->prenumele angajatului
                                 ->nu poate fi null
       -data angajare date
                                 ->data la care a fost angajat salariatul
                                 ->poate fi null(nu se mai cunoaste data angajarii)
       -comision number(4,2)
                                 ->comisionul angajatului(daca este agent este diferit de null)
      -profesie varchar2(20)
                                 ->profesia angajatului
                                 ->nu poate fi null
      -suma number(12,2)
                                 ->cheie primara
      -tip_livrare varchar2(20)
                                 ->retine tipul de livrare("Express", "Periculoasa" etc)
                                 ->valoarea default este "UNKNOWN"
       -suma number(12,2)
                                 ->not null
                                 ->foreign key ce refera cheia primara din tabelul OFERTA(suma)
      -cod_angajat number(6)
                                 ->not null
                                 ->foreign key ce refera cheia primara din tabelul ANGAJAT(cod angajat)
      -id furnizor number(6)
                                 ->not null
                                 ->foreign key ce refera cheia primara din tabelul FURNIZOR(id furnizor)
       -data_v date
                                 ->data vanzarii
CONTINENT(cod continent#,denumire);
REGIUNE(id regiune#,nume regiune,importanta regiune);
TARA(id_tara#,nume_tara,id_regiune);
LOCATIE(id locatie#,id tara,nume tara,cod postal);
FURNIZOR(id furnizor#,id locatie,nume furnizor);
DOMENIU(cod_domeniu#,popularitate);
ALIANTA(cod alianta#,cod domeniu);
FIRMA(id_firma#,cod_alianta,data_infiintare,nume_fondator);
```

j)ANGAJAT

k)OFERTA

1)VINDE

ACT CARITATE(id act#,bani donati,id firma);

ANGAJAT(cod angajat#,last name,first name,data angajare,comision,id firma);

```
OFERTA(suma#,tip livrare);
  VINDE(suma#,cod_angajat#,id_furnizor#, data_v);
<u>2</u>. & <u>3</u>.
create table CONTINENT(
cod continent number(4) constraint pkey cont primary key,
denumire varchar2(20) constraint nume_cont not null,
constraint den_unic unique(denumire)
);
create table REGIUNE(
id regiune number(4) constraint pkey id reg primary key,
nume regiune varchar2(20) constraint nume reg not null,
importanta regiune number(4) constraint pkey imp not null,
constraint n_reg unique(nume_regiune)
);
alter table REGIUNE
add (cod continent number(4) not null);
desc regiune;
alter table REGIUNE
add constraint fk reg foreign key(cod continent) REFERENCES CONTINENT(cod continent);
create table TARA(
id tara number(4) constraint pkey tara primary key,
nume tara varchar2(20) constraint nume tara not null,
id_regiune number(4) constraint id_reg_n not null,
constraint n t unique(nume tara),
constraint fk tara foreign key(id regiune)references REGIUNE(id regiune)
);
create table LOCATIE(
id locatie number(4) constraint pkey loc primary key,
oras varchar2(20) not null,
id_tara number(4) not null,
cod postal number(8),
constraint fk locatie foreign key(id tara)references TARA(id tara)
);
create table FURNIZOR(
id_furnizor number(6) constraint pkey_furn primary key,
id locatie number(4) constraint fkey f not null,
nume_furnizor varchar(20) unique,--numele furnizorului poate fi necunoscut
constraint fk furnizor foreign key(id locatie) references LOCATIE(id locatie)
);
create table DOMENIU(
```

cod domeniu number(6) constraint pkey dd primary key,

popularitate number(4) not null

);

```
create table ALIANTA(
cod alianta number(6) constraint pkey al primary key,
cod domeniu(6) not null
constraint fk alian foreign key(cod domeniu) references domeniu(cod domeniu)
create table FIRMA(
id firma number(6) constraint pk firma primary key,
cod alianta number(6) constraint firma al not null,
data infiintare date default sysdate,
nume_fondator varchar2(20) default 'UNKNOWN',
constraint fk firma foreign key(cod alianta) references alianta(cod alianta)
);
create table ACT CARITATE(
id_act number(4) constraint pk_act primary key,
bani donati number(10,2) not null,
id firma number(6),--poate avea null daca sunt donatii anononime din partea firmelor
constraint fk_caritate foreign key(id_firma) references firma(id_firma)
);
create table ANGAJAT(
cod angajat number(6) constraint pkk angaj primary key,
last name varchar2(15) not null,
first_name varchar2(15) not null,
data angajare date,
comision number(4,2)
);
create table oferta(
suma number(12,2) constraint pk_oferta primary key,
tip livrare varchar2(20) default 'UNKNOWN'
);
create table vinde(
suma number(12,2) not null,
cod angajat number(6) not null,
id furnizor number(6) not null,
constraint fk_vinde_s foreign key(suma) references oferta(suma),
constraint fk_vinde_c foreign key(cod_angajat) references angajat(cod_angajat),
constraint fk vinde i foreign key(id furnizor) references furnizor(id furnizor)
);
alter table vinde
add (data v date);
alter table angajat
add(id firma number(6) not null);
ALTER TABLE ANGAJAT
ADD CONSTRAINT fork ang firma FOREIGN KEY (id firma) references FIRMA(id firma);
```

```
-----INSERARE
create sequence secv
INCREMENT by 1
START WITH 0
MAXVALUE 100
NOCYCLE;
create sequence coddd conttt
increment by 100
start with 100
maxvalue 1000
nocycle;
create sequence iddd_taraaa
increment by 10
start with 10
maxvalue 1000
nocycle;
desc continent;
insert into CONTINENT
values(coddd_conttt.NEXTVAL,'Europa');
insert into CONTINENT
values(coddd_conttt.NEXTVAL,'Asia');
insert into CONTINENT
values(coddd_conttt.NEXTVAL,'America de Nord');
insert into CONTINENT
values(coddd_conttt.NEXTVAL,'Africa');
insert into CONTINENT
values(coddd_conttt.NEXTVAL,'America de Sud');
select *from continent;
______
desc regiune;
insert into regiune
values(secv.nextval, 'Africa de Nord', 4, 500);
```

select \*from regiune;

```
values(1, 'Europa de Vest', 9, 200);
insert into regiune
values(secv.nextval, 'Caraibe', 2, 400);
insert into regiune
values(secv.nextval, 'Asia de Sud', 6, 300);
insert into regiune
values(secv.nextval, 'Asia de Est', 9, 300);
insert into regiune
values(secv.nextval, 'Europa Centrala', 7, 200);
insert into regiune
values(secv.nextval, 'America de Nord', 10, 400);
desc tara;
select *from tara;
insert into tara
values(iddd taraaa.nextval, 'Germania', 1);
insert into tara
values(10, 'Cehia', 6);
insert into tara
values(iddd_taraaa.nextval, 'Jamaica', 3);
insert into tara
values(iddd_taraaa.nextval, 'China', 5);
insert into tara
values(iddd_taraaa.nextval, 'India', 4);
insert into tara
values(iddd_taraaa.nextval, 'Franta', 1);
insert into tara
values(iddd taraaa.nextval, 'Algeria', 2);
insert into tara
values(iddd taraaa.nextval, 'Libia', 2);
insert into tara
values(iddd_taraaa.nextval, 'SUA', 7);
insert into tara
values(iddd_taraaa.nextval, 'Romania', 6);
```

insert into regiune

```
insert into tara
values(iddd taraaa.nextval, 'Japonia', 5);
insert into tara
values(iddd_taraaa.nextval, 'Luxemburg', 1);
desc locatie;
select *from locatie;
insert into locatie(id_locatie,oras,id_tara)
values(25, 'Beijing', 40);
insert into locatie
values(50, 'Berlin', 20, 123456);
insert into locatie
values(75, 'Kingston', 30, 420420);
insert into locatie
values(100, 'Chennai', 50, 200100);
insert into locatie
values(125, 'Los Angeles', 100, 432123);
insert into locatie(id locatie, oras, id tara)
values(150, 'Oran', 70);
insert into locatie(id_locatie, oras, id_tara)
values(175, 'Tokyo', 120);
insert into locatie(id locatie, oras, id tara)
values(200, 'Mlada Boleslav', 10);
insert into locatie
values(999, 'Brasov', 110, 500408);
insert into locatie
values(250, 'Stuttgart', 20, 123444);
insert into locatie(id locatie,oras,id tara)
values(275, 'Shenzen', 40);
insert into locatie
values(300, 'Ettelbruck', 130, 200200);
insert into locatie
values(325, 'Alger', 70, 122221);
insert into locatie
values(400, 'Bucuresti', 110, 021301);
```

```
insert into furnizor
values(1, 999, 'RomTech');
create sequence idd_furnizor
increment by 2
start with 3
maxvalue 1000
nocycle;
insert into furnizor
values(idd furnizor.nextval, 150,'Lah-Ahmid SRL');
insert into furnizor
values(idd_furnizor.nextval, 50,'GufenHaus');
insert into furnizor(id furnizor,id locatie)
values(idd furnizor.nextval, 25);
insert into furnizor(id furnizor,id locatie)
values(idd furnizor.nextval, 325);
insert into furnizor
values(idd furnizor.nextval, 400,'Werder-Kopfhorer');
insert into furnizor
values(idd_furnizor.nextval, 175,'Aka Enpitsu');
insert into furnizor
values(idd_furnizor.nextval, 300,'Le Nain Dansant');
insert into furnizor
values(idd_furnizor.nextval, 175,'Zui Hao');
insert into furnizor
values(idd_furnizor.nextval, 125,'Madman Trevor Pie');
insert into furnizor
values(idd_furnizor.nextval, 150,'Badr Electronics');
insert into furnizor
values(idd furnizor.nextval, 400,'Fratii MG');
insert into furnizor
values(idd furnizor.nextval, 75,'Rasta Joy');
select*from furnizor;
```

desc domeniu;

```
select *from domeniu;
insert into domeniu
values(150, 8);
insert into domeniu
values(300, 3);
insert into domeniu
values(450, 6);
insert into domeniu
values(600, 7);
insert into domeniu
values(750,2);
insert into domeniu
values(1000,10);
insert into domeniu
values(1150,9);
insert into alianta
values(1,600);
insert into alianta
values(2,300);
insert into alianta
values(3,600);
insert into alianta
values(4,150);
insert into alianta
values(7,300);
insert into alianta
values(6,450);
select *from alianta;
desc angajat;
select *from angajat;
create sequence coddd_angajatt
increment by 100
start with 100
maxvalue 10000
nocycle;
```

```
insert into angajat
values(coddd angajatt.nextval, 'Villa', 'Jessie', to date('12-01-1995'), 0.3, 'Agent', 400);
insert into angajat(cod angajat,last name,first name,profesie, id firma)
values(coddd_angajatt.nextval, 'Church', 'Michael', 'Specialist', 510);
insert into angajat(cod angajat,last name,first name,data angajare,profesie, id firma)
values(coddd angajatt.nextval, 'Kepa', 'Ahmed', to date('12-10-2002'), 'Specialist', 500);
insert into angajat(cod angajat,last name,first name,data angajare,profesie, id firma)
values(coddd_angajatt.nextval, 'Ming', 'Eiko', to_date('23-11-2005'), 'Specialist', 100);
insert into angajat
values(coddd angajatt.nextval, 'Kahn', 'Samir', to date('17-03-2019'), 0.15, 'Agent', 510);
insert into angajat
values(coddd angajatt.nextval, 'Mandini', 'Paola', to date('22-05-2020'), 0.05, 'Agent', 350);
insert into angajat(cod_angajat,last_name,first_name,profesie, id_firma)
values(coddd angajatt.nextval, 'Sacic', 'Ocktavian', 'Specialist', 150);
insert into angajat
values(coddd angajatt.nextval, 'Karpinarian', 'Dan', to date('02-10-1999'), 0.35, 'Agent', 400);
insert into angajat
values(coddd angajatt.nextval, 'Gibberson', 'Lance', to date('12-12-1991'), 0.3, 'Agent', 50);
insert into angajat(cod angajat,last name,first name,data angajare,profesie, id firma)
values(coddd angajatt.nextval, 'Li', 'Wok Han', to date('19-06-1984'), 'Specialist', 50);
insert into angajat(cod angajat,last name,first name,profesie, id firma)
values(coddd angajatt.nextval, 'Cristescu', 'Adrian', 'Specialist', 680);
insert into angajat(cod angajat,last name,first name,profesie, id firma)
values(coddd angajatt.nextval, 'Smith', 'Buddy', 'Specialist', 150);
insert into angajat(cod angajat,last name,first name,comision,profesie, id firma)
values(coddd angajatt.nextval, 'Hollande', 'Armand', 0.33, 'Agent', 150);
insert into angajat(cod angajat,last name,first name,profesie, id firma)
values(coddd angajatt.nextval, 'Dahoty', 'Rebeca', 'Specialist', 50);
insert into angajat
values(coddd angajatt.nextval, 'Dos Santos', 'Eric', to date('08-07-1979'), 0.31, 'Agent', 50);
insert into angajat(cod angajat,last name,first name,profesie, id firma)
values(coddd_angajatt.nextval, 'Akoshua', 'Abena', 'Specialist', 400);
insert into angajat
values(coddd angajatt.nextval, 'Mendy', 'Ekon', to date('01-02-1984'), 0.1, 'Agent', 250);
```

```
insert into angajat(cod angajat,last name,first name,profesie, id firma)
values(coddd_angajatt.nextval, 'Toure', 'Abdoulaye', 'Specialist', 150);
insert into angajat(cod angajat,last name,first name,profesie, id firma)
values(coddd angajatt.nextval, 'Roberts', 'Alice', 'Specialist', 200);
insert into angajat
values(coddd angajatt.nextval, 'Adam', 'Eliska', to date('24-04-1993'), 0.1, 'Agent', 250);
insert into angajat(cod angajat,last name,first name,profesie, id firma)
values(coddd angajatt.nextval, 'Campbell', 'Aaron', 'Specialist', 350);
insert into angajat(cod angajat,last name,first name,profesie, id firma)
values(coddd angajatt.nextval, 'Draganescu', 'Daniel', 'Specialist', 500);
insert into angajat
values(coddd_angajatt.nextval, 'Dvorak', 'Jindrich', to_date('07-09-1988'), 0.13, 'Agent', 250);
insert into angajat
values(coddd_angajatt.nextval, 'Rodriguez', 'Feranda', to_date('12-01-2016'), 0.6, 'Agent', 50);
desc firma;
select *from firma;
insert into firma
values(50, 4, to date('02-10-1954','dd-mm-yy'),'Charles Berhshawn');
insert into firma
values(100, 2, to date('26-03-1989','dd-mm-yy'), 'Yao Ming');
insert into firma(id firma, cod alianta, data infiintare)
values(150, 2, to date('13-01-1999','dd-mm-yy'));
insert into firma(id firma, cod alianta, data infiintare)
values(200, 1, to date('16-08-1993','dd-mm-yy'));
insert into firma
values(250, 4, to date('17-12-1958','dd-mm-yy'),'Charles Berhshawn');
insert into firma
values(400, 4, to date('30-10-1968','dd-mm-yy'),'Breonna Berhshawn');
insert into firma
values(350, 2, to_date('15-05-2018','dd-mm-yy'),'Jun Tao Liu');
insert into firma
values(320, 3, to_date('02-06-2003','dd-mm-yy'),'Siko Doncic');
insert into firma
values(500, 7, to date('19-04-2009','dd-mm-yy'),'Robert Domnescu');
```

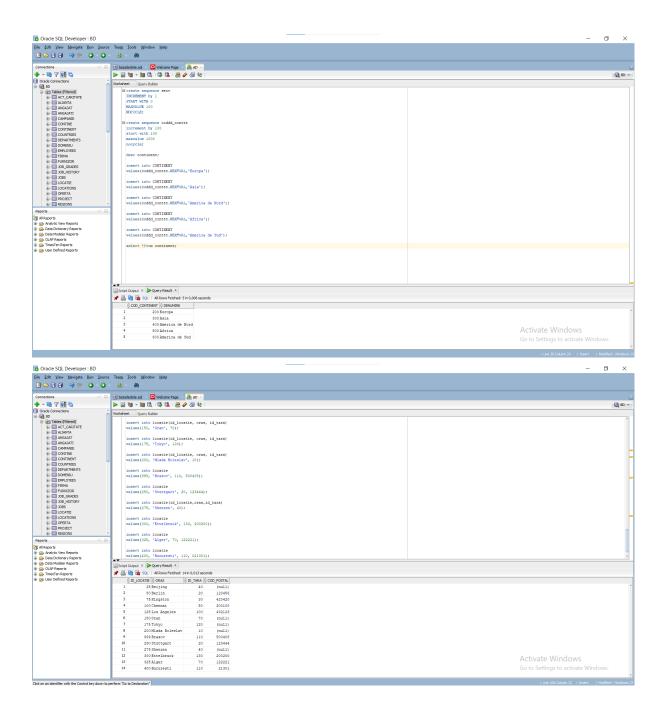
```
insert into firma
values(510, 6, to_date('14-03-2012','dd-mm-yy'),'Francois Lamerde');
insert into firma
values(680, 7, to date('09-01-2006','dd-mm-yy'),'Andrei Stoica');
create sequence coddd act
increment by 1
start with 1
maxvalue 100
nocycle;
select *from act caritate;
desc act_caritate;
insert into act_caritate
values(coddd act.nextval, 10000, 680);
insert into act_caritate
values(coddd_act.nextval, 35600.50, 100);
insert into act caritate
values(coddd act.nextval, 1500000, 500);
insert into act_caritate
values(coddd act.nextval, 1000.25, 510);
insert into act caritate
values(coddd_act.nextval, 90000.22, 320);
insert into act caritate
values(coddd act.nextval, 351752, 50);
insert into act caritate
values(coddd_act.nextval, 1251151, 320);
insert into act caritate(id act, bani donati)
values(coddd_act.nextval, 21250.54);
insert into act caritate
values(coddd act.nextval, 4686795, 500);
insert into act caritate
values(coddd_act.nextval, 918214, 400);
desc oferta;
SELECT*FROM OFERTA;
```

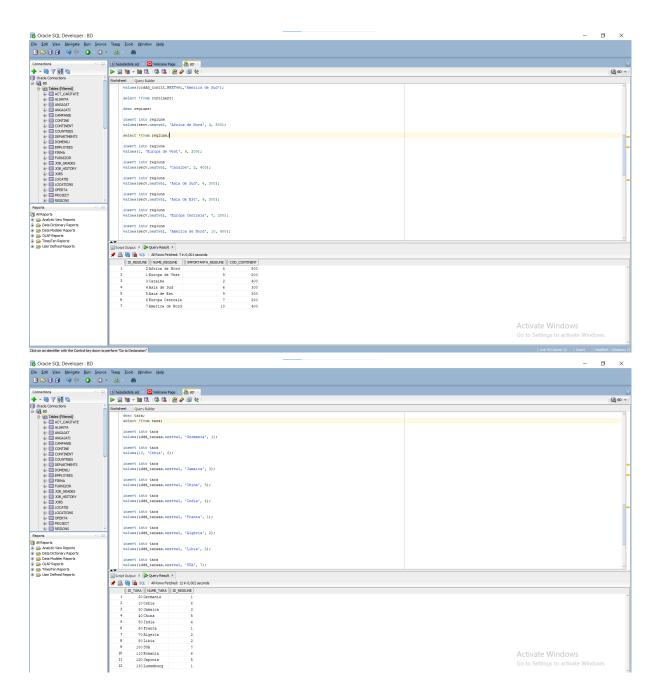
insert into oferta

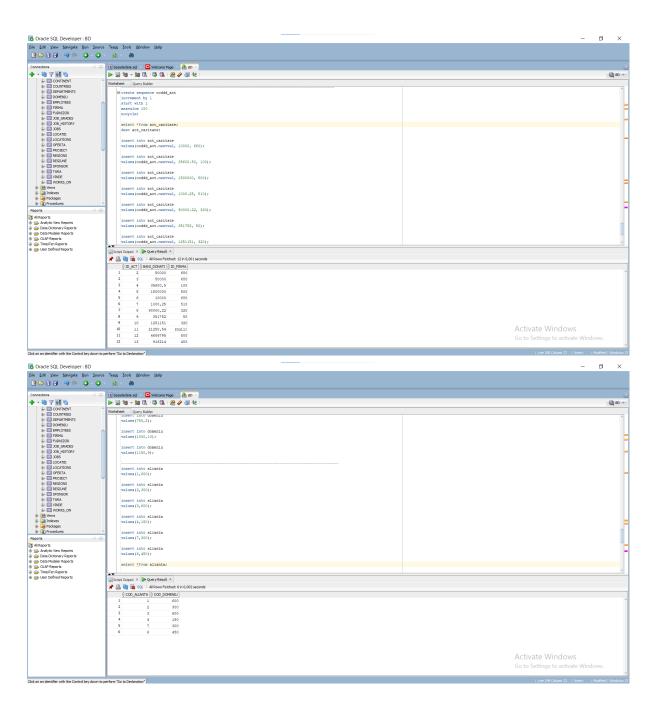
```
values(192419.25, 'EXPRESS');
INSERT INTO OFERTA
VALUES(9539101, 'EXPRESS');
INSERT INTO OFERTA
VALUES(10000, 'CU INTARZIERE');
INSERT INTO OFERTA
VALUES(10000000,'LIVRARE 3 ZILE');
INSERT INTO OFERTA
VALUES(401000, 'CU INTARZIERE');
INSERT INTO OFERTA
VALUES(5161000, 'EXPRESS');
INSERT INTO OFERTA
VALUES(20000, 'NESPECIFICAT');
INSERT INTO OFERTA
VALUES(3100, 'CU INTARZIERE');
INSERT INTO OFERTA
VALUES(5160, 'NEGOCIERE');
INSERT INTO OFERTA
VALUES(1022000, 'NEGOCIERE');
INSERT INTO OFERTA
VALUES(3100.50, 'CU INTARZIERE');
DESC VINDE;
select *from vinde;
alter table vinde
add constraint pk compus vinde primary key(suma, cod angajat, id furnizor);
insert into vinde
values(9539101, 200, 1, TO DATE('12-03-2001'));
insert into vinde
values(10000, 700, 3, TO DATE('16-09-2020'));
insert into vinde
values(401000, 1000, 7, TO DATE('17-06-2008'));
insert into vinde
values(10000000, 1600, 1, TO_DATE('12-03-2011'));
```

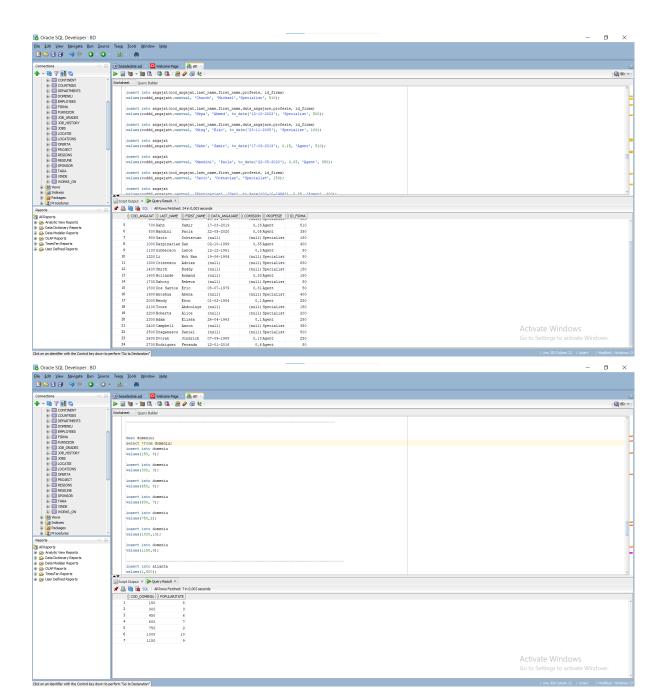
insert into vinde

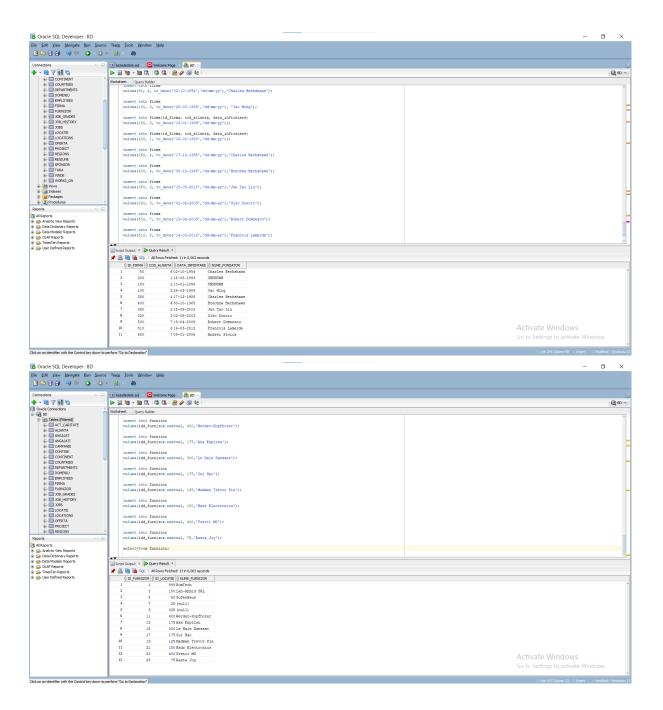
```
values(5161000, 700, 23, TO_DATE('12-03-2021'));
insert into vinde
values(20000, 200, 5, TO_DATE('05-04-1997'));
insert into vinde
values(1022000, 2600, 23, TO_DATE('22-12-1991'));
insert into vinde
values(10000000, 2300, 19, TO_DATE('17-07-2014'));
insert into vinde
values(5161000, 2300, 23, TO DATE('02-03-2010'));
insert into vinde
values(20000, 1800, 11, TO_DATE('05-05-1999'));
insert into vinde
values(1022000, 2000, 9, TO DATE('21-12-2004'));
insert into vinde
values(5161000, 800, 13, TO DATE('19-03-2021'));
insert into vinde
values(20000, 1800, 5, TO_DATE('08-06-1992'));
insert into vinde
values(1022000, 2300, 19, TO_DATE('30-03-1997'));
insert into vinde
values(1022000, 2300, 5, TO_DATE('22-06-1995'));
COMMIT;
```

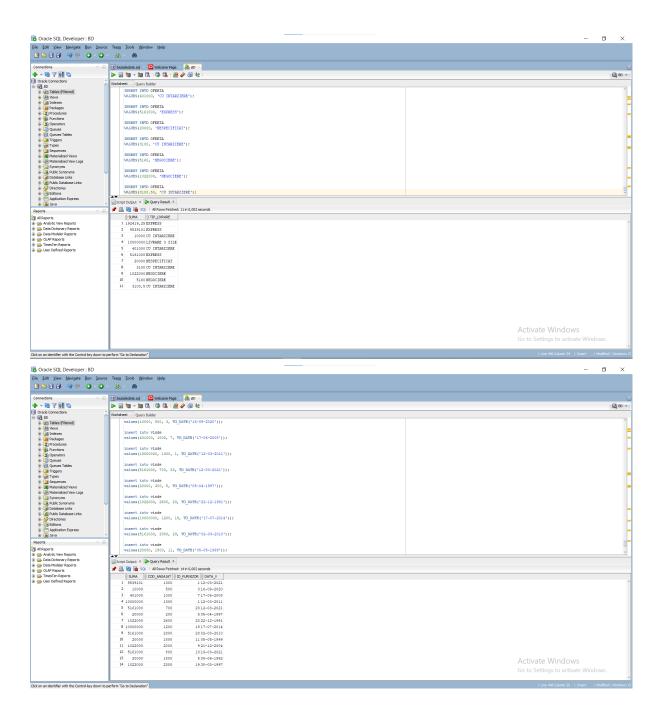












## <u>10</u>.

--triggerul ne opreste din a face modificari(insert, update, delete) asupra tabelului angajat in zilele de sambata,

--duminica sau in afara intervalului orar 06:00 - 23:59

```
create\ or\ replace\ trigger\ trigger10\_dav
```

```
before insert or update or delete on ang
```

begin

if(to\_char(sysdate, 'DAY') LIKE 'SAMBATA%')

then raise\_application\_error(-20001, 'NU SE POATE MODIFICA SAMBATA');

elsif (to\_char(sysdate, 'DAY') LIKE 'DUMINICA%')

then raise\_application\_error(-20002, 'NU SE POATE MODIFICA DUMINICA');

end if;

if (to char(sysdate, 'HH24') not between 6 and 23)

```
then raise_application_error(-20001, 'NU SE POATE MODIFICA IN ACEST INTERVAL ORAR(INTERVALUL PERMIS ESTE 06:00 - 23.59)');
end if;
end;
```

```
The rest of the r
```

## <u>11</u>.

--ex11

--nu permite updatarea datei de angajare, cu exceptia cazurilor in care data angajare nu este cunoscuta

create or replace trigger trigg11\_dav

before update of data\_angajare on ang

for each row

begin

if (:NEW.data\_angajare >:OLD.data\_angajare) then raise\_application\_error(-20001, 'Data angajare nu poate fi modificata'); end if;

end;

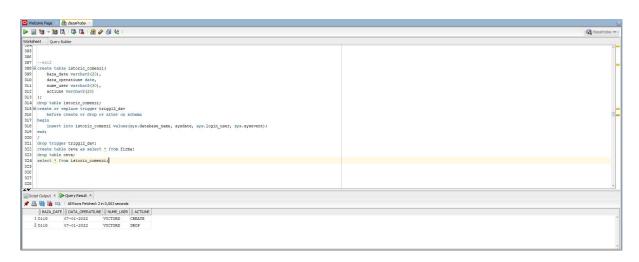
```
Wetcome Place

| State | State
```

## <u>12</u>.

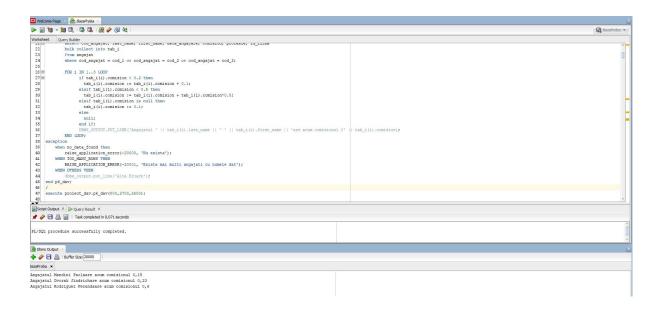
--se retin modificarile facute asupra bazei de date in tabelul istoric\_comenzi

```
create table istoric_comenzi(
        baza_date varchar2(20),
         data operatiune date,
         nume user varchar2(30),
         actiune varchar2(20)
);
drop table istoric_comenzi;
create or replace trigger trigg12 day
         before create or drop or alter on schema
begin
         insert into istoric_comenzi values(sys.database_name, sysdate, sys.login_user, sys.sysevent);
end;
drop trigger trigg12_dav;
create table ceva as select * from firma;
drop table ceva;
select * from istoric_comenzi;
```



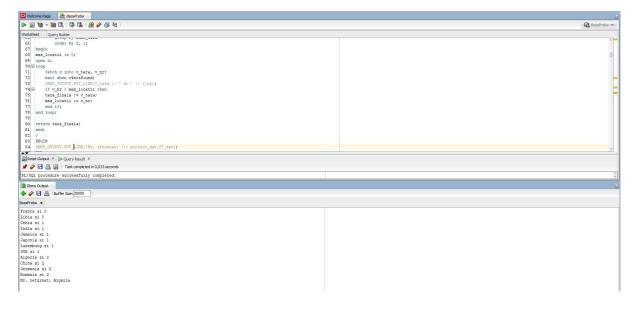
## 13.(contine cerintele 6-9)

```
function f7 day return varchar2;
        function f8 dav(ida act caritate.id act%type) return number;
        procedure p9 day(continentt continent.denumire%type);
end PROIECT_DAV;
create or replace package body PROIECT_DAV
as
--ex6
--transmite 3 coduri de angajati unei proceduri care:sa retina datele complete despre angajatii respectivi intr-o
--colectie suplimentara, sa mareasca cu 0.1 comisionul angajatilor ce au comisionul mai mic de 0.2, respectiv
--50% al celor avand comisionul <0.5(cei avand comision peste 0.5 nu vor avea comisionul modificat).
procedure p6_dav(
        cod 1 angajat.cod angajat%type,
        cod 2 angajat.cod angajat%type,
        cod_3 angajat.cod_angajat%type)
is
        TYPE tab_ind IS TABLE OF angajat%ROWTYPE INDEX BY BINARY_INTEGER;
        tab i tab ind;
        TYPE vector IS VARRAY(3) OF NUMBER;
        coduri vector := vector(cod 1, cod 2, cod 3);
        i number;
begin
        select cod_angajat, last_name, first_name, data_angajare, comision, profesie, id_firma
        bulk collect into tab i
        from angajat
        where cod angajat = cod 1 or cod angajat = cod 2 or cod angajat = cod 3;
        FOR i IN 1..3 LOOP
        if tab i(i).comision < 0.2 then
        tab i(i).comision := tab i(i).comision + 0.1;
        elsif tab i(i).comision < 0.5 then
        tab i(i).comision := tab i(i).comision + tab i(i).comision*0.5;
        elsif tab i(i).comision is null then
        tab i(i).comision := 0.1;
        else
        null;
        end if;
        DBMS OUTPUT.PUT LINE('Angajatul' || tab i(i).last name || ' || tab i(i).first name || 'are acum
comisionul 0' || tab i(i).comision);
        END LOOP;
exception
        when no_data_found then
        raise application error(-20000, 'Nu exista');
        WHEN TOO MANY ROWS THEN
        RAISE_APPLICATION_ERROR(-20001, 'Exista mai multi angajati cu numele dat');
        WHEN OTHERS THEN
        dbms_output.put_line('Alta Eroare');
end p6 dav;
```



--ex7 sa se returneze tara cu cele mai multe locatii(in caz de egalitate, se compara alfabetic). Sa se afiseze --corespunzator pt fiecare tara cate locatii are(in ordinea numarului de locatii, iar in caz de egalitate -> alfabetic)

```
function f7_dav
return VARCHAR2 is
        tara_finala tara.nume_tara%type;
        max_locatii number;
        v tara tara.nume tara%type;
        v nr number;
        cursor c is
        select nume_tara n_tara, count(id_locatie) nr_loc
        from tara t, locatie 1
        where t.id\_tara = 1.id\_tara(+)
        group by nume_tara
        order by 2, 1;
begin
max locatii := 0;
open c;
loop
        fetch c into v_tara, v_nr;
        exit when c%notfound;
        DBMS_OUTPUT.PUT_LINE(v_tara || ' si ' || v_nr);
        if v nr > max locatii then
        tara\_finala := v\_tara;
        max_locatii := v_nr;
        end if;
end loop;
return tara finala;
end;
```



- --ex8 Returneaza nr de angajati al unei firme care a facut actul de caritate transmis ca parametru si afiseaza --angajatii respectivi
- --exceptii:nu exista actul respectiv, donatia a fost anonima, donatia a fost a unei firme fara angajati, alte exceptii(intoarce -1)

end if;

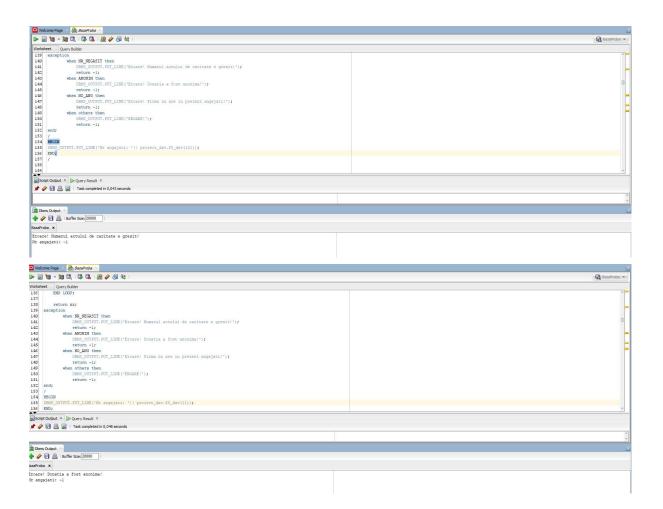
select id\_firma
into nr
from act\_caritate
where id\_act = ida;
if nr is null then
raise ANONIM;
end if;

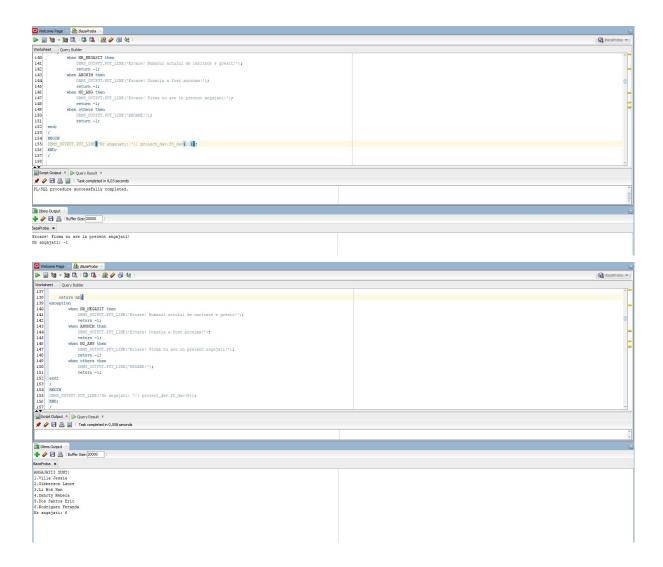
RAISE NR NEGASIT;

if gasit < 1 then

select cod\_angajat, last\_name, first\_name, data\_angajare, comision, profesie, a.id\_firma

```
bulk collect into tx
        from angajat a, firma f, act_caritate c
        where c.id act = ida and f.id firma = c.id firma and a.id firma = f.id firma;
        if tx.count < 1 then
        RAISE NO_ANG;
        end if;
        nr := tx.count;
        DBMS_OUTPUT.PUT_LINE('ANGAJATII SUNT:');
        FOR i IN 1..nr LOOP
        DBMS\_OUTPUT\_LINE(i \parallel '.' \parallel tx(i).last\_name \parallel ' ' \parallel tx(i).first\_name);
        END LOOP;
        return nr;
exception
        when NR_NEGASIT then
        DBMS_OUTPUT_LINE('Eroare! Numarul actului de caritate e gresit!');
        return -1;
        when ANONIM then
        DBMS_OUTPUT_LINE('Eroare! Donatia a fost anonima!');
        return -1;
        when NO_ANG then
        DBMS_OUTPUT_PUT_LINE('Eroare! Firma nu are in prezent angajati!');
        when others then
        DBMS_OUTPUT.PUT_LINE('EROARE!');
        return -1;
end;
```





- --ex9
- --afiseaza toti furnizorii(mai intai numarul lor) apartinand unui continent(afisarea este in ordine alfabetica)
- --transmis ca parametru, ii retine intr-un nou tabel si modifica in noul tabel id\_locatie cu id-ul continentului
- --exceptii:continentul nu exista, nu exista firme pe continentul respectiv, alte exceptii

## procedure p9\_dav(

continentt continent.denumire%type)

is

TYPE tab\_ind IS TABLE OF furnizor%ROWTYPE INDEX BY BINARY\_INTEGER; tabel tab\_ind;

i number;

validare number;

idd\_cont number;

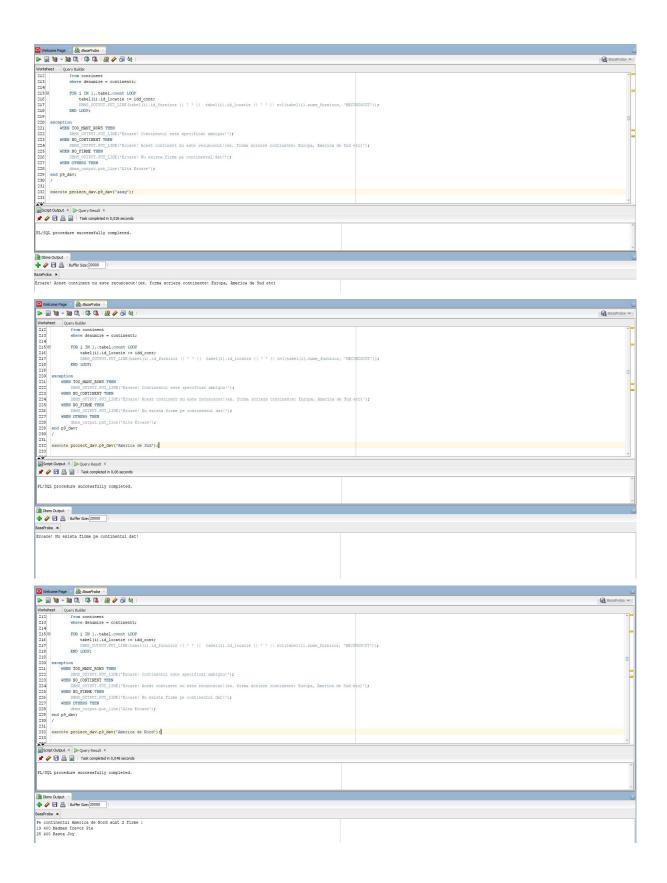
NO CONTINENT exception;

NO FIRME exception;

## begin

if continentt = 'America' then raise TOO\_MANY\_ROWS; --nu stie daca avem america de sud sau america de nord end if;

```
select count(*)
        into validare
        from continent
        where denumire = continentt;
        if validare < 1 then
        raise NO CONTINENT;
        end if;
        select count(*)
        into validare
        from furnizor f, continent c, regiune r, tara t, locatie l
        where f.id locatie = l.id locatie and l.id tara = t.id tara and t.id regiune = r.id regiune and
r.cod continent = c.cod continent and denumire = continentt;
        if validare < 1 then
        raise NO FIRME;
        end if;
        DBMS OUTPUT.PUT LINE('Pe continentul' || continentt || 'sunt' || validare || 'firme:');
        select f.id furnizor, f.id locatie, f.nume furnizor
        bulk collect into tabel
        from furnizor f, continent c, regiune r, tara t, locatie l
        where f.id_locatie = l.id_locatie and l.id_tara = t.id_tara and t.id_regiune = r.id_regiune and
r.cod_continent = c.cod_continent and denumire = continentt;
        select cod continent
        into idd cont
        from continent
        where denumire = continentt;
        FOR i IN 1..tabel.count LOOP
        tabel(i).id locatie := idd cont;
        DBMS OUTPUT.PUT LINE(tabel(i).id furnizor | ' ' | tabel(i).id locatie | ' ' |
nvl(tabel(i).nume furnizor, 'NECUNOSCUT'));
        END LOOP;
exception
        WHEN TOO_MANY_ROWS THEN
        DBMS OUTPUT.PUT LINE('Eroare! Continentul este specificat ambiguu!');
        WHEN NO CONTINENT THEN
        DBMS OUTPUT.PUT LINE('Eroare! Acest continent nu este recunoscut!(ex. forma scriere
continente: Europa, America de Sud etc)');
        WHEN NO FIRME THEN
        DBMS OUTPUT.PUT LINE('Eroare! Nu exista firme pe continentul dat!');
        WHEN OTHERS THEN
        dbms output.put line('Alta Eroare');
end p9_dav;
```



## end PROIECT\_DAV;

```
| Description |
```

--se creeaza un pachet ce retine numele si data nasterii unor persoane prin intermediul a doua tablouri --imbricate(unul de tip date si celalat varchar). Prin intermediul pachetului putem afisa inregistrarile existente, --numarul lor, putem adauga intrari noi si de asemenea putem sa vedem cate zile sunt ramase pana la ziua de --nastere a unei persoane adaugate prin intermediul unei functii avand ca parametru numele acesteia.

#### create or replace package date\_nastere

```
as
        procedure adauga(x date, y varchar2);
        procedure afiseaza;
        function until next(x varchar2) return number;
        function intrari_adaugate return number;
        d size number := 1;
        type tb im is table of varchar2(30);
        numele tb_im;
        type tb im 2 is table of date;
        zilele tb im 2;
end date_nastere;
create or replace package body date nastere
        procedure adauga(x date, y varchar2) as
        begin
        if d_{size} = 1 then
        zilele := tb_im_2();
        numele := tb im();
        end if;
        zilele.extend(1);
        numele.extend(1);
        zilele(d_size) := x;
        numele(d_size) := y;
        d_{size} := d_{size} + 1;
        end;
        procedure afiseaza as
        CALENDAR_GOL exception;
        i number;
```

```
begin
        if(d_size) = 1 then
        raise CALENDAR GOL;
        end if:
        FOR i IN 1..d size-1 LOOP
        dbms_output_line(numele(i) || ' ' || zilele(i));
        END LOOP;
        exception
        when CALENDAR_GOL then
        dbms_output.put_line('NU AVEM DATE INTRODUSE PENTRU A PUTEA AFISA CEVA!');
        end;
        function until next(x varchar2) return number as
        pozitie number;
        nr_zile_ramase number;
        i number;
        var1 varchar2(30);
        var2 varchar2(30);
        begin
        FOR i IN 1..d_size-1 LOOP
        if numele(i) like x then
        pozitie := i;
        end if;
        END LOOP;
        var1 := substr(to char(sysdate),0, 5);
        var2 := substr(to_char(zilele(pozitie)),0, 5);
        if var1 = var2 then
        nr_zile_ramase := 0;
        end if;
        if(sysdate > zilele(pozitie)) then
        nr_zile_ramase := floor(abs(sysdate - zilele(pozitie)));
        else
        nr zile ramase := floor(abs(sysdate - zilele(pozitie))) + 1;
        end if;
        return nr_zile_ramase;
        end;
        function intrari adaugate return number as
        begin
        return (d_size-1);
        end;
end date nastere;
```