Sisteme de gestiune a bazelor de date Proiect final – 2023

**GESTIUNEA UNEI BAZE HOTELIERE**

Lect. Dr. Gabriela Mihai

Student: Georgescu Elena- Alexandra

Seria 23, Grupa 231

Anul II, Semestrul I

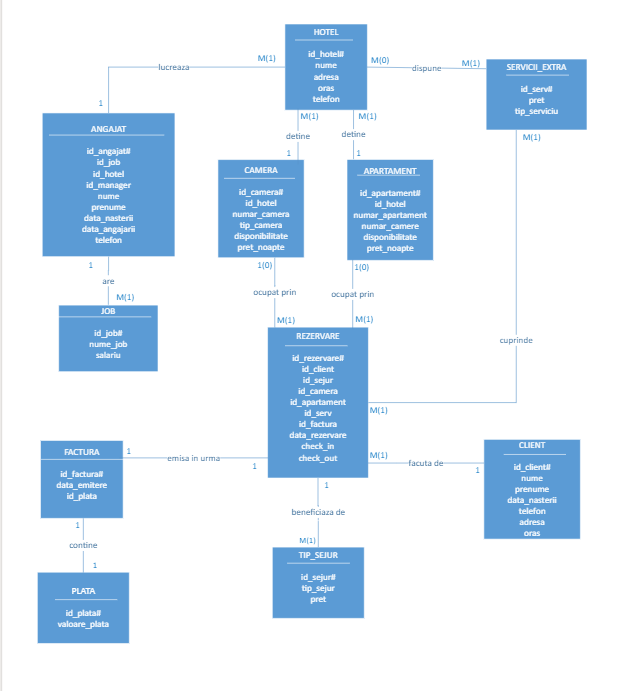
1. Descrierea modelului

In cadrul acestui proiect vom analiza gestiunea unui lant hotelier. Modelul prezentat cuprinde mai multe hoteluri cu acelasi nume, situate in orase diferite ale Romaniei. Cu ajutorul bazei de date proiectata, putem tine o evidenta clara a angajatilor din toate hotelurile, a rezervarilor facute, a clientilor care calca pragul hotelurilor, a platilor si a facturilor efectuate pentru sejururi.

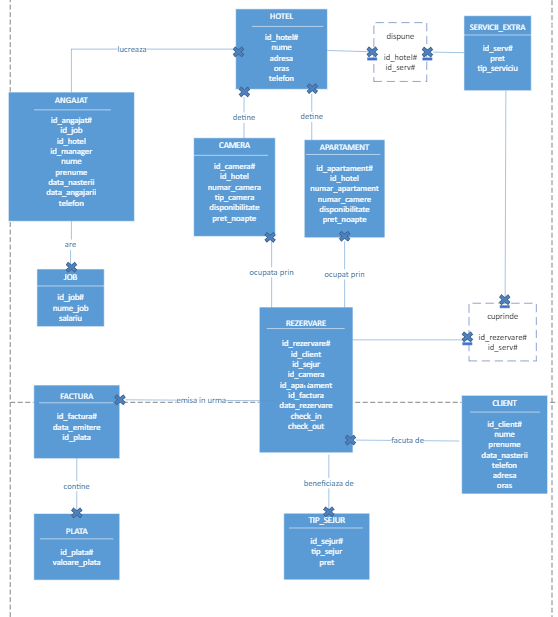
Reguli de functionare:

* Fiecare angajat din cadrul hotelului are un job si un salariu bine definit.
* Salariul unui angajat este determinat strict de locul de munca pe care acesta il ocupa.
* Pretul unei camere/unui apartament variaza in functie de tipul acesteia/ acestuia.
* Rezervarea cuprinde o serie de informatii esentiale: obiectul rezervat, persoana care a facut rezervarea, data rezervarii, perioada care se doreste rezervata, tipul de sejur pentru care se opteaza si factura emisa.
* Factura furnizeaza informatii cu privire la plata efectuata si data efectuarii acesteia.
* Un client isi poate alege tipul de serviciu extra dorit in functie de preferinte. De asemenea, serviciile pot lipsi din pachetul unui client, intrucat sunt optionale. In cazul alegerii unui serviciu, pretul acestuia va fi adaugat la pretul pe care il are de platit, iar serviciul va fi disponibil pe toata durata sederii clientului.
* Clientii pot opta pentru unul dintre serviciile de masa: room-only, mic dejun, demipensiune (ce cuprinde mic dejun si cina), pensiune completa sau all-inclusive.
* Clientii pot rezerva camere de tip single, double sau triple sau apartamente cu doua, trei sau patru camere.
* Rezervarile se fac, bineinteles, pe baza disponibilitatii camerelor si apartamentelor detinute de hotel.

1. Diagrama Entitate- Relatie



1. Diagrama conceptuala



1. Creare tabele

Entitatea ANGAJAT

CREATE TABLE ANGAJAT

(

ID\_ANGAJAT NUMBER(9) PRIMARY KEY,

ID\_JOB NUMBER(9) NOT NULL REFERENCES JOB(ID\_JOB),

ID\_HOTEL NUMBER(9) NOT NULL REFERENCES HOTEL(ID\_HOTEL),

ID\_MANAGER NUMBER(9) REFERENCES ANGAJAT(ID\_ANGAJAT),

NUME VARCHAR2(30) NOT NULL,

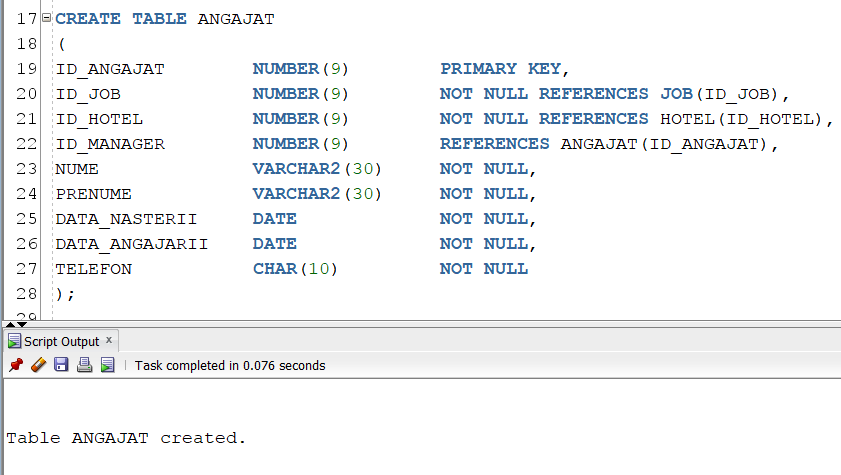
PRENUME VARCHAR2(30) NOT NULL,

DATA\_NASTERII DATE NOT NULL,

DATA\_ANGAJARII DATE NOT NULL,

TELEFON CHAR(10) NOT NULL

);



Entitatea APARTAMENT

CREATE TABLE APARTAMENT

(

ID\_APARTAMENT NUMBER(9) PRIMARY KEY,

ID\_HOTEL NUMBER(9) NOT NULL REFERENCES HOTEL(ID\_HOTEL),

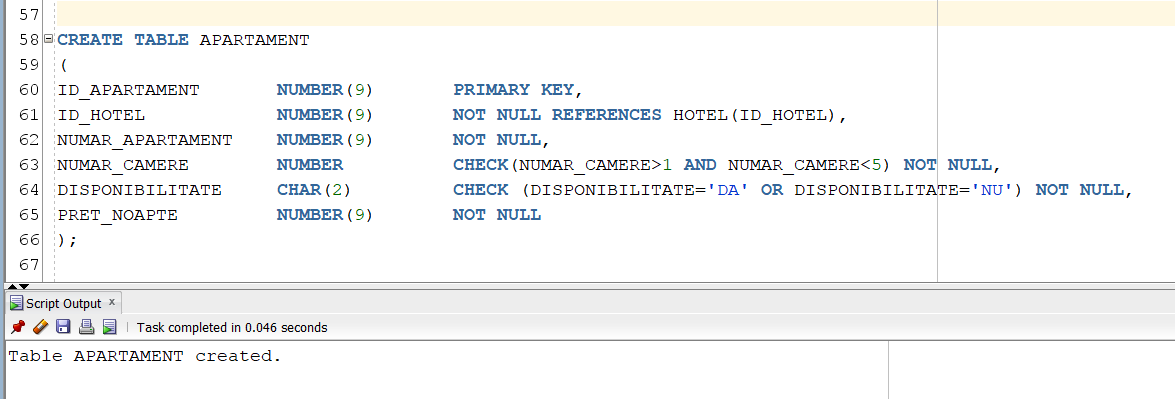
NUMAR\_APARTAMENT NUMBER(9) NOT NULL,

NUMAR\_CAMERE NUMBER CHECK(NUMAR\_CAMERE>1 AND NUMAR\_CAMERE<5) NOT NULL,

DISPONIBILITATE CHAR(2) CHECK (DISPONIBILITATE='DA' OR DISPONIBILITATE='NU') NOT NULL,

PRET\_NOAPTE NUMBER(9) NOT NULL

);



Entitatea CAMERA

CREATE TABLE CAMERA

(

ID\_CAMERA NUMBER(9) PRIMARY KEY,

ID\_HOTEL NUMBER(9) NOT NULL REFERENCES HOTEL(ID\_HOTEL),

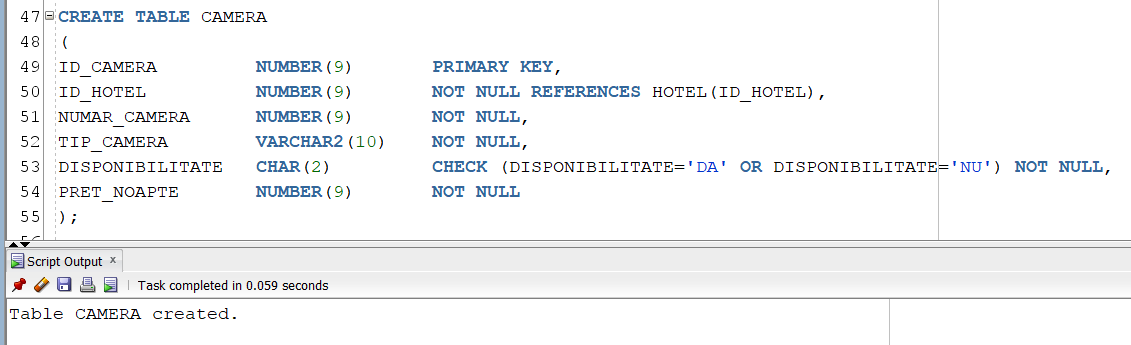
NUMAR\_CAMERA NUMBER(9) NOT NULL,

TIP\_CAMERA VARCHAR2(10) NOT NULL,

DISPONIBILITATE CHAR(2) CHECK (DISPONIBILITATE='DA' OR DISPONIBILITATE='NU') NOT NULL,

PRET\_NOAPTE NUMBER(9) NOT NULL

);



Entitatea CLIENT

CREATE TABLE CLIENT

(

ID\_CLIENT NUMBER(9) PRIMARY KEY,

NUME VARCHAR2(30) NOT NULL,

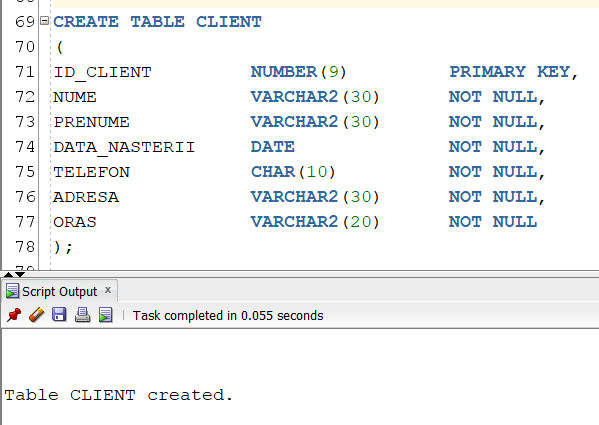
PRENUME VARCHAR2(30) NOT NULL,

DATA\_NASTERII DATE NOT NULL,

TELEFON CHAR(10) NOT NULL,

ADRESA VARCHAR2(30) NOT NULL,

ORAS VARCHAR2(20) NOT NULL);



Entitatea CUPRINDE

CREATE TABLE CUPRINDE

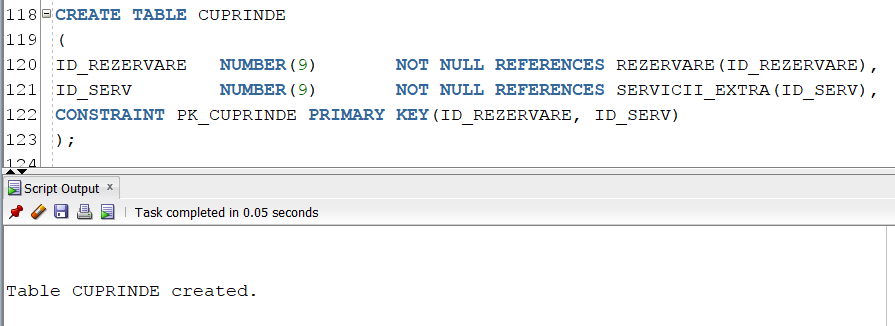
(

ID\_REZERVARE NUMBER(9) NOT NULL REFERENCES REZERVARE(ID\_REZERVARE),

ID\_SERV NUMBER(9) NOT NULL REFERENCES SERVICII\_EXTRA(ID\_SERV),

CONSTRAINT PK\_CUPRINDE PRIMARY KEY(ID\_REZERVARE, ID\_SERV)

);



Entitatea DISPUNE

CREATE TABLE DISPUNE

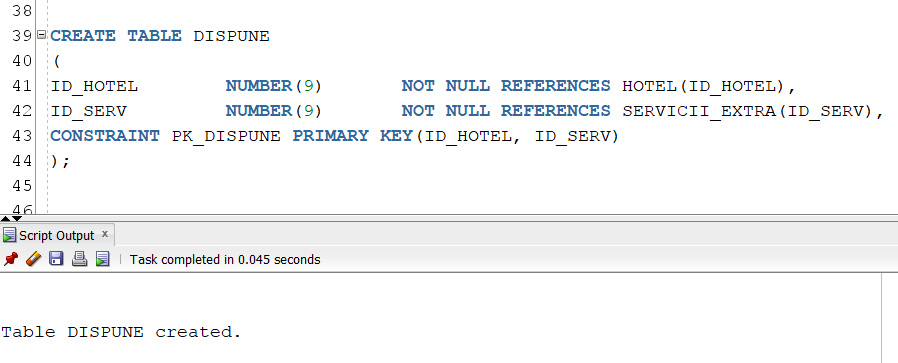
(

ID\_HOTEL NUMBER(9) NOT NULL REFERENCES HOTEL(ID\_HOTEL),

ID\_SERV NUMBER(9) NOT NULL REFERENCES SERVICII\_EXTRA(ID\_SERV),

CONSTRAINT PK\_DISPUNE PRIMARY KEY(ID\_HOTEL, ID\_SERV)

);



Entitatea FACTURA

CREATE TABLE FACTURA

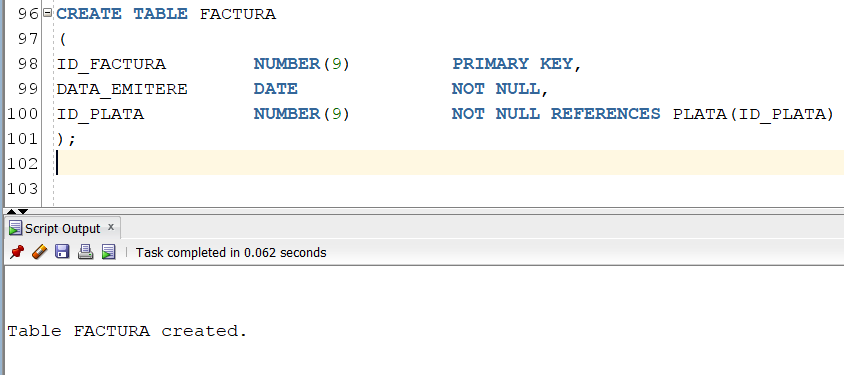
(

ID\_FACTURA NUMBER(9) PRIMARY KEY,

DATA\_EMITERE DATE NOT NULL,

ID\_PLATA NUMBER(9) NOT NULL REFERENCES PLATA(ID\_PLATA)

);



Entitatea HOTEL

CREATE TABLE HOTEL

(

ID\_HOTEL NUMBER(9) PRIMARY KEY,

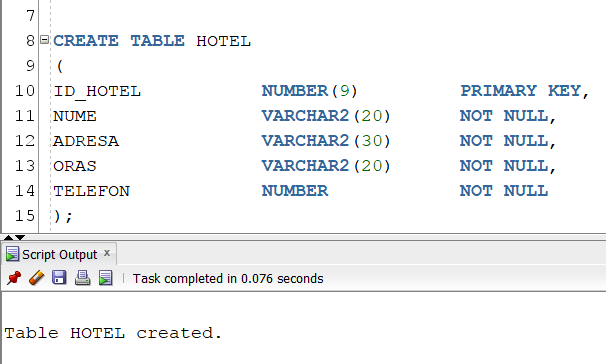
NUME VARCHAR2(20) NOT NULL,

ADRESA VARCHAR2(30) NOT NULL,

ORAS VARCHAR2(20) NOT NULL,

TELEFON CHAR(10) NOT NULL

);



Entitatea JOB

CREATE TABLE JOB

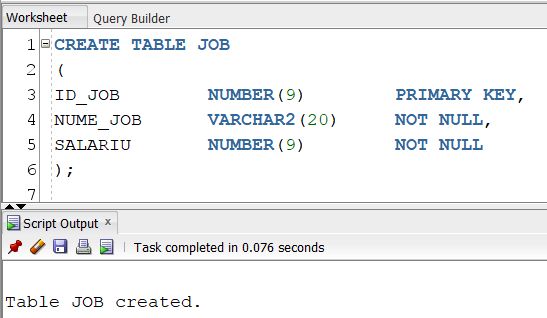
(

ID\_JOB NUMBER(9) PRIMARY KEY,

NUME\_JOB VARCHAR2(20) NOT NULL,

SALARIU NUMBER(9) NOT NULL

);



Entitatea PLATA

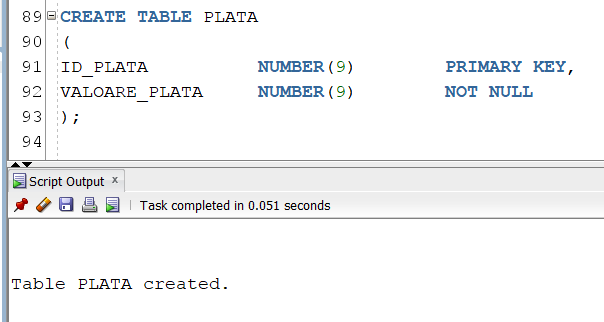
CREATE TABLE PLATA

(

ID\_PLATA NUMBER(9) PRIMARY KEY,

VALOARE\_PLATA NUMBER(9) NOT NULL

);



Entitatea REZERVARE

CREATE TABLE REZERVARE

(

ID\_REZERVARE NUMBER(9) PRIMARY KEY,

ID\_CLIENT NUMBER(9) NOT NULL REFERENCES CLIENT(ID\_CLIENT),

ID\_SEJUR NUMBER(9) NOT NULL REFERENCES TIP\_SEJUR(ID\_SEJUR),

ID\_CAMERA NUMBER(9) REFERENCES CAMERA(ID\_CAMERA),

ID\_APARTAMENT NUMBER(9) REFERENCES APARTAMENT(ID\_APARTAMENT),

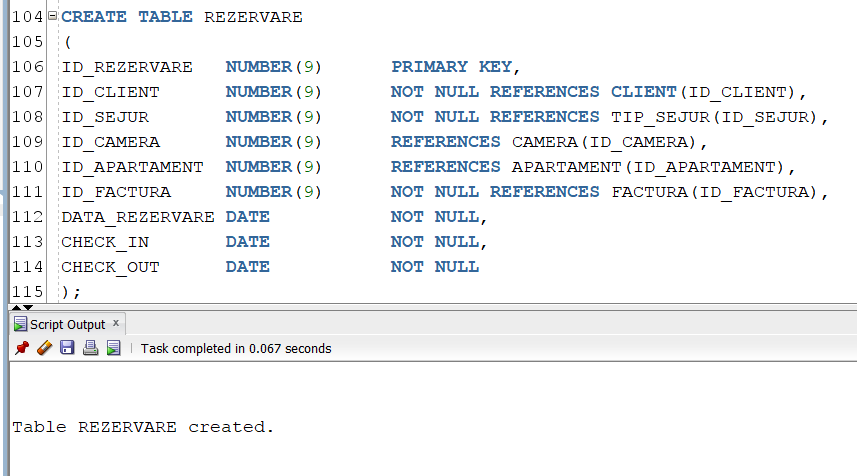
ID\_FACTURA NUMBER(9) NOT NULL REFERENCES FACTURA(ID\_FACTURA),

DATA\_REZERVARE DATE NOT NULL,

CHECK\_IN DATE NOT NULL,

CHECK\_OUT DATE NOT NULL

);



Entitatea TIP SEJUR

CREATE TABLE TIP\_SEJUR

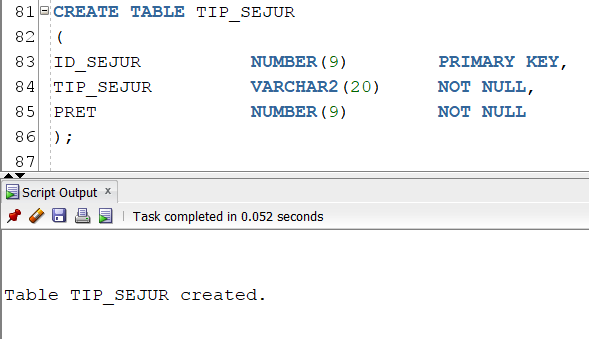
(

ID\_SEJUR NUMBER(9) PRIMARY KEY,

TIP\_SEJUR VARCHAR2(20) NOT NULL,

PRET NUMBER(9) NOT NULL

);



Entitatea SERVICII EXTRA

CREATE TABLE SERVICII\_EXTRA

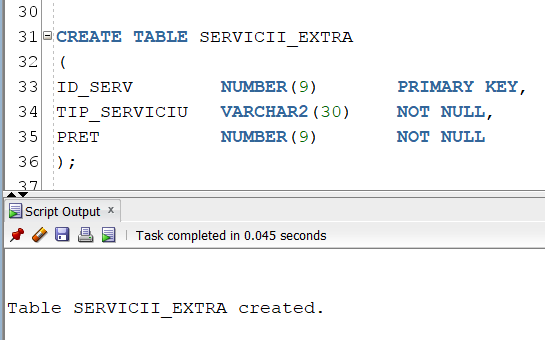
(

ID\_SERV NUMBER(9) PRIMARY KEY,

TIP\_SERVICIU VARCHAR2(30) NOT NULL,

PRET NUMBER(9) NOT NULL

);



1. Inserari in tabele

Entitatea ANGAJAT

insert into angajat values

(101,16,1,NULL,'Vasilica','Iacob','26-SEP-1984','18-JUL-2018','0771760402');

insert into angajat values

(102,16,2,NULL,'Nicu','Elena','22-JUN-1977','21-JUL-2016','0700760402');

insert into angajat values

(103,16,3,NULL,'Olga','Nicoleta','08-JUN-1981','16-JAN-2013','0708760402');

insert into angajat values

(104,16,4,NULL,'Fane','Horia','01-MAY-1985','27-JUL-2015','0731760402');

insert into angajat values

(105,16,5,NULL,'Tiberiu','Emil','03-OCT-1975','27-FEB-2014','0751760402');

insert into angajat values

(106,11,1,101,'Fabian','Tudor','18-APR-1972','02-NOV-2016','0711760402');

insert into angajat values

(107,11,2,102,'Dacian','Diana','04-MAY-1983','03-JUN-2014','0761760402');

insert into angajat values

(108,11,3,103,'Stan','Ciprian','15-MAR-1978','31-JUL-2013','0781760402');

insert into angajat values

(109,12,5,105,'Ruxandra','Andrei','08-MAR-1978','03-OCT-2013','0701760402');

insert into angajat values

(110,11,4,104,'Nicu','Elena','22-JUN-1977','21-JUL-2016','0700760402');

insert into angajat values

(111,12,1,101,'Lazar','Violeta','17-MAR-1982','07-JUL-2015','0702760402');

insert into angajat values

(112,12,2,102,'Alexandrina','Margareta','08-MAR-1984','27-NOV-2013','0704760402');

insert into angajat values

(113,12,3,103,'Romeo','Adam','29-NOV-1972','21-APR-2016','0705760402');

insert into angajat values

(114,12,4,104,'Miron','Cezar','09-MAY-1979','16-APR-2019','0706760402');

insert into angajat values

(115,12,5,105,'Matei','Laurentiu','05-APR-1974','08-MAY-2014','0707760402');

insert into angajat values

(116,13,1,101,'Rodica','Dragos','11-DEC-1979','03-MAR-2014','0701660402');

insert into angajat values

(117,13,2,102,'Victoria','Tatiana','22-DEC-1977','20-JUN-2014','0701860402');

insert into angajat values

(118,13,3,103,'Mihai','Augustin','08-APR-1985','29-SEP-2016','0701960402');

insert into angajat values

(119,13,4,104,'Estera','Danut','01-AUG-1972','28-JUL-2014','0701200402');

insert into angajat values

(120,13,5,105,'Atanasie','Narcisa','17-JUN-1977','31-JUL-2018','0701201402');

insert into angajat values

(121,14,1,101,'Adam','Radu','19-JUL-1979','17-MAR-2015','0701711402');

insert into angajat values

(122,14,2,102,'Petre','Marius','16-JUN-1981','02-APR-2014','0701811402');

insert into angajat values

(123,14,3,103,'Petrut','David','11-JUL-1985','17-DEC-2014','0701911402');

insert into angajat values

(124,14,4,104,'Carol','Lorena','24-AUG-1970','10-APR-2018','0701205402');

insert into angajat values

(125,14,5,105,'Stan','Andrei','17-MAR-1982','29-SEP-2015','0701206402');

insert into angajat values

(126,15,1,101'Floriana','Antonia','24-DEC-1982','03-MAY-2016','0701209402');

insert into angajat values

(127,15,2,102,'Costin','Isabela','21-JUN-1979','10-AUG-2018','0701230402');

insert into angajat values

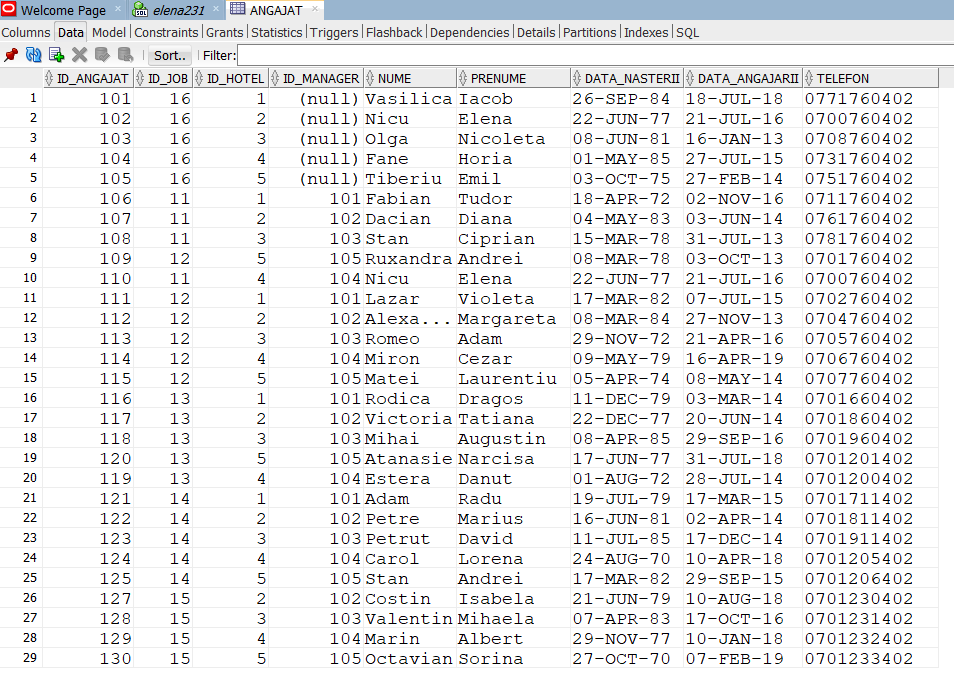
(128,15,3,103,'Valentin','Mihaela','07-APR-1983','17-OCT-2016','0701231402');

insert into angajat values

(129,15,4,104,'Marin','Albert','29-NOV-1977','10-JAN-2018','0701232402');

insert into angajat values

(130,15,5,105,'Octavian','Sorina','27-OCT-1970','07-FEB-2019','0701233402');



Entitatea APARTAMENT

insert into apartament values

(150,1,50,2,'NU',250);

insert into apartament values

(151,2,51,2,'NU',250);

insert into apartament values

(152,3,52,2,'DA',250);

insert into apartament values

(153,4,53,2,'DA',250);

insert into apartament values

(154,5,54,2,'DA',250);

insert into apartament values

(155,1,55,3,'NU',340);

insert into apartament values

(156,2,56,3,'NU',340);

insert into apartament values

(157,3,57,3,'DA',340);

insert into apartament values

(158,4,58,3,'DA',340);

insert into apartament values

(159,5,59,3,'NU',340);

insert into apartament values

(160,1,60,4,'DA',480);

insert into apartament values

(161,2,61,4,'NU',480);

insert into apartament values

(162,3,62,4,'NU',480);

insert into apartament values

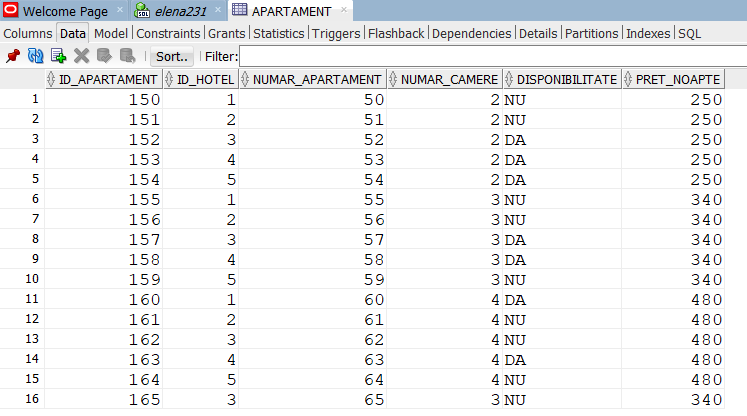
(163,4,63,4,'DA',480);

insert into apartament values

(164,5,64,4,'NU',480);

insert into apartament values

(165,2,65,3,'NU',340);



Entitatea CAMERA

insert into camera values

(110,1,10,'Single','DA',120);

insert into camera values

(111,2,11'Single','DA',120);

insert into camera values

(112,3,12'Single','NU',120);

insert into camera values

(113,4,13,'Single','NU',120);

insert into camera values

(114,5,14,'Single','NU',120);

insert into camera values

(115,1,15,'DOUBLE','NU',175);

insert into camera values

(116,2,16,'DOUBLE','NU',175);

insert into camera values

(117,3,17,'DOUBLE','NU',175);

insert into camera values

(118,4,18,'DOUBLE','NU',175);

insert into camera values

(119,5,19,'DOUBLE','DA',175);

insert into camera values

(120,1,20,'TRIPLE','DA',230);

insert into camera values

(121,2,21,'TRIPLE','NU',230);

insert into camera values

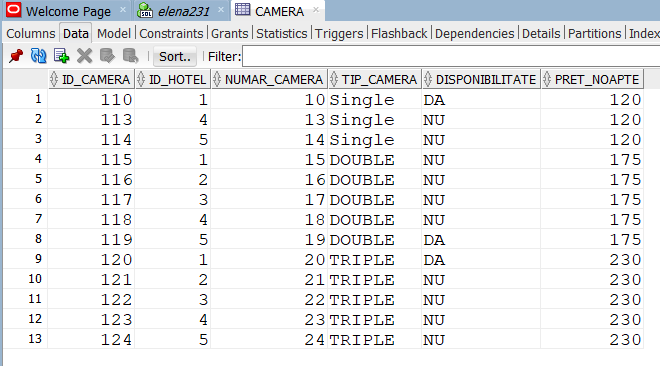
(122,3,22,'TRIPLE','NU',230);

insert into camera values

(123,4,23,'TRIPLE','NU',230);

insert into camera values

(124,5,24,'TRIPLE','NU',230);



Entitatea CLIENT

insert into client values

(650,'Nelu','Paul','17-MAY-1978','0712873082','Strada Brazdei nr.21-31','Cluj-Napoca');

insert into client values

(651,'Nicolae','Cosmina','30-AUG-1979','0732873082','Strada Dorobanti,22','Fagaras');

insert into client values

(652,'Costache','Raluca','28-FEB-1985','0742873082','Strada Valea Calugareasca nr.3','Tulcea');

insert into client values

(653,'Anisoara','Lidia','09-FEB-1982','0752873082','Strada Balcescu Nicolae nr.6','Oradea');

insert into client values

(654,'Chitoiu','Marius','20-MAY-1990','0703873582','Strada Cirezarilor,12','Braila');

insert into client values

(655,'Sandu','Victor','06-APR-1971','0772873082','Strada Grigorescu Eremia,15','Deva');

insert into client values

(656,'Nicu','Simion','20-JAN-1976','0782873082','Strada Fluturilor,25','Piatra Neamt');

insert into client values

(657,'Catina','Iulia','08-JUN-1972','0792873082','Strada Vacantei nr.30-T,7','Hunedoara');

insert into client values

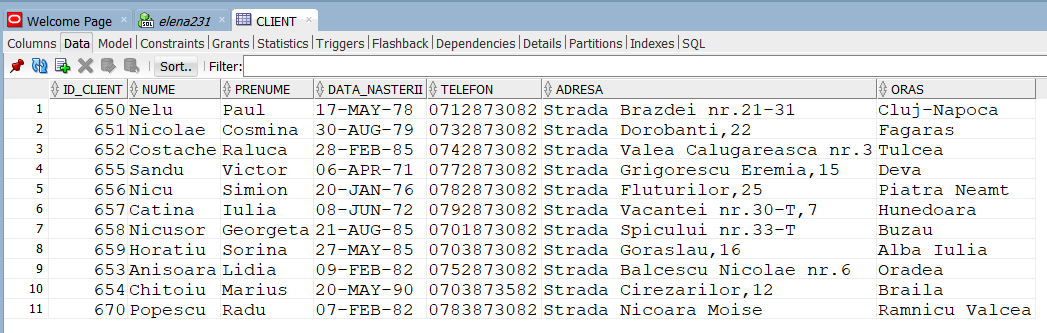
(658,'Nicusor','Georgeta','21-AUG-1985','0701873082','Strada Spicului nr.33-T','Buzau');

insert into client values

(659,'Horatiu','Sorina','27-MAY-1985','0703873082','Strada Goraslau,16','Alba Iulia');

insert into client values

(670,'Popescu','Radu','07-FEB-1982','0783873082','Strada Nicoara Moise','Ramnicu Valcea');



Entitatea CUPRINDE

insert into cuprinde values

(10651,1103);

insert into cuprinde values

(10652,1103);

insert into cuprinde values

(10655,1101);

insert into cuprinde values

(10655,1100);

insert into cuprinde values

(10656,1100);

insert into cuprinde values

(10657,1101);

insert into cuprinde values

(10657,1102);

insert into cuprinde values

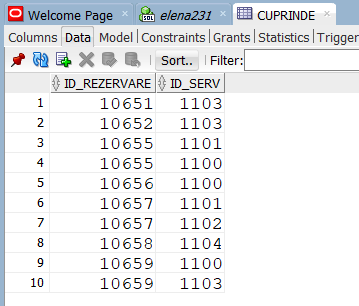
(10658,1104);

insert into cuprinde values

(10659,1100);

insert into cuprinde values

(10659,1103);



Entitatea DISPUNE

insert into dispune values

(1,1100);

insert into dispune values

(2,1100);

insert into dispune values

(3,1100);

insert into dispune values

(4,1100);

insert into dispune values

(5,1100);

insert into dispune values

(1,1101);

insert into dispune values

(2,1101);

insert into dispune values

(3,1101);

insert into dispune values

(4,1101);

insert into dispune values

(5,1101);

insert into dispune values

(1,1102);

insert into dispune values

(2,1102);

insert into dispune values

(3,1103);

insert into dispune values

(4,1103);

insert into dispune values

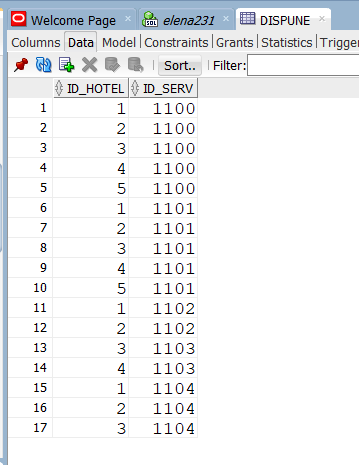
(1,1104);

insert into dispune values

(2,1104);

insert into dispune values

(3,1104);



Entitatea FACTURA

insert into factura values

(1010650,'12-APR-2021',110650);

insert into factura values

(1010651,'10-MAY-2021',110651);

insert into factura values

(1010652,'30-APR-2021',110652);

insert into factura values

(1010653,'03-JUN-2021',110653);

insert into factura values

(1010654,'18-AUG-2021',110654);

insert into factura values

(1010655,'15-SEP-2021',110655);

insert into factura values

(1010656,'12-MAR-2021',110656);

insert into factura values

(1010657,'13-MAR-2021',110657);

insert into factura values

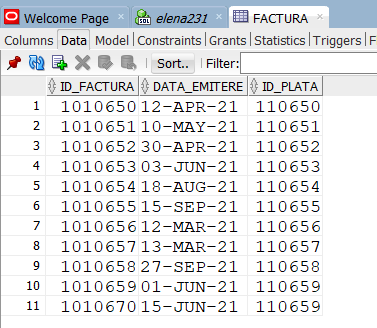
(1010658,'27-SEP-2021',110658);

insert into factura values

(1010659,'01-JUN-2021',110659);

insert into factura values

(1010670,'15-JUN-2021',110659);



Entitatea HOTEL

insert into hotel values

(1,'Glimpse','Strada Crinului, 15', 'Constanta', '0725415471');

insert into hotel values

(2,'Glimpse','Strada Raului nr.279-T, 25,', 'Sighisoara','0725415472');

insert into hotel values

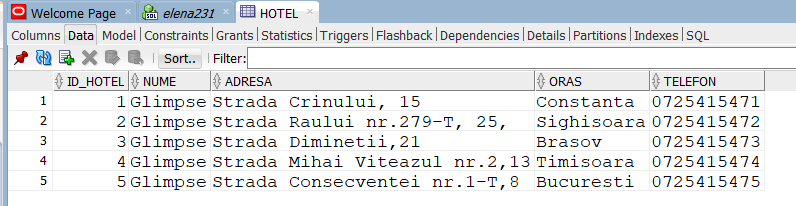
(3,'Glimpse','Strada Diminetii,21', 'Brasov', '0725415473');

insert into hotel values

(4,'Glimpse','Strada Mihai Viteazul nr.2,13', 'Timisoara', '0725415474');

insert into hotel values

(5,'Glimpse','Strada Consecventei nr.1-T,8', 'Bucuresti', '0725415475');



Entitatea JOB

INSERT INTO JOB VALUES

(11,'Paznic',2000);

INSERT INTO JOB VALUES

(16,'Ospatar',1800);

INSERT INTO JOB VALUES

(12,'Bucatar',3300);

INSERT INTO JOB VALUES

(13,'Ospatar',1800);

INSERT INTO JOB VALUES

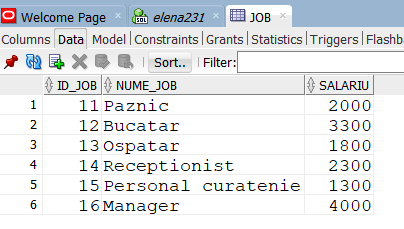
(14,'Receptionist',2300);

INSERT INTO JOB VALUES

(15,'Personal curatenie',1300);

INSERT INTO JOB VALUES

(16,'Manager',4000);



Entitatea PLATA

insert into plata values

(110650,510);

insert into plata values

(110651,2220);

insert into plata values

(110652,500);

insert into plata values

(110653,1760);

insert into plata values

(110654,1200);

insert into plata values

(110655,1150);

insert into plata values

(110656,1720);

insert into plata values

(110657,1500);

insert into plata values

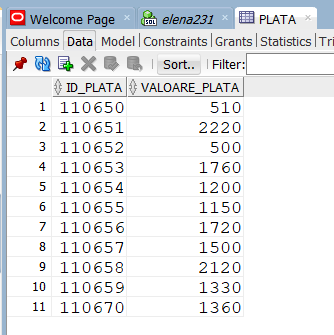
(110658,2120);

insert into plata values

(110659,1330);

insert into plata values

(110670,1360);



Entitatea REZERVARE

insert into rezervare values

(10651,651,192,NULL,163,1010651,'10-MAY-2021','04-JUL-2021','08-JUL-2021');

insert into rezervare values

(10652,652,191,115,NULL,1010652,'30-APR-2021','11-JUN-2021','13-JUN-2021');

insert into rezervare values

(10653,653,191,110,NULL,1010653,'25-APR-2021','11-JUN-2021','13-JUN-2021');

insert into rezervare values

(10654,654,193,120,NULL,1010654,'02-APR-2021','15-JUL-2021','19-JUL-2021');

insert into rezervare values

(10655,655,193,116,NULL,1010655,'23-JUN-2021','15-SEP-2021','21-SEP-2021');

insert into rezervare values

(10656,656,194,NULL,157,1010656,'12-MAR-2021','20-MAY-2021','24-MAY-2021');

insert into rezervare values

(10657,657,192,115,NULL,1010657,'13-MAR-2021','19-JUN-2021','25-JUN-2021');

insert into rezervare values

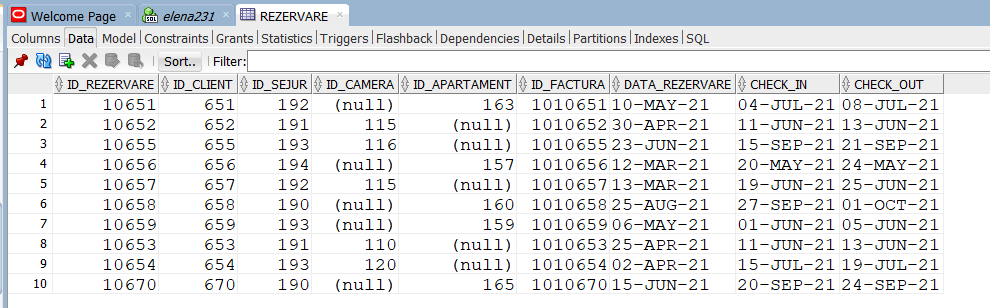
(10658,658,190,NULL,160,1010658,'25-AUG-2021','27-SEP-2021','01-OCT-2021');

insert into rezervare values

(10659,659,193,NULL,159,1010659,'06-MAY-2021','01-JUN-2021','05-JUN-2021');

insert into rezervare values

(10670,670,190,NULL,165,1010670,'15-JUN-2021','20-SEP-2021','24-SEP-2021');



Entitatea TIP SEJUR

insert into tip\_sejur values

(190,'Mic dejun',100);

insert into tip\_sejur values

(191,'Room only',0);

insert into tip\_sejur values

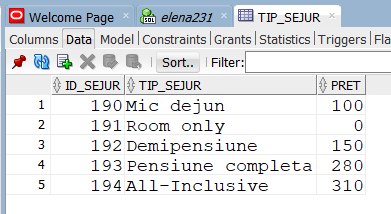
(192,'Demipensiune',150);

insert into tip\_sejur values

(193,'Pensiune completa',280);

insert into tip\_sejur values

(194,'All-Inclusive',310);



Entitatea SERVICII EXTRA

insert into servicii\_extra values

(1100,'Sala de sport', 50);

insert into servicii\_extra values

(1101,'Piscina', 100);

insert into servicii\_extra values

(1102,'Sauna', 100);

insert into servicii\_extra values

(1103,'Jacuzzi', 100);

insert into servicii\_extra values

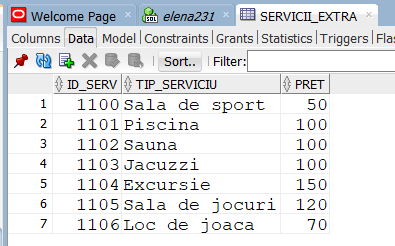
(1104,'Excursie', 150);

insert into servicii\_extra values

(1105,'Sala de jocuri', 120);

insert into servicii\_extra values

(1106,'Loc de joaca’, 70);



1. Procedura SERVICII HOTEL

-- Afisati toate serviciile de care dispune un hotel dintr-un oras dat ca parametru.

create or replace procedure servicii\_hotel

(oras\_hotel hotel.oras%TYPE) as

TYPE servicii IS TABLE OF SERVICII\_EXTRA%ROWTYPE INDEX BY PLS\_INTEGER;

t servicii;

TYPE tablou\_imbricat IS TABLE OF SERVICII\_EXTRA.ID\_SERV%TYPE;

v\_serv tablou\_imbricat:= tablou\_imbricat();

serviciu SERVICII\_EXTRA%ROWTYPE;

cod\_oras hotel.id\_hotel%TYPE;

i number:=0;

j number:=0;

begin

select id\_hotel into cod\_oras

from hotel

where upper(oras\_hotel)=upper(oras);

select id\_serv bulk collect into v\_serv

from dispune

where cod\_oras=id\_hotel;

for j in v\_serv.first..v\_serv.last loop

select id\_serv, tip\_serviciu, pret into serviciu

from servicii\_extra

where id\_serv = v\_serv(j);

t(i):=serviciu;

i := i+1;

end loop;

dbms\_output.put\_line('Hotelul "Glimpse" din orasul ' || oras\_hotel || ' dispune de urmatoarele servicii: ');

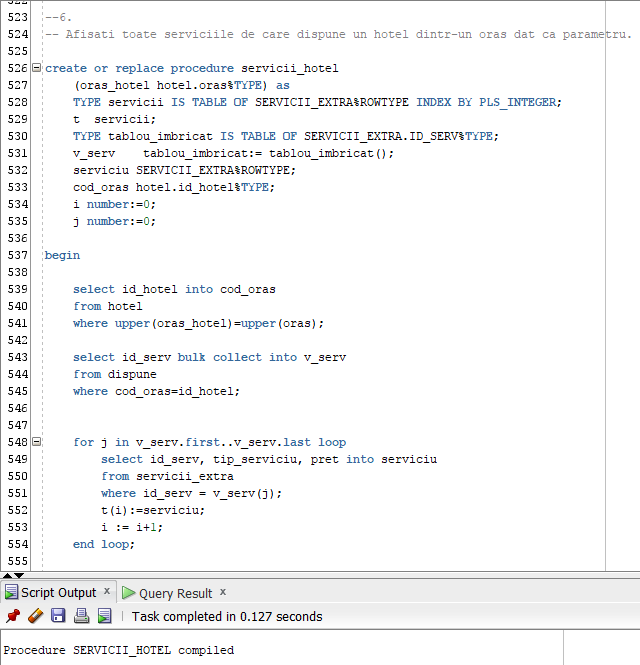
for i in t.first..t.last loop

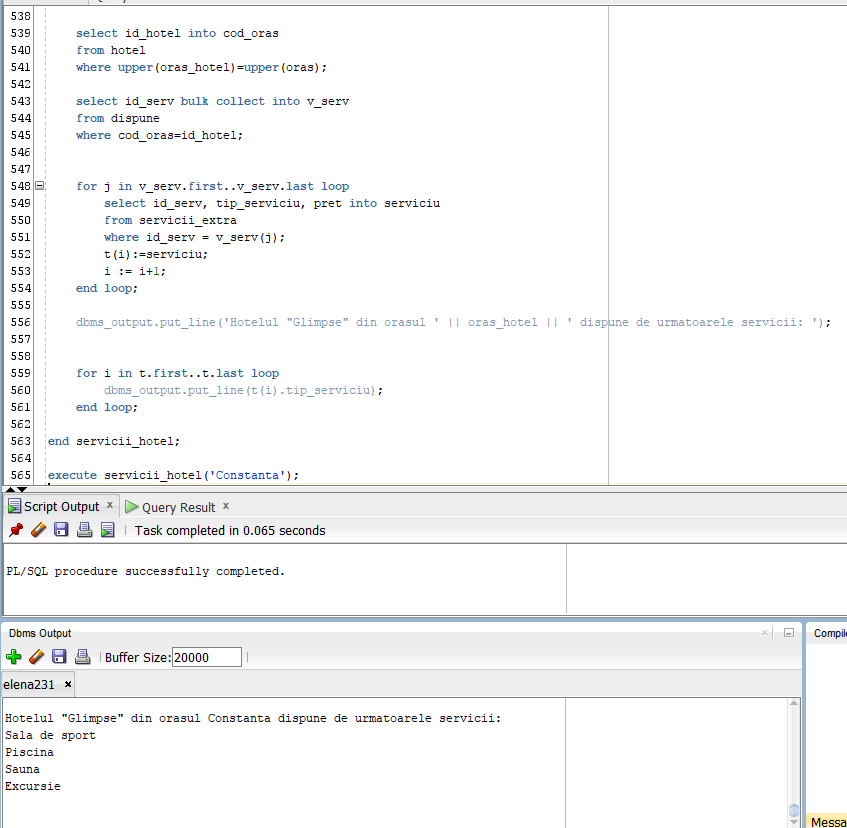
dbms\_output.put\_line(t(i).tip\_serviciu);

end loop;

end servicii\_hotel;

execute servicii\_hotel('Constanta');

****



1. Procedura ANGAJATI

-- Afisati toti angajatii subordonati unui manager al carui nume si prenume este dat de la tastatura. Dintre acestia, afisati job-ul celui mai vechi angajat.

create or replace procedure angajati

(nume\_manager angajat.nume%TYPE,

prenume\_manager angajat.prenume%TYPE) as

cod\_manager angajat.id\_angajat%type;

nume\_angajat angajat.nume%TYPE;

prenume\_angajat angajat.prenume%TYPE;

job\_nume job.nume\_job%TYPE;

salariu\_ang job.salariu%TYPE;

angajare angajat.data\_angajarii%TYPE;

nr number(4);

cursor c\_lista\_sub (cod\_man angajat.id\_angajat%type) is

select nume, prenume

from angajat

where id\_manager=cod\_man;

cursor c\_job is

select j.nume\_job

from job j, angajat a

where a.data\_angajarii=angajare and a.id\_job=j.id\_job;

begin

select id\_angajat into cod\_manager

from angajat

where upper(nume)=upper(nume\_manager) and upper(prenume)=upper(prenume\_manager);

dbms\_output.put\_line('cod ' || cod\_manager);

select min(data\_angajarii) into angajare

from angajat

where id\_manager=cod\_manager;

dbms\_output.put\_line('Lista angajatilor subordonati lui ' || nume\_manager || ' ' || prenume\_manager || ' sunt:');

open c\_lista\_sub(cod\_manager);

loop

--dbms\_output.put\_line(cod\_manager);

fetch c\_lista\_sub into nume\_angajat, prenume\_angajat;

exit when c\_lista\_sub%NOTFOUND;

dbms\_output.put\_line(nume\_angajat || ' ' || prenume\_angajat);

end loop;

close c\_lista\_sub;

open c\_job;

loop

fetch c\_job into job\_nume;

exit when c\_job%NOTFOUND;

end loop;

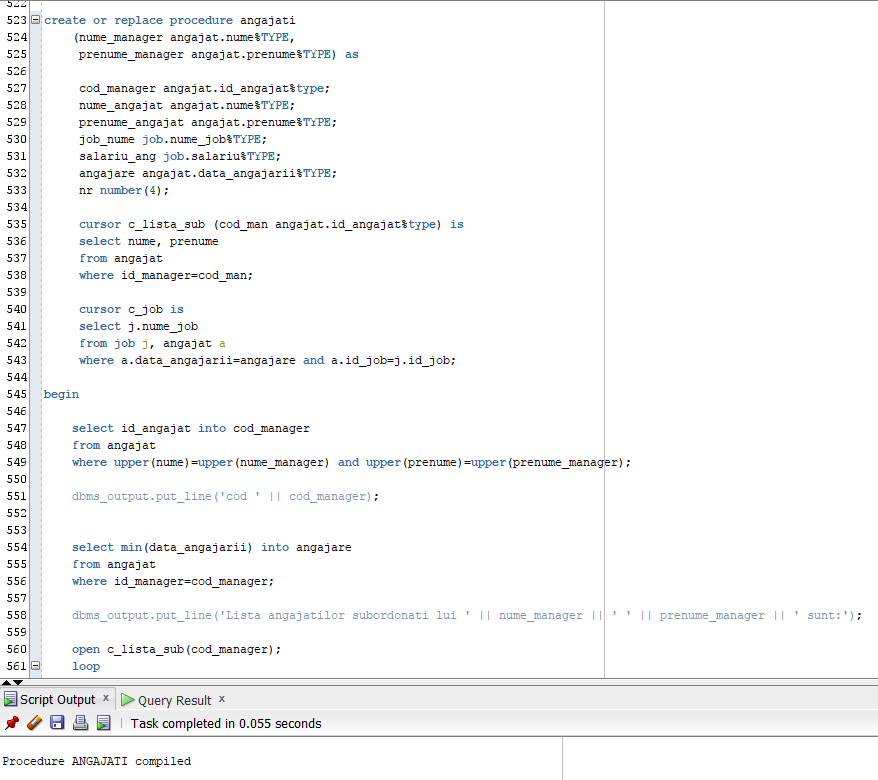
close c\_job;

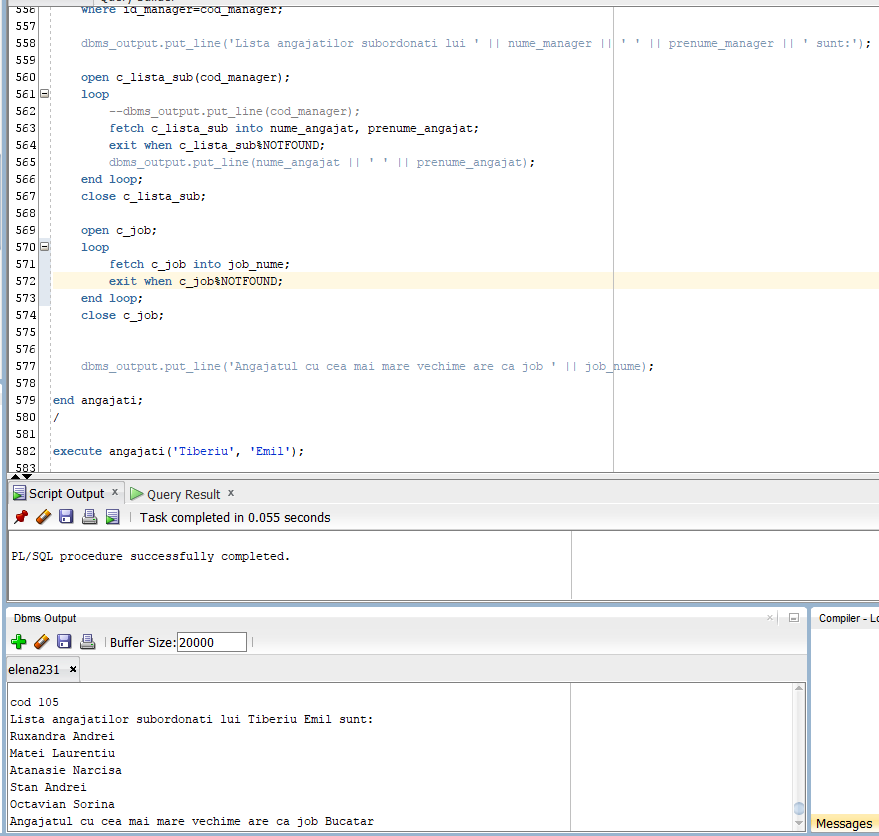
dbms\_output.put\_line('Angajatul cu cea mai mare vechime are ca job ' || job\_nume);

end angajati;

/

execute angajati('Tiberiu', 'Emil');





1. Functia TIP\_CAMERA

--Afisati care este tipul camerei rezervate de catre un client al carui nume incepe cu litera 'C', rezervarea fiind facuta intr-o luna data ca parametru dintr-un hotel dat ca parametru.

create or replace function tip\_camera (oras\_h hotel.oras%TYPE,

luna number)

return varchar2 is camera1 camera.tip\_camera%type;

nume client.nume%TYPE;

cod\_h hotel.id\_hotel%TYPE;

luna\_invalida exception;

begin

if luna<1 or luna> 12 then

raise luna\_invalida;

end if;

select id\_hotel into cod\_h

from hotel

where upper(oras\_h)=upper(oras);

select c.tip\_camera into camera1

from camera c

join rezervare r on c.id\_camera=r.id\_camera

join client cc on cc.id\_client=r.id\_client

where extract (MONTH from r.data\_rezervare)=luna and cc.nume like ('C%');

dbms\_output.put\_line('Camera rezervata in luna ' || luna || ' la hotelul din ' || oras\_h || ' este de tip: ');

return camera1;

EXCEPTION

WHEN luna\_invalida THEN

RAISE\_APPLICATION\_ERROR(-20999,'Luna introdusa este invalida!');

WHEN NO\_DATA\_FOUND THEN

RAISE\_APPLICATION\_ERROR(-20999, 'In istoricul de rezervari nu exista nicio camera rezervata la hotelul din ' || oras\_h || ' in luna ' || luna);

WHEN TOO\_MANY\_ROWS THEN

RAISE\_APPLICATION\_ERROR(-20999,'Mai multe camere au fost rezervate la hotelul din ' || oras\_h || ' in luna ' || luna);

end tip\_camera;

/

--eroare: luna invalida

begin

dbms\_output.put\_line(tip\_camera('Constanta',14));

end;

/

--eroare: TOO MANY ROWS

begin

dbms\_output.put\_line(tip\_camera('Constanta',4));

end;

/

--eroare: NO DATA FOUND

begin

dbms\_output.put\_line(tip\_camera('Constanta',12));

end;

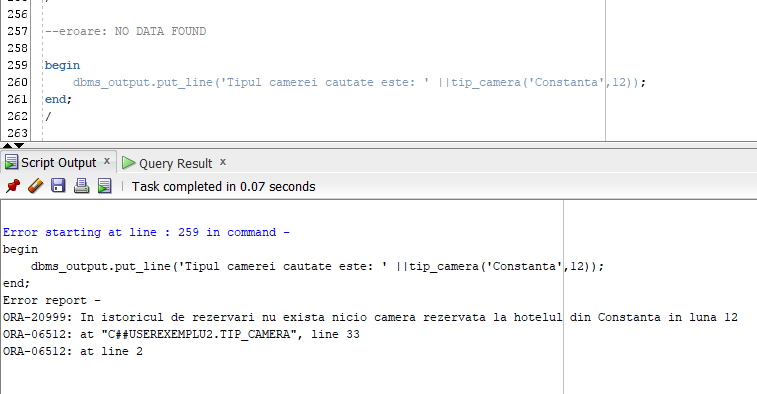
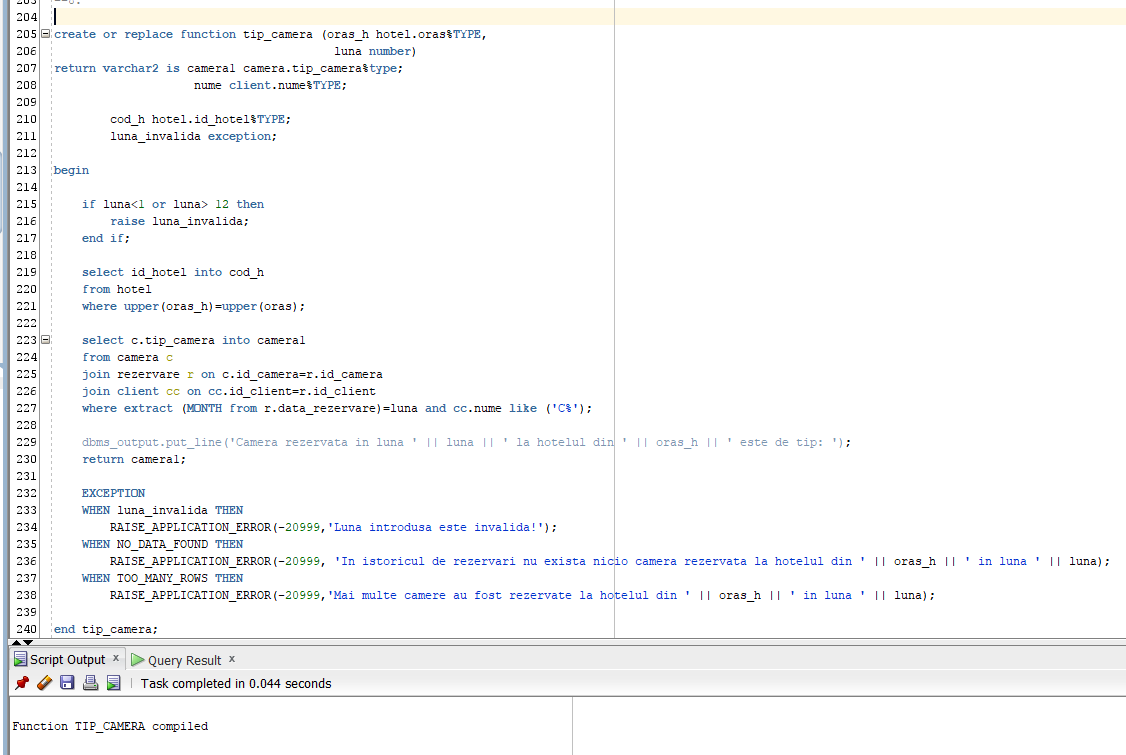
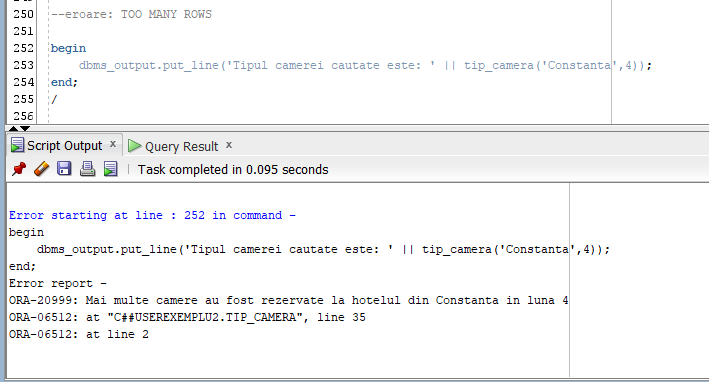
/

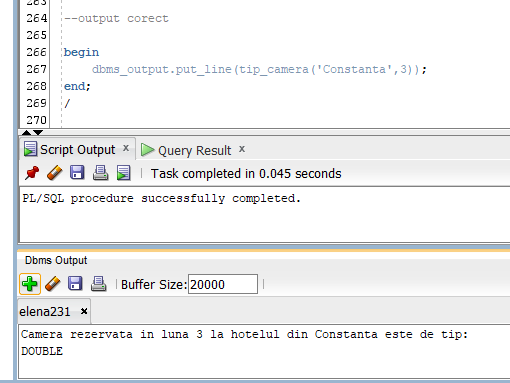
--output corect

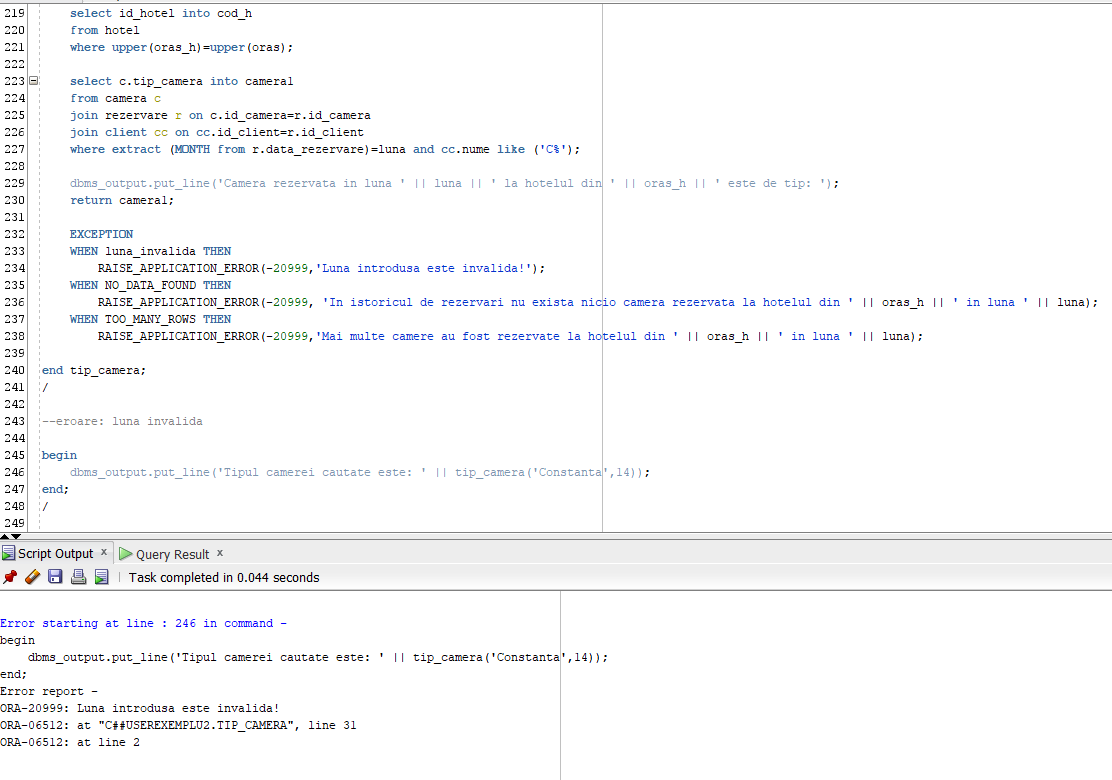
begin

dbms\_output.put\_line(tip\_camera('Constanta',3));

end;







1. Procedura VAL\_PLATA

--Afisati valoarea de plata a clientului care a rezervat un apartament cu 3 camere in hotelul al carui id este furnizat, a carui valoare a tipului de sejur trebuie sa fie mai mare decat o valoare

--data iar check-in-ul trebuie sa se fi facut intr-o zi data ca parametru.

create or replace procedure val\_plata (cod\_h hotel.id\_hotel%TYPE,

zi number,

pret\_s tip\_sejur.pret%TYPE) as

rezultat plata.valoare\_plata%TYPE;

zi\_invalida exception;

begin

if zi<1 or zi>31 then

raise zi\_invalida;

end if;

select p.valoare\_plata into rezultat

from plata p

join factura f on p.id\_plata = f.id\_plata

join rezervare r on r.id\_factura=f.id\_factura

join apartament a on a.id\_apartament=r.id\_apartament

join tip\_sejur t on r.id\_sejur=t.id\_sejur

where a.id\_hotel=cod\_h and a.numar\_camere=3 and EXTRACT (DAY from r.check\_in)=zi and t.pret>pret\_s;

dbms\_output.put\_line('Valoarea de plata cautata este ' || rezultat);

exception

when zi\_invalida then

RAISE\_APPLICATION\_ERROR(-20009, 'Ziua transmisa ca parametru este invalida!');

when NO\_DATA\_FOUND then

RAISE\_APPLICATION\_ERROR(-20009, 'Nu exista nicio rezervare cu aceste date!');

when TOO\_MANY\_ROWS then

RAISE\_APPLICATION\_ERROR(-20009, 'Exista mai multe rezervari cu aceste date!');

when others then

RAISE\_APPLICATION\_ERROR(-20009, 'Am intampinat o eroare');

end val\_plata;

/

--OUTPUT CORECT

execute val\_plata(5,1,50);

--eroare: NO\_DATA\_FOUND

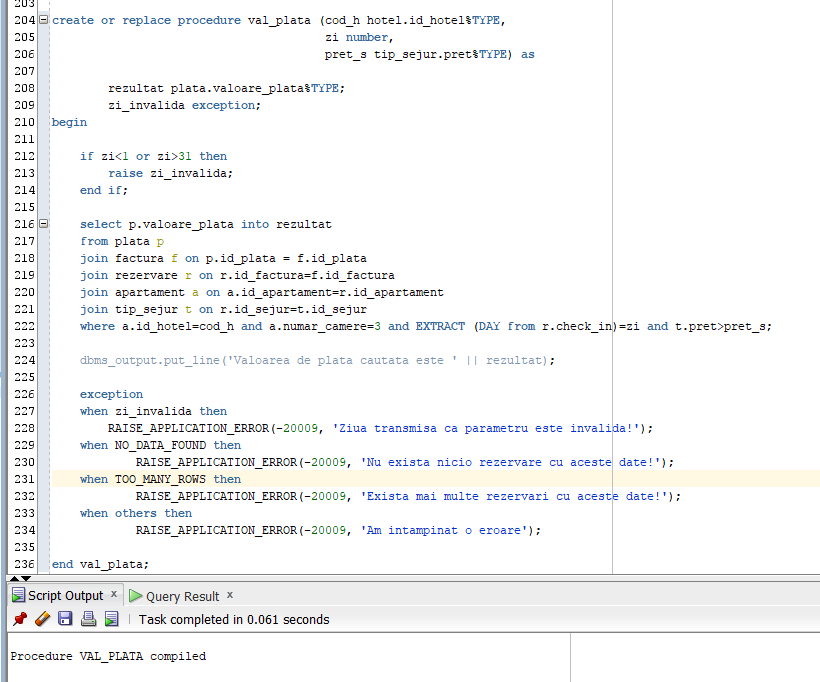
execute val\_plata(7,25,50);

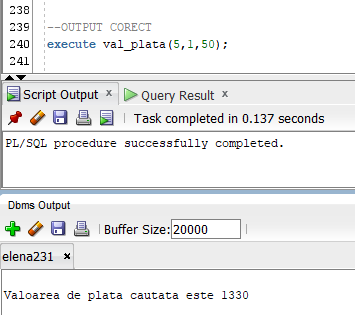
--eroare: zi invalida

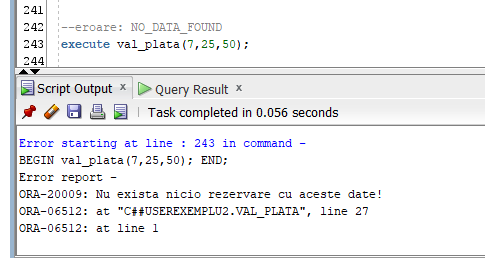
execute val\_plata(3,36,50);

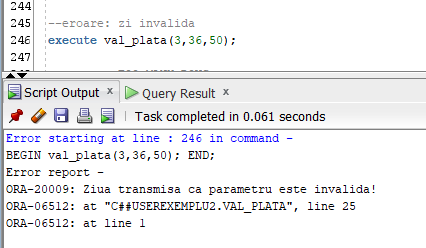
--eroare: TOO\_MANY\_ROWS

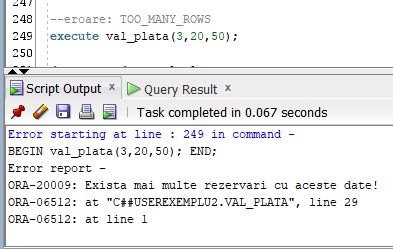
execute val\_plata(3,20,50);











1. Trigger LMD la nivel de comanda

-- Creati un trigger de tip LMD la nivel de comanda care sa nu permita existenta unui numar mai mare de 10 servicii extra.

create or replace trigger trigex10 before insert on servicii\_extra

declare

nr\_serv number;

begin

select count(id\_serv) into nr\_serv

from servicii\_extra;

if nr\_serv>10 then

raise\_application\_error(-20009, 'Nu mai putem adauga alte servicii extra');

end if;

end;

--declansare trigger

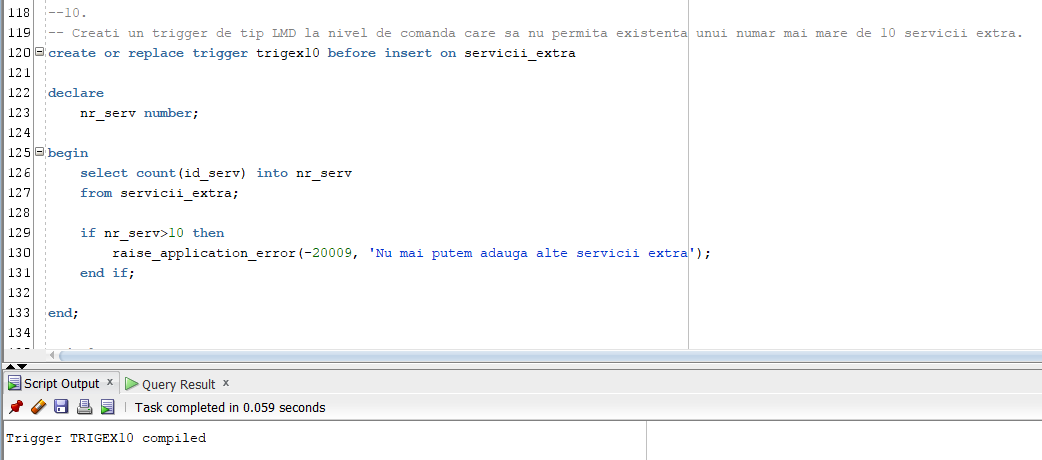
begin

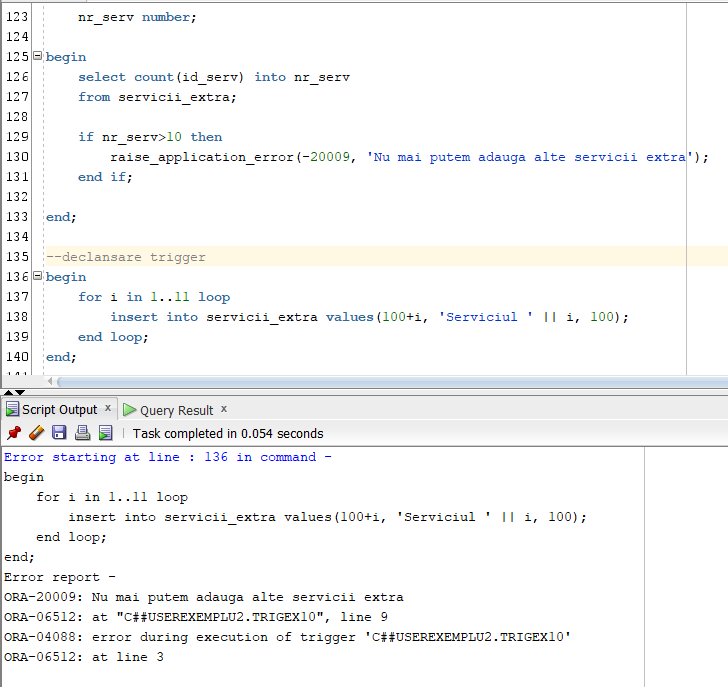
for i in 1..11 loop

insert into servicii\_extra values(100+i, 'Serviciul ' || i, 100);

end loop;

end;





1. Trigger de tip LMD la nivel de linie

--Creati un trigger de tip LMD la nivel de linie astfel incat pretul tipurilor de sejur sa nu poata fi crescute cu mai mult de 50 de lei.

create or replace trigger trigex11 before update of pret on tip\_sejur for each row

begin

if(:NEW.pret > :OLD.pret + 50) then

raise\_application\_error(-20009, 'Pretul tipurilor de masa nu pot fi crescute cu mai mult de 50 de lei');

end if;

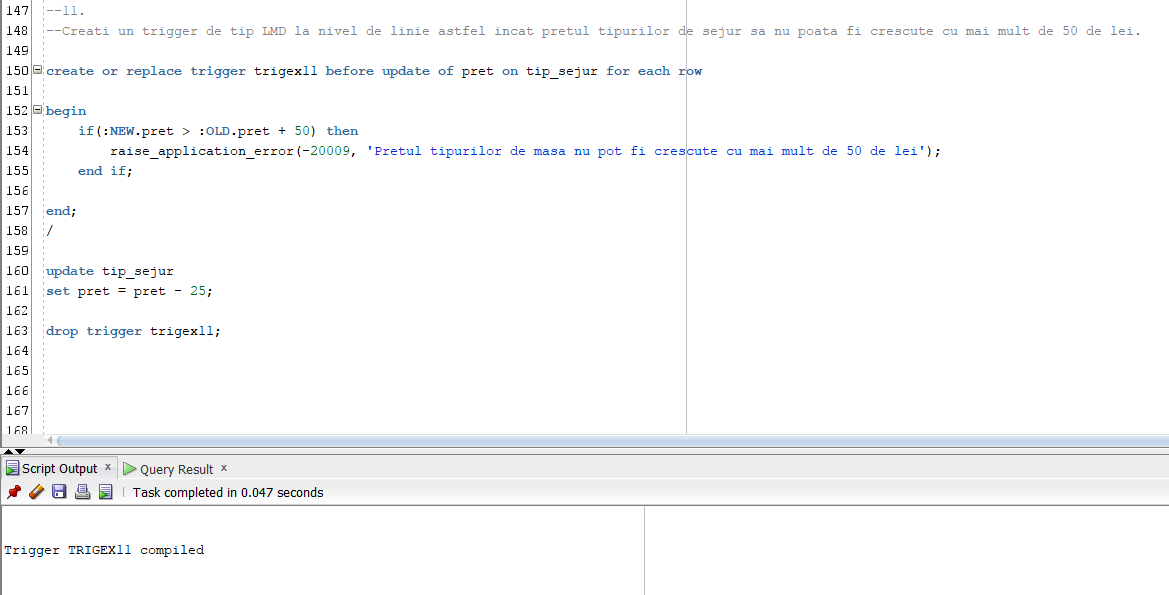
end;

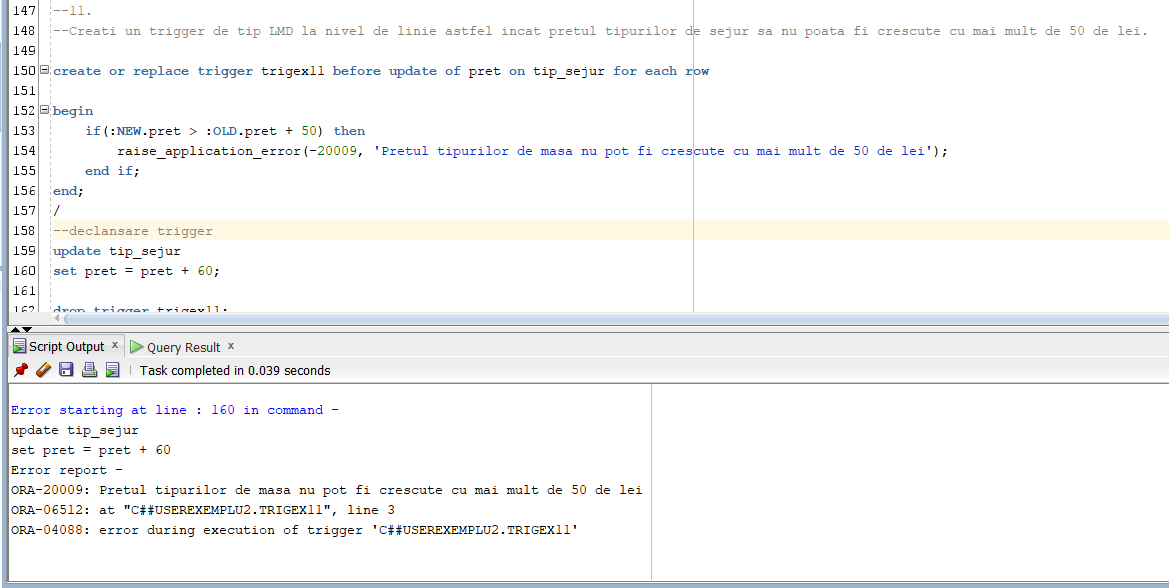
/

--declansare trigger

update tip\_sejur

set pret = pret + 60;





1. Trigger de tip LDD

-- Creati un trigger de tip LDD care dupa fiecare modificare a schemei salveaza modificarile in tabelul "actiuni".

-- Modificarile la nivel LDD pot fi facute doar de userul admin ('C##USEREXEMPLU2').

create table actiuni (

utilizator VARCHAR2(30),

nume\_bd VARCHAR2(50),

eveniment VARCHAR2(20),

nume\_obiect VARCHAR2(30),

data DATE);

create or replace trigger trigex12 after create or drop or alter on schema

begin

if USER!='C##USEREXEMPLU2' then

raise\_application\_error(-20009, 'Nu aveti voie sa faceti modificari asupra bazei de date!');

end if;

insert into actiuni values

(SYS.LOGIN\_USER, SYS.DATABASE\_NAME, SYS.SYSEVENT, SYS.DICTIONARY\_OBJ\_NAME, SYSDATE);

end;

--declansare trigger

create table testare\_trig

( column1 number,

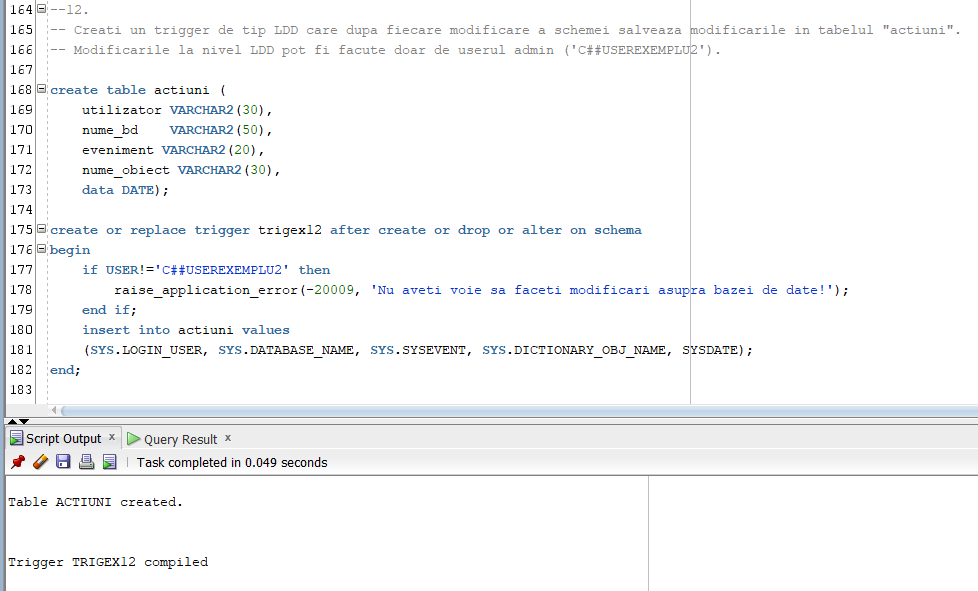
column2 varchar2(20),

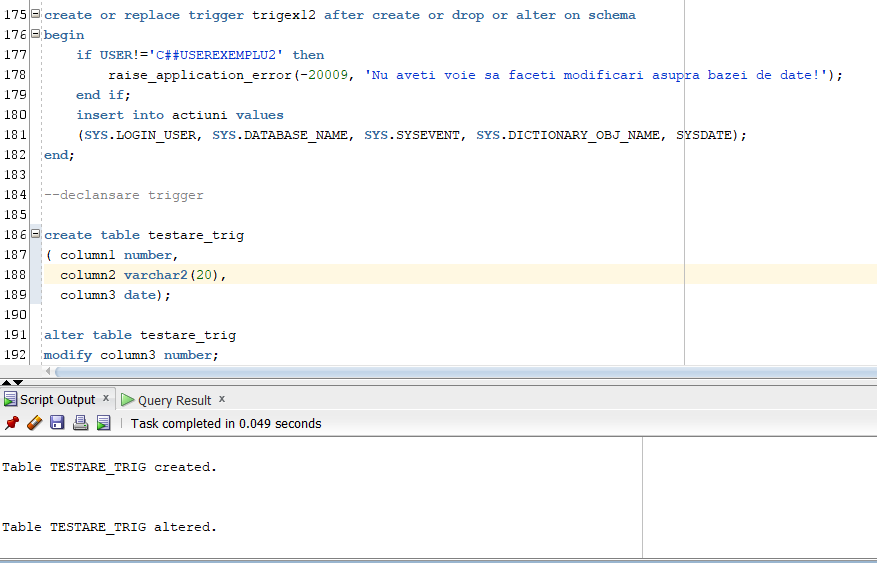
column3 date);

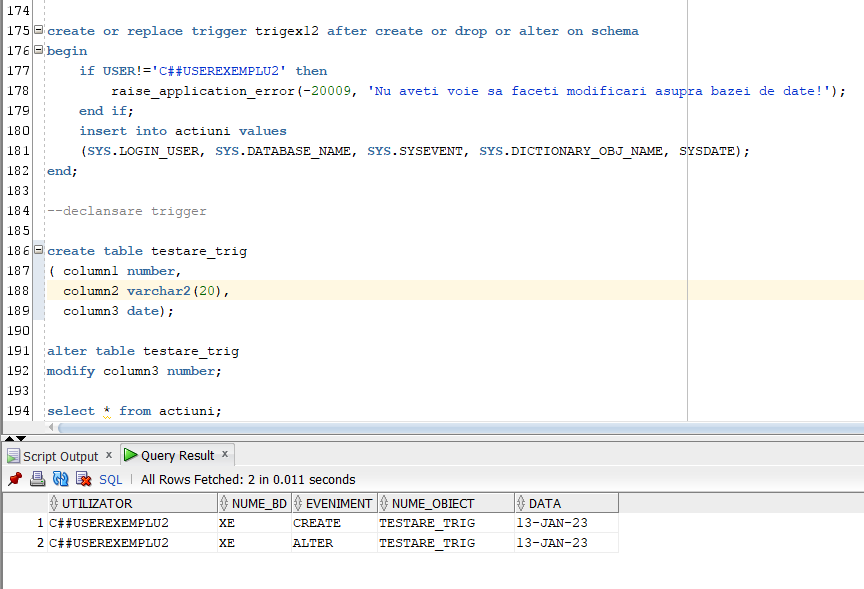
alter table testare\_trig

modify column3 number;

select \* from actiuni;







1. Pachet cu obiectele anterior definite

create or replace package ex13\_ege as

--6.

procedure servicii\_hotel

(oras\_hotel hotel.oras%TYPE);

--7.

procedure angajati

(nume\_manager angajat.nume%TYPE,

prenume\_manager angajat.prenume%TYPE);

--8.

function tip\_camera (oras\_h hotel.oras%TYPE,

luna number)

return varchar2;

--9.

procedure val\_plata (cod\_h hotel.id\_hotel%TYPE,

zi number,

pret\_s tip\_sejur.pret%TYPE);

end ex13\_ege;

/

create or replace package body ex13\_ege as

--6.

procedure servicii\_hotel

(oras\_hotel hotel.oras%TYPE) is

TYPE servicii IS TABLE OF SERVICII\_EXTRA%ROWTYPE INDEX BY PLS\_INTEGER;

t servicii;

TYPE tablou\_imbricat IS TABLE OF SERVICII\_EXTRA.ID\_SERV%TYPE;

v\_serv tablou\_imbricat:= tablou\_imbricat();

serviciu SERVICII\_EXTRA%ROWTYPE;

cod\_oras hotel.id\_hotel%TYPE;

i number:=0;

j number:=0;

begin

select id\_hotel into cod\_oras

from hotel

where upper(oras\_hotel)=upper(oras);

select id\_serv bulk collect into v\_serv

from dispune

where cod\_oras=id\_hotel;

for j in v\_serv.first..v\_serv.last loop

select id\_serv, tip\_serviciu, pret into serviciu

from servicii\_extra

where id\_serv = v\_serv(j);

t(i):=serviciu;

i := i+1;

end loop;

dbms\_output.put\_line('Hotelul "Glimpse" din orasul ' || oras\_hotel || ' dispune de urmatoarele servicii: ');

for i in t.first..t.last loop

dbms\_output.put\_line(t(i).tip\_serviciu);

end loop;

end servicii\_hotel;

--7.

procedure angajati

(nume\_manager angajat.nume%TYPE,

prenume\_manager angajat.prenume%TYPE) as

cod\_manager angajat.id\_angajat%type;

nume\_angajat angajat.nume%TYPE;

prenume\_angajat angajat.prenume%TYPE;

job\_nume job.nume\_job%TYPE;

salariu\_ang job.salariu%TYPE;

angajare angajat.data\_angajarii%TYPE;

nr number(4);

cursor c\_lista\_sub (cod\_man angajat.id\_angajat%type) is

select nume, prenume

from angajat

where id\_manager=cod\_man;

cursor c\_job is

select j.nume\_job

from job j, angajat a

where a.data\_angajarii=angajare and a.id\_job=j.id\_job;

begin

select id\_angajat into cod\_manager

from angajat

where upper(nume)=upper(nume\_manager) and upper(prenume)=upper(prenume\_manager);

dbms\_output.put\_line('cod ' || cod\_manager);

select min(data\_angajarii) into angajare

from angajat

where id\_manager=cod\_manager;

dbms\_output.put\_line('Lista angajatilor subordonati lui ' || nume\_manager || ' ' || prenume\_manager || ' sunt:');

open c\_lista\_sub(cod\_manager);

loop

--dbms\_output.put\_line(cod\_manager);

fetch c\_lista\_sub into nume\_angajat, prenume\_angajat;

exit when c\_lista\_sub%NOTFOUND;

dbms\_output.put\_line(nume\_angajat || ' ' || prenume\_angajat);

end loop;

close c\_lista\_sub;

open c\_job;

loop

fetch c\_job into job\_nume;

exit when c\_job%NOTFOUND;

end loop;

close c\_job;

dbms\_output.put\_line('Angajatul cu cea mai mare vechime are ca job ' || job\_nume);

end angajati;

--8.

function tip\_camera (oras\_h hotel.oras%TYPE,

luna number)

return varchar2 is camera1 camera.tip\_camera%type;

nume client.nume%TYPE;

cod\_h hotel.id\_hotel%TYPE;

luna\_invalida exception;

begin

if luna<1 or luna> 12 then

raise luna\_invalida;

end if;

select id\_hotel into cod\_h

from hotel

where upper(oras\_h)=upper(oras);

select c.tip\_camera into camera1

from camera c

join rezervare r on c.id\_camera=r.id\_camera

join client cc on cc.id\_client=r.id\_client

where extract (MONTH from r.data\_rezervare)=luna and cc.nume like ('C%');

dbms\_output.put\_line('Camera rezervata in luna ' || luna || ' la hotelul din ' || oras\_h || ' este de tip: ');

return camera1;

EXCEPTION

WHEN luna\_invalida THEN

RAISE\_APPLICATION\_ERROR(-20999,'Luna introdusa este invalida!');

WHEN NO\_DATA\_FOUND THEN

RAISE\_APPLICATION\_ERROR(-20999, 'In istoricul de rezervari nu exista nicio camera rezervata la hotelul din ' || oras\_h || ' in luna ' || luna);

WHEN TOO\_MANY\_ROWS THEN

RAISE\_APPLICATION\_ERROR(-20999,'Mai multe camere au fost rezervate la hotelul din ' || oras\_h || ' in luna ' || luna);

end tip\_camera;

--9.

procedure val\_plata (cod\_h hotel.id\_hotel%TYPE,

zi number,

pret\_s tip\_sejur.pret%TYPE) as

rezultat plata.valoare\_plata%TYPE;

zi\_invalida exception;

begin

if zi<1 or zi>31 then

raise zi\_invalida;

end if;

select p.valoare\_plata into rezultat

from plata p

join factura f on p.id\_plata = f.id\_plata

join rezervare r on r.id\_factura=f.id\_factura

join apartament a on a.id\_apartament=r.id\_apartament

join tip\_sejur t on r.id\_sejur=t.id\_sejur

where a.id\_hotel=cod\_h and a.numar\_camere=3 and EXTRACT (DAY from r.check\_in)=zi and t.pret>pret\_s;

dbms\_output.put\_line('Valoarea de plata cautata este ' || rezultat);

exception

when zi\_invalida then

RAISE\_APPLICATION\_ERROR(-20009, 'Ziua transmisa ca parametru este invalida!');

when NO\_DATA\_FOUND then

RAISE\_APPLICATION\_ERROR(-20009, 'Nu exista nicio rezervare cu aceste date!');

when TOO\_MANY\_ROWS then

RAISE\_APPLICATION\_ERROR(-20009, 'Exista mai multe rezervari cu aceste date!');

when others then

RAISE\_APPLICATION\_ERROR(-20009, 'Am intampinat o eroare');

end val\_plata;

end ex13\_ege;

begin

dbms\_output.put\_line('Exericitiul 6:');

ex13\_ege.servicii\_hotel('Constanta');

dbms\_output.put\_line(' ');

dbms\_output.put\_line('Exericitiul 7:');

ex13\_ege.angajati('Tiberiu', 'Emil');

dbms\_output.put\_line(' ');

dbms\_output.put\_line('Exericitiul 8:');

dbms\_output.put\_line(ex13\_ege.tip\_camera('Constanta',3));

dbms\_output.put\_line(' ');

dbms\_output.put\_line('Exericitiul 9:');

ex13\_ege.val\_plata(5,1,50);

end;

