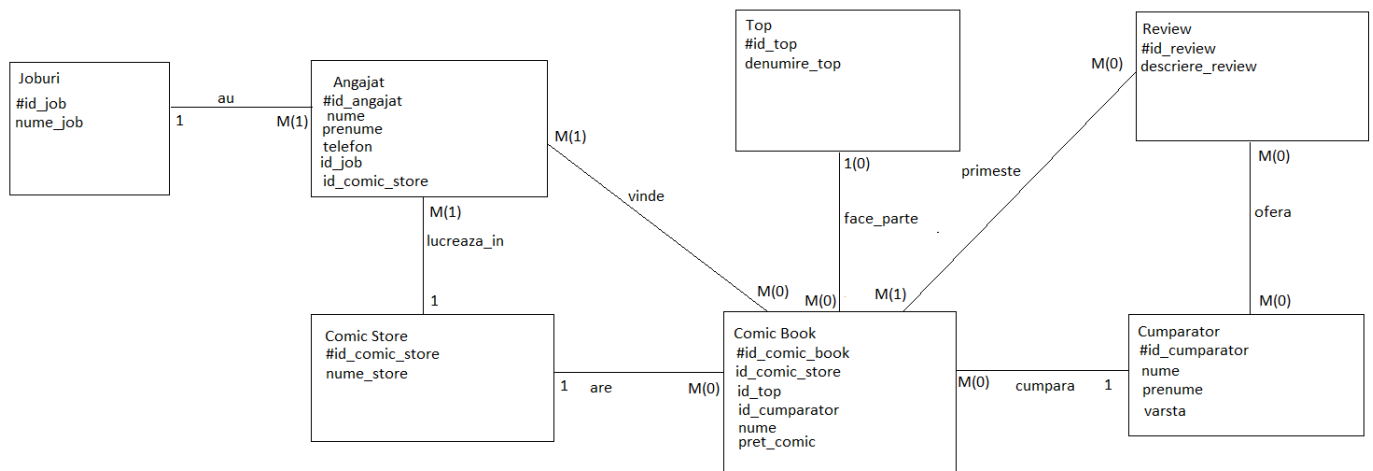


# Proiect Sisteme de Gestiune a Bazelor de Date

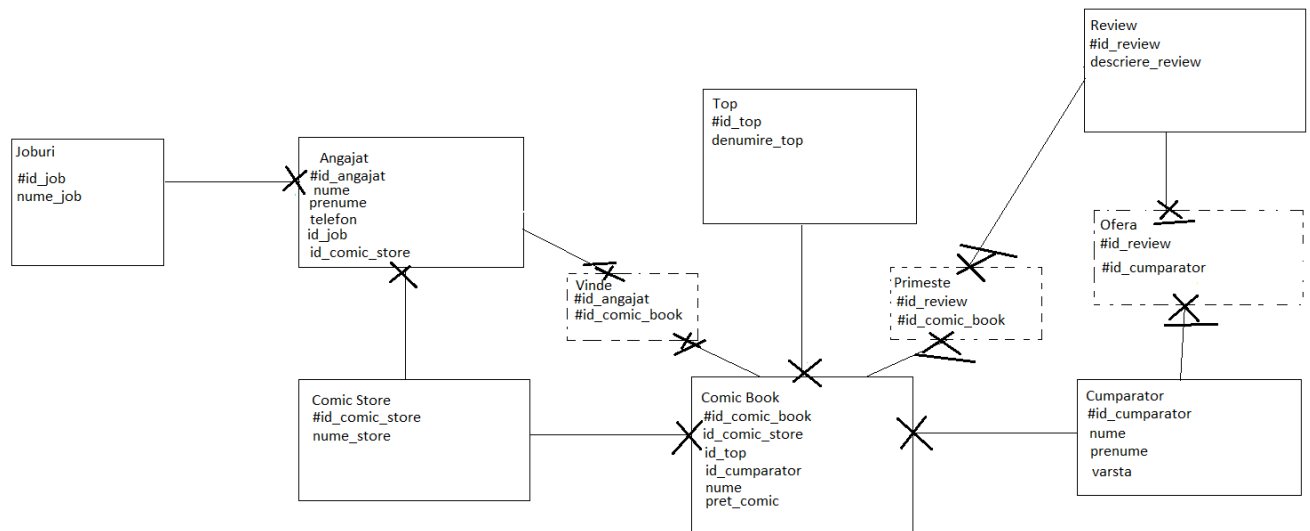
Roșianu Robert – Grupa 233

1. Proiectul prezinta o baza de date folosita pentru administrarea unei afaceri ce se ocupa cu vanzarea benzilor desenate. Avem mai multe magazine unde se vand diverse reviste (vandute de anumiti angajati avand diverse joburi). Aceste reviste fac parte dintr-un top (nu este obligatoriu), au cate un comparator si primesc sau nu un review in functie de cat de bun este continutul revistei respective. Baza noastra de date ofera operatii ce ajuta la mentinerea informatiilor cat si la mentenanta acesteia.

2. Diagrama Entitate-Relatie:



3. Diagrama Conceptuala:



#### 4. Tabele:

```

create table Joburi(
id_job number(4) primary key,
nume_job varchar2(10) not null
);
  
```

```

create table ComicStore(
id_comic_store number(4) primary key,
nume_store varchar2(15) not null
);
  
```

```

create table Top(
id_top number(4) primary key,
denumire_top varchar2(20) not null
);
  
```

);

```
create table Cumparator(  
id_cumparator number(4) primary key,  
nume varchar2(12) not null,  
prenume varchar2(12) not null,  
varsta number(4) not null  
);
```

```
create table Review(  
id_review number(4) primary key,  
descriere_review varchar2(30) not null  
);
```

```
create table ComicBook(  
id_comic_book number(4) primary key,  
id_comic_store number(4) references ComicStore(id_comic_store) on delete cascade,  
id_top number(4) references Top(id_top) on delete cascade,  
id_cumparator number(4) references Cumparator(id_cumparator) on delete cascade,  
nume varchar2(20) not null,  
pret number(4) not null  
);
```

```
create table Angajat(  
id_angajat number(4) primary key,  
id_job number(4) references Joburi(id_job) on delete cascade,
```

```
id_comic_store number(4) references ComicStore(id_comic_store) on delete cascade,  
nume varchar2(10) not null,  
prenume varchar2(10) not null,  
telefon number(11) not null unique  
);
```

```
create table Vinde(  
id_angajat number(4),  
id_comic_book number(4),  
primary key(id_angajat, id_comic_book),  
foreign key(id_angajat) references Angajat(id_angajat) on delete cascade,  
foreign key(id_comic_book) references ComicBook(id_comic_book) on delete cascade  
);
```

```
create table Primeste(  
id_review number(4),  
id_comic_book number(4),  
primary key(id_review, id_comic_book),  
foreign key(id_review) references Review(id_review) on delete cascade,  
foreign key(id_comic_book) references ComicBook(id_comic_book) on delete cascade  
);
```

```
create table Ofera(  
id_review number(4),  
id_cumparator number(4),  
primary key(id_review, id_cumparator),
```

```
foreign key(id_review) references Review(id_review) on delete cascade,  
foreign key(id_cumparator) references Cumparator(id_cumparator) on delete cascade  
);
```

5. Inserare in tabelle:

```
create sequence angajati
```

```
start with 1
```

```
nocycle;
```

```
create sequence jobs
```

```
start with 1
```

```
nocycle;
```

```
create sequence comics
```

```
start with 1
```

```
nocycle;
```

```
create sequence comic_store
```

```
start with 1
```

```
nocycle;
```

```
create sequence tops
```

```
start with 1
```

```
nocycle;
```

```
create sequence cumparatori
```

start with 1

nocycle;

create sequence reviews

start with 1

nocycle;

insert into Joburi(id\_job, nume\_job)

values(jobs.nextval, 'Vanzator');

insert into Joburi(id\_job, nume\_job)

values(jobs.nextval, 'Manager');

insert into Joburi(id\_job, nume\_job)

values(jobs.nextval, 'Asistent');

insert into Joburi(id\_job, nume\_job)

values(jobs.nextval, 'Patron');

insert into Joburi(id\_job, nume\_job)

values(jobs.nextval, 'Curatator');

insert into Joburi(id\_job, nume\_job)

values(jobs.nextval, 'Investitor');

insert into Joburi(id\_job, nume\_job)

```
values(jobs.nextval, 'Asistent');
```

```
insert into ComicStore(id_comic_store, nume_store)  
values (comic_store.nextval, 'Best Books');
```

```
insert into ComicStore(id_comic_store, nume_store)  
values (comic_store.nextval, 'Hentai Heaven');
```

```
insert into ComicStore(id_comic_store, nume_store)  
values (comic_store.nextval, 'Top Comics');
```

```
insert into ComicStore(id_comic_store, nume_store)  
values (comic_store.nextval, 'Last Avengers');
```

```
insert into ComicStore(id_comic_store, nume_store)  
values (comic_store.nextval, 'Downtown Comics');
```

```
insert into ComicStore(id_comic_store, nume_store)  
values (comic_store.nextval, 'New Order Shop');
```

```
insert into ComicStore(id_comic_store, nume_store)  
values (comic_store.nextval, 'Stranger Shop');
```

```
insert into ComicStore(id_comic_store, nume_store)  
values (comic_store.nextval, 'Big Offer');
```

```
insert into ComicStore(id_comic_store, nume_store)
```

```
values (comic_store.nextval, 'New Nw');
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
```

```
values (angajati.nextval,1,1, 'Ciocan', 'Madalin', 40763312934);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
```

```
values (angajati.nextval,2,1, 'Silviu', 'Lungu', 40763312314);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
```

```
values (angajati.nextval,3,1, 'Matea', 'Marian', 40762345674);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
```

```
values (angajati.nextval,4,2, 'Liviu', 'Sandu', 40743212934);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
```

```
values (angajati.nextval,5,2, 'Spataru', 'Sulean', 40743444934);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
```

```
values (angajati.nextval,1,2, 'Coltea', 'Spitalu', 40733312934);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
```

```
values (angajati.nextval,3,2, 'Cosmina', 'Ciortea', 40743299934);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
```

```
values (angajati.nextval,2,2, 'Sandu', 'Ciorba', 40712312734);
```



```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,5,1, 'Florin', 'Florin', 40743123454);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,4,1, 'Florin', 'Dinu', 40746754454);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,2,3, 'Martinel', 'Lungu', 40743555554);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,1,3, 'Guta', 'Nicolae', 40711123454);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,4,3, 'Trinu', 'Minu', 40743187874);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,5,4, 'Legion', 'Seven', 40741212654);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,2,4, 'Cultan', 'Oirr', 40755123552);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,1,4, 'Petrica', 'Simion', 40743666884);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
```

```
values (angajati.nextval,5,4, 'Minuc', 'Sad', 40724561834);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,1,5, 'Sidan', 'Pisan', 40215384912);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,2,5, 'Lionel', 'Messi', 40724444434);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,1,5, 'Cristiano', 'Ronaldo', 40724656224);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,5,5, 'Vecinu', 'Debloc', 40712361994);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,2,6, 'Ghioc', 'David', 40721122334);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,1,6, 'Flesa', 'Manar', 40754222811);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,3,6, 'Tarnaveanu', 'Sorin', 40724141794);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,4,6, 'Scovearca', 'Ramus', 40214563151);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,4,6, 'Sive', 'Relu', 40214999951);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,2,7, 'Svde', 'Rreu', 40223561711);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,1,1, 'Sile', 'Kamat', 40224441219);
```

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,1,8, 'Ye', 'Kanye', 40234143297);
```

```
insert into Top(id_top, denumire_top)
values (tops.nextval,'Best Romance');
```

```
insert into Top(id_top, denumire_top)
values (tops.nextval,'Best Overall');
```

```
insert into Top(id_top, denumire_top)
values (tops.nextval,'Best Action');
```

```
insert into Top(id_top, denumire_top)
values (tops.nextval,'Most Recommended');
```

```
insert into Top(id_top, denumire_top)
values (tops.nextval,'Funniest');
```

```
insert into Review(id_review, descriere_review)
values (reviews.nextval, 'Foarte Faina');
```

```
insert into Review(id_review, descriere_review)
values (reviews.nextval, 'Buna');
```

```
insert into Review(id_review, descriere_review)
values (reviews.nextval, 'Mediocra');
```

```
insert into Review(id_review, descriere_review)
values (reviews.nextval, 'Slaba');
```

```
insert into Review(id_review, descriere_review)
values (reviews.nextval, 'Groaznica');
```

```
insert into Review(id_review, descriere_review)
values (reviews.nextval, 'Printre cele mai bune');
```

```
insert into Review(id_review, descriere_review)
values (reviews.nextval, 'Printre cele mai rele');
```

```
insert into Review(id_review, descriere_review)
values (reviews.nextval, 'Foarte Unica');
```

```
insert into Review(id_review, descriere_review)
```

```
values (reviews.nextval, 'Design Slab');
```

```
insert into Review(id_review, descriere_review)
```

```
values (reviews.nextval, 'Animatie buna');
```

```
insert into Cumparator(id_cumparator, nume, prenume, varsta)
```

```
values (cumparatori.nextval, 'Ghinea', 'Silviu', 23);
```

```
insert into Cumparator(id_cumparator, nume, prenume, varsta)
```

```
values (cumparatori.nextval, 'Florica', 'Nwo', 24);
```

```
insert into Cumparator(id_cumparator, nume, prenume, varsta)
```

```
values (cumparatori.nextval, 'Tataee', 'Bug', 43);
```

```
insert into Cumparator(id_cumparator, nume, prenume, varsta)
```

```
values (cumparatori.nextval, 'Maresalu', 'Antonio', 29);
```

```
insert into Cumparator(id_cumparator, nume, prenume, varsta)
```

```
values (cumparatori.nextval, 'Pican', 'Antonio', 31);
```

```
insert into Cumparator(id_cumparator, nume, prenume, varsta)
```

```
values (cumparatori.nextval, 'Goku', 'Saiyan', 42);
```

```
insert into ComicBook(id_comic_book, id_comic_store, id_top, id_cumparator, nume, pret)
```

```
values (comics.nextval, 1, 1, 2, 'Genshin Impact', 20);
```

```
insert into ComicBook(id_comic_book, id_comic_store, id_top, id_cumparator, nume, pret)
values (comics.nextval, 1, 3, 2, 'Big Adventure', 25);
```

```
insert into ComicBook(id_comic_book, id_comic_store, id_top, id_cumparator, nume, pret)
values (comics.nextval, 2, null, 3, 'Re:Zero', 18);
```

```
insert into ComicBook(id_comic_book, id_comic_store, id_top, id_cumparator, nume, pret)
values (comics.nextval, 2, null, 1, 'Horimiya', 22);
```

```
insert into ComicBook(id_comic_book, id_comic_store, id_top, id_cumparator, nume, pret)
values (comics.nextval, 3, 2, 3, 'Ian si Azteca', 29);
```

```
insert into ComicBook(id_comic_book, id_comic_store, id_top, id_cumparator, nume, pret)
values (comics.nextval, 5, null, 4, 'Dragon Ball Z', 26);
```

```
insert into ComicBook(id_comic_book, id_comic_store, id_top, id_cumparator, nume, pret)
values (comics.nextval, 2, 4, 5, 'Last Airbender', 21);
```

```
insert into ComicBook(id_comic_book, id_comic_store, id_top, id_cumparator, nume, pret)
values (comics.nextval, 5, 5, 6, 'Worst Date', 31);
```

```
insert into ComicBook(id_comic_book, id_comic_store, id_top, id_cumparator, nume, pret)
values (comics.nextval, 5, null, 4, 'Best Date', 31);
```

```
insert into ComicBook(id_comic_book, id_comic_store, id_top, id_cumparator, nume, pret)
values (comics.nextval, 4, null, 3, 'Worst Date', 37);
```

```
insert into ComicBook(id_comic_book, id_comic_store, id_top, id_cumparator, nume, pret)
values (comics.nextval, 7, null, 3, 'New Stuff', 33);
```

```
insert into ComicBook(id_comic_book, id_comic_store, id_top, id_cumparator, nume, pret)
values (comics.nextval, 8, null, null, 'AA problems', 42);
```

```
insert into Vinde(id_angajat, id_comic_book)
values(1,3);
```

```
insert into Vinde(id_angajat, id_comic_book)
values(2,4);
```

```
insert into Vinde(id_angajat, id_comic_book)
values(1,5);
```

```
insert into Vinde(id_angajat, id_comic_book)
values(1,1);
```

```
insert into Vinde(id_angajat, id_comic_book)
values(2,6);
```

```
insert into Vinde(id_angajat, id_comic_book)
values(3,3);
```

```
insert into Vinde(id_angajat, id_comic_book)
```

```
values(3,6);
```

```
insert into Vinde(id_angajat, id_comic_book)
```

```
values(4,1);
```

```
insert into Vinde(id_angajat, id_comic_book)
```

```
values(5,8);
```

```
insert into Vinde(id_angajat, id_comic_book)
```

```
values(22,5);
```

```
insert into Primeste(id_review,id_comic_book)
```

```
values(1,1);
```

```
insert into Primeste(id_review,id_comic_book)
```

```
values(2,2);
```

```
insert into Primeste(id_review,id_comic_book)
```

```
values(3,4);
```

```
insert into Primeste(id_review,id_comic_book)
```

```
values(4,6);
```

```
insert into Primeste(id_review,id_comic_book)
```

```
values(5,8);
```



```
insert into Primeste(id_review,id_comic_book)
values(6,9);
```

```
insert into Primeste(id_review,id_comic_book)
values(7,10);
```

```
insert into Primeste(id_review,id_comic_book)
values(8,3);
```

```
insert into Primeste(id_review,id_comic_book)
values(9,5);
```

```
insert into Primeste(id_review,id_comic_book)
values(10,7);
```

```
insert into Ofera(id_review, id_cumparator)
values(2,5);
```

```
insert into Ofera(id_review, id_cumparator)
values(1,4);
```

```
insert into Ofera(id_review, id_cumparator)
values(3,1);
```

```
insert into Ofera(id_review, id_cumparator)
values(4,2);
```

```
insert into Ofera(id_review, id_cumparator)
values(10,3);
```

```
insert into Ofera(id_review, id_cumparator)
values(9,6);
```

```
insert into Ofera(id_review, id_cumparator)
values(5,3);
```

```
insert into Ofera(id_review, id_cumparator)
values(6,3);
```

```
insert into Ofera(id_review, id_cumparator)
values(7,3);
```

```
insert into Ofera(id_review, id_cumparator)
values(9,4);
```

Tabelul Angajat:





Script Output x Query Result x						
SQL   All Rows Fetched: 27 in 0.265 seconds						
ID_ANGAJAT	ID_JOB	ID_COMIC_STORE	NUME	PREN...	TELEFON	
1	1	1	1 Ciocan	Madalin	40763312934	
2	2	2	1 Silviu	Lungu	40763312314	
3	3	3	1 Matea	Marian	40762345674	
4	4	4	2 Liviu	Sandu	40743212934	
5	5	5	2 Spataru	Sulean	40743444934	
6	6	1	2 Coltea	Spitalu	40733312934	
7	7	3	2 Cosmina	Ciortea	40743299934	
8	8	2	2 Sandu	Ciorba	40712312734	
9	9	5	1 Florin	Florin	40743123454	
10	10	4	1 Florin	Dinu	40746754454	
11	11	2	3 Martinel	Lungu	40743555554	
12	12	1	3 Guta	Nicolae	40711123454	
13	13	1	2 Guta	Nicolae	40711123454	

Tabelul Joburi:

Script Output x Query Result x	
SQL   All Rows Fetched: 7 in 0.002 seconds	
ID_JOB	NUME_JOB
1	1 Vanzator
2	2 Manager
3	3 Asistent
4	4 Patron
5	5 Curatator
6	6 Investitor
7	7 Asistent

Tabelul ComicStore:


Script Output x Query Result x

 SQL | All Rows Fetched: 9 in 0.003 seconds

	ID_COMIC_STORE	NUME_STORE
1		1 Best Books
2		2 Hentai Heaven
3		3 Top Comics
4		4 Last Avengers
5		5 Downtown Comics
6		6 New Order Shop
7		7 Stranger Shop
8		8 Big Offer
9		9 New Nw

Tabelul ComicBook:

Script Output x Query Result x

 | All Rows Fetched: 12 in 0.005 seconds

ID_COMIC_BOOK	ID_COMIC_STORE	ID_TOP	ID_CUMPARATOR	NUME	PRET
1	1	1		2 Genshin Impact	20
2	2	1	3	2 Big Adventure	25
3	3	2	(null)	3 Re:Zero	18
4	4	2	(null)	1 Horimiya	22
5	5	3	2	3 Ian si Asteca	29
6	6	5	(null)	4 Dragon Ball Z	26
7	7	2	4	5 Last Airbender	21
8	8	5	5	6 Worst Date	31
9	9	5	(null)	4 Best Date	31
10	10	4	(null)	3 Worst Date	37
11	11	7	(null)	3 New Stuff	33
12	12	8	(null)	(null) AA problems	42

Tabelul Top:

Script Output x Query Result x

SQL | All Rows Fetched: 5 in 0.017 seconds

ID_TOP	DENUMIRE_TOP
1	1 Best Romance
2	2 Best Overall
3	3 Best Action
4	4 Most Recommended
5	5 Funniest

Tabelul Cumparator:

Script Output x Query Result x

SQL | All Rows Fetched: 6 in 0.025 seconds

ID_CUMPAR...	NUME	PRENUME	VARSTA
1	1 Ghinea	Silviu	23
2	2 Florica	Nwo	24
3	3 Tataee	Bug	43
4	4 Maresalu	Antonio	29
5	5 Pican	Antonio	31
6	6 Goku	Saiyan	42

Tabelul Review:

Script Output x Query Result x	
SQL   All Rows Fetched: 10 in 0.047 seconds	
ID_REVIEW	DESCRIERE_REVIEW
1	1 Foarte Faina
2	2 Buna
3	3 Mediocra
4	4 Slaba
5	5 Groaznica
6	6 Printre cele mai bune
7	7 Printre cele mai rele
8	8 Foarte Unica
9	9 Design Slab
10	10 Animatie buna

Tabelul Vinde:

Script Output x Query Result x	
SQL   All Rows Fetched: 9 in 0.019 seconds	
ID_ANGAJAT	ID_COMIC_BOOK
1	1
2	1
3	2
4	2
5	3
6	3
7	4
8	5
9	22

Tabelul Primeste:

Script Output x Query Result x		
SQL   All Rows Fetched: 10 in 0.01 seconds		
ID_REVIEW	ID_COMIC_BOOK	
1	1	1
2	2	2
3	3	4
4	4	6
5	5	8
6	6	9
7	7	10
8	8	3
9	9	5
10	10	7

Tabelul Ofera:

Script Output x Query Result x		
SQL   All Rows Fetched: 10 in 0.007 seconds		
ID_REVIEW	ID_CUMPARATOR	
1	1	4
2	2	5
3	3	1
4	4	2
5	5	3
6	6	3
7	7	3
8	9	4
9	9	6
10	10	3

#### Exercitiul 6:

--6 Aflati toti angajatii din magazine si codul acestor magazine

create or replace procedure ang\_si\_magazine

as

type vector is varray(50) of ComicStore.id\_comic\_store%type;

type vector\_2 is varray(50) of Angajat.nume%type;

type table\_1 is table of vector\_2 index by pls\_integer;

```

    cstore vector := vector();
    cangajat table_1;
    chk number(1) := 0;
begin
    select id_comic_store
    bulk collect into cstore
    from ComicStore;

    if cstore.count < 3 then
        RAISE_APPLICATION_ERROR(-20099, 'Prea putine magazine!');
    end if;

    for i in 1..cstore.count loop
        select nume
        bulk collect into cangajat(i)
        from Angajat
        join ComicStore on Angajat.id_comic_store = ComicStore.id_comic_store
        where ComicStore.id_comic_store = cstore(i);
        dbms_output.put_line('Id-ul magazinului:' || cstore(i));
        for j in 1..cangajat(i).count loop
            dbms_output.put_line(cangajat(i)(j));
        end loop;
    end loop;
end ang_si_magazine;
/

```



--Test:

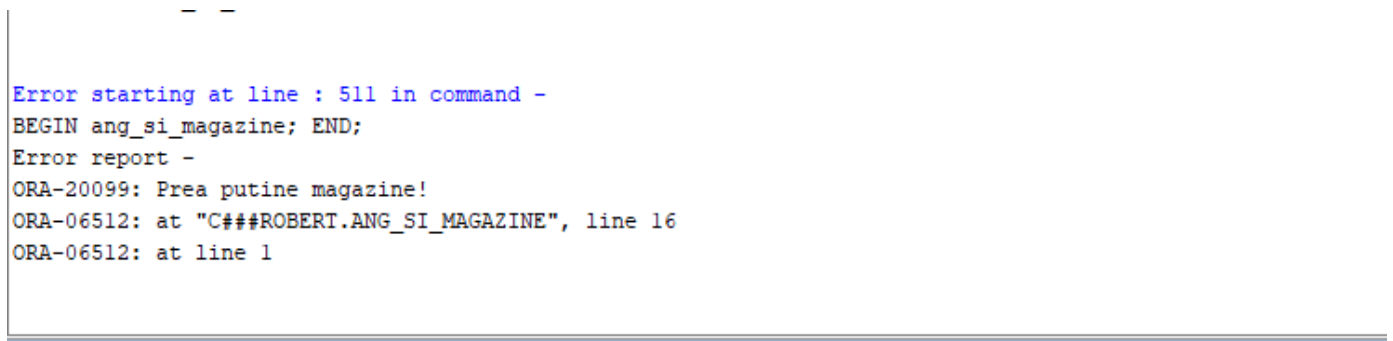
execute ang\_si\_magazine;



```
Script Output x Query Result x
Task completed in 0.116 seconds

Id-ul magazinului:1
Ciocan
Silviu
Matea
Florin
Florin
Id-ul magazinului:2
Liviu
Spataru
Coltea
Cosmina
Sandu
Id-ul magazinului:3
Martinel
Guta
```

Eroare atunci cand nu avem suficiente magazine:



```
Error starting at line : 511 in command -
BEGIN ang_si_magazine; END;
Error report -
ORA-20099: Prea putine magazine!
ORA-06512: at "C###ROBERT.ANG_SI_MAGAZINE", line 16
ORA-06512: at line 1
```

Exercitiul 7:

--7.Afisati numele tuturor revistelor avute cat si revistele ce contin in nume un anumit cuvant

--dat si care au pretul mai mare decat un pret dat.

create or replace procedure comics\_ex(p\_cod comicbook.pret%type, p\_cuvant in varchar2)

as

cursor cursor1 is

select \* from ComicBook;

cursor cursor2 (v\_pret comicbook.pret%type, v\_cuvant\_cheie varchar2) is

```

select * from comicbook

where pret > v_pret

and nume like '%' || v_cuvant_cheie || '%';

comic comicbook%rowtype;

begin

    dbms_output.put_line('Toate revistele sunt: ');

    open cursor1;

    loop

        fetch cursor1 into comic;

        exit when cursor1%notfound;

        dbms_output.put_line('Numele: ' || comic.nume);

    end loop;

    close cursor1;


    dbms_output.put_line('Revistele cautate dupa nume si pret sunt: ');

    open cursor2(p_cod,p_cuvant);

    loop

        fetch cursor2 into comic;

        exit when cursor2%notfound;

        dbms_output.put_line('Pretul este: ' || comic.pret || ' si numele este ' || comic.nume);

    end loop;

    close cursor2;

end comics_ex;

/

```

--Test:

begin

comics\_ex(29,'Date');

end;



The screenshot shows a window titled 'Script Output' and 'Query Result'. It displays the output of a PL/SQL function call. The output lists the names of all comic books in the database, followed by the names of the comic books that are the worst, best, and new. The window also shows a status bar indicating that the task was completed in 0.142 seconds.

```
Script Output x Query Result x
Task completed in 0.142 seconds

Toate revistele sunt:
Numele: Genshin Impact
Numele: Big Adventure
Numele: Re:Zero
Numele: Horimiya
Numele: Ian si Azteca
Numele: Dragon Ball Z
Numele: Last Airbender
Numele: Worst Date
Numele: Best Date
Numele: Worst Date
Numele: New Stuff
Revistele cautate dupa nume si pret sunt:
Pretul este: 31 si numele este Worst Date
Pretul este: 31 si numele este Best Date
Pretul este: 37 si numele este Worst Date
```

## Exercitiul 8:

--8 Pentru un id dat al unei reviste afisati pretul acestei reviste, magazinul in care se afla cat -  
--si angajatul asociat acesteia

create or replace function reviste(p\_id\_comic comicbook.id\_comic\_book%type, lungime  
number) return number is

v\_pret comicbook.pret%type;

v\_comic\_name comicbook.numename%type;

v\_angajat\_nume angajat.numename%type;

counter number;

pret\_prea\_mare exception;

nume\_scurt exception;

begin

select cb.pret, cs.ume\_store, a.ume

into v\_pret, v\_comic\_name, v\_angajat\_ume

from comicbook cb

join comicstore cs on cb.id\_comic\_store=cs.id\_comic\_store

join angajat a on cs.id\_comic\_store=a.id\_comic\_store

where cb.id\_comic\_book=p\_id\_comic;

if length(v\_angajat\_ume) < lungime then

raise ume\_scurt;

end if;

if v\_pret > 40 then

raise pret\_prea\_mare;

end if;

dbms\_output.put\_line('Numele magazinului este: ' || v\_comic\_name);

dbms\_output.put\_line('Numele angajatului asociat este: ' || v\_angajat\_ume);

dbms\_output.put\_line('Pretul pentru comic bookul cu id ul: ' || p\_id\_comic || ' este: ');

return v\_pret;

exception

when NO\_DATA\_FOUND then

RAISE\_APPLICATION\_ERROR(-20008, 'Nu exista comic-ul cu id ul dat');

```
when pret_prea_mare then
```

```
    RAISE_APPLICATION_ERROR(-20007, 'Pretul dat este prea mare');
```

```
when nume_scurt then
```

```
    RAISE_APPLICATION_ERROR(-20009, 'Numele este prea scurt!');
```

```
when TOO_MANY_ROWS then
```

```
    RAISE_APPLICATION_ERROR(-20006, 'Mai multe reviste!');
```

```
end reviste;
```

```
/
```

```
--Test:
```

```
begin
```

```
    dbms_output.put_line(reviste(9,2));
```

```
end;
```

```
/
```



```
begin
    dbms_output.put_line(reviste(11,3));
end;
```

Script Output x Query Result x

Task completed in 0.036 seconds

Numele magazinului este: Stranger Shop  
Numele angajatului asociat este: Svde  
Pretul pentru comic bookul cu id ul: 11 este:  
33

PL/SQL procedure successfully completed.

```
begin
    dbms_output.put_line(reviste(9,2));
end;
/
```

Script Output x Query Result x  
Task completed in 0.051 seconds

```
end;
Error report -
ORA-20008: Nu exista comic-ul cu id ul dat
ORA-06512: at "C###ROBERT.REVISTE", line 34
ORA-06512: at line 2
```

Error starting at line : 612 in command -

```
begin
    dbms_output.put_line(reviste(9,2));
end;
Error report -
ORA-20006: Mai multe reviste!
ORA-06512: at "C###ROBERT.REVISTE", line 43
ORA-06512: at line 2
```

```
begin
    dbms_output.put_line(reviste(14,2));
end;
/
```

Script Output x Query Result x  
Task completed in 0.099 seconds

```
end;
Error report -
ORA-20009: Numele este prea scurt!
ORA-06512: at "C###ROBERT.REVISTE", line 40
ORA-06512: at line 2
```

Error starting at line : 612 in command -

```
begin
    dbms_output.put_line(reviste(14,2));
end;
Error report -
ORA-20008: Nu exista comic-ul cu id ul dat
ORA-06512: at "C###ROBERT.REVISTE", line 34
ORA-06512: at line 2
```

```
begin
    dbms_output.put_line(reviste(11,7));
end;
/
```

Script Output x Query Result x

Task completed in 0.103 seconds

Pretul pentru comic bookul cu id ul: 11 este:  
33

PL/SQL procedure successfully completed.

Error starting at line : 612 in command -  
begin  
 dbms\_output.put\_line(reviste(11,7));  
end;  
Error report -  
ORA-20009: Numele este prea scurt!  
ORA-06512: at "C###ROBERT.REVISTE", line 40  
ORA-06512: at line 2

#### Exercitiul 9:

--9 Aflati jobul avut de un angajat care lucreaza la un comic store care are o anumita revista -  
--ce se afla intr-un top cu titlul ce contine "Romance"

create or replace procedure job\_avut(id\_angajat\_dat angajat.id\_angajat%type)

is

denumire\_job joburi.nume\_job%type;

begin

select jb.nume\_job

into denumire\_job

from joburi jb

join angajat a on a.id\_job = jb.id\_job

join comicstore cs on a.id\_comic\_store = cs.id\_comic\_store

join comicbook cb on cs.id\_comic\_store = cb.id\_comic\_store

join top tp on cb.id\_top = tp.id\_top

```
where tp.denumire_top like '%Romance%' and a.id_angajat = id_angajat_dat;
```

```
dbms_output.put_line('Jobul avut de angajatul cu id dat este: ' || denumire_job);
```

```
exception
```

```
when NO_DATA_FOUND then
```

```
RAISE_APPLICATION_ERROR(-20010, 'Nu s-au gasit joburi pe care lucreaza angajatul cu  
id-ul dat!');
```

```
end job_avut;
```

```
/
```

```
--Test:
```

```
begin
```

```
job_avut(9);
```

```
end;
```

```
begin
    job_avut(9);
end;
select * from joburi
select * from angajat
```

Script Output x Query Result x

Task completed in 0.054 seconds

Errors: check compiler log

Procedure JOB\_AVUT compiled

Jobul avut de angajatul cu id dat este: Curatator

PL/SQL procedure successfully completed.



```
begin
    job_avut(6);
end;
select * from joburi
select * from angajat
```

Script Output x Query Result x

Task completed in 0.107 seconds

Error starting at line : 644 in command -

```
begin
    job_avut(6);
end;
Error report -
ORA-20010: Nu s-au gasit joburi pe care lucreaza angajatul cu id-ul dat!
ORA-06512: at "C###ROBERT.JOB_AVUT", line 17
ORA-06512: at line 2
```

--10 Creati un trigger care nu ne permite modificarea tabelului angajat in ziua de luni si  
--duminica sau daca nu ne aflam in intervalul orar 8 -17

create or replace trigger actualizare\_tabel

before insert or update or delete on angajat

begin

if (to\_char(sysdate,'D') = 1) or (to\_char(sysdate,'D') = 2) or (to\_char(sysdate,'HH24') not between  
8 and 17)

then

RAISE\_APPLICATION\_ERROR(-20010, 'Nu puteti actualiza tabelul!');

end if;

end;

/

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,2,5, 'Surugiu', 'Tanya', 40277752711);
--11
```

---

Script Output x Query Result x

Task completed in 0.095 seconds

---

Trigger ACTUALIZARE\_TABEL compiled

---

Error starting at line : 655 in command -

```
insert into Angajat(id_angajat, id_job, id_comic_store, nume, prenume, telefon)
values (angajati.nextval,2,5, 'Surugiu', 'Tanya', 40277752711)
Error report -
ORA-20010: Nu puteti actualiza tabelul!
ORA-06512: at "C###ROBERT.ACTUALIZARE_TABEL", line 4
```

---

--11 Creati un trigger care nu ne lasa sa modificam pretul revistelor daca diferenta dintre -----  
--pretul vechi si cel nou este mai mica de 15

create or replace trigger actualizare\_pret

before update of pret on comicbook

for each row

declare

pret\_obligatoriu exception;

begin

if :old.pret - :new.pret < 15 then

raise pret\_obligatoriu;

end if;

exception

when pret\_obligatoriu then

RAISE\_APPLICATION\_ERROR(-20010, 'Pretul este prea mic! - NU AM ACTUALIZAT  
PRETUL');

end;

/

```
update comicbook
set pret = 24
where id_comic_book = 2;
```

Script Output x Query Result x

Task completed in 0.184 seconds

Error starting at line : 675 in command -  
update comicbook  
set pret = 24  
where id\_comic\_book = 2  
Error report -  
ORA-20010: Pretul este prea mic! - NU AM ACTUALIZAT PRETUL  
ORA-06512: at "C###ROBERT.ACTUALIZARE\_PRET", line 9  
ORA-04088: error during execution of trigger 'C###ROBERT.ACTUALIZARE\_PRET'

--12 Creati un trigger care nu ne permite crearea unor tabele noi in baza de date vinerea si ---  
--sambata sau daca numele acestuia este fie prea mic < 2, fie prea mare > 10

create or replace trigger actualizare\_database

before create on schema

declare

nume\_gresit exception;

data\_gresita exception;

begin

if (to\_char(sysdate,'D') between 6 and 7)

then

raise data\_gresita;

elsif length(ora\_dict\_obj\_name) < 2 or length(ora\_dict\_obj\_name) > 10

then

raise nume\_gresit;

end if;

exception

when nume\_gresit then

```
RAISE_APPLICATION_ERROR(-20010, 'Numele introdus este prea scurt sau prea lung -
incorect!');
```

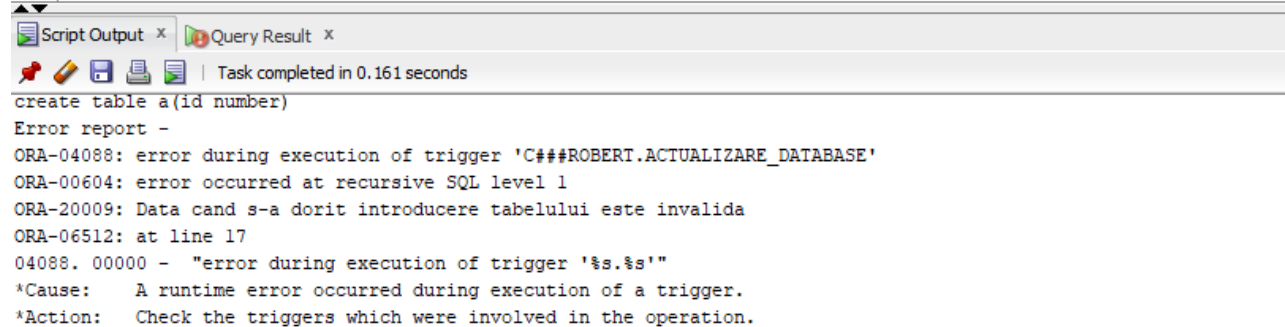
```
when data_gresita then
```

```
RAISE_APPLICATION_ERROR(-20009, 'Data cand s-a dorit introducere tabelului este
invalida');
```

```
end;
```

```
/
```

```
create table a(id number);
```

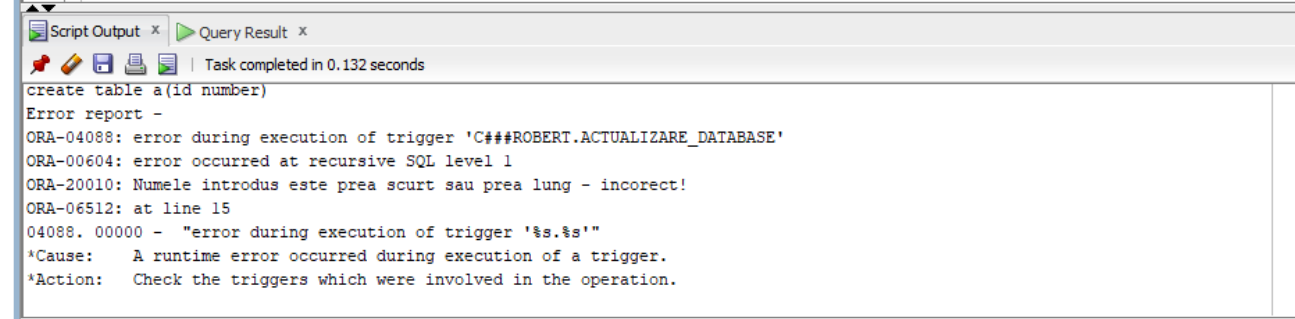


Script Output x Query Result x

Task completed in 0.161 seconds

```
create table a(id number)
Error report -
ORA-04088: error during execution of trigger 'C###ROBERT.ACTUALIZARE_DATABASE'
ORA-00604: error occurred at recursive SQL level 1
ORA-20009: Data cand s-a dorit introducere tabelului este invalida
ORA-06512: at line 17
04088. 00000 - "error during execution of trigger '%s.%s'"
*Cause:      A runtime error occurred during execution of a trigger.
*Action:     Check the triggers which were involved in the operation.
```

```
create table a(id number);
--drop trigger actualizare_database
--13
```



Script Output x Query Result x

Task completed in 0.132 seconds

```
create table a(id number)
Error report -
ORA-04088: error during execution of trigger 'C###ROBERT.ACTUALIZARE_DATABASE'
ORA-00604: error occurred at recursive SQL level 1
ORA-20010: Numele introdus este prea scurt sau prea lung - incorect!
ORA-06512: at line 15
04088. 00000 - "error during execution of trigger '%s.%s'"
*Cause:      A runtime error occurred during execution of a trigger.
*Action:     Check the triggers which were involved in the operation.
```

### 13. Pachetul cu obiectele:

create or replace package pachet\_13 as

```
procedure ang_si_magazine;
```

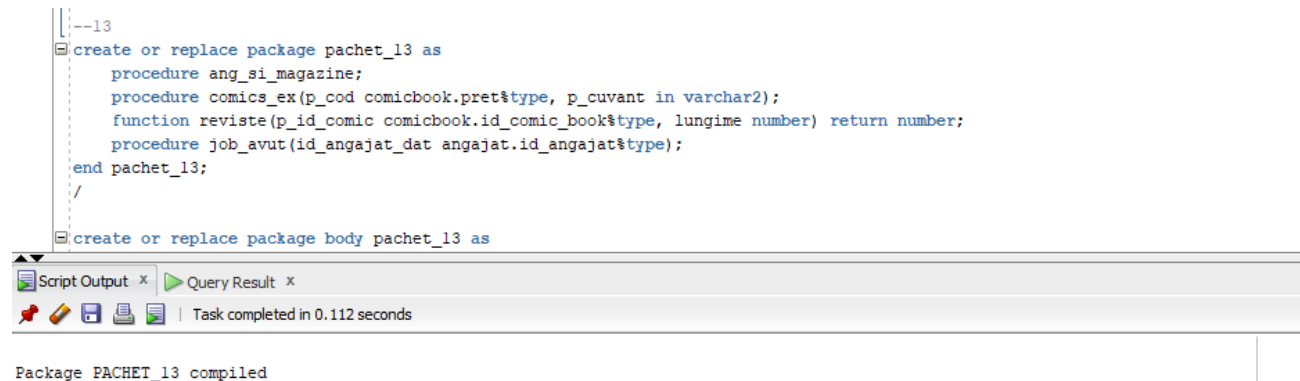
```
procedure comics_ex(p_cod comicbook.pret%type, p_cuvant in varchar2);
```

```
function reviste(p_id_comic comicbook.id_comic_book%type, lungime number) return  
number;
```

```
procedure job_avut(id_angajat_dat angajat.id_angajat%type);
```

```
end pachet_13;
```

```
/
```



```
--13  
create or replace package pachet_13 as  
  procedure ang_si_magazine;  
  procedure comics_ex(p_cod comicbook.pret%type, p_cuvant in varchar2);  
  function reviste(p_id_comic comicbook.id_comic_book%type, lungime number) return number;  
  procedure job_avut(id_angajat_dat angajat.id_angajat%type);  
end pachet_13;  
  
/
```

Script Output x Query Result x

Task completed in 0.112 seconds

Package PACHET\_13 compiled

```
create or replace package body pachet_13 as
```

```
  procedure ang_si_magazine
```

```
as
```

```
  type vector is varray(50) of ComicStore.id_comic_store%type;
```

```
  type vector_2 is varray(50) of Angajat.nume%type;
```

```
  type table_1 is table of vector_2 index by pls_integer;
```

```
  cstore vector := vector();
```

```
  cangajat table_1;
```

```
  chk number(1) := 0;
```

```
begin
```

```
  select id_comic_store
```

```
  bulk collect into cstore
```

```

from ComicStore;

if cstore.count < 3 then
    RAISE_APPLICATION_ERROR(-20099, 'Prea putine magazine!');
end if;

for i in 1..cstore.count loop
    select nume
    bulk collect into cangajat(i)
    from Angajat
    join ComicStore on Angajat.id_comic_store = ComicStore.id_comic_store
    where ComicStore.id_comic_store = cstore(i);
    dbms_output.put_line('Id-ul magazinului:' || cstore(i));
    for j in 1..cangajat(i).count loop
        dbms_output.put_line(cangajat(i)(j));
    end loop;
end loop;
end ang_si_magazine;

```

```

procedure comics_ex(p_cod comicbook.pret%type, p_cuvant in varchar2)
as
cursor cursor1 is
    select * from ComicBook;

cursor cursor2 (v_pret comicbook.pret%type, v_cuvant_cheie varchar2) is
    select * from comicbook

```

```
where pret > v_pret
```

```
and nume like '%' || v_cuvant_cheie || '%';
```

```
comic comicbook%rowtype;
```

```
begin
```

```
    dbms_output.put_line('Toate revistele sunt: ');
```

```
    open cursor1;
```

```
    loop
```

```
        fetch cursor1 into comic;
```

```
        exit when cursor1%notfound;
```

```
        dbms_output.put_line('Numele: ' || comic.nume);
```

```
    end loop;
```

```
    close cursor1;
```

```
    dbms_output.put_line('Revistele cautate dupa nume si pret sunt: ');
```

```
    open cursor2(p_cod,p_cuvant);
```

```
    loop
```

```
        fetch cursor2 into comic;
```

```
        exit when cursor2%notfound;
```

```
        dbms_output.put_line('Pretul este: ' || comic.pret || ' si numele este ' || comic.nume);
```

```
    end loop;
```

```
    close cursor2;
```

```
end comics_ex;
```

```
function reviste(p_id_comic comicbook.id_comic_book%type, lungime number) return  
number is
```

```

v_pret comicbook.pret%type;
v_comic_name comicbook.numename%type;
v_angajat_nume angajat.numename%type;
counter number;

pret_prema_mare exception;
nume_scurt exception;

begin
    select cb.pret, cs.numename_store, a.numename
    into v_pret, v_comic_name, v_angajat_nume
    from comicbook cb
    join comicstore cs on cb.id_comic_store=cs.id_comic_store
    join angajat a on cs.id_comic_store=a.id_comic_store
    where cb.id_comic_book=p_id_comic;

    if length(v_angajat_nume) < lungime then
        raise nume_scurt;
    end if;

    if v_pret > 40 then
        raise pret_prema_mare;
    end if;

    dbms_output.put_line('Numele magazinului este: ' || v_comic_name);
    dbms_output.put_line('Numele angajatului asociat este: ' || v_angajat_nume);

```



```
dbms_output.put_line('Pretul pentru comic bookul cu id ul: ' || p_id_comic || ' este: ');
```

```
return v_pret;
```

```
exception
```

```
when NO_DATA_FOUND then
```

```
    RAISE_APPLICATION_ERROR(-20008, 'Nu exista comic-ul cu id ul dat');
```

```
when pret_prea_mare then
```

```
    RAISE_APPLICATION_ERROR(-20007, 'Pretul dat este prea mare');
```

```
when nume_scurt then
```

```
    RAISE_APPLICATION_ERROR(-20009, 'Numele este prea scurt!');
```

```
when TOO_MANY_ROWS then
```

```
    RAISE_APPLICATION_ERROR(-20006, 'Mai multe reviste!');
```

```
end reviste;
```

```
procedure job_avut(id_angajat_dat angajat.id_angajat%type)
```

```
is
```

```
    denumire_job joburi.nume_job%type;
```

```
begin
```

```
    select jb.nume_job
```

```
    into denumire_job
```

```

from joburi jb
join angajat a on a.id_job = jb.id_job
join comicstore cs on a.id_comic_store = cs.id_comic_store
join comicbook cb on cs.id_comic_store = cb.id_comic_store
join top tp on cb.id_top = tp.id_top
where tp.denumire_top like '%Romance%' and a.id_angajat = id_angajat_dat;

dbms_output.put_line('Jobul avut de angajatul cu id dat este: ' || denumire_job);
exception

when NO_DATA_FOUND then

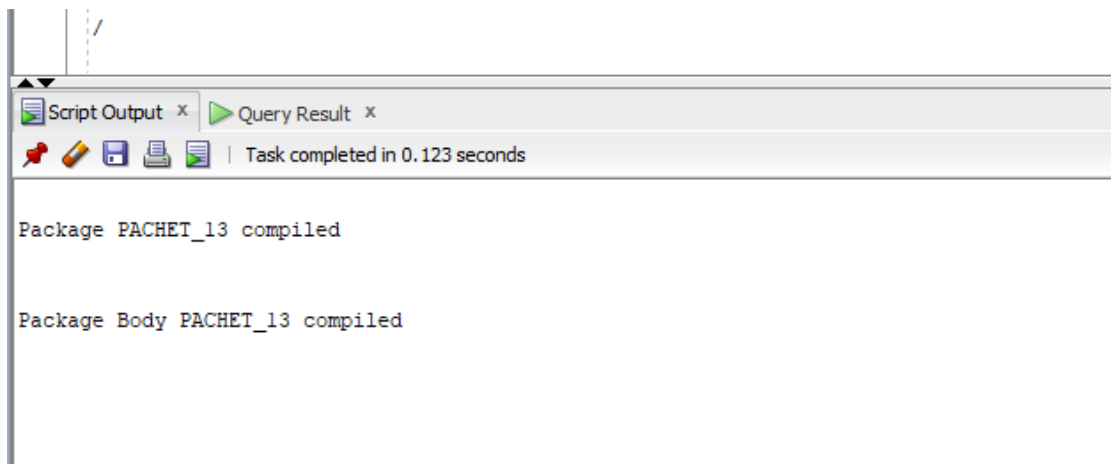
    RAISE_APPLICATION_ERROR(-20010, 'Nu s-au gasit joburi pe care lucreaza angajatii cu
id-ul dat!');

end job_avut;

end pachet_13;

/

```



--Test pachet:

```
exec pachet_13.ang_si_magazine
```

```
exec pachet_13.ang_si_magazine
```

Script Output x Query Result x

Task completed in 0.073 seconds

Id-ul magazinului:1  
Ciocan  
Silviu  
Matea  
Florin  
Florin  
Sile  
Id-ul magazinului:2  
Liviu  
Spataru

exec pachet\_13.comics\_ex(29,'Date');

```
exec pachet_13.comics_ex(29, 'Date');
```

Script Output x Query Result x

Task completed in 0.095 seconds

Numele: Best Date  
Numele: Worst Date  
Numele: New Stuff  
Numele: AA problems  
Revistele cautate dupa nume si pret sunt:  
Pretul este: 31 si numele este Worst Date  
Pretul este: 31 si numele este Best Date  
Pretul este: 37 si numele este Worst Date

select pachet\_13.reviste(9,2) from dual;

```
select pachet_13.reviste(9,2) from dual;
```

Script Output x Query Result x

SQL | Executing:select pachet\_13.reviste(9,2) from dual in 0 seconds

ORA-20006: Mai multe reviste!  
ORA-06512: at "C###ROBERT.PACHET\_13", line 106

select pachet\_13.reviste(11,2) from dual;

```
select pachet_13.reviste(11,2) from dual;
```

PACKET_13.REVISTE(11,2)	
1	33

select pachet\_13.reviste(16,8) from dual;

```
select pachet_13.reviste(16,8) from dual;
```

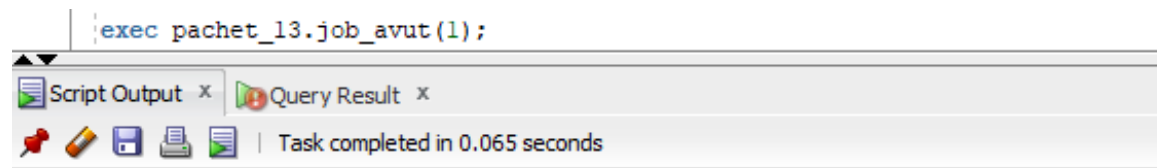
Script Output x Query Result x	
SQL   Executing:select pachet_13.reviste(16,8) from dual in 0 seconds	
ORA-20008: Nu exista comic-ul cu id ul dat ORA-06512: at "C###ROBERT.PACHET_13", line 97	

select pachet\_13.reviste(12,8) from dual;

```
select pachet_13.reviste(12,8) from dual;
```

Script Output x Query Result x	
SQL   Executing:select pachet_13.reviste(12,8) from dual in 0 seconds	
ORA-20009: Numele este prea scurt! ORA-06512: at "C###ROBERT.PACHET_13", line 103	

```
exec pachet_13.job_avut(1);
```



```
Package Body PACHET_13 compiled
```

```
Jobul avut de angajatul cu id dat este: Vanzator
```

```
PL/SQL procedure successfully completed.
```

```
exec pachet_13.job_avut(242);
```

