

L04 Insert si Select

```
--Activam baza de date
use bdFacultati

--Sa se insereze date in tabelul Scoala.tFacultati
insert into Scoala.tFacultati (CodFac,Denumire) values
('FSEFI','Facultatea de Stiinte, Ed. Fizica si Informatica'),
('FECC','Facultatea de Electronica, Comunicatii si Calculatoare'),
('FSED','Facultatea de Stiinte Economice si Drept'),
('FTLIA','Facultatea de Teologie, Litere, Istorie si Arte'),
('FMT','Facultatea de Mecanica si Tehnologie'),
('FSESSP','Facultatea de Stiinte ale Ed., Stiinte Sociale si Psihologice'),
('DPPD','Departamentul de Perfectionare a Cadrelor Didactice')

/*
Am obtinut mesajul:
Msg 8152, Level 16, State 14, Line 1
String or binary data would be truncated.
The statement has been terminated.
*/
--Sa se modifice dimensiunea coloanei denumire de la 50 la 80 caractere
alter table Scoala.tFacultati
alter column denumire varchar(80) not null

/* Sa se reexecute comanda insert
Am obtinut mesajul: (7 row(s) affected)
ceea ce inseamna ca insert-urile au fost efectuate
*/
--Sa se afiseze continutul tabelului Scoala.tFacultati
select * from Scoala.tFacultati

/*
codFac    denumire                                                    adresa
DPPD      Departamentul de Perfectionare a Cadrelor Didactice      NULL
FECC      Facultatea de Electronica, Comunicatii si Calculatoare     NULL
FMT        Facultatea de Mecanica si Tehnologie                          NULL
FSED      Facultatea de Stiinte Economice si Drept                        NULL
FSEFI     Facultatea de Stiinte, Ed. Fizica si Informatica                  NULL
FSESSP    Facultatea de Stiinte ale Ed., Stiinte Sociale si Psihologice    NULL
FTLIA     Facultatea de Teologie, Litere, Istorie si Arte                    NULL
*/

/* Observatie:
Tabelele tFacultati,tDepartamente,tSpecializari etc. sunt create in schema
Scoala si de aceea in comenzile insert si select anterioara am prefixat
denumirea tabelului cu denumirea schemei.
Daca acest lucru il consideram un neajuns, il putem elimina prin crearea
sinonimelor
*/
-- Sa se creeze sinonime pentru tabelele schemei Scoala

create synonym tFacultati for Scoala.tFacultati
```

```

create synonym tDepartamente for Scoala.tDepartamente
create synonym tSpecializari for Scoala.tSpecializari
create synonym tProfesori for Scoala.tProfesori
create synonym tStudenti for Scoala.tStudenti
create synonym tCursuri for Scoala.tCursuri
create synonym tNote for Scoala.tNote
create synonym tCursProfesor for Scoala.tCursProfesor

```

/* Acum putem referi tabelele fie utilizand sintaxa <denumire schema>.<denumire tabel> ca in insert-ul de mai sus, fie folosind synonym-ele lor.

Obs. Un sinonim nu trebuie neaparat sa aiba aceeasi denumire cu a tabelului
*/

```

insert into tDepartamente(CodDep, Denumire, CodFac)
values ('DMI','Mate-Info','FSEFI'),
       ('DS',' Stiinte','FSEFI'),
       ('DEFS','Ed. Fiz si Sport','FSEFI'),
       ('DAMK','As. Medicala si Kineto','FSEFI')

```

```

insert into tSpecializari(CodSpec, Denumire, CodDep)
values ('Info', 'Informatica','DMI'),
       ('Mate', 'Matematica', 'DMI'),
       ('Sport','Sport si Performanta', 'DEFS'),
       ('EF', 'Educatie Fizica', 'DEFS'),
       ('CM', 'Chimie Medicala', 'DS'),
       ('Bio','Biologie', 'DS'),
       ('AM','Asistenta Medicala','DAMK'),
       ('KT','Kinetoterapie','DAMK')

```

```

insert into scoala.tProfesori(CodProf, Nume, GradDidactic, CodDep)
values ('P1','POPESCU',null,'DMI'),
       ('P2','TEODORESCU',null,'DMI'),
       ('P3','CONSTANTINESCU',null,'DMI'),
       ('P4', 'MARINESCU',null,'DEFS'),
       ('P5', 'IONESCU',null,'DS'),
       ('P6', 'RADULESCU',null, 'DAMK')

```

```

insert into tStudenti(CodStud,Nume,CodJud,Localitate,CodSpec,AnStudiu,CNP)
values
  ('S01', 'Florin', 'AG', 'Pitesti','Info','1','1990514123456'),
  ('S02', 'Mihai', 'AG', 'Costesti', 'Info','1','1991130123456'),
  ('S03','Alexandra', 'AG', 'Pitesti', 'Info','2','2980117123456'),
  ('S04','Andreea','AG','Stefanesti','Info','2','2980824123456'),
  ('S11','Flavius','AG','Mioveni','Mate','1','1990413123456'),
  ('S12', 'Marian','AG','Pitesti','Mate','2','1980919123456'),
  ('S13','Adrian','AG','Costesti','Mate','1','1990718123456'),
  ('S21','Raul','AG','Pitesti','Bio','1','1991228123456'),
  ('S22','Corina','AG','Stefanesti','Bio','1','2991121123456'),
  ('S31','Maria','AG','Pitesti','AM','1','2990426123456')

```

```

insert into tCursuri
values ('AG', 'Algoritmica Grafurilor','B',5),
       ('BD', 'Baze de Date','B', 6),
       ('OOP', 'Programare Orientata Pe Obiecte','B',6),
       ('GC', 'Geometrie Computationala','B', 5),
       ('LMC', 'Logica Matematica Si Computationala','B', 6),
       ('EN', 'Limba Engleza','B', 4),
       ('EF', 'Educatie Fizica', 'B',2),

```

```
('PED', 'Pedagogie','F',4)
```

```
-- INTEROGARI SIMPLE--
```

```
select * from tStudenti
```

```
/*
```

| codStud | nume | CNP | codSpec | anStudiu | codJud | localitate | dataNasterii |
|---------|-----------|---------------|---------|----------|--------|------------|---------------------|
| S01 | Florin | 1990514123456 | Info | 1 | AG | Pitesti | 1999-05-14 00:00:00 |
| S02 | Mihai | 1991130123456 | Info | 1 | AG | Costesti | 1999-11-30 00:00:00 |
| S03 | Alexandra | 2980117123456 | Info | 2 | AG | Pitesti | 1998-01-17 00:00:00 |
| S04 | Andreea | 2980824123456 | Info | 2 | AG | Stefanesti | 1998-08-24 00:00:00 |
| S11 | Flavius | 1990413123456 | Mate | 1 | AG | Mioveni | 1999-04-13 00:00:00 |
| S12 | Marian | 1980919123456 | Mate | 2 | AG | Pitesti | 1998-09-19 00:00:00 |
| S13 | Adrian | 1990718123456 | Mate | 1 | AG | Costesti | 1999-07-18 00:00:00 |
| S21 | Raul | 1991228123456 | Bio | 1 | AG | Pitesti | 1999-12-28 00:00:00 |
| S22 | Corina | 2991121123456 | Bio | 1 | AG | Stefanesti | 1999-11-21 00:00:00 |
| S31 | Maria | 2990426123456 | AM | 1 | AG | Pitesti | 1999-04-26 00:00:00 |

```
*/
```

```
select * from tStudenti where CodSpec='info'
```

```
/*
```

| codStud | nume | CNP | codSpec | anStudiu | codJud | localitate | dataNasterii |
|---------|-----------|---------------|---------|----------|--------|------------|---------------------|
| S01 | Florin | 1990514123456 | Info | 1 | AG | Pitesti | 1999-05-14 00:00:00 |
| S02 | Mihai | 1991130123456 | Info | 1 | AG | Costesti | 1999-11-30 00:00:00 |
| S03 | Alexandra | 2980117123456 | Info | 2 | AG | Pitesti | 1998-01-17 00:00:00 |
| S04 | Andreea | 2980824123456 | Info | 2 | AG | Stefanesti | 1998-08-24 00:00:00 |

```
*/
```

```
select codStud,nume,dataNasterii from tStudenti
```

```
/*
```

| | | |
|-----|-----------|---------------------|
| S01 | Florin | 1999-05-14 00:00:00 |
| S02 | Mihai | 1999-11-30 00:00:00 |
| S03 | Alexandra | 1998-01-17 00:00:00 |
| S04 | Andreea | 1998-08-24 00:00:00 |
| S11 | Flavius | 1999-04-13 00:00:00 |
| S12 | Marian | 1998-09-19 00:00:00 |
| S13 | Adrian | 1999-07-18 00:00:00 |
| S21 | Raul | 1999-12-28 00:00:00 |
| S22 | Corina | 1999-11-21 00:00:00 |
| S31 | Maria | 1999-04-26 00:00:00 |

```
*/
```

```
select codStud,nume,dataNasterii from tStudenti order by dataNasterii
```

```

/*
S03      Alexandra      1998-01-17  00:00:00
S04      Andreea        1998-08-24  00:00:00
S12      Marian         1998-09-19  00:00:00
S11      Flavius        1999-04-13  00:00:00
S31      Maria          1999-04-26  00:00:00
S01      Florin         1999-05-14  00:00:00
S13      Adrian         1999-07-18  00:00:00
S22      Corina         1999-11-21  00:00:00
S02      Mihai          1999-11-30  00:00:00
S21      Raul           1999-12-28  00:00:00
*/

select codStud,nume,dataNasterii from tStudenti order by dataNasterii desc
/*
S21      Raul           1999-12-28  00:00:00
S02      Mihai          1999-11-30  00:00:00
S22      Corina         1999-11-21  00:00:00
S13      Adrian         1999-07-18  00:00:00
S01      Florin         1999-05-14  00:00:00
S31      Maria          1999-04-26  00:00:00
S11      Flavius        1999-04-13  00:00:00
S12      Marian         1998-09-19  00:00:00
S04      Andreea        1998-08-24  00:00:00
S03      Alexandra      1998-01-17  00:00:00
*/

-- Sa se afiseze studentii nascuti in luna urmatoare --
select CodStud, Nume, DataNasterii
      FROM tStudenti
      WHERE month(DataNasterii) = Month(GetDate())+1
/*
S11      Flavius 1999-04-13  00:00:00
S31      Maria  1999-04-26  00:00:00
*/

-- Sa se afiseze studentii al carui nume incepe cu litera 'F' --
select CodStud, Nume FROM tStudenti WHERE Nume like 'F%'
/*
S01      Florin
S11      Flavius
*/

-- Sa se afiseze studentii al carui nume incepe cu litera 'A' sau 'F' --
select CodStud, Nume FROM tStudenti WHERE Nume like '[AF]%'
/*
CodStud      Nume
S01           Florin
S03           Alexandra
S04           Andreea
S11           Flavius
S13           Adrian
*/

-- Sa se afiseze studentii al carui nume nu incepe cu litera 'A' sau 'F' --
select CodStud, Nume FROM tStudenti WHERE Nume like '[^AF]%'
/*
CodStud      Nume

```

```
S02      Mihai
S12      Marian
S21      Raul
S22      Corina
S31      Maria
*/
```

-- Sa se afiseze studentii al carui nume are pe pozitia a doua litera 'O' --

```
select CodStud, Nume FROM tStudenti WHERE Nume like '_O%'
```

```
/*
```

```
CodStud    Nume
S22         Corina
*/
```

-- Sa se afiseze studentii al carui nume are pe pozitia a patra litera 'I' --

```
select CodStud, Nume FROM tStudenti WHERE Nume like '___I%'
```

```
/*
```

```
CodStud    Nume
S12         Marian
S13         Adrian
S22         Corina
S31         Maria
*/
```

-- Sa se afiseze studentii al carui nume contine subsirul 'IA' --

```
select CodStud, Nume FROM tStudenti WHERE Nume like '%IA%'
```

```
/*
```

```
CodStud    Nume
S12         Marian
S13         Adrian
S31         Maria
*/
```

-- Sa se afiseze studentii al carui nume incepe cu litera 'C' si se termina cu litera 'A' --

```
select CodStud, Nume FROM tStudenti WHERE Nume like 'C%A'
```

```
/*
```

```
CodStud    Nume
S22         Corina
*/
```

-- Sa se afiseze studentii al carui nume incepe cu una din literele :

"A,B,C,D,E,F" --

```
select CodStud, Nume FROM tStudenti WHERE Nume like '[A-F]%'
```

```
/*
```

```
CodStud    Nume
S01         Florin
S03         Alexandra
S04         Andreea
S11         Flavius
S13         Adrian
S22         Corina
*/
```

-- Sa se afiseze studentii nascuti in 1999

```
select CodStud, Nume, DataNasterii
FROM tStudenti
WHERE year(DataNasterii) = 1999
```

```

--Sa se afiseze numarul de studenti
select count(*) as [Nr studenti] FROM tStudenti

--Sa se afiseze numarul de studenti la nivel de localitate
select Localitate, count(CodStud) AS [Nr. Studenti]
    FROM tStudenti
    GROUP BY Localitate

/*
Sa se afiseze numarul de studenti la nivel de localitate in ordinea
descrescatoare a nr. de studenti
*/
select Localitate, count(CodStud) AS [Nr. Studenti]
    FROM tStudenti
    GROUP BY Localitate
    ORDER BY [Nr. Studenti] desc

/*
Sa se afiseze primele doua localitati(inregistrari) cu cei mai multi studenti
*/
select top 2 Localitate, count(CodStud) AS [Nr. Studenti]
    FROM tStudenti
    GROUP BY Localitate
    ORDER BY [Nr. Studenti] desc

/*
Localitate  Nr. Studenti
Pitesti      5
Costesti     2
*/

/*
Sa se afiseze primele doua localitati cu cei mai multi studenti.
Observati rolul lui < with ties>
*/
select TOP 2 with ties Localitate, count(CodStud) AS [Nr. Studenti]
    FROM tStudenti
    GROUP BY Localitate
    ORDER BY [Nr. Studenti] DESC

/*
Localitate  Nr. Studenti
Pitesti      5
Stefanesti   2
Costesti     2
*/

-- Sa se afiseze specializarile cu cel mult 2 studenti --
select Localitate, count(CodStud) AS [Nr. Studenti]
    FROM tStudenti
    GROUP BY Localitate
    HAVING count(CodStud) < 3

/*
Localitate  Nr. Studenti
Costesti    2
Mioveni     1
Stefanesti  2
*/

```

```

/* Sa se afiseze numarul de studenti din localitatile din localitatile Pitesti
si Mioveni in ordinea descrescatoare a nr de stud
*/
select Localitate, count(CodStud) as [NumarStudenti]
  from tStudenti
 where Localitate = 'Pitesti' or Localitate = 'Mioveni'
 group by Localitate
 order by Localitate desc
/*
Localitate  NumarStudenti
Pitesti      5
Mioveni      1
*/

--Sa se afiseze CodStud, Nume si CodSpec
select CodStud, Nume, CodSpec from tStudenti
/*
CodStud    Nume      CodSpec
S01         Florin    Info
S02         Mihai     Info
S03         Alexandra Info
S04         Andreea   Info
S11         Flavius   Mate
S12         Marian    Mate
S13         Adrian    Mate
S21         Raul       Bio
S22         Corina     Bio
S31         Maria      AM
*/

--Sa se afiseze studentii care nu sunt la Info
select CodStud, Nume, CodSpec
  from tStudenti
 where CodSpec != 'Info'

/*
CodStud    Nume      CodSpec
S11         Flavius   Mate
S12         Marian    Mate
S13         Adrian    Mate
S21         Raul       Bio
S22         Corina     Bio
S31         Maria      AM
*/

--Sa se afiseze numarul de studenti la nivel de specializare
select count(CodStud) as [Numar Studenti] ,CodSpec
  from tStudenti
 group by CodSpec
/*
Numar Studenti  CodSpec
1               AM
2               Bio
4               Info
3               Mate
*/

```

```
--Sa se afiseze specializarile cu cel putin 2 studenti
select CodSpec, count(CodStud) as [NumarStudenti]
  from tStudenti
  group by CodSpec
  having count(CodStud) >= 2
/*
CodSpec NumarStudenti
Bio      2
Info     4
Mate     3
*/
```