

L06 Subinterogari

```
use db2019Info_an1
```

```
insert into tCursuri(CodCurs,denumire,tipCurs,nrCredite)
values('ASD','Algoritmi si structuri de date','B','5'),
      ('FP','Fundamentele Programarii','B',6)
```

```
insert into tCursuri(CodCurs,denumire,tipCurs,nrCredite)
values('ASD','Algoritmi si structuri de date','B','5'),
      ('FP','Fundamentele Programarii','B',6)
```

```
insert into tNote(codCurs, codStud, nota, DataExamen)
values ('ASD', 'S01', 7, '2020/02/08'),
      ('ASD', 'S02', 9, '2020/02/08'),
      ('ASD', 'S03', 8, '2020/02/08'),
      ('ASD', 'S04', 5, '2020/02/08')
```

```
insert into tNote(codCurs, codStud, nota, DataExamen)
values ('FP', 'S01', 5, '2020/02/05'),
      ('FP', 'S02', 6, '2020/02/05'),
      ('FP', 'S03', 4, '2020/02/05'),
      ('FP', 'S04', 10, '2020/02/05'),
      ('FP', 'S11', 8, '2020/02/05'),
      ('FP', 'S12', 4, '2020/02/05'),
      ('FP', 'S13', 7, '2020/02/05')
```

```
select * from tCursuri
```

```
/*
```

codCurs	denumire	tipCurs	nrCredite
AG	Algoritmica Grafurilor	B	5
ASD	Algoritmi si structuri de date	B	5
BD	Baze de Date	B	6
EF	Educatie Fizica	B	2
EN	Limba Engleza	B	4
FP	Fundamentele Programarii	B	6
GC	Geometrie Computationala	B	5
LMC	Logica Matematica Si Computationala	B	6
OOP	Programare Orientata Pe Obiecte	B	6
PED	Pedagogie	F	4

```
*/
```

```
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 tNote
```

/*

codCurs	codStud	dataExamen	nota
ASD	S01	2020-02-08 00:00:00	7
ASD	S02	2020-02-08 00:00:00	9
ASD	S03	2020-02-08 00:00:00	8
ASD	S04	2020-02-08 00:00:00	5
FP	S01	2020-02-05 00:00:00	5
FP	S02	2020-02-05 00:00:00	6
FP	S03	2020-02-05 00:00:00	4
FP	S04	2020-02-05 00:00:00	10
FP	S11	2020-02-05 00:00:00	8
FP	S12	2020-02-05 00:00:00	4
FP	S13	2020-02-05 00:00:00	7

*/

/*Sa se afle nota maxima*/

```
select max(Nota) as [Nota Maxima] from tNote
```

/*

Nota Maxima

10

*/

/*Sa se afle nota minima*/

/*

Nota Minima

4

*/

/*Sa se afle media notelor*/

```
select avg(Nota) as [Media Notelor] from tNote
```

/*

Media Notelor

6

*/

/* Obs. Daca argumentul functiei avg este de tip intreg atunci si rezultatul este numar intreg.
Pentru a obtine un rezultat de tip real trebuie sa convertim argumentul la tip real.
Putem folosi una din variantele urmatoare:

*/

```

select avg(Nota+0.0) as [Media Notelor] from tNote
select avg(Nota*1.0) as [Media Notelor] from tNote
select avg(convert(decimal(4,2),Nota)) as [Media Notelor] from tNote
select avg(cast(Nota as decimal(4,2))) as [Media Notelor] from tNote
/*
Media Notelor
6.636363
*/

/*Sa se afle numarul notelor*/
select count(Nota) as [Numar Note] from tNote
/*
Numar Note
11
*/

/*Sa se afle suma notelor supra numarul notelor
Sa observati ca raportul a doua numere intregi este un numar intreg
*/
select sum(Nota)/count(Nota) as [Media Notelor] from tNote
/*
Media Notelor
6
*/

select 1.0*sum(Nota)/count(Nota) as [Media Notelor] from tNote
/*
Media Notelor
6.63636363636363
*/

/*Sa se afiseze CodStudent,Nume,CodCurs,Nota*/
select A.CodStud,Nume,CodCurs,Nota
      from tStudenti as A inner join tNote as B
      on A.CodStud=B.CodStud
/*
CodStud      Nume      CodCurs      Nota
S01           Florin      ASD           7
S02           Mihai      ASD           9
S03           Alexandra  ASD           8
S04           Andreea     ASD           5
S01           Florin      FP            5
S02           Mihai      FP            6
S03           Alexandra  FP            4
S04           Andreea     FP           10
S11           Flavius     FP            8
S12           Marian      FP            4
S13           Adrian      FP            7
*/

/*Sa se afiseze studentii care au luat cea mai mare nota*/
select A.CodStud,Nume,CodCurs,Nota
      from tStudenti as A inner join tNote as B
      on A.CodStud=B.CodStud
      where Nota=(select max(Nota) from tNote)
/*
CodStud      Nume      CodCurs      Nota
S04           Andreea     FP           10

```

```
*/
```

```
/*Sa se afiseze studentii care au luat nota cea mai mica*/
```

```
select CodStud,Nume,Prenume,CodCurs,Nota
  from tStudenti as A inner join tNote as B
  on A.CodStud=B.CodStd
  where Nota=(select min(Nota) from tNote)
```

```
/*
```

CodStud	Nume	CodCurs	Nota
S03	Alexandra	FP	4
S12	Marian	FP	4

```
*/
```

```
/*Sa se afiseze colegii de specializare ai studentei Alexandra*/
```

```
select CodStud,Nume,CodSpec
  from tStudenti
  where CodSpec=(select CodSpec from tStudenti where Nume='Alexandra')
```

```
/*
```

CodStud	Nume	CodSpec
S01	Florin	Info
S02	Mihai	Info
S03	Alexandra	Info
S04	Andreea	Info

```
*/
```

```
/*Sa se afiseze studentii care au media notelor mai mare decat media generala
a tuturor notelor studentilor*/
```

```
select A.CodStud,Nume,avg(Nota*1.0) as Media
  from tStudenti as A inner join tNote as B
  on A.CodStud=B.CodStud
  group by A.CodStud,Nume
  having avg(Nota*1.0)>(select avg(Nota*1.0) from tNote)
```

```
/*
```

CodStud	Nume	Media
S02	Mihai	7.500000
S04	Andreea	7.500000
S11	Flavius	8.000000
S13	Adrian	7.000000

```
*/
```

```
/*Sa se afiseze CodStud,Nume,Prenume,Medie student, Media notelor tuturor
studentilor*/
```

```
select A.CodStud,Nume,avg(Nota*1.0) as [Medie student],
  (select avg(Nota*1.0) from tNote) as [Media notelor]
  from tStudenti as A inner join tNote as B
  on A.CodStud=B.CodStud
  group by A.CodStud,Nume
```

```
/*
```

CodStud	Nume	Medie student	Media notelor
S01	Florin	6.000000	6.636363
S02	Mihai	7.500000	6.636363
S03	Alexandra	6.000000	6.636363
S04	Andreea	7.500000	6.636363
S11	Flavius	8.000000	6.636363
S12	Marian	4.000000	6.636363
S13	Adrian	7.000000	6.636363

```
*/
```

/*Sa se determine CodCurs si Nota Maxima*/

```
select CodCurs,max(Nota) as [Nota Maxima]
  from tNote
 group by CodCurs
```

/*

CodCurs	Nota Maxima
---------	-------------

ASD	9
-----	---

FP	10
----	----

*/

/*Sa se afiseze denumire curs si nota maxima*/

```
select Denumire,[Nota maxima]
  from tCursuri as A inner join ( select CodCurs,max(Nota) as [Nota Maxima]
  from tNote
  group by CodCurs) as B
 on A.CodCurs=B.CodCurs
```

/*

Denumire	Nota maxima
----------	-------------

Algoritmi si structuri de date	9
--------------------------------	---

Fundamentele Programarii	10
--------------------------	----

*/

--Sa se afiseze denumirea specializarii si media la nivel de specializare

```
select A.Denumire, A.codSpec, avg(nota * 1.0) as [Media notelor]
  from tSpecializari as A inner join tStudenti as B
  on A.codSpec = B.codSpec inner join tNote as C
  on B.codStud = C.codStud
 group by A.Denumire, A.codSpec
```

/*

Denumire	codSpec	Media notelor
----------	---------	---------------

Informatica Info		6.750000
------------------	--	----------

Matematica Mate		6.333333
-----------------	--	----------

*/

--Sa se afiseze cod specializare si media maxima obtinuta de studenti in cadrul specializarii

--1) codStud, CodSpec

```
select codStud,CodSpec from tstudenti
```

/*

codStud	CodSpec
---------	---------

S01	Info
-----	------

S02	Info
-----	------

S03	Info
-----	------

S04	Info
-----	------

S11	Mate
-----	------

S12	Mate
-----	------

S13	Mate
-----	------

S21	Bio
-----	-----

S22	Bio
-----	-----

S31	AM
-----	----

*/

--2) cod student, media

```
select codStud as [codStud], avg(nota * 1.0) as [Media]
  from tNote
 group by codStud
```

```

/*
codStud      Media
S01           6.000000
S02           7.500000
S03           6.000000
S04           7.500000
S11           8.000000
S12           4.000000
S13           7.000000
*/

--3) cod specializare, media maxima
select codSpec, max(Media) as [Media maxima]
  from tStudenti as A inner join (select codStud as [codStud], avg(nota * 1.0)
as [Media]
  from tNote
  group by codStud) as B
 on A.codStud = B.codStud
  group by codSpec
/*
codSpec      Media maxima
Info         7.500000
Mate         8.000000
*/

```