

Databases Laboratory Work Nr 4

SELECT Queries

Prerequisites: MS SQL, SSMS/Azure Data Studio/e.t.c.

Objectives: To create a table and do different queries depending on task.

Tasks:

- 1:
1. Aflați toate datele despre grupele de studii de la facultate.
 2. Să se obțină lista disciplinelor în ordine descrescătoare a numărului de ore.
 3. Aflați cursurile (*Disciplina*) predate de fiecare profesor (*Nume_Profesor, Prenume_Profesor*) sortate descrescător după nume și apoi prenume.

- 2:
13. Aflați cursurile urmate de către studentul Florea Ioan.
 14. Aflați numele și prenumele studenților, precum și cursurile promovate cu note mai mari de 8 la examen.
 15. Găsiți numele și prenumele studenților, care au susținut examen atât la profesorul Ion, cât și la profesorul Gheorge în anul 2017 (folosiți pentru nume clauza *LIKE*)

3:

Implementation :

home > dima > Desktop > Data_Bases_Cambur_Dumitru_FAF-191 > lab4 > Question1.sql

Run Cancel Disconnect Change Connection universitatea Explain Enable SQLCMD

```
1 SELECT * FROM dbo.grupe;
2 GO
```

Results Messages

| | Id_Grupa | Cod_Grupa | Specialitate | Nume_Fac... |
|---|----------|-----------|-----------------|-------------|
| 1 | 1 | CIB171 | Cibernetica | Inform... |
| 2 | 2 | INF171 | Informatica | Inform... |
| 3 | 3 | TI171 | Tehnologii I... | Inform... |

1:

home > dima > Desktop > Data_Bases_Cambur_Dumitru_FAF-191 > lab4 > Question2.sql

Run Cancel Disconnect Change Connection universitatea Explain Enable SQLCMD

```
1 SELECT Disciplina, Nr_ore_plan_disciplina FROM dbo.discipline ORDER BY Nr_ore_plan_disciplina DESC;
```

Results Messages

| | Disciplina | Nr_ore_plan... |
|-----|------------|----------------|
| 1 | Practic... | 80 |
| 2 | Practic... | 80 |
| 3 | Cerceta... | 76 |
| 4 | Structu... | 76 |
| 5 | Limbaje... | 76 |
| 6 | Program... | 60 |
| 7 | Matemat... | 60 |
| 8 | Asambla... | 60 |
| 9 | Baze de... | 60 |
| ... | Sisteme... | 60 |
| ... | Program... | 60 |
| ... | Proiect... | 60 |
| ... | Program... | 46 |
| ... | Informa... | 46 |
| ... | Sisteme... | 46 |
| ... | Program... | 46 |
| ... | Modelar... | 46 |
| ... | Retele ... | 46 |
| ... | Tehnolo... | 46 |
| ... | Program... | 46 |
| ... | Integra... | 20 |

2:

Run Cancel Disconnect Change Connection universitatea Explain Enable SQLCMD

```

1 SELECT DISTINCT Nume_Profesor, Prenume_Profesor, Disciplina
2 FROM dbo.profesori pr
3 JOIN dbo.studenti_reusita reu
4 ON ( pr.Id_Profesor = reu.Id_Profesor )
5
6 JOIN dbo.disciplina di
7 ON (reu.Id_Disciplina = di.Id_Disciplina)
8 ORDER BY Nume_Profesor DESC, Prenume_Profesor DESC;
9
10

```

Results Messages

| | Nume_Prof... | Prenume_Pro... | Disciplina |
|-----|--------------|----------------|-----------------|
| 1 | Ungurea... | Iulia | Practica de ... |
| 2 | Popescu | Gabriel | Asamblare si... |
| 3 | Popescu | Gabriel | Sisteme de c... |
| 4 | Popescu | Gabriel | Sisteme de o... |
| 5 | Olteanu | Andrei | Matematica d... |
| 6 | Negru | Sergiu | Limbaje eval... |
| 7 | Nechita | Vasile | Practica de ... |
| 8 | Nazarie | Alexandru | Modelarea si... |
| 9 | Munteanu | Alexandru | Informatica ... |
| ... | Munteanu | Alexandru | Programarea ... |
| ... | Mocanu | Diana | Programarea ... |
| ... | Mocanu | Diana | Programarea ... |
| ... | Mocanu | Diana | Programarea ... |
| ... | Misan | Andrei | Practica de ... |
| ... | Mircea | Sorin | Programe apl... |
| ... | Mircea | Maria | Integrare in... |
| ... | Micu | Elena | Baze de date |
| ... | Micu | Elena | Structuri de... |
| ... | Ilascu | Ionela | Tehnologii d... |
| ... | Frent | Tudor | Cercetari op... |
| ... | Dogar | Alexandru | Rețele infor... |

3:

Run Cancel Disconnect Change Connection universitatea Explain Enable SQLCMD

```

1 SELECT DISTINCT Nume_Student, Prenume_Student, Disciplina
2 FROM dbo.studenti s
3 JOIN dbo.studenti_reusita sr ON (s.Id_Student = sr.Id_Student)
4 JOIN dbo.disciplina d ON (sr.Id_Disciplina = d.Id_Disciplina)
5
6 WHERE s.Nume_Student LIKE('Florea') and s.Prenume_Student LIKE('Ioan') ;

```

Results Messages

| | Nume_Stud... | Prenume_Stu... | Disciplina |
|-----|--------------|----------------|-----------------|
| 1 | Florea | Ioan | Asamblare si... |
| 2 | Florea | Ioan | Baze de date |
| 3 | Florea | Ioan | Integrare in... |
| 4 | Florea | Ioan | Practica de ... |
| 5 | Florea | Ioan | Practica de ... |
| 6 | Florea | Ioan | Programarea ... |
| 7 | Florea | Ioan | Programarea ... |
| 8 | Florea | Ioan | Programe apl... |
| 9 | Florea | Ioan | Rețele infor... |
| ... | Florea | Ioan | Sisteme de c... |
| ... | Florea | Ioan | Sisteme de o... |
| ... | Florea | Ioan | Structuri de... |
| ... | Florea | Ioan | Tehnologii d... |

13:

Home > Dima > Desktop > Data_Bases_Cambridge_Dumitru_TAI-191 > lab4 > Question14.sql

Run Cancel Disconnect Change Connection universitatea Explain Enable SQLCMD

```

1 SELECT DISTINCT Nume_Student, Prenume_Student, Disciplina, Nota
2 FROM dbo.studenti s
3 JOIN dbo.studenti_reusita sr ON (s.Id_Student = sr.Id_Student)
4 JOIN dbo.discipline d ON (sr.Id_Disciplina = d.Id_Disciplina)
5
6 WHERE Nota > 8 and Tip_Evaluare = 'Examen';
7
8

```

Results Messages

| | Nume_Stud... | Prenume_Stu... | Disciplina | Nota |
|-----|--------------|----------------|-----------------|------|
| 1 | Brasovi... | Teodora | Cercetari op... | 9 |
| 2 | Brasovi... | Teodora | Integrare in... | 9 |
| 3 | Brasovi... | Teodora | Practica de ... | 10 |
| 4 | Brasovi... | Teodora | Programarea ... | 9 |
| 5 | Corovet | Eduard | Integrare in... | 9 |
| 6 | Corovet | Eduard | Programe apl... | 10 |
| 7 | Cosovanu | Geanina | Programarea ... | 9 |
| 8 | Cosovanu | Geanina | Structuri de... | 9 |
| 9 | Covas | Roman | Integrare in... | 9 |
| ... | Covas | Roman | Limbaje eval... | 10 |
| ... | Covas | Roman | Practica de ... | 10 |
| ... | Covas | Roman | Structuri de... | 10 |
| ... | Damian | Adina | Cercetari op... | 10 |
| ... | Damian | Adina | Integrare in... | 10 |
| ... | Damian | Adina | Matematica d... | 10 |
| ... | Damian | Adina | Modelarea si... | 10 |
| ... | Damian | Adina | Programarea ... | 10 |

14:

Run Cancel Disconnect Change Connection universitatea Explain Enable SQLCMD

```

1 SELECT DISTINCT Nume_Student, Prenume_Student, Data_Evaluare, Nume_Profesor, Prenume_Profesor, Tip_Evaluare, Nota
2 FROM dbo.studenti s
3 INNER JOIN dbo.studenti_reusita sr ON (s.Id_Student = sr.Id_Student)
4 INNER JOIN dbo.profesori p ON (sr.Id_Profesor = p.Id_Profesor)
5 INNER JOIN dbo.discipline d ON (sr.Id_Disciplina = d.Id_Disciplina)
6
7 WHERE (Prenume_Profesor LIKE('Ion') or Prenume_Profesor LIKE('Gheorge')) and Tip_Evaluare LIKE('Examen') and Data_Evaluare >= '2017-1-1' and Nota >= 5
8 ORDER BY Nota DESC;
9

```

Results Messages

| | Nume_Stud... | Prenume_Stu... | Data_Evaluare | Nume_Pro... | Pren... | Tip_Evaluare | Nota |
|-----|--------------|----------------|---------------|-------------|---------|--------------|------|
| 1 | Brasovi... | Teodora | 2018-01-25 | Bivol | Ion | Examen | 10 |
| 2 | Covas | Roman | 2018-01-23 | Bivol | Ion | Examen | 10 |
| 3 | Dobrita | Maria | 2018-01-25 | Bivol | Ion | Examen | 10 |
| 4 | Gheorgh... | Gabriel | 2018-01-25 | Bivol | Ion | Examen | 10 |
| 5 | Giurca | Sebastian | 2018-01-25 | Bivol | Ion | Examen | 10 |
| 6 | Jinga | Cristian | 2018-01-19 | Bivol | Ion | Examen | 10 |
| 7 | Lincar | Alexandra | 2018-01-19 | Bivol | Ion | Examen | 10 |
| 8 | Luca | Alex | 2018-01-27 | Bivol | Ion | Examen | 10 |
| 9 | Medrea | Diana | 2018-01-27 | Bivol | Ion | Examen | 10 |
| ... | Pintea | Andrei | 2018-01-19 | Bivol | Ion | Examen | 10 |
| ... | Popov | Andrei | 2018-01-19 | Bivol | Ion | Examen | 10 |
| ... | Suciu | Ionut | 2018-01-23 | Bivol | Ion | Examen | 10 |
| ... | Suciu | Ionut | 2018-01-27 | Bivol | Ion | Examen | 10 |
| ... | Varga | Izabella | 2018-01-23 | Bivol | Ion | Examen | 10 |
| ... | Galambo... | Norbert | 2018-01-27 | Bivol | Ion | Examen | 9 |
| ... | Jinga | Cristian | 2018-01-27 | Bivol | Ion | Examen | 9 |

15:

```
home > dima > Desktop > Data_Bases_Cambur_Dumitru_FAF-191 > lab4 > Question21.sql
Run Cancel Disconnect Change Connection universitatea Explain Enable SQLCMD
1 SELECT s.num_e_student, s.prenume_student, count(sr.nota)
2 FROM studenti AS s,
3      studenti_reusita AS sr
4 WHERE s.id_student = sr.id_student
5 GROUP BY s.num_e_student, s.prenume_student, sr.id_student
6 ORDER BY s.num_e_student, s.prenume_student;
```

Results Messages

| | num_e_student | prenume_student | (No column name) |
|----|---------------|-----------------|------------------|
| 1 | Brasovianu | Teodora | 40 |
| 2 | Corovet | Eduard | 52 |
| 3 | Cosovanu | Geanina | 40 |
| 4 | Coste | Claudia | 40 |
| 5 | Covas | Roman | 52 |
| 6 | Damian | Adina | 40 |
| 7 | Damian | Roxana | 40 |
| 8 | Dan | David | 40 |
| 9 | Danci | Larisa | 40 |
| 10 | Dascal | Florina | 52 |
| 11 | Demian | Bogdan | 40 |
| 12 | Diaconu | Samuel | 38 |
| 13 | Dobrea | Daniela | 40 |
| 14 | Dobrita | Maria | 40 |
| 15 | Dobrovat | Mihai | 40 |
| 16 | Dordai | Ovidiu | 40 |
| 17 | Ene | Mihai | 40 |
| 18 | Farcas | Alina | 40 |
| 19 | Florea | Ioan | 52 |
| 20 | Forgaci | Mihai | 40 |

21:

```
home > dima > Desktop > Data_Bases_Cambur_Dumitru_FAF-191 > lab4 > Question25.sql
Run Cancel Disconnect Change Connection universitatea Explain Enable SQLCMD
1 SELECT Cod_Grupa, Count(DISTINCT s.Id_Student) Total_Students
2 FROM dbo.studenti_reusita sr
3      JOIN dbo.studenti s ON (sr.Id_Student = s.Id_Student)
4      JOIN dbo.grupe g ON (sr.Id_Grupa = g.Id_Grupa)
5 GROUP BY Cod_Grupa
6 HAVING COUNT(DISTINCT s.Id_Student) > 24;
```

Results Messages

| | Cod_Grupa | Total_Students |
|---|-----------|----------------|
| 1 | CIB171 | 25 |
| 2 | INF171 | 25 |
| 3 | TI171 | 25 |

25:

32:

home > dima > Desktop > Data_Bases_Cambur_Dumitru_FAF-191 > lab4 > Question32.sql

Run Cancel Disconnect Change Connection universitatea Explain Enable SQLCMD

```

1 SELECT s.id_student, s.num Student, s.prenume Student, g.cod_grupa, AVG(sr.nota) media
2 FROM studenti s
3 JOIN studenti_reusita sr ON (s.id_student = sr.id_student)
4 JOIN grupe g ON (sr.id_grupa = g.id_grupa)
5 WHERE s.id_student = sr.id_student
6 GROUP BY s.id_student, s.num Student, s.prenume Student, sr.id_student, g.cod_grupa
7 ORDER BY g.cod_grupa, s.num Student, s.prenume Student;

```

Results Messages

| | id_student | num Student | prenume Student | cod_grupa | media |
|-----|------------|-------------|-----------------|-----------|-------|
| 1 | 100 | Brasovianu | Teodora | CIB171 | 7 |
| 2 | 101 | Cosovanu | Geanina | CIB171 | 5 |
| 3 | 102 | Coste | Claudia | CIB171 | 5 |
| 4 | 104 | Damian | Adina | CIB171 | 7 |
| 5 | 103 | Damian | Roxana | CIB171 | 7 |
| 6 | 105 | Dan | David | CIB171 | 7 |
| 7 | 106 | Danci | Larisa | CIB171 | 7 |
| 8 | 108 | Demian | Bogdan | CIB171 | 6 |
| 9 | 107 | Diaconu | Samuel | CIB171 | 7 |
| ... | 109 | Dobrea | Daniela | CIB171 | 6 |
| ... | 110 | Dobrita | Maria | CIB171 | 7 |
| ... | 111 | Dobrovat | Mihai | CIB171 | 6 |
| ... | 112 | Dordai | Ovidiu | CIB171 | 6 |
| ... | 113 | Ene | Mihai | CIB171 | 6 |
| ... | 114 | Farcas | Alina | CIB171 | 6 |
| ... | 115 | Forgaci | Mihai | CIB171 | 7 |
| ... | 116 | Fratila | Ovidiu | CIB171 | 7 |
| ... | 117 | Gadalean | Gabriela | CIB171 | 6 |
| ... | 118 | Gheorghescu | Gabriel | CIB171 | 7 |
| ... | 119 | Ghimpu | Edward | CIB171 | 6 |

Conclusion: After doing this laboratory work i learnt how to work with SE-LECT queries. How to select by different conditions (DISTINCT, TOP, LI-MIT e.t.c) , how to make different Joins (like Inner and Outer) , Unions e.t.c between tables.