



TECHNICAL UNIVERSITY OF MOLDOVA

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## DB Laboratory 6

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**General purpose:**

Learn about SQL Query Language

**Tasks:**

- Answer Questions at the end of Chapter 6;
- Solve ex. 1 - 8 at the end of Chapter 6.

**Task Realization:**

In Figure 1 i was struggling Finding group leaders for each group and teachers counting most pairs. Also I took into account that one teacher can't be leader for more that one group.

	Id_Grupa	Cod_Grupa	Specialitate	Nume_Facultate	Sef_grupa	Prof_Indrumator
1	1	CIB171	Cibemetica	Informatica si Cibemetica	118	101
2	2	INF171	Informatica	Informatica si Cibemetica	152	104
3	3	TI171	Tehnologii Informatinale	Informatica si Cibemetica	127	100

Figure 1: Finding group leaders and teachers counting most pairs

In figure 2 we can observe that student with 118 ID has all his grades higher with one point, and 10 is maximum grade. students 118 127 and 152 as we can see in figure 1 are the best student in their groups and i just joined table "grupe" and "studentireusita"

	Id_Student	Id_Disciplina	Id_Profesor	Id_Grupa	Tip_Evaluare	Nota	Data_Evaluare
1	118	105	110	1	Examen	10	2018-01-25
2	118	105	110	1	Reusita curenta	10	2018-12-03
3	118	105	110	1	Testul 1	8	2017-10-06
4	118	105	110	1	Testul 2	10	2017-12-09
5	118	107	101	1	Examen	8	2018-01-15
6	118	107	101	1	Reusita curenta	8	2018-12-03
7	118	107	101	1	Testul 1	6	2017-10-10
8	118	107	101	1	Testul 2	10	2017-12-15
9	118	108	101	1	Examen	7	2018-01-09
10	118	108	101	1	Reusita curenta	7	2018-12-03
11	118	108	101	1	Testul 1	10	2017-10-12
12	118	108	101	1	Testul 2	10	2017-12-12
13	118	110	131	1	Examen	10	2018-01-25
14	118	110	131	1	Reusita curenta	10	2018-12-04
15	118	110	131	1	Testul 1	10	2017-10-03
16	118	110	131	1	Testul 2	9	2017-12-14
17	118	111	126	1	Examen	8	2018-01-13
18	118	111	126	1	Reusita curenta	8	2018-12-03
19	118	111	126	1	Testul 1	8	2017-10-06
20	118	111	126	1	Testul 2	9	2017-12-14
21	118	113	104	1	Examen	10	2018-01-16
22	118	113	104	1	Reusita curenta	10	2018-12-04
23	118	113	104	1	Testul 1	10	2017-10-09
24	118	113	104	1	Testul 2	6	2017-12-08

Figure 2: group leaders gain 1 to their grades

In figure 3 is The new table "profesorinew" With all data from the table "profesori". The big difference is that instead of one field with all geolocational information we now have three. The hardest part was to find all rules to split every string correct and according to the task. Also we can observe in this table that all fields from "Localitate" row are fulfilled, so the task from ex.1 is also executed correct.

	Id_Profesor	Nume_Profesor	Prenume_Profesor	Localitate	Adresa_1	Adresa_2
1	100	Popescu	Gabriel	mun. Chisinau	NULL	NULL
2	101	Micu	Elena	mun. Chisinau	bd. Dacia	44
3	102	Avram	Sanda	mun. Chisinau, or. Vadul lui Voda	str. Stefan cel Mare	2/2
4	103	Munteanu	Alexandru	mun. Chisinau	bd. Decebal	91
5	104	Mocanu	Diana	mun. Chisinau	str. Titulescu	47
6	105	Ilascu	Ionela	mun. Chisinau, s. Stauceni	str. Mateevici	9
7	106	Prodan	Cristian	mun. Chisinau	bd. Alba Iulia	198
8	107	Ungureanu	Iulia	mun. Chisinau	str. N. Costin	44/1
9	108	Bivol	Ion	mun. Chisinau,	NULL	NULL
10	109	Dogar	Alexandru	mun. Chisinau,	NULL	NULL
11	110	Frent	Tudor	mun. Chisinau,	NULL	NULL
12	111	Ilie	Vasile	mun. Chisinau,	NULL	NULL
13	112	Jugaru	George	mun. Chisinau,	NULL	NULL
14	113	Micu	George	mun. Chisinau,	NULL	NULL
15	114	Mihalache	Mihai	mun. Chisinau,	NULL	NULL
16	115	Mihaliuc	Ioana	mun. Chisinau,	NULL	NULL
17	116	Mircea	Sorin	mun. Chisinau,	NULL	NULL
18	117	Mircea	Maria	mun. Chisinau,	NULL	NULL
19	118	Misan	Andrei	mun. Chisinau,	NULL	NULL

Figure 3: table profesorinew

In figure 4 we can see the table "orarul", i inserted values in this table considering also that i need group's ID with CodGrupa='CIB171'

	Id_Disciplina	Id_Profesor	Id_Grupa	Zi	Ora	Auditoriu	Bloc
1	107	101	1	Luni	08:00:00.0000000	202	B
2	108	101	1	Luni	11:30:00.0000000	501	B
3	119	117	1	Luni	13:30:00.0000000	501	B

Figure 4: Inserting values into "orarul"

## Conclusion

During This lab work i find out how to add data to existing tables, modify their structure, create new tables and i understood why do we need indexes in database. Also by the way I gain some skills with cursors and i think they are extremely useful when you want to modify each tuple according to information it posses. [1]

## References

- [1] SQL Server Management Studio 2017, Tutorials for Lab 5
- [2] MSSQL Official Documentation <https://docs.microsoft.com/en-us/sql/t-sql/language-elements/try-catch-transact-sql?view=sql-server-2017>