

Data Base Laboratory Work 3

Creating and Modifying Tables

Tasks:

Sarcini practice:

1. Care din numerele prezentate mai jos pot fi introduse într-un câmp de tipul *DECIMAL(4,1)*?
a) 16,2; b) 116,2; c) 16,21; d) 1116,2; e) 1116,21.
2. Fie [Col1] din tabelul de mai jos este de tip *INT*, și [Col2] este de tip *DECIMAL (2,1)*

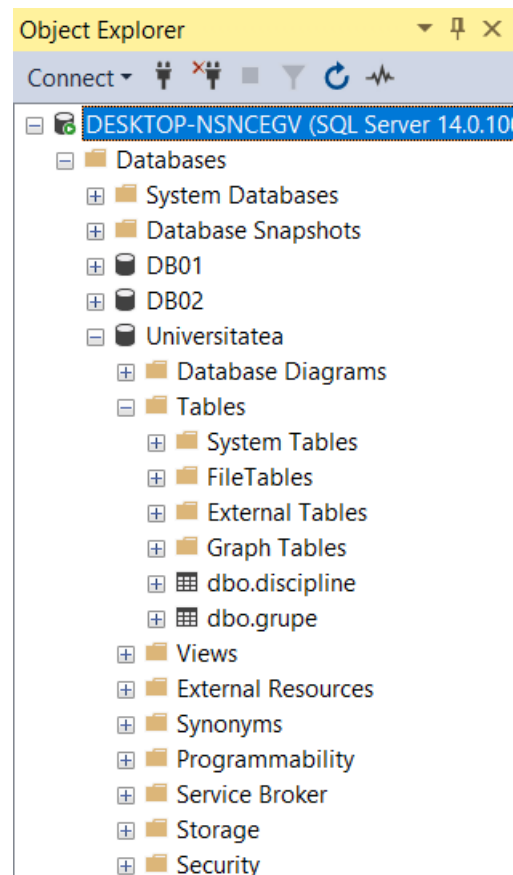
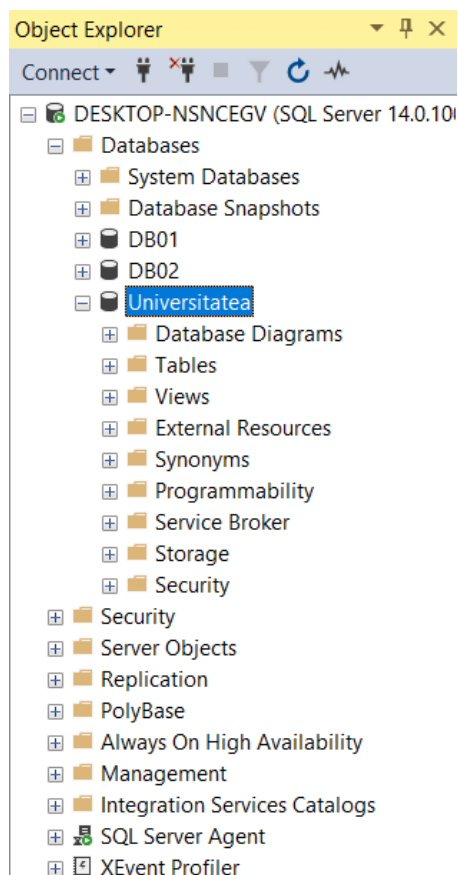
Tabel	Col1	Col2	Col3
1	1.0		
2	1.0		

Ce tip de date trebuie să fie [Col3] pentru a păstra rezultatul următoarei expresii $Col1 * Col2$.

3. Creați o bază de date numită *universitatea* cu proprietăți implicite. În cadrul acestei baze de date, creați 2 tabele (*grupe*, *disciplina*), schemele cărora sunt definite în secțiunea 3.3 a capitolului.
4. Inserați în tabelele respective ale bazei de date *universitatea* următoarele înregistrări:

<i>disciplina</i>	<i>Id_Disciplina</i>	<i>Disciplina</i>	<i>Nr_ore_plan_disciplina</i>
	100	Sisteme de operare	60
	101	Programarea calculatoarelor	60
	102	Informatica aplicata	46
	103	Sisteme de calcul	46
	104	Asamblare si depanare PC	60
	105	Cercetari operationale	76
	106	Programarea WEB	46
	107	Baze de date	60
	108	Structuri de date si algoritmi	76
	109	Retele informatice	46
	110	Matematica discreta	60
	111	Modelarea sistemelor	46
	112	Limbaje evaluate de programare (Java,.NET)	76
	113	Programarea aplicatiilor Windows	60
	114	Tehnologii de procesare a informatiei	46
	115	Programarea declarativa	46
	116	Proiectarea sistemelor informatice	60
	117	Practica de licenta	80
	118	Practica de productie	80
	119	Integrare informationala europeana	20
	120	Programe aplicative	46

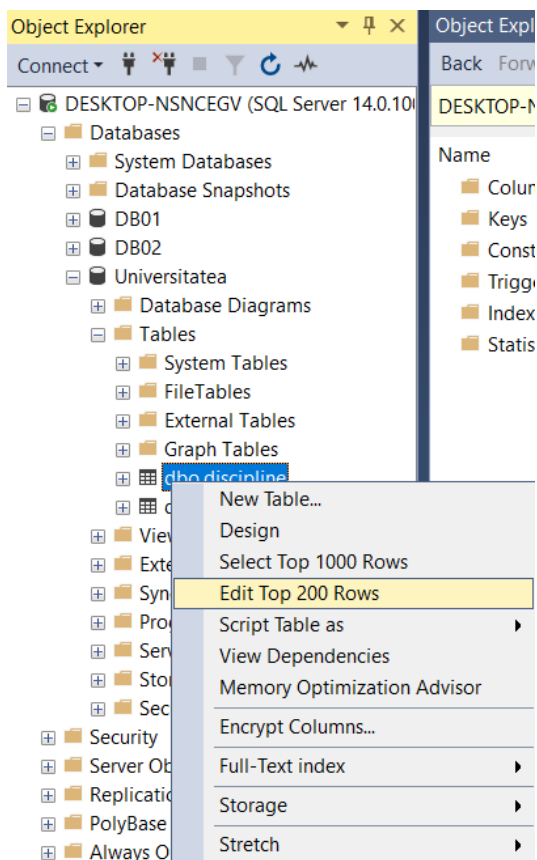
1. For the first task I choose **a) 16.2** and **b) 116.2**, because DECIMAL(4,1) indicates that our numbers will have maximum 4 digits before the decimal point and 1 digit after decimal point. So in a) we have 2 digits before and 1 digit after, and in b) we have 3 digits before point and 1 digit after.
2. I think it will be correct with INT and DECIMAL(2,1) type in [Col3], because all values in [Col2] have 0 after the decimal point, it means that the precision isn't lost in the calculation process.
3. For the third task I created a new database **Universitatea** with the default properties. Also I created two tables: **dbo.discipline** and **dbo.grupe**.



DESKTOP-NSNCEGV.U...- dbo.discipline* Object Explorer Details			
	Column Name	Data Type	Allow Nulls
🔑	Id_Disciplina	int	<input type="checkbox"/>
	Disciplina	nchar(255)	<input type="checkbox"/>
	Nr_ore_plan_disciplina	int	<input type="checkbox"/>
▶			<input type="checkbox"/>

DESKTOP-NSNCEGV....tatea - dbo.grupe DESKTOP-NSNCEGV.U...- dbo.discipline*			
	Column Name	Data Type	Allow Nulls
🔑	Id_Grupa	int	<input type="checkbox"/>
	Cod_Grupa	nchar(50)	<input type="checkbox"/>
	Specialitate	nchar(100)	<input type="checkbox"/>
	Nume_Facultate	nchar(100)	<input type="checkbox"/>
▶			<input type="checkbox"/>

4. In this task I completed each of the tables with data.



Object Explorer

Connect

DESKTOP-NSNCEGV (SQL Server 14.0.10062.1)

Databases

System Databases

Database Snapshots

DB01

DB02

Universitatea

Database Diagrams

Tables

System Tables

FileTables

External Tables

Graph Tables

dbo.discipline

dbo.grupe

Views

External Resources

Synonyms

Programmability

Service Broker

Storage

Security

Security

Server Objects

Replication

PolyBase

DESKTOP-NSNCEGV.U... - dbo.discipline

Object Explorer Details

	Id_Disciplina	Disciplina	Nr_ore_pla...
	100	Sisteme de operare	... 60
	101	Programarea calculatoarelor	... 60
	102	Informatica aplicata	... 46
	103	Sisteme de calcul	... 46
	104	Asamblare si depanare PC	... 60
	105	Cercetari operationale	... 76
	106	Programarea WEB	... 46
	107	Baze de date	... 60
	108	Structuri de date si algoritmi	... 76
	109	Rețele informatice	... 46
	110	Matematica discreta	... 60
	111	Modelarea sistemelor	... 46
	112	Limbaje evaluate de programare (Java,.NET)	... 76
	113	Programarea aplicatiilor Windows	... 60
	114	Tehnologii de procesare a informatiei	... 46
	115	Programarea declarativa	... 46
	116	Proiectarea sistemelor informatice	... 60
	117	Practica de licenta	... 80
	118	Practica de productie	... 80
	119	Integrare informationala europeana	... 20
	120	Programe aplicative	... 46
»*	NULL	NULL	NULL

Object Explorer

Connect

DESKTOP-NSNCEGV (SQL Server 14.0.10)

Databases

System Databases

Database Snapshots

DB01

DB02

Universitatea

Database Diagrams

Tables

System Tables

FileTables

External Tables

Graph Tables

dbo.discipline

dbo.grupe

DESKTOP-NSNCEGV....tatea - dbo.grupe

DESKTOP-NSNCEGV.U...- dbo.discipline

Object Explorer Det

	Id_Grupa	Cod_Grupa	Specialitate	Nume_Facultate
	1	CIB171 ...	Cibernetica ...	Informatica si Cibernetica ...
	2	INF171 ...	Informatica ...	Informatica si Cibernetica ...
	3	TI171 ...	Tehnologii Informatinale ...	Informatica si Cibernetica ...
»*	NULL	NULL	NULL	NULL

Conclusion:

During the laboratory work I've mastered SQL data types. I learnt how to create tables in a database and to complete them with the given data. I learnt how to pick data types in tables, and how to refer to the primary key.