create schema nr5;

use nr5;

create table studenti(

`IdStudent` int auto\_increment,

`nume` varchar(45),

`prenume` varchar(45),

`adresa` varchar(45),

primary key(`IdStudent`)

);

create table profesori(

`IdProfesor` int auto\_increment,

`nume` varchar(45),

`prenume` varchar(45),

`adresa` varchar(45),

primary key(`IdProfesor`)

);

create table disciplina(

`IdDisciplina` int auto\_increment,

`IdStudent` int,

`IdProfesor` int,

`nume\_disciplina` varchar(45),

`nrOre` int,

primary key(`IdDisciplina`),

constraint foreign key (`IdStudent`) references studenti(`IdStudent`),

constraint foreign key (`IdProfesor`) references profesori(`IdProfesor`)

);

insert into studenti(`nume`,`prenume`,`adresa`) values('Popescu','George','Bucuresti');

insert into studenti(`nume`,`prenume`,`adresa`) values('Ionescu','George','Pitesti');

insert into studenti(`nume`,`prenume`,`adresa`) values('Albu','Andrei','Bucuresti');

insert into studenti(`nume`,`prenume`,`adresa`) values('NumeTest','PrenumeTest','Bucuresti');

insert into profesori(`nume`,`prenume`,`adresa`) values('Anghelescu','Mihai','Bucuresti');

insert into profesori(`nume`,`prenume`,`adresa`) values('Olteanu','Stefan','Brasov');

insert into profesori(`nume`,`prenume`,`adresa`) values('Vasilescu','George','Bucuresti');

insert into profesori(`nume`,`prenume`,`adresa`) values('NumeTest','PrenumeTest','Bucuresti');

insert into disciplina(`IdStudent`,`IdProfesor`,`nume\_disciplina`,`nrOre`) values(1, 2,'fizica',2);

insert into disciplina(`IdStudent`,`IdProfesor`,`nume\_disciplina`,`nrOre`) values(2, 4,'matematica',3);

insert into disciplina(`IdStudent`,`IdProfesor`,`nume\_disciplina`,`nrOre`) values(3, 1,'baze',4);

insert into disciplina(`IdStudent`,`IdProfesor`,`nume\_disciplina`,`nrOre`) values(4, 4,'algebra',1);

insert into disciplina(`IdStudent`,`IdProfesor`,`nume\_disciplina`,`nrOre`) values(3, 3,'baze',2);

/\*studentii profesorului vasilescu\*/

/\*varianta 1\*/

select studenti.nume, studenti.prenume from studenti, profesori, disciplina

where profesori.nume='Vasilescu' and

disciplina.IdStudent=studenti.IdStudent and

disciplina.IdProfesor=profesori.IdProfesor;

/\*varianta 2\*/

select studenti.nume, studenti.prenume from studenti

inner join disciplina on (disciplina.IdStudent=studenti.IdStudent)

inner join profesori on (disciplina.IdProfesor=profesori.IdProfesor)

where profesori.nume='Vasilescu';

/\*varianta 3\*/

select studenti.nume, studenti.prenume from studenti

inner join disciplina using (`IdStudent`)

inner join profesori using (`IdProfesor`)

where profesori.nume='Vasilescu';

/\*union\*/

select nume, prenume from studenti

union

select nume, prenume from profesori

where adresa='Bucuresti';

/\*diferenta\*/

select distinct nume, prenume from studenti

where not exists (select \* from profesori

where studenti.nume=profesori.nume

and studenti.prenume=profesori.prenume);

/\*intersectia\*/

select distinct nume, prenume from studenti

where exists (select \* from profesori

where studenti.nume=profesori.nume

and studenti.prenume=profesori.prenume);

/\*produs cartezian\*/

select \* from studenti, profesori;

/\*media nrOre\*/

select avg(`nrOre`) from disciplina;

/\*nr inregistrari\*/

select count(`IdStudent`) from studenti;

/\*nr minim\*/

select min(`nrOre`), nume\_disciplina from disciplina;

/\*nr maxim\*/

select max(`nrOre`), nume\_disciplina from disciplina;