Лабораторная работа 8

```sql
CREATE TABLE STUDENTS_2(
     SNUM INTEGER PRIMARY KEY,
     SFAM CHARACTER(20),
     SIMA CHARACTER(20),
     SOTCH CHARACTER(20),
     STIP MONEY DEFAULT 10
);


ALTER TABLE STUDENTS_2
     ADD COURS INTEGER;


ALTER TABLE STUDENTS_2
     ADD TELEPHONE CHARACTER(15);


ALTER TABLE STUDENTS_2
     DROP COURS;


ALTER TABLE STUDENTS_2
```

```sql
        DROP TELEPHONE;

CREATE TYPE TELEPHONE AS (
   area_code INTEGER,
   number VARCHAR(20)
);

CREATE DOMAIN TELEPHONE AS VARCHAR(20) NOT NULL;

CREATE INDEX SFAM_IN ON "STUDENTS"("SFAM");

CREATE TABLE "PREDMET_2"(
     "PNUM" SMALLINT,
     "PNAME" CHARACTER(20),
     "TNUM" INTEGER,
     "HOURS" SMALLINT,
     "COURS" SMALLINT
);
```

```sql
CREATE TABLE "TEACHERS_2"(
    "TNUM" INTEGER,
    "TFAM" CHARACTER(20),
    "TIMA" CHARACTER(20),
    "TOTCH" CHARACTER(15),
    "TDATE" DATE
);

CREATE TABLE "USP_2"(
    "UNUM" INTEGER,
    "OCENKA" SMALLINT,
    "UDATE" DATE,
    "SNUM" INTEGER,
    "PNUM" SMALLINT
);

ALTER TABLE "PREDMET_2"
ADD CHECK("COURS" BETWEEN 1 AND 5);
```

```sql
ALTER TABLE "PREDMET_2"

ADD PRIMARY KEY ("PNUM");


ALTER TABLE "TEACHERS_2"

ADD PRIMARY KEY ("TNUM");


ALTER TABLE "STUDENTS_2"

ADD PRIMARY KEY ("SNUM");


ALTER TABLE "USP_2"

ADD PRIMARY KEY ("UNUM");


INSERT INTO "STUDENTS_2"

SELECT *

FROM "STUDENTS"

WHERE "SFAM" IN

(SELECT "SFAM"

FROM "STUDENTS"
```

```sql
INNER JOIN "USP" USING ("SNUM")

GROUP BY "SFAM"

HAVING COUNT(*) = COUNT(CASE WHEN "OCENKA" = 5
THEN 1 END));


INSERT INTO "TEACHERS_2"

SELECT *

FROM "TEACHERS"


INSERT INTO "USP_2"

SELECT *

FROM "USP"


INSERT INTO "PREDMET_2"

SELECT *

FROM "PREDMET"


INSERT INTO "STUDENTS_2"

SELECT * FROM "STUDENTS"
```

```sql
EXCEPT

SELECT * FROM "STUDENTS_2";


ALTER TABLE "USP_2"

ADD CONSTRAINT usp_students_2

FOREIGN KEY ("SNUM")

REFERENCES "STUDENTS_2" ("SNUM")

ON DELETE CASCADE;



ALTER TABLE "USP_2"

ADD CONSTRAINT usp_predmet_2

FOREIGN KEY ("PNUM")

REFERENCES "PREDMET_2" ("PNUM")

ON DELETE CASCADE;



ALTER TABLE "PREDMET_2"

ADD CONSTRAINT predmet_teachers_2
```

FOREIGN KEY ("TNUM")

REFERENCES "TEACHERS_2" ("TNUM")

ON DELETE CASCADE;

ALTER TABLE "USP_2"

ADD CONSTRAINT CHECK_DATE CHECK("UDATE" < NOW());

ALTER TABLE "PREDMET_2"

ADD CONSTRAINT CHECK_NAME CHECK("PNAME" IN

('Физика', 'Химия', 'Математика', 'Философия', 'Экономика'));

USP	
🔑 **UNUM**	INTEGER
OCENKA	SMALLINT
UDATE	DATE
SNUM	INTEGER ↗
PNUM	SMALLINT ↗

STUDENTS	
🔑 **SNUM**	INTEGER
SFAM	CHARACTER(20)
SIMA	CHARACTER(10)
SOTCH	CHARACTER(15)
STIP	MONEY

PREDMET	
🔑 **PNUM**	SMALLINT
PNAME	CHARACTER(20)
TNUM	INTEGER ↗
HOURS	SMALLINT
COURS	SMALLINT

TEACHERS	
🔑 **TNUM**	INTEGER
TFAM	CHARACTER(20)
TIMA	CHARACTER(10)
TOTCH	CHARACTER(15)
TDATE	DATE

USP_2	
🔑 **UNUM**	INTEGER
OCENKA	SMALLINT
UDATE	DATE
SNUM	INTEGER ↗
PNUM	SMALLINT ↗

STUDENTS_2	
🔑 **SNUM**	INTEGER
SFAM	CHARACTER(20)
SIMA	CHARACTER(20)
SOTCH	CHARACTER(20)
STIP	MONEY

PREDMET_2	
🔑 **PNUM**	SMALLINT
PNAME	CHARACTER(20)
TNUM	INTEGER ↗
HOURS	SMALLINT
COURS	SMALLINT

TEACHERS_2	
🔑 **TNUM**	INTEGER
TFAM	CHARACTER(20)
TIMA	CHARACTER(20)
TOTCH	CHARACTER(15)
TDATE	DATE