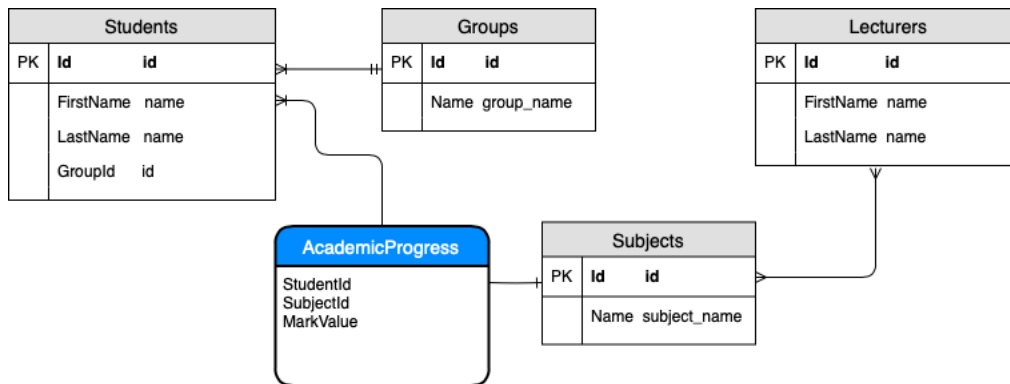


Тельнов Сергей, М3435

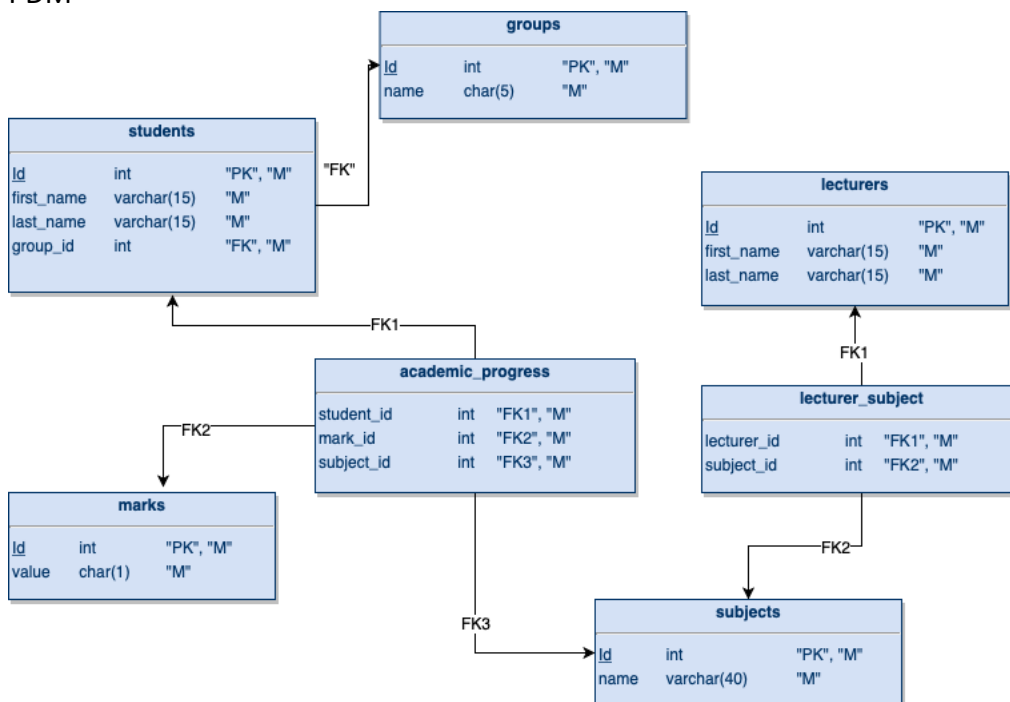
Домашнее задание по курсу «Введение в систему баз данных»

СУБД - psql (PostgreSQL) 11.5

## ERD



## PDM



## university.sql

```
/* Создание базы данных*/
create database UNIVERSITY;

/* Смена базы данных */
\c university;

/* Создание таблиц */
create table groups (
    id int PRIMARY KEY,
    name char(5) NOT NULL
);
```

```

create table students (
  id int PRIMARY KEY,
  first_name varchar(15) NOT NULL,
  last_name varchar(15) NOT NULL,
  group_id int REFERENCES groups (id)
);

create table lecturers (
  id int PRIMARY KEY,
  first_name varchar(15) NOT NULL,
  last_name varchar(15) NOT NULL
);

create table subjects (
  id int PRIMARY KEY,
  name varchar(40) NOT NULL
);

create table lecturers_subjects (
  lecturer_id int REFERENCES lecturers (id),
  subject_id int REFERENCES subjects (id),
  PRIMARY KEY (lecturer_id, subject_id)
);

create table marks (
  id int PRIMARY KEY,
  value char(1) NOT NULL
);

create table academic_progress (
  student_id int REFERENCES students (id),
  subject_id int REFERENCES subjects (id),
  mark_id int REFERENCES marks (id),
  PRIMARY KEY (student_id, subject_id, mark_id)
);

```

test\_values.sql

```

/* Смена базы данных */
\c university;

/* Добавим группы */
insert into groups
(id, name)
values
(1, 'M3435'),
(2, 'M3437'),

```

```
(3, 'M3439'),
(4, 'M4139');

/* Попробуем обмануть группы */
update groups
set name = null
where id = 1;

/* Добавим оценки */
insert into marks
(id, value)
values
(1, 'A'),
(2, 'B'),
(3, 'C'),
(4, 'D'),
(5, 'E'),
(6, 'F');

/* Добавим преподавателей */
insert into lecturers
(id, first_name, last_name)
values
(1, 'Andrew', 'Stankevich'),
(2, 'George', 'Korneev'),
(3, 'Pavel', 'Mavrin');

/* Добавим предметы */
insert into subjects
(id, name)
values
(1, 'Algorithms and data structures'),
(2, 'Java technology');

/* Добавим к предметам преподавателей */
insert into lecturers_subjects
(lecturer_id, subject_id)
values
(1, 1),
(3, 1),
(2, 2);

/* Добавим студентов */
insert into students
(id, first_name, last_name, group_id)
```

**values**

```
(1, 'Michael', 'Putilin', 3),  
(2, 'Eugene', 'Feder', 3),  
(3, 'Nina', 'Zhevtyak', 2),  
(4, 'Sergey', 'Telnov', 1);
```