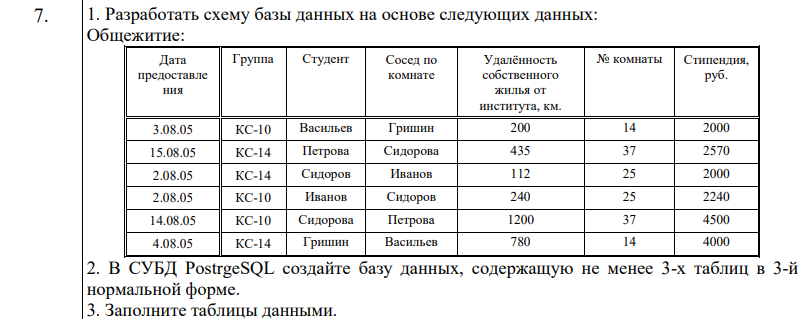
**Отчет по лабораторной работе 1, вариант 7.**

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**ЗАДАНИЕ**



**Создание базы данных**

Пароль к серверу и базе данных: 123

CREATE DATABASE “Var7”

WITH

OWNER = postgres

ENCODING = ‘UTF8’

TABLESPACE = pg\_default

CONNECTION LIMIT = -1

IS\_TEMPLATE = False;

**Создание таблиц**

1. **Группы**

CREATE TABLE IF NOT EXISTS groups

(

group\_id integer NOT NULL GENERATED ALWAYS AS IDENTITY (INCREMENT 1 START 1 MINVALUE 1 MAXVALUE 2147483647),

group\_name character varying(5) NOT NULL,

CONSTRAINT groups\_pkey PRIMARY KEY (group\_id)

);

1. **Комнаты**

CREATE TABLE IF NOT EXISTS rooms

(

room\_id integer NOT NULL GENERATED ALWAYS AS IDENTITY (INCREMENT 1 START 1 MINVALUE 1 MAXVALUE 2147483647),

room\_number integer NOT NULL,

CONSTRAINT rooms\_pkey PRIMARY KEY (room\_id)

);

1. **Студенты**

CREATE TABLE IF NOT EXISTS students

(

student\_id integer NOT NULL GENERATED ALWAYS AS IDENTITY (INCREMENT 1 START 1 MINVALUE 1 MAXVALUE 2147483647),

student\_name character varying(15) NOT NULL,

scholarship integer NOT NULL,

group\_name integer REFERENCES groups(group\_id) NOT NULL,

CONSTRAINT students\_pkey PRIMARY KEY (student\_id)

);

1. **Размещения**

CREATE TABLE IF NOT EXISTS accommodations

(

accommodation\_id integer NOT NULL GENERATED ALWAYS AS IDENTITY (INCREMENT 1 START 1 MINVALUE 1 MAXVALUE 2147483547)

accommodation\_date date NOT NULL,

distance integer NOT NULL,

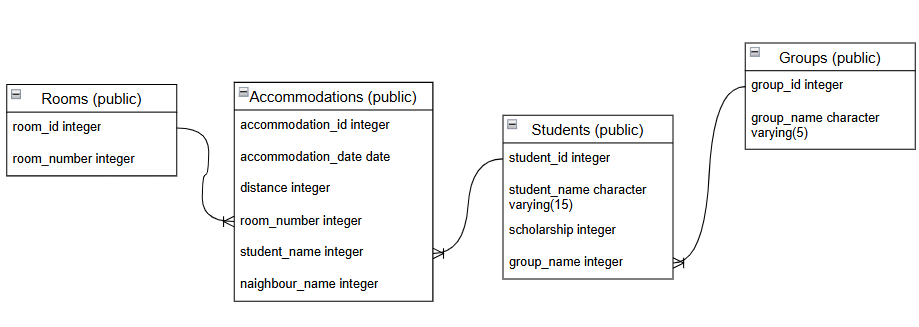
room\_number integer REFERENCES rooms(room\_id) NOT NULL,

student\_name integer REFERENCES students(student\_id) NOT NULL,

neighbour\_name integer REFERENCES students(student\_id) NOT NULL,

);

**Схема базы данных**



**Полный код создания таблиц**

**ГРУППЫ**

CREATE TABLE IF NOT EXISTS public.groups

(

group\_id SERIAL,

group\_name character varying(5) NOT NULL,

CONSTRAINT groups\_pkey PRIMARY KEY (group\_id)

);

**КОМНАТЫ**

CREATE TABLE IF NOT EXISTS public.rooms

(

room\_id SERIAL,

room\_number integer NOT NULL,

CONSTRAINT room\_number\_pkey PRIMARY KEY (room\_id)

);

**СТУДЕНТЫ**

CREATE TABLE IF NOT EXISTS public.students

(

student\_id SERIAL,

student\_name character varying(15) NOT NULL,

scholarship integer NOT NULL,

group\_name integer NOT NULL,

CONSTRAINT students\_pkey PRIMARY KEY (student\_id),

CONSTRAINT group\_group\_name\_fkey FOREIGN KEY (group\_name)

REFERENCES public.groups(group\_id) MATCH SIMPLE

ON UPDATE NO ACTION

ON DELETE NO ACTION

);

**РАЗМЕЩЕНИЯ**

CREATE TABLE IF NOT EXISTS public.accommodations

(

accommodation\_id SERIAL,

accommodation\_date date NOT NULL,

distance integer NOT NULL,

room\_number integer NOT NULL,

student\_name integer NOT NULL,

neighbour\_name integer NOT NULL,

CONSTRAINT room\_room\_number\_fkey FOREIGN KEY (room\_number)

REFERENCES public.rooms(room\_id) MATCH SIMPLE

ON UPDATE NO ACTION

ON DELETE NO ACTION,

CONSTRAINT student\_student\_name\_fkey FOREIGN KEY (student\_name)

REFERENCES public.students(student\_id) MATCH SIMPLE

ON UPDATE NO ACTION

ON DELETE NO ACTION,

CONSTRAINT neighbour\_neighbour\_name\_fkey FOREIGN KEY (neighbour\_name)

REFERENCES public.students(student\_id) MATCH SIMPLE

ON UPDATE NO ACTION

ON DELETE NO ACTION

);

**Заполнение таблиц**

1. **Группы**

INSERT INTO groups (group\_name) VALUES

(‘CS-10’),

(‘CS-14’);

1. **Комнаты**

INSERT INTO rooms (room\_number) VALUES

(14),

(37),

(25);

1. **Студенты**

INSERT INTO students (student\_name, scholarship, group\_name) VALUES

(‘Vasilyev’, 2000, 1),

(‘Petrova’, 2570, 2),

(‘Sidorov’, 2000, 2),

(‘Ivanov’, 2240, 1),

(‘Sidorova’, 4500, 1),

(‘Grishin’, 4000, 2);

1. **Размещения**

INSERT INTO accommodations (accommodation\_date, distance, room\_number, student\_name, neighbour\_name) VALUES

(‘2005-08-03’, 200, 1, 1, 6),

(‘2005-08-15’, 435, 2, 2, 5),

(‘2005-08-02’, 112, 3, 3, 4),

(‘2005-08-02’, 240, 3, 4, 3),

(‘2005-08-14’, 1200, 2, 5, 2),

(‘2005-08-04’, 780, 1, 6, 1);

**Результат заполнения таблиц**

