|  |  |
| --- | --- |
|  | МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РЕСПУБЛИКИ ТАТАРСТАН **Государственное автономное профессиональное образовательное учреждение** **«ЗЕЛЕНОДОЛЬСКИЙ МЕХАНИЧЕСКИЙ КОЛЛЕДЖ»** (ГАПОУ «ЗМК») |

**09.02.07 «Информационные системы и программирование»**

# **МДК 07.01. УПРАВЛЕНИЕ И АВТОМАТИЗАЦИЯ БАЗ ДАННЫХ**

**Отчет о практических работах**

**Исполнитель**: Назаров Михаил Александрович

**Группа**: 227

**Преподаватель:** Алемасов Евгений Павлович

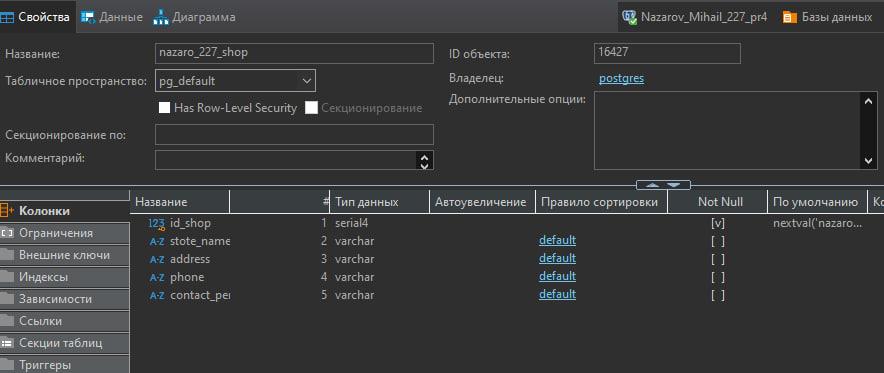
**Дата сдачи** 04.11.2024 **Оценка** \_\_\_\_\_\_\_\_\_\_\_\_

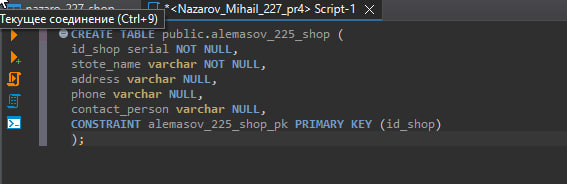
**Подпись преподавателя**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

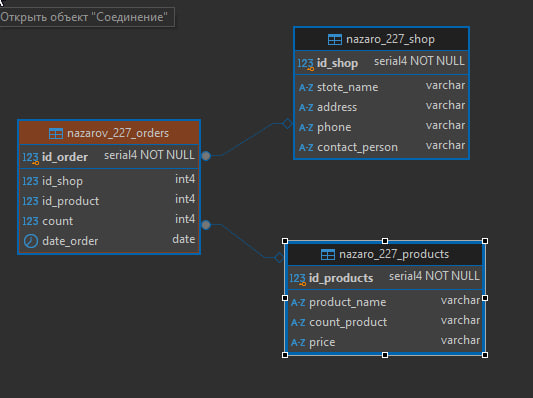
**ЗЕЛЕНОДОЛЬСК – 2024**

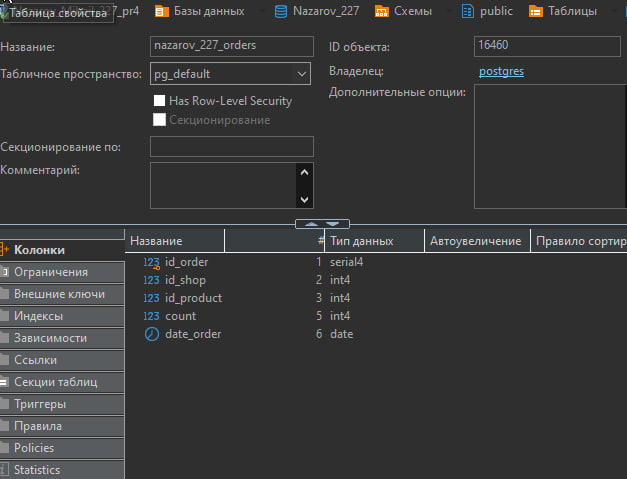
**Работа №4. Нормализация.Связи в таблицах.**

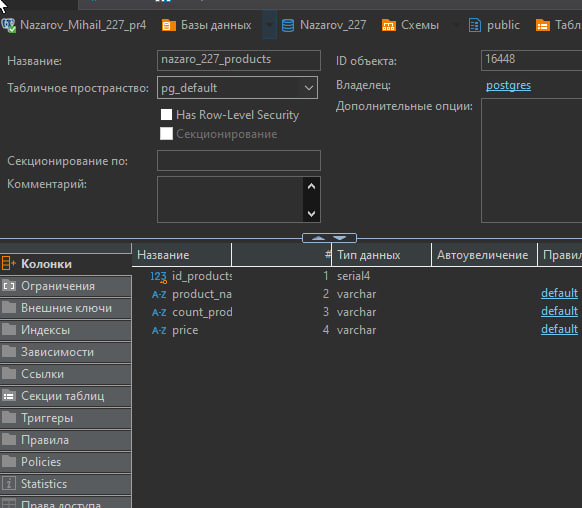
**Задание 1:**

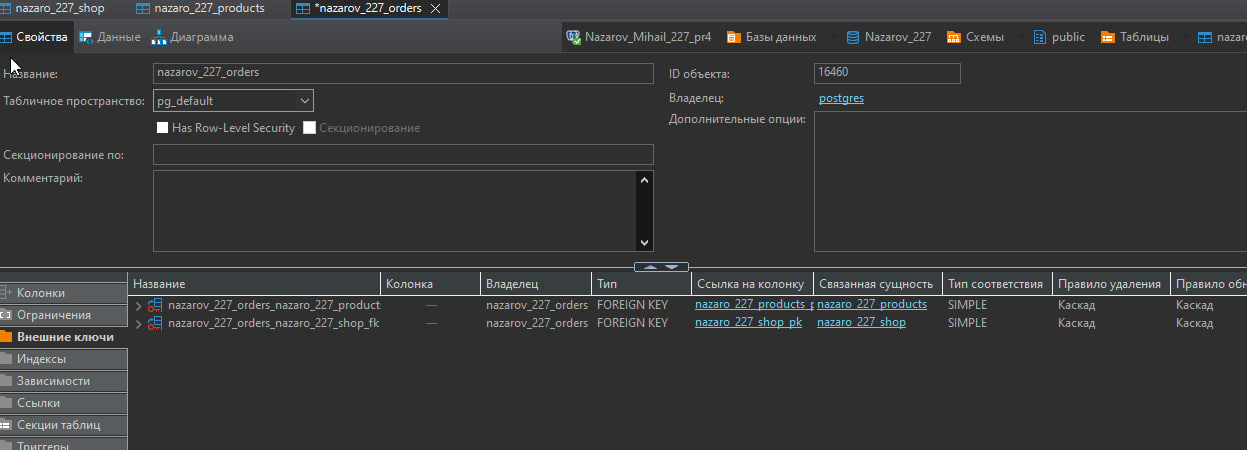


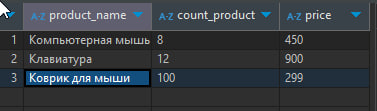


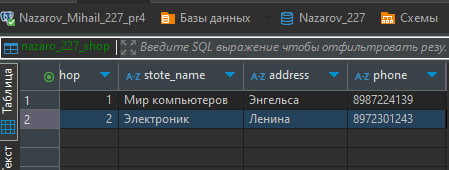


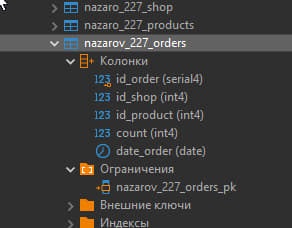


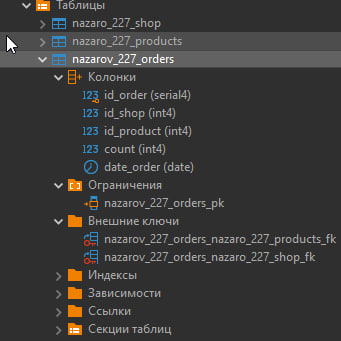












-- DROP SCHEMA public;

CREATE SCHEMA public AUTHORIZATION pg\_database\_owner;

COMMENT ON SCHEMA public IS 'standard public schema';

-- DROP SEQUENCE doctor\_id\_doctor\_seq;

CREATE SEQUENCE doctor\_id\_doctor\_seq

INCREMENT BY 1

MINVALUE 1

MAXVALUE 2147483647

START 1

CACHE 1

NO CYCLE;

-- Permissions

ALTER SEQUENCE doctor\_id\_doctor\_seq OWNER TO postgres;

GRANT ALL ON SEQUENCE doctor\_id\_doctor\_seq TO postgres;

-- DROP SEQUENCE patients\_id\_patient\_seq;

CREATE SEQUENCE patients\_id\_patient\_seq

INCREMENT BY 1

MINVALUE 1

MAXVALUE 2147483647

START 1

CACHE 1

NO CYCLE;

-- Permissions

ALTER SEQUENCE patients\_id\_patient\_seq OWNER TO postgres;

GRANT ALL ON SEQUENCE patients\_id\_patient\_seq TO postgres;

-- DROP SEQUENCE reception\_id\_reception\_seq;

CREATE SEQUENCE reception\_id\_reception\_seq

INCREMENT BY 1

MINVALUE 1

MAXVALUE 9223372036854775807

START 1

CACHE 1

NO CYCLE;

-- Permissions

ALTER SEQUENCE reception\_id\_reception\_seq OWNER TO postgres;

GRANT ALL ON SEQUENCE reception\_id\_reception\_seq TO postgres;

-- public.nazaro\_227\_shop определение

-- Drop table

-- DROP TABLE nazaro\_227\_shop;

CREATE TABLE nazaro\_227\_shop (

id\_shop serial4 NOT NULL,

stote\_name varchar NULL,

address varchar NULL,

phone varchar NULL,

contact\_person varchar NULL,

CONSTRAINT nazaro\_227\_shop\_pk PRIMARY KEY (id\_shop)

);

-- Permissions

ALTER TABLE nazaro\_227\_shop OWNER TO postgres;

GRANT ALL ON TABLE nazaro\_227\_shop TO postgres;

-- public.nazaro\_227\_products определение

-- Drop table

-- DROP TABLE nazaro\_227\_products;

CREATE TABLE nazaro\_227\_products (

id\_products serial4 NOT NULL,

product\_name varchar NULL,

count\_product varchar NULL,

price varchar NULL,

CONSTRAINT nazaro\_227\_products\_pk PRIMARY KEY (id\_products)

);

-- Permissions

ALTER TABLE nazaro\_227\_products OWNER TO postgres;

GRANT ALL ON TABLE nazaro\_227\_products TO postgres;

-- public.nazarov\_227\_orders определение

-- Drop table

-- DROP TABLE nazarov\_227\_orders;

CREATE TABLE nazarov\_227\_orders (

id\_order serial4 NOT NULL,

id\_shop int4 NULL,

id\_product int4 NULL,

count int4 NULL,

date\_order date NULL,

CONSTRAINT nazarov\_227\_orders\_pk PRIMARY KEY (id\_order),

CONSTRAINT nazarov\_227\_orders\_nazaro\_227\_products\_fk FOREIGN KEY (id\_product) REFERENCES nazaro\_227\_products(id\_products) ON DELETE CASCADE ON UPDATE CASCADE,

CONSTRAINT nazarov\_227\_orders\_nazaro\_227\_shop\_fk FOREIGN KEY (id\_shop) REFERENCES nazaro\_227\_shop(id\_shop) ON DELETE CASCADE ON UPDATE CASCADE

);

-- Permissions

ALTER TABLE nazarov\_227\_orders OWNER TO postgres;

GRANT ALL ON TABLE nazarov\_227\_orders TO postgres;

-- Permissions

GRANT ALL ON SCHEMA public TO pg\_database\_owner;

GRANT USAGE ON SCHEMA public TO public;

INSERT INTO public.nazaro\_227\_shop (id\_shop,stote\_name,address,phone,contact\_person) VALUES

(1,'Мир компьютеров','Энгельса','8987224139','Иванов Павел'),

(2,'Электроник','Ленина','8972301243','Васильев Алексей');

INSERT INTO public.nazaro\_227\_products (id\_products,product\_name,count\_product,price) VALUES

(1,'Компьютерная мышь','8','450'),

(2,'Клавиатура','12','900'),

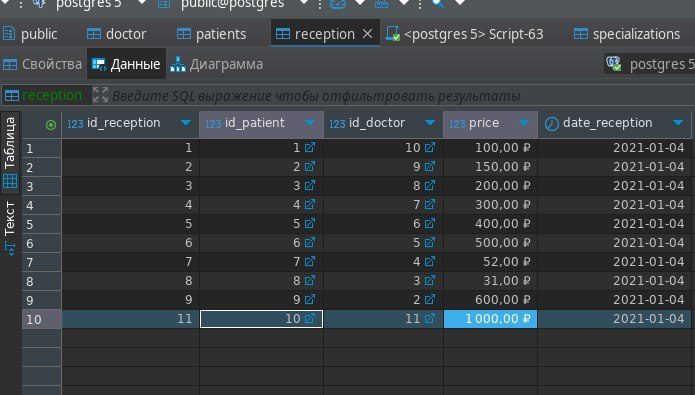
(3,'Коврик для мыши','100','299');

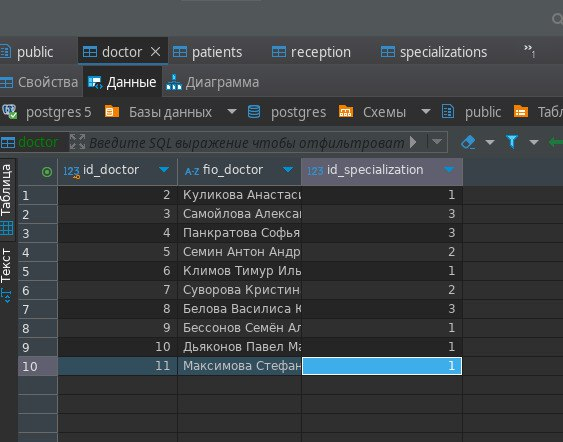
INSERT INTO public.nazarov\_227\_orders (id\_order,id\_shop,id\_product,count,date\_order) VALUES

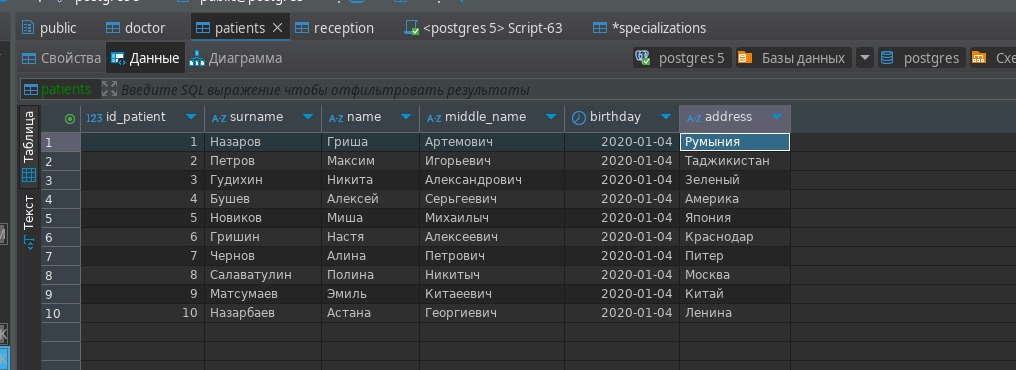
(1,1,2,1,'2024-10-27'),

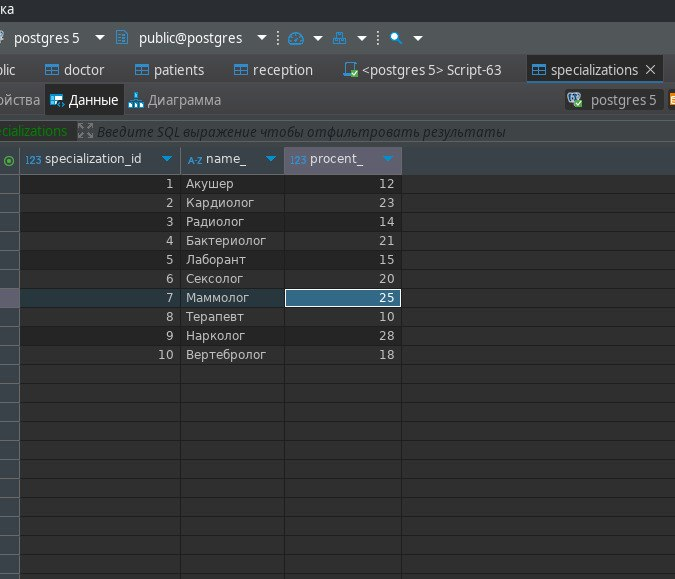
(2,2,3,1,'2024-10-27');

Задание 2









CREATE SEQUENCE public.doctor\_id\_doctor\_seq

INCREMENT BY 1

MINVALUE 1

MAXVALUE 2147483647

START 1

CACHE 1

NO CYCLE;

-- Permissions

ALTER SEQUENCE public.doctor\_id\_doctor\_seq OWNER TO postgres;

GRANT ALL ON SEQUENCE public.doctor\_id\_doctor\_seq TO postgres;

-- DROP SEQUENCE public.patients\_id\_patient\_seq;

CREATE SEQUENCE public.patients\_id\_patient\_seq

INCREMENT BY 1

MINVALUE 1

MAXVALUE 2147483647

START 1

CACHE 1

NO CYCLE;

-- Permissions

ALTER SEQUENCE public.patients\_id\_patient\_seq OWNER TO postgres;

GRANT ALL ON SEQUENCE public.patients\_id\_patient\_seq TO postgres;

-- DROP SEQUENCE public.reception\_id\_reception\_seq;

CREATE SEQUENCE public.reception\_id\_reception\_seq

INCREMENT BY 1

MINVALUE 1

MAXVALUE 9223372036854775807

START 1

CACHE 1

NO CYCLE;

-- Permissions

ALTER SEQUENCE public.reception\_id\_reception\_seq OWNER TO postgres;

GRANT ALL ON SEQUENCE public.reception\_id\_reception\_seq TO postgres;

-- public.doctor определение

-- Drop table

-- DROP TABLE public.doctor;

CREATE TABLE public.doctor (

id\_doctor serial4 NOT NULL,

fio\_doctor varchar NOT NULL,

id\_specialization int4 NOT NULL,

CONSTRAINT doctor\_pk PRIMARY KEY (id\_doctor)

);

-- Permissions

ALTER TABLE public.doctor OWNER TO postgres;

GRANT ALL ON TABLE public.doctor TO postgres;

-- public.patients определение

-- Drop table

-- DROP TABLE public.patients;

CREATE TABLE public.patients (

id\_patient serial4 NOT NULL,

surname varchar NOT NULL,

"name" varchar NOT NULL,

middle\_name varchar NULL,

birthday date NOT NULL,

address varchar NULL,

CONSTRAINT patients\_pk PRIMARY KEY (id\_patient)

);

-- Permissions

ALTER TABLE public.patients OWNER TO postgres;

GRANT ALL ON TABLE public.patients TO postgres;

-- public.reception определение

-- Drop table

-- DROP TABLE public.reception;

CREATE TABLE public.reception (

id\_reception bigserial NOT NULL,

id\_patient int4 NOT NULL,

id\_doctor int4 NOT NULL,

price money NULL,

date\_reception date NOT NULL,

CONSTRAINT reception\_pk PRIMARY KEY (id\_reception),

CONSTRAINT reception\_doctor\_fk FOREIGN KEY (id\_doctor) REFERENCES public.doctor(id\_doctor) ON DELETE CASCADE ON UPDATE CASCADE,

CONSTRAINT reception\_patients\_fk FOREIGN KEY (id\_patient) REFERENCES public.patients(id\_patient) ON DELETE CASCADE ON UPDATE CASCADE

);

-- Permissions

ALTER TABLE public.reception OWNER TO postgres;

GRANT ALL ON TABLE public.reception TO postgres;

-- Permissions

GRANT ALL ON SCHEMA public TO pg\_database\_owner;

GRANT USAGE ON SCHEMA public TO public;

INSERT INTO public.doctor (id\_doctor,fio\_doctor,id\_specialization) VALUES

(2,'Куликова Анастасия Артёмовна',1),

(3,'Самойлова Александра Александровна',3),

(4,'Панкратова Софья Павловна',3),

(5,'Семин Антон Андреевич',2),

(6,'Климов Тимур Ильич',1),

(7,'Суворова Кристина Семёновна',2),

(8,'Белова Василиса Юрьевна',3),

(9,'Бессонов Семён Алексеевич',1),

(10,'Дьяконов Павел Максимович',1),

(11,'Максимова Стефания Александровна',1);

INSERT INTO public.patients (id\_patient,surname,"name",middle\_name,birthday,address) VALUES

(1,'Назаров','Гриша','Артемович','2020-01-04','Румыния'),

(2,'Петров','Максим','Игорьевич','2020-01-04','Таджикистан'),

(3,'Гудихин','Никита','Александрович','2020-01-04','Зеленый'),

(4,'Бушев','Алексей','Серьгеевич','2020-01-04','Америка'),

(5,'Новиков','Миша','Михаилыч','2020-01-04','Япония'),

(6,'Гришин','Настя','Алексеевич','2020-01-04','Краснодар'),

(7,'Чернов','Алина','Петрович','2020-01-04','Питер'),

(8,'Салаватулин','Полина','Никитыч','2020-01-04','Москва'),

(9,'Матсумаев','Эмиль','Китаеевич','2020-01-04','Китай'),

(10,'Назарбаев','Астана','Георгиевич','2020-01-04','Ленина');

INSERT INTO public.reception (id\_reception,id\_patient,id\_doctor,price,date\_reception) VALUES

(1,1,10,100,00 ₽,'2021-01-04'),

(2,2,9,150,00 ₽,'2021-01-04'),

(3,3,8,200,00 ₽,'2021-01-04'),

(4,4,7,300,00 ₽,'2021-01-04'),

(5,5,6,400,00 ₽,'2021-01-04'),

(6,6,5,500,00 ₽,'2021-01-04'),

(7,7,4,52,00 ₽,'2021-01-04'),

(8,8,3,31,00 ₽,'2021-01-04'),

(9,9,2,600,00 ₽,'2021-01-04'),

(11,10,11,1 000,00 ₽,'2021-01-04');

INSERT INTO public.specializations (name\_,procent\_,specialization\_id) VALUES

('Акушер',12,1),

('Кардиолог',23,2),

('Радиолог',14,3),

('Бактериолог',21,4),

('Лаборант',15,5),

('Сексолог',20,6),

('Маммолог',25,7),

('Терапевт',10,8),

('Нарколог',28,9),

('Вертебролог',18,10);