

Министерство науки и высшего образования Российской Федерации
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«НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИТМО»

Отчет

по лабораторной работе №3.2 «Создание таблиц базы данных PostgreSQL. Заполнение
таблиц рабочими данными»

по дисциплине **«Проектирование и реализация баз данных»**

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Санкт-Петербург 2023

Оглавление

Цель работы	3
Практическое задание	3
Вариант 7. БД «Курсы».....	3
Выполнение.....	4
Листинг	5
Вывод	45

Цель работы

Овладеть практическими навыками создания таблиц базы данных PostgreSQL 1X, заполнения их рабочими данными, резервного копирования и восстановления БД.

Практическое задание

1. Создать базу данных с использованием pgAdmin 4 (согласно индивидуальному заданию).
2. Создать схему в составе базы данных.
3. Создать таблицы базы данных.
4. Установить ограничения на данные: Primary Key, Unique, Check, Foreign Key.
5. Заполнить таблицы БД рабочими данными.
6. Создать резервную копию БД.

Указание:

Создать две резервные копии:

с расширением CUSTOM для восстановления БД;

с расширением PLAIN для листинга (в отчете);

при создании резервных копий БД настроить параметры Dump options для Type of objects и Queries .

7. Восстановить БД.

Вариант 7. БД «Курсы»

Описание предметной области: Сеть учебных подразделений НОУ ДПО занимается организацией внебюджетного образования.

Имеется несколько образовательных программ краткосрочных курсов, предназначенных для определенных специальностей, связанных с программным обеспечением ИТ. Каждая программа имеет определенную длительность и свой перечень изучаемых дисциплин. Одна дисциплина может относиться к нескольким программам. На каждую программу может быть набрано несколько групп обучающихся.

По каждой дисциплине могут проводиться лекционные, лабораторные/практические занятия и практика определенном объеме часов. По каждой дисциплине и практике проводится аттестация в формате экзамен/дифзачет/зачет.

Необходимо хранить информацию по аттестации обучающихся.

Подразделение обеспечивает следующие ресурсы: учебные классы, лекционные аудитории и преподавателей. Необходимо составить расписание занятий.

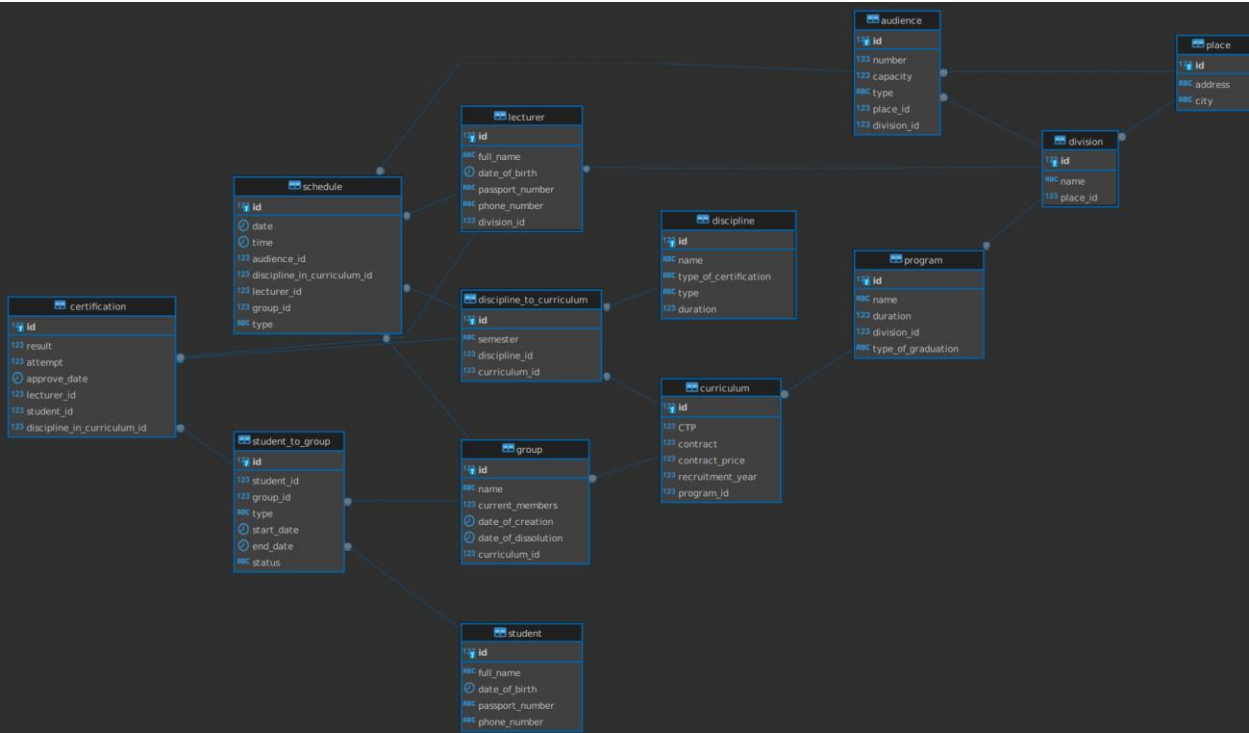
БД должна содержать следующий минимальный набор сведений: Фамилия слушателя. Имя слушателя. Паспортные данные. Контакты. Код программы. Программа. Тип программы. Объем часов. Номер группы. максимальное количество человек в группе (для набора). Дата начала обучения. Дата окончания обучения. Название дисциплины. Количество часов. Дата занятий. Номер пары. Номер аудитории. Тип аудитории. Адрес площадки. Вид занятий (лекционные, практические или лабораторные). Фамилия

преподавателя. Имя и отчество преподавателя. Должность преподавателя. Дисциплины, которые может вести преподаватель.

Выполнение

Название создаваемой БД – «Курсы»

Схема логической модели базы данны, сгенерированная с помощью ERD



Листинг

```
--  
  
-- PostgreSQL database dump  
  
--  
  
-- Dumped from database version 15.5 (Ubuntu 15.5-1.pgdg22.04+1)  
-- Dumped by pg_dump version 16.1 (Ubuntu 16.1-1.pgdg22.04+1)  
  
-- Started on 2024-01-22 13:13:13 MSK
```

```

SET statement_timeout = 0;

SET lock_timeout = 0;

SET idle_in_transaction_session_timeout = 0;

SET client_encoding = 'UTF8';

SET standard_conforming_strings = on;

SELECT pg_catalog.set_config('search_path', '', false);

SET check_function_bodies = false;

SET xmloption = content;

SET client_min_messages = warning;

SET row_security = off;


--
-- TOC entry 3552 (class 1262 OID 33654)
-- Name: Course; Type: DATABASE; Schema: -; Owner: postgres
--

CREATE DATABASE "Course" WITH TEMPLATE = template0 ENCODING = 'UTF8' LOCALE_PROVIDER = libc
LOCALE = 'en_US.UTF-8';


ALTER DATABASE "Course" OWNER TO postgres;


\connect "Course"


SET statement_timeout = 0;

SET lock_timeout = 0;

SET idle_in_transaction_session_timeout = 0;

SET client_encoding = 'UTF8';

SET standard_conforming_strings = on;

```

```

SELECT pg_catalog.set_config('search_path', '', false);

SET check_function_bodies = false;

SET xmloption = content;

SET client_min_messages = warning;

SET row_security = off;


--
-- TOC entry 866 (class 1247 OID 66514)
-- Name: audiencetype; Type: TYPE; Schema: public; Owner: postgres
--

CREATE TYPE public.audiencetype AS ENUM (
    'lecture',
    'academic',
    'laboratory',
    'computer_lab'
);


ALTER TYPE public.audiencetype OWNER TO postgres;


--
-- TOC entry 920 (class 1247 OID 41988)
-- Name: disciplinetoprogramattestationtype; Type: TYPE; Schema: public; Owner: postgres
--

CREATE TYPE public.disciplinetoprogramattestationtype AS ENUM (
    'exam',
    'zachet'

```

```
);
```

```
ALTER TYPE public.disciplinetoprogramattestationtype OWNER TO postgres;
```

```
--
```

```
-- TOC entry 863 (class 1247 OID 66507)
```

```
-- Name: disciplinetype; Type: TYPE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE TYPE public.disciplinetype AS ENUM (
```

```
    'lecture',
```

```
    'practice',
```

```
    'lab'
```

```
);
```

```
ALTER TYPE public.disciplinetype OWNER TO postgres;
```

```
--
```

```
-- TOC entry 869 (class 1247 OID 66524)
```

```
-- Name: programtypeofgraduation; Type: TYPE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE TYPE public.programtypeofgraduation AS ENUM (
```

```
    'bachelor',
```

```
    'master'
```

```
);
```

```
ALTER TYPE public.programtypeofgraduation OWNER TO postgres;
```

```
--
```

```
-- TOC entry 878 (class 1247 OID 66544)
```

```
-- Name: schedulypeenum; Type: TYPE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE TYPE public.schedulypeenum AS ENUM (
```

```
    'lecture',
```

```
    'practice',
```

```
    'lab'
```

```
);
```

```
ALTER TYPE public.schedulypeenum OWNER TO postgres;
```

```
--
```

```
-- TOC entry 875 (class 1247 OID 66536)
```

```
-- Name: studenttogroupstatus; Type: TYPE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE TYPE public.studenttogroupstatus AS ENUM (
```

```
    'studying',
```

```
    'expelled',
```

```
    'graduated'
```

```
);
```



```
ALTER TYPE public.studenttogroupstatus OWNER TO postgres;
```

```
--
```

```
-- TOC entry 872 (class 1247 OID 66530)
```

```
-- Name: studenttogrouptype; Type: TYPE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE TYPE public.studenttogrouptype AS ENUM (
```

```
    'tuition_free',
```

```
    'contract'
```

```
);
```

```
ALTER TYPE public.studenttogrouptype OWNER TO postgres;
```

```
--
```

```
-- TOC entry 251 (class 1255 OID 60413)
```

```
-- Name: get_schedule_for_group_on_day(character varying, character varying); Type: FUNCTION;  
Schema: public; Owner: postgres
```

```
--
```

```
CREATE FUNCTION public.get_schedule_for_group_on_day(group_name character varying,  
schedule_day character varying) RETURNS TABLE(schedule_id integer, lesson_date date, lesson_time  
time without time zone, audience_number integer, discipline_name character varying, lecturer_name  
character varying)
```

```
    LANGUAGE plpgsql
```

```
    AS $$
```

```
BEGIN
```

```
    RETURN QUERY
```

```
    SELECT
```

```

s.id AS schedule_id,

s.date AS lesson_date,

s."time" AS lesson_time,

a."number" AS audience_number,

d.name AS discipline_name,

l.full_name AS lecturer_name

FROM

    public.schedule s

JOIN

    public."group" g ON s.group_id = g.id

JOIN

    public.audience a ON s.audience_id = a.id

JOIN

    public.discipline_to_curriculum dc ON s.discipline_in_curriculum_id = dc.id

JOIN

    public.discipline d ON dc.discipline_id = d.id

JOIN

    public.lecturer l ON s.lecturer_id = l.id

WHERE

    g.name = group_name

    AND EXTRACT(DOW FROM s.date) = CASE

        WHEN schedule_day = 'Понедельник' THEN 1

        WHEN schedule_day = 'Вторник' THEN 2

        WHEN schedule_day = 'Среда' THEN 3

        WHEN schedule_day = 'Четверг' THEN 4

        WHEN schedule_day = 'Пятница' THEN 5

        WHEN schedule_day = 'Суббота' THEN 6

        WHEN schedule_day = 'Воскресенье' THEN 0

    END;

```

END;

\$\$;

ALTER FUNCTION public.get_schedule_for_group_on_day(group_name character varying, schedule_day character varying) OWNER TO postgres;

SET default_tablespace = '';

SET default_table_access_method = heap;

--

-- TOC entry 223 (class 1259 OID 66592)

-- Name: audience; Type: TABLE; Schema: public; Owner: postgres

--

```
CREATE TABLE public.audience (  
    id integer NOT NULL,  
    number integer NOT NULL,  
    capacity integer NOT NULL,  
    type public.audiencetype NOT NULL,  
    place_id integer NOT NULL,  
    division_id integer NOT NULL,  
    CONSTRAINT check_capacity CHECK (((capacity > 0) AND (capacity <= 200))),  
    CONSTRAINT check_number CHECK ((number > 0))  
);
```

ALTER TABLE public.audience OWNER TO postgres;

--

-- TOC entry 222 (class 1259 OID 66591)

-- Name: audience_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.audience_id_seq

AS integer

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.audience_id_seq OWNER TO postgres;

--

-- TOC entry 3553 (class 0 OID 0)

-- Dependencies: 222

-- Name: audience_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.audience_id_seq OWNED BY public.audience.id;

--

-- TOC entry 239 (class 1259 OID 66726)

-- Name: certification; Type: TABLE; Schema: public; Owner: postgres

--

```
CREATE TABLE public.certification (  
    id integer NOT NULL,  
    result integer NOT NULL,  
    attempt integer NOT NULL,  
    approve_date timestamp without time zone NOT NULL,  
    lecturer_id integer NOT NULL,  
    student_id integer NOT NULL,  
    discipline_in_curriculum_id integer NOT NULL,  
    CONSTRAINT check_attempt CHECK ((attempt > 0)),  
    CONSTRAINT check_result CHECK (((result >= 0) AND (result <= 100)))  
);
```

```
ALTER TABLE public.certification OWNER TO postgres;
```

--

-- TOC entry 238 (class 1259 OID 66725)

-- Name: certification_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

```
CREATE SEQUENCE public.certification_id_seq  
    AS integer  
    START WITH 1  
    INCREMENT BY 1  
    NO MINVALUE  
    NO MAXVALUE  
    CACHE 1;
```

```
ALTER SEQUENCE public.certification_id_seq OWNER TO postgres;
```

```
--
```

```
-- TOC entry 3554 (class 0 OID 0)
```

```
-- Dependencies: 238
```

```
-- Name: certification_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE public.certification_id_seq OWNED BY public.certification.id;
```

```
--
```

```
-- TOC entry 229 (class 1259 OID 66638)
```

```
-- Name: curriculum; Type: TABLE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE TABLE public.curriculum (  
    id integer NOT NULL,  
    "CTP" integer NOT NULL,  
    contract integer NOT NULL,  
    contract_price integer NOT NULL,  
    recruitment_year integer NOT NULL,  
    program_id integer NOT NULL  
);
```

```
ALTER TABLE public.curriculum OWNER TO postgres;
```

--

-- TOC entry 228 (class 1259 OID 66637)

-- Name: curriculum_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.curriculum_id_seq

AS integer

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.curriculum_id_seq OWNER TO postgres;

--

-- TOC entry 3555 (class 0 OID 0)

-- Dependencies: 228

-- Name: curriculum_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.curriculum_id_seq OWNED BY public.curriculum.id;

--

-- TOC entry 217 (class 1259 OID 66563)

-- Name: discipline; Type: TABLE; Schema: public; Owner: postgres

--

```
CREATE TABLE public.discipline (  
    id integer NOT NULL,  
    name character varying(50) NOT NULL,  
    type_of_certification character varying NOT NULL,  
    type public.disciplinetype NOT NULL,  
    duration integer NOT NULL,  
    CONSTRAINT check_duration CHECK (((duration > 0) AND (duration <= 120)))  
);
```

```
ALTER TABLE public.discipline OWNER TO postgres;
```

--

-- TOC entry 216 (class 1259 OID 66562)

-- Name: discipline_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

```
CREATE SEQUENCE public.discipline_id_seq
```

```
    AS integer
```

```
    START WITH 1
```

```
    INCREMENT BY 1
```

```
    NO MINVALUE
```

```
    NO MAXVALUE
```

```
    CACHE 1;
```

```
ALTER SEQUENCE public.discipline_id_seq OWNER TO postgres;
```



```
--  
  
-- TOC entry 3556 (class 0 OID 0)  
  
-- Dependencies: 216  
  
-- Name: discipline_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres  
  
--
```

```
ALTER SEQUENCE public.discipline_id_seq OWNED BY public.discipline.id;
```

```
--  
  
-- TOC entry 231 (class 1259 OID 66650)  
  
-- Name: discipline_to_curriculum; Type: TABLE; Schema: public; Owner: postgres  
  
--
```

```
CREATE TABLE public.discipline_to_curriculum (  
    id integer NOT NULL,  
    semester character varying(8) NOT NULL,  
    discipline_id integer NOT NULL,  
    curriculum_id integer NOT NULL  
);
```

```
ALTER TABLE public.discipline_to_curriculum OWNER TO postgres;
```

```
--  
  
-- TOC entry 230 (class 1259 OID 66649)  
  
-- Name: discipline_to_curriculum_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres  
  
--
```

```
CREATE SEQUENCE public.discipline_to_curriculum_id_seq
```

```
AS integer
```

```
START WITH 1
```

```
INCREMENT BY 1
```

```
NO MINVALUE
```

```
NO MAXVALUE
```

```
CACHE 1;
```

```
ALTER SEQUENCE public.discipline_to_curriculum_id_seq OWNER TO postgres;
```

```
--
```

```
-- TOC entry 3557 (class 0 OID 0)
```

```
-- Dependencies: 230
```

```
-- Name: discipline_to_curriculum_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE public.discipline_to_curriculum_id_seq OWNED BY public.discipline_to_curriculum.id;
```

```
--
```

```
-- TOC entry 221 (class 1259 OID 66580)
```

```
-- Name: division; Type: TABLE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE TABLE public.division (
```

```
id integer NOT NULL,
```

```
name character varying(50) NOT NULL,  
place_id integer NOT NULL  
);
```

```
ALTER TABLE public.division OWNER TO postgres;
```

```
--
```

```
-- TOC entry 220 (class 1259 OID 66579)
```

```
-- Name: division_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE public.division_id_seq
```

```
AS integer
```

```
START WITH 1
```

```
INCREMENT BY 1
```

```
NO MINVALUE
```

```
NO MAXVALUE
```

```
CACHE 1;
```

```
ALTER SEQUENCE public.division_id_seq OWNER TO postgres;
```

```
--
```

```
-- TOC entry 3558 (class 0 OID 0)
```

```
-- Dependencies: 220
```

```
-- Name: division_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE public.division_id_seq OWNED BY public.division.id;
```

```
--
```

```
-- TOC entry 233 (class 1259 OID 66667)
```

```
-- Name: group; Type: TABLE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE TABLE public."group" (
```

```
    id integer NOT NULL,
```

```
    name character varying(50) NOT NULL,
```

```
    current_members integer NOT NULL,
```

```
    date_of_creation date NOT NULL,
```

```
    date_of_dissolution date,
```

```
    curriculum_id integer NOT NULL,
```

```
    CONSTRAINT check_current_amount CHECK (((current_members >= 0) AND (current_members <= 50))),
```

```
    CONSTRAINT check_date CHECK ((date_of_creation < date_of_dissolution))
```

```
);
```

```
ALTER TABLE public."group" OWNER TO postgres;
```

```
--
```

```
-- TOC entry 232 (class 1259 OID 66666)
```

```
-- Name: group_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE public.group_id_seq
```

```
AS integer

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;
```

```
ALTER SEQUENCE public.group_id_seq OWNER TO postgres;
```

```
--
```

```
-- TOC entry 3559 (class 0 OID 0)
```

```
-- Dependencies: 232
```

```
-- Name: group_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE public.group_id_seq OWNED BY public."group".id;
```

```
--
```

```
-- TOC entry 227 (class 1259 OID 66624)
```

```
-- Name: lecturer; Type: TABLE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE TABLE public.lecturer (
```

```
    id integer NOT NULL,
```

```
    full_name character varying(50) NOT NULL,
```

```
    date_of_birth date NOT NULL,
```

```
    passport_number character varying(10) NOT NULL,
```

```
phone_number character varying(15) NOT NULL,  
division_id integer NOT NULL,  
CONSTRAINT check_passport_number CHECK (regexp_like(passport_number)::text, '^\\d{10}$'::text)),  
CONSTRAINT check_phone_number CHECK (regexp_like(phone_number)::text, '^\\+7\\d{10}$'::text))  
);
```

```
ALTER TABLE public.lecturer OWNER TO postgres;
```

```
--
```

```
-- TOC entry 226 (class 1259 OID 66623)
```

```
-- Name: lecturer_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE public.lecturer_id_seq
```

```
AS integer
```

```
START WITH 1
```

```
INCREMENT BY 1
```

```
NO MINVALUE
```

```
NO MAXVALUE
```

```
CACHE 1;
```

```
ALTER SEQUENCE public.lecturer_id_seq OWNER TO postgres;
```

```
--
```

```
-- TOC entry 3560 (class 0 OID 0)
```

```
-- Dependencies: 226
```

```
-- Name: lecturer_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres
```

--

ALTER SEQUENCE public.lecturer_id_seq OWNED BY public.lecturer.id;

--

-- TOC entry 219 (class 1259 OID 66573)

-- Name: place; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.place (

id integer NOT NULL,

address character varying(50) NOT NULL,

city character varying(50) NOT NULL

);

ALTER TABLE public.place OWNER TO postgres;

--

-- TOC entry 218 (class 1259 OID 66572)

-- Name: place_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

CREATE SEQUENCE public.place_id_seq

AS integer

START WITH 1

INCREMENT BY 1

NO MINVALUE

NO MAXVALUE

CACHE 1;

ALTER SEQUENCE public.place_id_seq OWNER TO postgres;

--

-- TOC entry 3561 (class 0 OID 0)

-- Dependencies: 218

-- Name: place_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.place_id_seq OWNED BY public.place.id;

--

-- TOC entry 225 (class 1259 OID 66611)

-- Name: program; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.program (

id integer NOT NULL,

name character varying(50) NOT NULL,

duration integer NOT NULL,

division_id integer NOT NULL,

type_of_graduation public.programtypeofgraduation NOT NULL,

CONSTRAINT check_duration CHECK (((duration > 0) AND (duration <= 6)))

);


```
ALTER TABLE public.program OWNER TO postgres;
```

```
--
```

```
-- TOC entry 224 (class 1259 OID 66610)
```

```
-- Name: program_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE public.program_id_seq
```

```
AS integer
```

```
START WITH 1
```

```
INCREMENT BY 1
```

```
NO MINVALUE
```

```
NO MAXVALUE
```

```
CACHE 1;
```

```
ALTER SEQUENCE public.program_id_seq OWNER TO postgres;
```

```
--
```

```
-- TOC entry 3562 (class 0 OID 0)
```

```
-- Dependencies: 224
```

```
-- Name: program_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE public.program_id_seq OWNED BY public.program.id;
```

```
--
```

```
-- TOC entry 237 (class 1259 OID 66699)
-- Name: schedule; Type: TABLE; Schema: public; Owner: postgres
--
```

```
CREATE TABLE public.schedule (
    id integer NOT NULL,
    date date NOT NULL,
    "time" time without time zone NOT NULL,
    audience_id integer NOT NULL,
    discipline_in_curriculum_id integer NOT NULL,
    lecturer_id integer NOT NULL,
    group_id integer NOT NULL,
    type public.scheduletypeenum NOT NULL
);
```

```
ALTER TABLE public.schedule OWNER TO postgres;
```

```
--
-- TOC entry 236 (class 1259 OID 66698)
-- Name: schedule_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres
--
```

```
CREATE SEQUENCE public.schedule_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
```

CACHE 1;

ALTER SEQUENCE public.schedule_id_seq OWNER TO postgres;

--

-- TOC entry 3563 (class 0 OID 0)

-- Dependencies: 236

-- Name: schedule_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

ALTER SEQUENCE public.schedule_id_seq OWNED BY public.schedule.id;

--

-- TOC entry 215 (class 1259 OID 66552)

-- Name: student; Type: TABLE; Schema: public; Owner: postgres

--

CREATE TABLE public.student (

id integer NOT NULL,

full_name character varying(50) NOT NULL,

date_of_birth date NOT NULL,

passport_number character varying(10) NOT NULL,

phone_number character varying(15) NOT NULL,

CONSTRAINT check_passport_number CHECK (regexp_like((passport_number)::text, '^d{10}\$'::text)),

CONSTRAINT check_phone_number CHECK (regexp_like((phone_number)::text, '^+7d{10}\$'::text))

);

```
ALTER TABLE public.student OWNER TO postgres;
```

```
--
```

```
-- TOC entry 214 (class 1259 OID 66551)
```

```
-- Name: student_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE public.student_id_seq
```

```
AS integer
```

```
START WITH 1
```

```
INCREMENT BY 1
```

```
NO MINVALUE
```

```
NO MAXVALUE
```

```
CACHE 1;
```

```
ALTER SEQUENCE public.student_id_seq OWNER TO postgres;
```

```
--
```

```
-- TOC entry 3564 (class 0 OID 0)
```

```
-- Dependencies: 214
```

```
-- Name: student_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE public.student_id_seq OWNED BY public.student.id;
```

```
--
```

-- TOC entry 235 (class 1259 OID 66681)

-- Name: student_to_group; Type: TABLE; Schema: public; Owner: postgres

--

```
CREATE TABLE public.student_to_group (  
    id integer NOT NULL,  
    student_id integer NOT NULL,  
    group_id integer NOT NULL,  
    type public.studenttogrouptype NOT NULL,  
    start_date date NOT NULL,  
    end_date date,  
    status public.studenttogroupstatus NOT NULL,  
    CONSTRAINT check_dates CHECK ((start_date <= end_date))  
);
```

```
ALTER TABLE public.student_to_group OWNER TO postgres;
```

--

-- TOC entry 234 (class 1259 OID 66680)

-- Name: student_to_group_id_seq; Type: SEQUENCE; Schema: public; Owner: postgres

--

```
CREATE SEQUENCE public.student_to_group_id_seq  
    AS integer  
    START WITH 1  
    INCREMENT BY 1  
    NO MINVALUE  
    NO MAXVALUE
```

CACHE 1;

```
ALTER SEQUENCE public.student_to_group_id_seq OWNER TO postgres;
```

--

-- TOC entry 3565 (class 0 OID 0)

-- Dependencies: 234

-- Name: student_to_group_id_seq; Type: SEQUENCE OWNED BY; Schema: public; Owner: postgres

--

```
ALTER SEQUENCE public.student_to_group_id_seq OWNED BY public.student_to_group.id;
```

--

-- TOC entry 3311 (class 2604 OID 66595)

-- Name: audience id; Type: DEFAULT; Schema: public; Owner: postgres

--

```
ALTER TABLE ONLY public.audience ALTER COLUMN id SET DEFAULT  
nextval('public.audience_id_seq'::regclass);
```

--

-- TOC entry 3319 (class 2604 OID 66729)

-- Name: certification id; Type: DEFAULT; Schema: public; Owner: postgres

--

```
ALTER TABLE ONLY public.certification ALTER COLUMN id SET DEFAULT
nextval('public.certification_id_seq'::regclass);
```

```
--
```

```
-- TOC entry 3314 (class 2604 OID 66641)
```

```
-- Name: curriculum id; Type: DEFAULT; Schema: public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public.curriculum ALTER COLUMN id SET DEFAULT
nextval('public.curriculum_id_seq'::regclass);
```

```
--
```

```
-- TOC entry 3308 (class 2604 OID 66566)
```

```
-- Name: discipline id; Type: DEFAULT; Schema: public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public.discipline ALTER COLUMN id SET DEFAULT
nextval('public.discipline_id_seq'::regclass);
```

```
--
```

```
-- TOC entry 3315 (class 2604 OID 66653)
```

```
-- Name: discipline_to_curriculum id; Type: DEFAULT; Schema: public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public.discipline_to_curriculum ALTER COLUMN id SET DEFAULT
nextval('public.discipline_to_curriculum_id_seq'::regclass);
```

--

-- TOC entry 3310 (class 2604 OID 66583)

-- Name: division id; Type: DEFAULT; Schema: public; Owner: postgres

--

```
ALTER TABLE ONLY public.division ALTER COLUMN id SET DEFAULT  
nextval('public.division_id_seq'::regclass);
```

--

-- TOC entry 3316 (class 2604 OID 66670)

-- Name: group id; Type: DEFAULT; Schema: public; Owner: postgres

--

```
ALTER TABLE ONLY public."group" ALTER COLUMN id SET DEFAULT  
nextval('public.group_id_seq'::regclass);
```

--

-- TOC entry 3313 (class 2604 OID 66627)

-- Name: lecturer id; Type: DEFAULT; Schema: public; Owner: postgres

--

```
ALTER TABLE ONLY public.lecturer ALTER COLUMN id SET DEFAULT  
nextval('public.lecturer_id_seq'::regclass);
```

--

-- TOC entry 3309 (class 2604 OID 66576)

-- Name: place id; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.place ALTER COLUMN id SET DEFAULT nextval('public.place_id_seq'::regclass);

--

-- TOC entry 3312 (class 2604 OID 66614)

-- Name: program id; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.program ALTER COLUMN id SET DEFAULT
nextval('public.program_id_seq'::regclass);

--

-- TOC entry 3318 (class 2604 OID 66702)

-- Name: schedule id; Type: DEFAULT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.schedule ALTER COLUMN id SET DEFAULT
nextval('public.schedule_id_seq'::regclass);

--

-- TOC entry 3307 (class 2604 OID 66555)

-- Name: student id; Type: DEFAULT; Schema: public; Owner: postgres

--

```
ALTER TABLE ONLY public.student ALTER COLUMN id SET DEFAULT
nextval('public.student_id_seq'::regclass);
```

```
--
```

```
-- TOC entry 3317 (class 2604 OID 66684)
```

```
-- Name: student_to_group id; Type: DEFAULT; Schema: public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public.student_to_group ALTER COLUMN id SET DEFAULT
nextval('public.student_to_group_id_seq'::regclass);
```

```
--
```

```
-- TOC entry 3530 (class 0 OID 66592)
```

```
-- Dependencies: 223
```

```
-- Data for Name: audience; Type: TABLE DATA; Schema: public; Owner: postgres
```

```
--
```

```
INSERT INTO public.audience (id, number, capacity, type, place_id, division_id) VALUES (1, 1, 100,
'computer_lab', 1, 1);
```

```
INSERT INTO public.audience (id, number, capacity, type, place_id, division_id) VALUES (2, 2, 200,
'computer_lab', 2, 2);
```

```
INSERT INTO public.audience (id, number, capacity, type, place_id, division_id) VALUES (3, 3, 50,
'computer_lab', 3, 3);
```

```
INSERT INTO public.audience (id, number, capacity, type, place_id, division_id) VALUES (4, 4, 200,
'computer_lab', 4, 4);
```

```
INSERT INTO public.audience (id, number, capacity, type, place_id, division_id) VALUES (5, 5, 152,
'lecture', 5, 5);
```

--

-- TOC entry 3546 (class 0 OID 66726)

-- Dependencies: 239

-- Data for Name: certification; Type: TABLE DATA; Schema: public; Owner: postgres

--

```
INSERT INTO public.certification (id, result, attempt, approve_date, lecturer_id, student_id,
discipline_in_curriculum_id) VALUES (1, 5, 1, '2024-01-22 10:12:16.604019', 1, 1, 1);
```

```
INSERT INTO public.certification (id, result, attempt, approve_date, lecturer_id, student_id,
discipline_in_curriculum_id) VALUES (2, 5, 1, '2024-01-22 10:12:16.604019', 2, 2, 2);
```

```
INSERT INTO public.certification (id, result, attempt, approve_date, lecturer_id, student_id,
discipline_in_curriculum_id) VALUES (3, 5, 1, '2024-01-22 10:12:16.604019', 3, 3, 3);
```

--

-- TOC entry 3536 (class 0 OID 66638)

-- Dependencies: 229

-- Data for Name: curriculum; Type: TABLE DATA; Schema: public; Owner: postgres

--

```
INSERT INTO public.curriculum (id, "CTP", contract, contract_price, recruitment_year, program_id)
VALUES (1, 10, 50, 100000, 2020, 1);
```

```
INSERT INTO public.curriculum (id, "CTP", contract, contract_price, recruitment_year, program_id)
VALUES (2, 20, 40, 130000, 2020, 2);
```

```
INSERT INTO public.curriculum (id, "CTP", contract, contract_price, recruitment_year, program_id)
VALUES (3, 30, 40, 150000, 2020, 3);
```

--

-- TOC entry 3524 (class 0 OID 66563)

-- Dependencies: 217

-- Data for Name: discipline; Type: TABLE DATA; Schema: public; Owner: postgres

--

INSERT INTO public.discipline (id, name, type_of_certification, type, duration) VALUES (1, 'discipline1', 'exam', 'lecture', 1);

INSERT INTO public.discipline (id, name, type_of_certification, type, duration) VALUES (2, 'discipline1', 'exam', 'practice', 1);

INSERT INTO public.discipline (id, name, type_of_certification, type, duration) VALUES (3, 'discipline2', 'zachet', 'lecture', 1);

INSERT INTO public.discipline (id, name, type_of_certification, type, duration) VALUES (4, 'discipline2', 'zachet', 'practice', 1);

--

-- TOC entry 3538 (class 0 OID 66650)

-- Dependencies: 231

-- Data for Name: discipline_to_curriculum; Type: TABLE DATA; Schema: public; Owner: postgres

--

INSERT INTO public.discipline_to_curriculum (id, semester, discipline_id, curriculum_id) VALUES (1, '6', 1, 1);

INSERT INTO public.discipline_to_curriculum (id, semester, discipline_id, curriculum_id) VALUES (2, '4', 2, 1);

INSERT INTO public.discipline_to_curriculum (id, semester, discipline_id, curriculum_id) VALUES (3, '3', 3, 2);

INSERT INTO public.discipline_to_curriculum (id, semester, discipline_id, curriculum_id) VALUES (4, '7', 4, 2);

--

-- TOC entry 3528 (class 0 OID 66580)

-- Dependencies: 221

-- Data for Name: division; Type: TABLE DATA; Schema: public; Owner: postgres

--

INSERT INTO public.division (id, name, place_id) VALUES (1, 'division1', 1);

INSERT INTO public.division (id, name, place_id) VALUES (2, 'division2', 2);

INSERT INTO public.division (id, name, place_id) VALUES (3, 'division3', 3);

INSERT INTO public.division (id, name, place_id) VALUES (4, 'division4', 4);

INSERT INTO public.division (id, name, place_id) VALUES (5, 'division5', 5);

--

-- TOC entry 3540 (class 0 OID 66667)

-- Dependencies: 233

-- Data for Name: group; Type: TABLE DATA; Schema: public; Owner: postgres

--

INSERT INTO public."group" (id, name, current_members, date_of_creation, date_of_dissolution, curriculum_id) VALUES (1, 'group1', 17, '2023-09-01', NULL, 1);

INSERT INTO public."group" (id, name, current_members, date_of_creation, date_of_dissolution, curriculum_id) VALUES (2, 'group2', 9, '2023-09-01', NULL, 3);

INSERT INTO public."group" (id, name, current_members, date_of_creation, date_of_dissolution, curriculum_id) VALUES (3, 'group3', 25, '2022-09-01', '2023-07-01', 2);

INSERT INTO public."group" (id, name, current_members, date_of_creation, date_of_dissolution, curriculum_id) VALUES (4, 'group4', 7, '2023-09-01', NULL, 2);

--

-- TOC entry 3534 (class 0 OID 66624)

-- Dependencies: 227

-- Data for Name: lecturer; Type: TABLE DATA; Schema: public; Owner: postgres

--

```
INSERT INTO public.lecturer (id, full_name, date_of_birth, passport_number, phone_number,
division_id) VALUES (1, 'lecturer1', '1999-01-01', '1234567890', '+77529123456', 1);
```

```
INSERT INTO public.lecturer (id, full_name, date_of_birth, passport_number, phone_number,
division_id) VALUES (2, 'lecturer2', '1999-01-01', '2345678901', '+77529123457', 2);
```

```
INSERT INTO public.lecturer (id, full_name, date_of_birth, passport_number, phone_number,
division_id) VALUES (3, 'lecturer3', '1999-01-01', '3456789012', '+77529123467', 3);
```

```
INSERT INTO public.lecturer (id, full_name, date_of_birth, passport_number, phone_number,
division_id) VALUES (4, 'lecturer4', '1999-01-01', '4567890123', '+77529123567', 4);
```

```
INSERT INTO public.lecturer (id, full_name, date_of_birth, passport_number, phone_number,
division_id) VALUES (5, 'lecturer5', '1999-01-01', '5678901234', '+77529124567', 5);
```

--

-- TOC entry 3526 (class 0 OID 66573)

-- Dependencies: 219

-- Data for Name: place; Type: TABLE DATA; Schema: public; Owner: postgres

--

```
INSERT INTO public.place (id, address, city) VALUES (1, 'Lenina 1', 'Saint-Petersburg');
```

```
INSERT INTO public.place (id, address, city) VALUES (2, 'Lenina 2', 'Saint-Petersburg');
```

```
INSERT INTO public.place (id, address, city) VALUES (3, 'Lenina 3', 'Saint-Petersburg');
```

```
INSERT INTO public.place (id, address, city) VALUES (4, 'Lenina 4', 'Saint-Petersburg');
```

```
INSERT INTO public.place (id, address, city) VALUES (5, 'Lenina 5', 'Saint-Petersburg');
```

--

-- TOC entry 3532 (class 0 OID 66611)

-- Dependencies: 225

-- Data for Name: program; Type: TABLE DATA; Schema: public; Owner: postgres

--

```
INSERT INTO public.program (id, name, duration, division_id, type_of_graduation) VALUES (1, 'program1', 4, 1, 'bachelor');
```

```
INSERT INTO public.program (id, name, duration, division_id, type_of_graduation) VALUES (2, 'program2', 2, 2, 'master');
```

```
INSERT INTO public.program (id, name, duration, division_id, type_of_graduation) VALUES (3, 'program3', 3, 3, 'master');
```

--

-- TOC entry 3544 (class 0 OID 66699)

-- Dependencies: 237

-- Data for Name: schedule; Type: TABLE DATA; Schema: public; Owner: postgres

--

```
INSERT INTO public.schedule (id, date, "time", audience_id, discipline_in_curriculum_id, lecturer_id, group_id, type) VALUES (1, '2024-01-01', '10:00:00', 1, 1, 1, 1, 'lecture');
```

```
INSERT INTO public.schedule (id, date, "time", audience_id, discipline_in_curriculum_id, lecturer_id, group_id, type) VALUES (2, '2023-01-02', '11:00:00', 2, 2, 2, 1, 'practice');
```

```
INSERT INTO public.schedule (id, date, "time", audience_id, discipline_in_curriculum_id, lecturer_id, group_id, type) VALUES (3, '2023-12-25', '12:00:00', 3, 3, 3, 2, 'lecture');
```

```
INSERT INTO public.schedule (id, date, "time", audience_id, discipline_in_curriculum_id, lecturer_id, group_id, type) VALUES (4, '2024-01-04', '13:00:00', 4, 4, 4, 2, 'practice');
```

--

-- TOC entry 3522 (class 0 OID 66552)

-- Dependencies: 215

-- Data for Name: student; Type: TABLE DATA; Schema: public; Owner: postgres

--

```
INSERT INTO public.student (id, full_name, date_of_birth, passport_number, phone_number) VALUES
(1, 'Ivanov Ivan Ivanovich', '1999-01-01', '1234567890', '+77529123456');
```

```
INSERT INTO public.student (id, full_name, date_of_birth, passport_number, phone_number) VALUES
(2, 'Petrov Petr Petrovich', '1999-01-01', '2345678901', '+77529123457');
```

```
INSERT INTO public.student (id, full_name, date_of_birth, passport_number, phone_number) VALUES
(3, 'Sidorov Sidor Sidorovich', '1999-01-01', '3456789012', '+77529123457');
```

```
INSERT INTO public.student (id, full_name, date_of_birth, passport_number, phone_number) VALUES
(4, 'Pupkin Vasya Vasilievich', '1999-01-01', '4567890123', '+77529123567');
```

```
INSERT INTO public.student (id, full_name, date_of_birth, passport_number, phone_number) VALUES
(5, 'Ivanova Anna Ivanovna', '1999-01-01', '5678901234', '+77529123467');
```

```
INSERT INTO public.student (id, full_name, date_of_birth, passport_number, phone_number) VALUES
(6, 'Petrova Maria Petrovna', '1999-01-01', '6789012345', '+77529123567');
```

```
INSERT INTO public.student (id, full_name, date_of_birth, passport_number, phone_number) VALUES
(7, 'Sidorova Olga Sidorovna', '1999-01-01', '7890123456', '+77529123467');
```

```
INSERT INTO public.student (id, full_name, date_of_birth, passport_number, phone_number) VALUES
(8, 'Pupkina Vasilisa Vasilievna', '1999-01-01', '8901234567', '+77529123467');
```

```
INSERT INTO public.student (id, full_name, date_of_birth, passport_number, phone_number) VALUES
(9, 'Pupkin Vasilis Vasiliev', '1999-01-01', '8901234576', '+77529123476');
```

```
INSERT INTO public.student (id, full_name, date_of_birth, passport_number, phone_number) VALUES
(10, 'Pupin Vasilis Vasiliev', '1999-02-01', '8901234598', '+77529123498');
```

--

-- TOC entry 3542 (class 0 OID 66681)

-- Dependencies: 235

-- Data for Name: student_to_group; Type: TABLE DATA; Schema: public; Owner: postgres

--

```
INSERT INTO public.student_to_group (id, student_id, group_id, type, start_date, end_date, status)
VALUES (1, 1, 1, 'tuition_free', '2020-01-01', NULL, 'studying');
```

```
INSERT INTO public.student_to_group (id, student_id, group_id, type, start_date, end_date, status)
VALUES (2, 2, 1, 'tuition_free', '2020-01-01', NULL, 'studying');
```



```
INSERT INTO public.student_to_group (id, student_id, group_id, type, start_date, end_date, status)
VALUES (3, 3, 1, 'contract', '2020-01-01', NULL, 'studying');
```

```
INSERT INTO public.student_to_group (id, student_id, group_id, type, start_date, end_date, status)
VALUES (4, 4, 1, 'tuition_free', '2020-01-01', NULL, 'studying');
```

```
INSERT INTO public.student_to_group (id, student_id, group_id, type, start_date, end_date, status)
VALUES (5, 5, 2, 'contract', '2020-01-01', NULL, 'studying');
```

```
INSERT INTO public.student_to_group (id, student_id, group_id, type, start_date, end_date, status)
VALUES (6, 6, 2, 'contract', '2020-01-01', NULL, 'studying');
```

```
INSERT INTO public.student_to_group (id, student_id, group_id, type, start_date, end_date, status)
VALUES (7, 7, 2, 'contract', '2020-01-01', NULL, 'studying');
```

```
INSERT INTO public.student_to_group (id, student_id, group_id, type, start_date, end_date, status)
VALUES (8, 8, 2, 'tuition_free', '2020-01-01', NULL, 'studying');
```

```
INSERT INTO public.student_to_group (id, student_id, group_id, type, start_date, end_date, status)
VALUES (9, 9, 4, 'contract', '2023-01-01', NULL, 'studying');
```

```
--
```

```
-- TOC entry 3566 (class 0 OID 0)
```

```
-- Dependencies: 222
```

```
-- Name: audience_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
```

```
--
```

```
SELECT pg_catalog.setval('public.audience_id_seq', 5, true);
```

```
--
```

```
-- TOC entry 3567 (class 0 OID 0)
```

```
-- Dependencies: 238
```

```
-- Name: certification_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
```

```
--
```

```
SELECT pg_catalog.setval('public.certification_id_seq', 3, true);
```

```
--
```

```
-- TOC entry 3568 (class 0 OID 0)
```

```
-- Dependencies: 228
```

```
-- Name: curriculum_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
```

```
--
```

```
SELECT pg_catalog.setval('public.curriculum_id_seq', 3, true);
```

```
--
```

```
-- TOC entry 3569 (class 0 OID 0)
```

```
-- Dependencies: 216
```

```
-- Name: discipline_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
```

```
--
```

```
SELECT pg_catalog.setval('public.discipline_id_seq', 4, true);
```

```
--
```

```
-- TOC entry 3570 (class 0 OID 0)
```

```
-- Dependencies: 230
```

```
-- Name: discipline_to_curriculum_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
```

```
--
```

```
SELECT pg_catalog.setval('public.discipline_to_curriculum_id_seq', 4, true);
```

```
--  
  
-- TOC entry 3571 (class 0 OID 0)  
  
-- Dependencies: 220  
  
-- Name: division_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres  
  
--
```

```
SELECT pg_catalog.setval('public.division_id_seq', 5, true);
```

```
--  
  
-- TOC entry 3572 (class 0 OID 0)  
  
-- Dependencies: 232  
  
-- Name: group_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres  
  
--
```

```
SELECT pg_catalog.setval('public.group_id_seq', 4, true);
```

```
--  
  
-- TOC entry 3573 (class 0 OID 0)  
  
-- Dependencies: 226  
  
-- Name: lecturer_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres  
  
--
```

```
SELECT pg_catalog.setval('public.lecturer_id_seq', 5, true);
```

```
--
```

```

-- TOC entry 3574 (class 0 OID 0)

-- Dependencies: 218

-- Name: place_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
--

SELECT pg_catalog.setval('public.place_id_seq', 5, true);

--

-- TOC entry 3575 (class 0 OID 0)

-- Dependencies: 224

-- Name: program_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
--

SELECT pg_catalog.setval('public.program_id_seq', 3, true);

--

-- TOC entry 3576 (class 0 OID 0)

-- Dependencies: 236

-- Name: schedule_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres
--

SELECT pg_catalog.setval('public.schedule_id_seq', 4, true);

--

-- TOC entry 3577 (class 0 OID 0)

-- Dependencies: 214

```

-- Name: student_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg_catalog.setval('public.student_id_seq', 10, true);

--

-- TOC entry 3578 (class 0 OID 0)

-- Dependencies: 234

-- Name: student_to_group_id_seq; Type: SEQUENCE SET; Schema: public; Owner: postgres

--

SELECT pg_catalog.setval('public.student_to_group_id_seq', 9, true);

--

-- TOC entry 3344 (class 2606 OID 66599)

-- Name: audience audience_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.audience

ADD CONSTRAINT audience_pkey PRIMARY KEY (id);

--

-- TOC entry 3360 (class 2606 OID 66733)

-- Name: certification certification_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

```
ALTER TABLE ONLY public.certification
```

```
ADD CONSTRAINT certification_pkey PRIMARY KEY (id);
```

```
--
```

```
-- TOC entry 3350 (class 2606 OID 66643)
```

```
-- Name: curriculum curriculum_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public.curriculum
```

```
ADD CONSTRAINT curriculum_pkey PRIMARY KEY (id);
```

```
--
```

```
-- TOC entry 3338 (class 2606 OID 66571)
```

```
-- Name: discipline discipline_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public.discipline
```

```
ADD CONSTRAINT discipline_pkey PRIMARY KEY (id);
```

```
--
```

```
-- TOC entry 3352 (class 2606 OID 66655)
```

```
-- Name: discipline_to_curriculum discipline_to_curriculum_pkey; Type: CONSTRAINT; Schema: public;  
Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY public.discipline_to_curriculum
```

```

ADD CONSTRAINT discipline_to_curriculum_pkey PRIMARY KEY (id);

--

-- TOC entry 3342 (class 2606 OID 66585)
-- Name: division division_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.division

    ADD CONSTRAINT division_pkey PRIMARY KEY (id);

--

-- TOC entry 3354 (class 2606 OID 66674)
-- Name: group group_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public."group"

    ADD CONSTRAINT group_pkey PRIMARY KEY (id);

--

-- TOC entry 3348 (class 2606 OID 66631)
-- Name: lecturer lecturer_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.lecturer

    ADD CONSTRAINT lecturer_pkey PRIMARY KEY (id);

```

--

-- TOC entry 3340 (class 2606 OID 66578)

-- Name: place place_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.place

ADD CONSTRAINT place_pkey PRIMARY KEY (id);

--

-- TOC entry 3346 (class 2606 OID 66617)

-- Name: program program_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.program

ADD CONSTRAINT program_pkey PRIMARY KEY (id);

--

-- TOC entry 3358 (class 2606 OID 66704)

-- Name: schedule schedule_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.schedule

ADD CONSTRAINT schedule_pkey PRIMARY KEY (id);

--

-- TOC entry 3334 (class 2606 OID 66561)
-- Name: student student_passport_number_key; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.student
ADD CONSTRAINT student_passport_number_key UNIQUE (passport_number);

--
-- TOC entry 3336 (class 2606 OID 66559)
-- Name: student student_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.student
ADD CONSTRAINT student_pkey PRIMARY KEY (id);

--
-- TOC entry 3356 (class 2606 OID 66687)
-- Name: student_to_group student_to_group_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres
--

ALTER TABLE ONLY public.student_to_group
ADD CONSTRAINT student_to_group_pkey PRIMARY KEY (id);

--
-- TOC entry 3362 (class 2606 OID 66605)

-- Name: audience_audience_division_id_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.audience

ADD CONSTRAINT audience_division_id_fkey FOREIGN KEY (division_id) REFERENCES
public.division(id);

--

-- TOC entry 3363 (class 2606 OID 66600)

-- Name: audience_audience_place_id_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.audience

ADD CONSTRAINT audience_place_id_fkey FOREIGN KEY (place_id) REFERENCES public.place(id);

--

-- TOC entry 3376 (class 2606 OID 66744)

-- Name: certification_certification_discipline_in_curriculum_id_fkey; Type: FK CONSTRAINT; Schema:
public; Owner: postgres

--

ALTER TABLE ONLY public.certification

ADD CONSTRAINT certification_discipline_in_curriculum_id_fkey FOREIGN KEY
(discipline_in_curriculum_id) REFERENCES public.discipline_to_curriculum(id);

--

-- TOC entry 3377 (class 2606 OID 66734)

-- Name: certification certification_lecturer_id_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.certification

ADD CONSTRAINT certification_lecturer_id_fkey FOREIGN KEY (lecturer_id) REFERENCES public.lecturer(id);

--

-- TOC entry 3378 (class 2606 OID 66739)

-- Name: certification certification_student_id_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.certification

ADD CONSTRAINT certification_student_id_fkey FOREIGN KEY (student_id) REFERENCES public.student_to_group(id);

--

-- TOC entry 3366 (class 2606 OID 66644)

-- Name: curriculum curriculum_program_id_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.curriculum

ADD CONSTRAINT curriculum_program_id_fkey FOREIGN KEY (program_id) REFERENCES public.program(id);

```
--  
  
-- TOC entry 3367 (class 2606 OID 66661)  
  
-- Name: discipline_to_curriculum discipline_to_curriculum_curriculum_id_fkey; Type: FK CONSTRAINT;  
Schema: public; Owner: postgres  
  
--
```

```
ALTER TABLE ONLY public.discipline_to_curriculum  
  
    ADD CONSTRAINT discipline_to_curriculum_curriculum_id_fkey FOREIGN KEY (curriculum_id)  
    REFERENCES public.curriculum(id);
```

```
--  
  
-- TOC entry 3368 (class 2606 OID 66656)  
  
-- Name: discipline_to_curriculum discipline_to_curriculum_discipline_id_fkey; Type: FK CONSTRAINT;  
Schema: public; Owner: postgres  
  
--
```

```
ALTER TABLE ONLY public.discipline_to_curriculum  
  
    ADD CONSTRAINT discipline_to_curriculum_discipline_id_fkey FOREIGN KEY (discipline_id)  
    REFERENCES public.discipline(id);
```

```
--  
  
-- TOC entry 3361 (class 2606 OID 66586)  
  
-- Name: division division_place_id_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres  
  
--
```

```
ALTER TABLE ONLY public.division  
  
    ADD CONSTRAINT division_place_id_fkey FOREIGN KEY (place_id) REFERENCES public.place(id);
```

--

-- TOC entry 3369 (class 2606 OID 66675)

-- Name: group_group_curriculum_id_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public."group"

ADD CONSTRAINT group_curriculum_id_fkey FOREIGN KEY (curriculum_id) REFERENCES
public.curriculum(id);

--

-- TOC entry 3365 (class 2606 OID 66632)

-- Name: lecturer_lecturer_division_id_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.lecturer

ADD CONSTRAINT lecturer_division_id_fkey FOREIGN KEY (division_id) REFERENCES
public.division(id);

--

-- TOC entry 3364 (class 2606 OID 66618)

-- Name: program_program_division_id_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.program

ADD CONSTRAINT program_division_id_fkey FOREIGN KEY (division_id) REFERENCES
public.division(id);

```
--  
  
-- TOC entry 3372 (class 2606 OID 66705)  
  
-- Name: schedule schedule_audience_id_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres  
  
--
```

```
ALTER TABLE ONLY public.schedule
```

```
    ADD CONSTRAINT schedule_audience_id_fkey FOREIGN KEY (audience_id) REFERENCES  
public.audience(id);
```

```
--  
  
-- TOC entry 3373 (class 2606 OID 66710)  
  
-- Name: schedule schedule_discipline_in_curriculum_id_fkey; Type: FK CONSTRAINT; Schema: public;  
Owner: postgres  
  
--
```

```
ALTER TABLE ONLY public.schedule
```

```
    ADD CONSTRAINT schedule_discipline_in_curriculum_id_fkey FOREIGN KEY  
(discipline_in_curriculum_id) REFERENCES public.discipline_to_curriculum(id);
```

```
--  
  
-- TOC entry 3374 (class 2606 OID 66720)  
  
-- Name: schedule schedule_group_id_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres  
  
--
```

```
ALTER TABLE ONLY public.schedule
```

```
    ADD CONSTRAINT schedule_group_id_fkey FOREIGN KEY (group_id) REFERENCES public."group"(id);
```

--

-- TOC entry 3375 (class 2606 OID 66715)

-- Name: schedule schedule_lecturer_id_fkey; Type: FK CONSTRAINT; Schema: public; Owner: postgres

--

ALTER TABLE ONLY public.schedule

ADD CONSTRAINT schedule_lecturer_id_fkey FOREIGN KEY (lecturer_id) REFERENCES
public.lecturer(id);

--

-- TOC entry 3370 (class 2606 OID 66693)

-- Name: student_to_group student_to_group_group_id_fkey; Type: FK CONSTRAINT; Schema: public;
Owner: postgres

--

ALTER TABLE ONLY public.student_to_group

ADD CONSTRAINT student_to_group_group_id_fkey FOREIGN KEY (group_id) REFERENCES
public."group"(id);

--

-- TOC entry 3371 (class 2606 OID 66688)

-- Name: student_to_group student_to_group_student_id_fkey; Type: FK CONSTRAINT; Schema: public;
Owner: postgres

--

ALTER TABLE ONLY public.student_to_group

ADD CONSTRAINT student_to_group_student_id_fkey FOREIGN KEY (student_id) REFERENCES
public.student(id);

-- Completed on 2024-01-22 13:13:13 MSK

--

-- PostgreSQL database dump complete

--

Вывод

В данной лабораторной работе мы создали базу данных с использованием pgAdmin 4. В базе данных были созданы схема и таблицы, установлены ограничения на данные: Primary Key, Unique, Check, Foreign Key. БД была заполнена рабочими данными с помощью запросов к базе. Была создана резервная копия БД, также БД была восстановлена. В итоге мы научились пользоваться pgAdmin 4 и создавать базы данных.