Министерство науки и высшего образования Российской Федерации
федеральное государственное автономное образовательное учреждение высшего образования
«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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Оглавление

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.

Выполнение

Вариант 16. БД «Спортивный клуб»

Схема логической модели базы данных, сгенерированная в Generate ERD указана на рисунке 1.

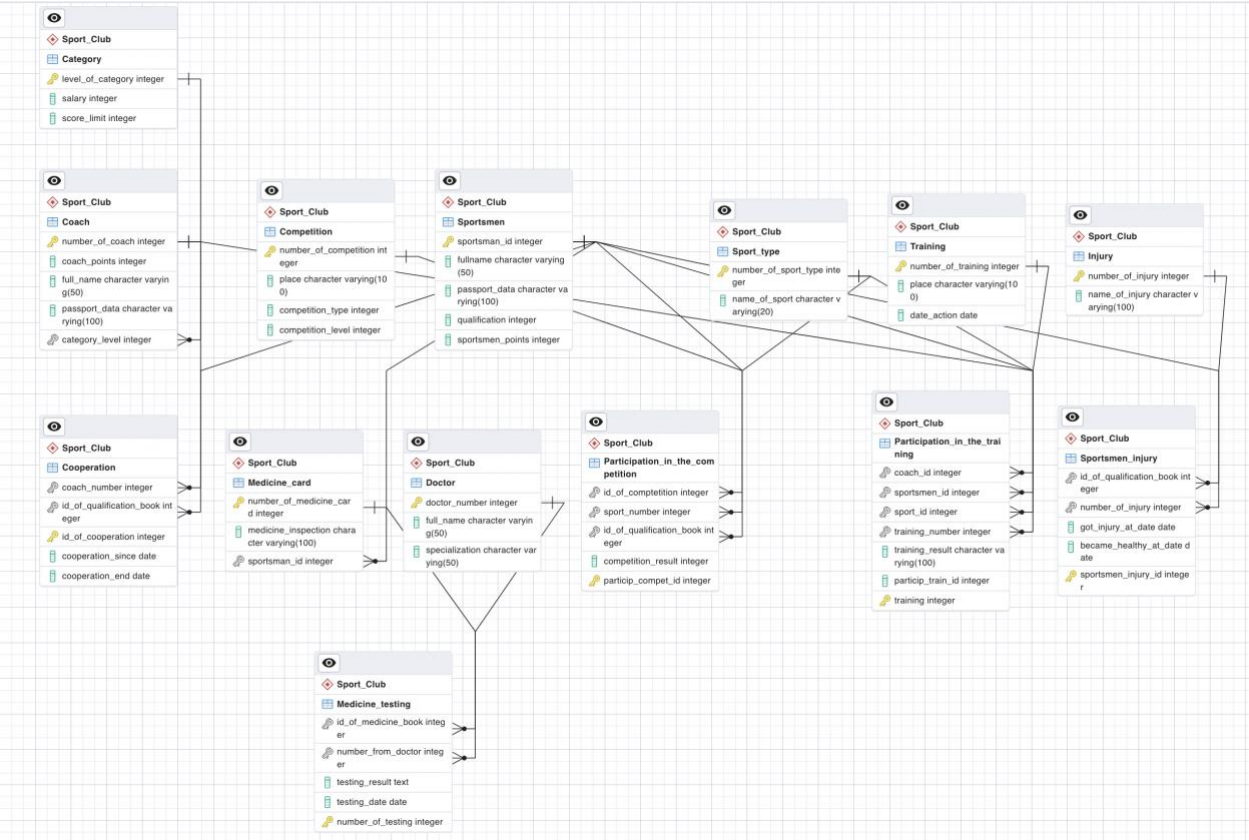

Рисунок 1 – Схема логической модели базы данных.

Листинг кода дампа приведен ниже в листинге 1:

Листинг 1 – Описание атрибутов сущностей

```
--
-- PostgreSQL database dump
--


-- Dumped from database version 15.4 (Homebrew)
-- Dumped by pg_dump version 16.0


-- Started on 2023-11-13 12:55:25 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 5 (class 2615 OID 16404)
-- Name: Sport_Club; Type: SCHEMA; Schema: -; Owner: postgres
--

CREATE SCHEMA "Sport_Club";


ALTER SCHEMA "Sport_Club" OWNER TO postgres;

SET default_tablespace = '';

SET default_table_access_method = heap;

--
-- TOC entry 214 (class 1259 OID 16405)
-- Name: Category; Type: TABLE; Schema: Sport_Club; Owner: postgres
--

CREATE TABLE "Sport_Club"."Category" (
    level_of_category integer NOT NULL,
    salary integer NOT NULL,
    score_limit integer NOT NULL
);


ALTER TABLE "Sport_Club"."Category" OWNER TO postgres;

--
-- TOC entry 221 (class 1259 OID 16481)
-- Name: Coach; Type: TABLE; Schema: Sport_Club; Owner: postgres
--

CREATE TABLE "Sport_Club"."Coach" (
    number_of_coach integer NOT NULL,
    coach_points integer DEFAULT 0 NOT NULL,
    full_name character varying(50) NOT NULL,
    passport_data character varying(100) NOT NULL,
    category_level integer NOT NULL,
```

```
    CONSTRAINT coach_points_check1 CHECK ((coach_points >= 0)),
    CONSTRAINT coach_points_check2 CHECK ((coach_points <= 1000))
);


ALTER TABLE "Sport_Club"."Coach" OWNER TO postgres;

--
-- TOC entry 218 (class 1259 OID 16466)
-- Name: Competition; Type: TABLE; Schema: Sport_Club; Owner: postgres
--

CREATE TABLE "Sport_Club"."Competition" (
    number_of_competition integer NOT NULL,
    place character varying(100) NOT NULL,
    competition_type integer NOT NULL,
    competition_level integer NOT NULL,
    CONSTRAINT competition_level CHECK ((competition_level >= 0)),
    CONSTRAINT competition_type CHECK ((competition_type >= 0))
);


ALTER TABLE "Sport_Club"."Competition" OWNER TO postgres;

--
-- TOC entry 226 (class 1259 OID 16578)
-- Name: Cooperation; Type: TABLE; Schema: Sport_Club; Owner: postgres
--

CREATE TABLE "Sport_Club"."Cooperation" (
    coach_number integer NOT NULL,
    id_of_qualification_book integer NOT NULL,
    id_of_cooperation integer NOT NULL,
    cooperation_since date NOT NULL,
    cooperation_end date NOT NULL
);


ALTER TABLE "Sport_Club"."Cooperation" OWNER TO postgres;

--
-- TOC entry 219 (class 1259 OID 16473)
```

```
-- Name: Doctor; Type: TABLE; Schema: Sport_Club; Owner: postgres
--

CREATE TABLE "Sport_Club"."Doctor" (
    doctor_number integer NOT NULL,
    full_name character varying(50) NOT NULL,
    specialization character varying(50) NOT NULL
);


ALTER TABLE "Sport_Club"."Doctor" OWNER TO postgres;

--
-- TOC entry 217 (class 1259 OID 16461)
-- Name: Injury; Type: TABLE; Schema: Sport_Club; Owner: postgres
--

CREATE TABLE "Sport_Club"."Injury" (
    number_of_injury integer NOT NULL,
    name_of_injury character varying(100) NOT NULL
);


ALTER TABLE "Sport_Club"."Injury" OWNER TO postgres;

--
-- TOC entry 220 (class 1259 OID 16476)
-- Name: Medicine_card; Type: TABLE; Schema: Sport_Club; Owner: postgres
--

CREATE TABLE "Sport_Club"."Medicine_card" (
    number_of_medicine_card integer NOT NULL,
    medicine_inspection character varying(100) NOT NULL,
    sportsman_id integer
);


ALTER TABLE "Sport_Club"."Medicine_card" OWNER TO postgres;

--
-- TOC entry 227 (class 1259 OID 16595)
-- Name: Medicine_testing; Type: TABLE; Schema: Sport_Club; Owner: postgres
```

```
--

CREATE TABLE "Sport_Club"."Medicine_testing" (
    id_of_medicine_book integer NOT NULL,
    number_from_doctor integer NOT NULL,
    testing_result text NOT NULL,
    testing_date date NOT NULL,
    number_of_testing integer NOT NULL
);


ALTER TABLE "Sport_Club"."Medicine_testing" OWNER TO postgres;

--
-- TOC entry 225 (class 1259 OID 16560)
-- Name: Participation_in_the_competition ; Type: TABLE; Schema: Sport_Club; Owner: postgres
--

CREATE TABLE "Sport_Club"."Participation_in_the_competition " (
    id_of_comptetition integer NOT NULL,
    sport_number integer NOT NULL,
    id_of_qualification_book integer NOT NULL,
    competition_result integer NOT NULL,
    particip_compet_id integer NOT NULL
);


ALTER TABLE "Sport_Club"."Participation_in_the_competition " OWNER TO postgres;

--
-- TOC entry 222 (class 1259 OID 16510)
-- Name: Participation_in_the_training; Type: TABLE; Schema: Sport_Club; Owner: postgres
--

CREATE TABLE "Sport_Club"."Participation_in_the_training" (
    coach_id integer NOT NULL,
    sportsmen_id integer NOT NULL,
    sport_id integer NOT NULL,
    training_number integer NOT NULL,
    training_result character varying(100) NOT NULL,
    particip_train_id integer DEFAULT 0 NOT NULL,
    training integer NOT NULL
```

```
);


ALTER TABLE "Sport_Club"."Participation_in_the_training" OWNER TO postgres;

--
-- TOC entry 228 (class 1259 OID 16694)
-- Name: Participation_in_the_training_training_seq; Type: SEQUENCE; Schema: Sport_Club; Owner: postgres
--

CREATE SEQUENCE "Sport_Club"."Participation_in_the_training_training_seq"
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;


ALTER SEQUENCE "Sport_Club"."Participation_in_the_training_training_seq" OWNER TO postgres;

--
-- TOC entry 3751 (class 0 OID 0)
-- Dependencies: 228
-- Name: Participation_in_the_training_training_seq; Type: SEQUENCE OWNED BY; Schema: Sport_Club; Owner: postgres
--

ALTER SEQUENCE "Sport_Club"."Participation_in_the_training_training_seq" OWNED BY "Sport_Club"."Participation_in_the_training".training;


--
-- TOC entry 216 (class 1259 OID 16456)
-- Name: Sport_type; Type: TABLE; Schema: Sport_Club; Owner: postgres
--

CREATE TABLE "Sport_Club"."Sport_type" (
    number_of_sport_type integer NOT NULL,
    name_of_sport character varying(20) NOT NULL
);
```

```
ALTER TABLE "Sport_Club"."Sport_type" OWNER TO postgres;


--
-- TOC entry 223 (class 1259 OID 16530)
-- Name: Sportsmen; Type: TABLE; Schema: Sport_Club; Owner: postgres
--

CREATE TABLE "Sport_Club"."Sportsmen" (
    sportsman_id integer NOT NULL,
    fullname character varying(50) NOT NULL,
    passport_data character varying(100) NOT NULL,
    qualification integer NOT NULL,
    sportsmen_points integer DEFAULT 0 NOT NULL,
    CONSTRAINT qualification_check CHECK ((qualification >= 0)),
    CONSTRAINT sportsmen_points_check1 CHECK ((sportsmen_points >= 0)),
    CONSTRAINT sportsmen_points_check2 CHECK ((sportsmen_points <= 1000))
);


ALTER TABLE "Sport_Club"."Sportsmen" OWNER TO postgres;


--
-- TOC entry 224 (class 1259 OID 16544)
-- Name: Sportsmen_injury; Type: TABLE; Schema: Sport_Club; Owner: postgres
--

CREATE TABLE "Sport_Club"."Sportsmen_injury" (
    id_of_qualification_book integer NOT NULL,
    number_of_injury integer NOT NULL,
    got_injury_at_date date NOT NULL,
    became_healthy_at_date date NOT NULL,
    sportsmen_injury_id integer NOT NULL
);


ALTER TABLE "Sport_Club"."Sportsmen_injury" OWNER TO postgres;


--
-- TOC entry 215 (class 1259 OID 16450)
-- Name: Training; Type: TABLE; Schema: Sport_Club; Owner: postgres
--
```

```
CREATE TABLE "Sport_Club"."Training" (
    number_of_training integer NOT NULL,
    place character varying(100) NOT NULL,
    date_action date NOT NULL,
    CONSTRAINT number_of_training_check CHECK ((number_of_training > 0))
);


ALTER TABLE "Sport_Club"."Training" OWNER TO postgres;

--
-- TOC entry 3515 (class 2604 OID 16695)
-- Name: Participation_in_the_training training; Type: DEFAULT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Participation_in_the_training" ALTER COLUMN training SET DEFAULT
nextval('"Sport_Club"."Participation_in_the_training_training_seq"'::regclass);



--
-- TOC entry 3731 (class 0 OID 16405)
-- Dependencies: 214
-- Data for Name: Category; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--

COPY "Sport_Club"."Category" (level_of_category, salary, score_limit) FROM stdin;
1   50000   100
2   60000   200
3   70000   300
4   80000   400
5   90000   500
6   100000  600
7   110000  700
8   120000  800
9   130000  900
10  140000  1000
\.



--
-- TOC entry 3738 (class 0 OID 16481)
-- Dependencies: 221
```

```
-- Data for Name: Coach; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--

COPY "Sport_Club"."Coach" (number_of_coach, coach_points, full_name, passport_data, category_level) FROM stdin;
1	100	Иванов Иван Иванович	1234567890	3
2	110	Петрова Марина Александровна	2345678901	2
3	120	Сидоров Алексей Петрович	3456789012	4
4	130	Михайлова Елена Сергеевна	4567890123	2
5	140	Козлов Сергей Владимирович	5678901234	3
6	150	Никитина Ольга Дмитриевна	6789012345	2
7	160	Андреев Владимир Андреевич	7890123456	4
8	170	Павлова Татьяна Ивановна	8901234567	3
9	180	Егоров Дмитрий Анатольевич	9012345678	2
10	190	Васильева Наталья Георгиевна	0123456789	4
\.


--
-- TOC entry 3735 (class 0 OID 16466)
-- Dependencies: 218
-- Data for Name: Competition; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--

COPY "Sport_Club"."Competition" (number_of_competition, place, competition_type, competition_level) FROM stdin;
1	Стадион A	1	2
2	Зал B	2	1
3	Парк C	3	3
4	Бассейн D	1	2
5	Скейтпарк E	2	1
6	Площадка F	3	3
7	Арена G	1	2
8	Пляж H	2	1
9	Спортзал I	3	3
10	Гора J	1	2
\.


--
-- TOC entry 3743 (class 0 OID 16578)
-- Dependencies: 226
-- Data for Name: Cooperation; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
```

```
--

COPY "Sport_Club"."Cooperation" (coach_number, id_of_qualification_book, id_of_cooperation, cooperation_since,
cooperation_end) FROM stdin;
1	1	1	2023-01-01	2023-12-31
1	2	2	2023-02-01	2023-12-31
2	3	3	2023-03-01	2023-12-31
2	4	4	2023-04-01	2023-12-31
3	5	5	2023-05-01	2023-12-31
3	6	6	2023-06-01	2023-12-31
4	7	7	2023-07-01	2023-12-31
4	8	8	2023-08-01	2023-12-31
5	9	9	2023-09-01	2023-12-31
5	10	10	2023-10-01	2023-12-31
\.


--
-- TOC entry 3736 (class 0 OID 16473)
-- Dependencies: 219
-- Data for Name: Doctor; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--

COPY "Sport_Club"."Doctor" (doctor_number, full_name, specialization) FROM stdin;
1	Иванов Иван Иванович	Травматолог
2	Петрова Марина Александровна	Ортопед
3	Сидоров Алексей Петрович	Кардиолог
4	Михайлова Елена Сергеевна	Офтальмолог
5	Козлов Сергей Владимирович	Педиатр
6	Никитина Ольга Дмитриевна	Невролог
7	Андреев Владимир Андреевич	Хирург
8	Павлова Татьяна Ивановна	Терапевт
9	Егоров Дмитрий Анатольевич	Стоматолог
10	Васильева Наталья Георгиевна	Акушер-гинеколог
\.


--
-- TOC entry 3734 (class 0 OID 16461)
-- Dependencies: 217
-- Data for Name: Injury; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--
```

```
COPY "Sport_Club"."Injury" (number_of_injury, name_of_injury) FROM stdin;
1	Спрейн лодыжки
2	Повреждение колена
3	Растяжение мышцы
4	Ушиб
5	Травма головы
6	Опорожнение
7	Вывих плеча
8	Подрезание колена
9	Ожог
10	Сотрясение мозга
\.


--
-- TOC entry 3737 (class 0 OID 16476)
-- Dependencies: 220
-- Data for Name: Medicine_card; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--

COPY "Sport_Club"."Medicine_card" (number_of_medicine_card, medicine_inspection, sportsman_id) FROM stdin;
1	Осмотр врача перед соревнованием	\N
2	Регулярный медицинский осмотр спортсмена	\N
3	Медицинский осмотр после травмы	\N
4	Специализированное обследование для спортсменов	\N
5	Психологическая консультация	\N
6	Лабораторные анализы крови и мочи	\N
7	ЭКГ и мониторинг сердечной деятельности	\N
8	УЗИ и рентгенография	\N
9	Физиотерапия и реабилитация	\N
10	Допинг-контроль и антидопинговые проверки	\N
\.


--
-- TOC entry 3744 (class 0 OID 16595)
-- Dependencies: 227
-- Data for Name: Medicine_testing; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--
```

```
COPY "Sport_Club"."Medicine_testing" (id_of_medicine_book, number_from_doctor, testing_result, testing_date,
number_of_testing) FROM stdin;
\.


--
-- TOC entry 3742 (class 0 OID 16560)
-- Dependencies: 225
-- Data for Name: Participation_in_the_competition ; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--

COPY "Sport_Club"."Participation_in_the_competition " (id_of_comptetition, sport_number, id_of_qualification_book,
competition_result, particip_compet_id) FROM stdin;
\.


--
-- TOC entry 3739 (class 0 OID 16510)
-- Dependencies: 222
-- Data for Name: Participation_in_the_training; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--

COPY "Sport_Club"."Participation_in_the_training" (coach_id, sportsmen_id, sport_id, training_number,
training_result, particip_train_id, training) FROM stdin;
1	1	1	1	Успех	0	1
1	2	1	2	Успех	0	2
2	3	2	3	Успех	0	3
2	4	2	4	Успех	0	4
3	5	3	5	Успех	0	5
3	6	3	6	Успех	0	6
4	7	4	7	Успех	0	7
4	8	4	8	Успех	0	8
5	9	5	9	Успех	0	9
5	10	5	10	Успех	0	10
\.


--
-- TOC entry 3733 (class 0 OID 16456)
-- Dependencies: 216
-- Data for Name: Sport_type; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--
```

```
COPY "Sport_Club"."Sport_type" (number_of_sport_type, name_of_sport) FROM stdin;
1	Футбол
2	Баскетбол
3	Теннис
4	Плавание
5	Бег
6	Волейбол
7	Гольф
8	Бокс
9	Шахматы
10	Хоккей
\.


--
-- TOC entry 3740 (class 0 OID 16530)
-- Dependencies: 223
-- Data for Name: Sportsmen; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--

COPY "Sport_Club"."Sportsmen" (sportsman_id, fullname, passport_data, qualification, sportsmen_points) FROM
stdin;
1	Иванов Иван Иванович	1234567890	3	100
2	Петрова Марина Александровна	2345678901	2	110
3	Сидоров Алексей Петрович	3456789012	4	120
4	Михайлова Елена Сергеевна	4567890123	2	130
5	Козлов Сергей Владимирович	5678901234	3	140
6	Никитина Ольга Дмитриевна	6789012345	2	150
7	Андреев Владимир Андреевич	7890123456	4	160
8	Павлова Татьяна Ивановна	8901234567	3	170
9	Егоров Дмитрий Анатольевич	9012345678	2	180
10	Васильева Наталья Георгиевна	0123456789	4	190
\.


--
-- TOC entry 3741 (class 0 OID 16544)
-- Dependencies: 224
-- Data for Name: Sportsmen_injury; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--
```

```
COPY "Sport_Club"."Sportsmen_injury" (id_of_qualification_book, number_of_injury, got_injury_at_date,
became_healthy_at_date, sportsmen_injury_id) FROM stdin;
\.


--
-- TOC entry 3732 (class 0 OID 16450)
-- Dependencies: 215
-- Data for Name: Training; Type: TABLE DATA; Schema: Sport_Club; Owner: postgres
--

COPY "Sport_Club"."Training" (number_of_training, place, date_action) FROM stdin;
1	Место 1	2023-10-23
2	Место 2	2023-10-24
3	Место 3	2023-10-25
4	Место 4	2023-10-26
5	Место 5	2023-10-27
6	Место 6	2023-10-28
7	Место 7	2023-10-29
8	Место 8	2023-10-30
9	Место 9	2023-10-31
10	Место 10	2023-11-01
11	Место 11	2023-11-02
12	Место 12	2023-11-03
13	Место 13	2023-11-04
14	Место 14	2023-11-05
15	Место 15	2023-11-06
16	Место 16	2023-11-07
17	Место 17	2023-11-08
18	Место 18	2023-11-09
19	Место 19	2023-11-10
20	Место 20	2023-11-11
\.


--
-- TOC entry 3752 (class 0 OID 0)
-- Dependencies: 228
-- Name: Participation_in_the_training_training_seq; Type: SEQUENCE SET; Schema: Sport_Club; Owner: postgres
--

SELECT pg_catalog.setval('"Sport_Club"."Participation_in_the_training_training_seq"', 10, true);
```

```
--
-- TOC entry 3517 (class 2606 OID 16410)
-- Name: Category Category_check; Type: CHECK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE "Sport_Club"."Category"
    ADD CONSTRAINT "Category_check" CHECK ((level_of_category > 0)) NOT VALID;


--
-- TOC entry 3537 (class 2606 OID 16409)
-- Name: Category Category_pkey; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Category"
    ADD CONSTRAINT "Category_pkey" PRIMARY KEY (level_of_category);


--
-- TOC entry 3571 (class 2606 OID 16582)
-- Name: Cooperation Cooperation_pkey; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Cooperation"
    ADD CONSTRAINT "Cooperation_pkey" PRIMARY KEY (id_of_cooperation);


--
-- TOC entry 3551 (class 2606 OID 16611)
-- Name: Doctor Doctor_pkey; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Doctor"
    ADD CONSTRAINT "Doctor_pkey" PRIMARY KEY (doctor_number);


--
-- TOC entry 3545 (class 2606 OID 16632)
-- Name: Injury Injury_pkey; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--
```

```
ALTER TABLE ONLY "Sport_Club"."Injury"
    ADD CONSTRAINT "Injury_pkey" PRIMARY KEY (number_of_injury);


--
-- TOC entry 3555 (class 2606 OID 16702)
-- Name: Medicine_card Medicine_card_pkey; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Medicine_card"
    ADD CONSTRAINT "Medicine_card_pkey" PRIMARY KEY (number_of_medicine_card);


--
-- TOC entry 3573 (class 2606 OID 16674)
-- Name: Medicine_testing Medicine_testing_pkey; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Medicine_testing"
    ADD CONSTRAINT "Medicine_testing_pkey" PRIMARY KEY (number_of_testing);


--
-- TOC entry 3569 (class 2606 OID 16594)
-- Name: Participation_in_the_competition  Participation_in_the_competition _pkey; Type: CONSTRAINT; Schema:
Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Participation_in_the_competition "
    ADD CONSTRAINT "Participation_in_the_competition _pkey" PRIMARY KEY (particip_compet_id);


--
-- TOC entry 3561 (class 2606 OID 16700)
-- Name: Participation_in_the_training Participation_in_the_training_pkey; Type: CONSTRAINT; Schema: Sport_Club;
Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Participation_in_the_training"
    ADD CONSTRAINT "Participation_in_the_training_pkey" PRIMARY KEY (training);


--
```

```
-- TOC entry 3518 (class 2606 OID 16411)
-- Name: Category Salary_check1; Type: CHECK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE "Sport_Club"."Category"
    ADD CONSTRAINT "Salary_check1" CHECK ((salary >= 0)) NOT VALID;


--
-- TOC entry 3519 (class 2606 OID 16412)
-- Name: Category Salary_check2; Type: CHECK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE "Sport_Club"."Category"
    ADD CONSTRAINT "Salary_check2" CHECK ((salary <= 1000000)) NOT VALID;


--
-- TOC entry 3541 (class 2606 OID 16630)
-- Name: Sport_type Sport_type_pkey; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Sport_type"
    ADD CONSTRAINT "Sport_type_pkey" PRIMARY KEY (number_of_sport_type);


--
-- TOC entry 3567 (class 2606 OID 16636)
-- Name: Sportsmen_injury Sportsmen_injury_pkey; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Sportsmen_injury"
    ADD CONSTRAINT "Sportsmen_injury_pkey" PRIMARY KEY (sportsmen_injury_id);


--
-- TOC entry 3563 (class 2606 OID 16538)
-- Name: Sportsmen Sportsmen_pkey; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Sportsmen"
    ADD CONSTRAINT "Sportsmen_pkey" PRIMARY KEY (sportsman_id);
```

```
--
-- TOC entry 3535 (class 2606 OID 16712)
-- Name: Medicine_testing date_chech; Type: CHECK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE "Sport_Club"."Medicine_testing"
    ADD CONSTRAINT date_chech CHECK ((testing_date <= CURRENT_DATE)) NOT VALID;


--
-- TOC entry 3531 (class 2606 OID 16713)
-- Name: Sportsmen_injury date_check; Type: CHECK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE "Sport_Club"."Sportsmen_injury"
    ADD CONSTRAINT date_check CHECK ((got_injury_at_date <= CURRENT_DATE)) NOT VALID;


--
-- TOC entry 3522 (class 2606 OID 16715)
-- Name: Training date_check; Type: CHECK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE "Sport_Club"."Training"
    ADD CONSTRAINT date_check CHECK ((date_action <= CURRENT_DATE)) NOT VALID;


--
-- TOC entry 3533 (class 2606 OID 16716)
-- Name: Cooperation date_check; Type: CHECK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE "Sport_Club"."Cooperation"
    ADD CONSTRAINT date_check CHECK ((cooperation_since <= CURRENT_DATE)) NOT VALID;


--
-- TOC entry 3532 (class 2606 OID 16714)
-- Name: Sportsmen_injury date_check2; Type: CHECK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--
```

```
ALTER TABLE "Sport_Club"."Sportsmen_injury"
    ADD CONSTRAINT date_check2 CHECK ((became_healthy_at_date <= CURRENT_DATE)) NOT VALID;



--
-- TOC entry 3534 (class 2606 OID 16717)
-- Name: Cooperation date_check2; Type: CHECK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE "Sport_Club"."Cooperation"
    ADD CONSTRAINT date_check2 CHECK ((cooperation_end <= CURRENT_DATE)) NOT VALID;



--
-- TOC entry 3553 (class 2606 OID 16613)
-- Name: Doctor doctor_number; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Doctor"
    ADD CONSTRAINT doctor_number UNIQUE (doctor_number);



--
-- TOC entry 3565 (class 2606 OID 16652)
-- Name: Sportsmen id_of_qualification_book; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Sportsmen"
    ADD CONSTRAINT id_of_qualification_book UNIQUE (sportsman_id);



--
-- TOC entry 3559 (class 2606 OID 16509)
-- Name: Coach number_of_coach; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Coach"
    ADD CONSTRAINT number_of_coach PRIMARY KEY (number_of_coach);



--
-- TOC entry 3549 (class 2606 OID 16472)
-- Name: Competition number_of_competition; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
```

```
--

ALTER TABLE ONLY "Sport_Club"."Competition"
    ADD CONSTRAINT number_of_competition PRIMARY KEY (number_of_competition);



--
-- TOC entry 3547 (class 2606 OID 16465)
-- Name: Injury number_of_injury; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Injury"
    ADD CONSTRAINT number_of_injury UNIQUE (number_of_injury);



--
-- TOC entry 3557 (class 2606 OID 16480)
-- Name: Medicine_card number_of_medicine_card; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Medicine_card"
    ADD CONSTRAINT number_of_medicine_card UNIQUE (number_of_medicine_card);



--
-- TOC entry 3543 (class 2606 OID 16460)
-- Name: Sport_type number_of_sport_type; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Sport_type"
    ADD CONSTRAINT number_of_sport_type UNIQUE (number_of_sport_type);



--
-- TOC entry 3539 (class 2606 OID 16455)
-- Name: Training number_of_training; Type: CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Training"
    ADD CONSTRAINT number_of_training PRIMARY KEY (number_of_training);



--
```

```
-- TOC entry 3520 (class 2606 OID 16413)
-- Name: Category score_limit_check1; Type: CHECK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE "Sport_Club"."Category"
    ADD CONSTRAINT score_limit_check1 CHECK ((score_limit > 0)) NOT VALID;


--
-- TOC entry 3521 (class 2606 OID 16414)
-- Name: Category score_limit_check2; Type: CHECK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE "Sport_Club"."Category"
    ADD CONSTRAINT score_limit_check2 CHECK ((score_limit <= 1000)) NOT VALID;


--
-- TOC entry 3575 (class 2606 OID 16487)
-- Name: Coach category_level_key; Type: FK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Coach"
    ADD CONSTRAINT category_level_key FOREIGN KEY (category_level) REFERENCES
"Sport_Club"."Category"(level_of_category);


--
-- TOC entry 3576 (class 2606 OID 16515)
-- Name: Participation_in_the_training coach_id_key; Type: FK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Participation_in_the_training"
    ADD CONSTRAINT coach_id_key FOREIGN KEY (coach_id) REFERENCES
"Sport_Club"."Coach"(number_of_coach);


--
-- TOC entry 3585 (class 2606 OID 16583)
-- Name: Cooperation coach_number_key; Type: FK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--
```

```
ALTER TABLE ONLY "Sport_Club"."Cooperation"
    ADD CONSTRAINT coach_number_key FOREIGN KEY (coach_number) REFERENCES
"Sport_Club"."Coach"(number_of_coach);


--
-- TOC entry 3582 (class 2606 OID 16563)
-- Name: Participation_in_the_competition  id_of_comptetition_key; Type: FK CONSTRAINT; Schema: Sport_Club;
Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Participation_in_the_competition "
    ADD CONSTRAINT id_of_comptetition_key FOREIGN KEY (id_of_comptetition) REFERENCES
"Sport_Club"."Competition"(number_of_competition);


--
-- TOC entry 3587 (class 2606 OID 16619)
-- Name: Medicine_testing id_of_medicine_book_key; Type: FK CONSTRAINT; Schema: Sport_Club; Owner:
postgres
--

ALTER TABLE ONLY "Sport_Club"."Medicine_testing"
    ADD CONSTRAINT id_of_medicine_book_key FOREIGN KEY (id_of_medicine_book) REFERENCES
"Sport_Club"."Medicine_card"(number_of_medicine_card) NOT VALID;


--
-- TOC entry 3586 (class 2606 OID 16588)
-- Name: Cooperation id_of_qualification_book; Type: FK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Cooperation"
    ADD CONSTRAINT id_of_qualification_book FOREIGN KEY (id_of_qualification_book) REFERENCES
"Sport_Club"."Sportsmen"(sportsman_id);


--
-- TOC entry 3580 (class 2606 OID 16547)
-- Name: Sportsmen_injury id_of_qualification_book_key; Type: FK CONSTRAINT; Schema: Sport_Club; Owner:
postgres
--
```

```
ALTER TABLE ONLY "Sport_Club"."Sportsmen_injury"
    ADD CONSTRAINT id_of_qualification_book_key FOREIGN KEY (id_of_qualification_book) REFERENCES
"Sport_Club"."Sportsmen"(sportsman_id);


--
-- TOC entry 3583 (class 2606 OID 16573)
-- Name: Participation_in_the_competition  id_of_qualification_book_key; Type: FK CONSTRAINT; Schema:
Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Participation_in_the_competition "
    ADD CONSTRAINT id_of_qualification_book_key FOREIGN KEY (id_of_qualification_book) REFERENCES
"Sport_Club"."Sportsmen"(sportsman_id);


--
-- TOC entry 3588 (class 2606 OID 16624)
-- Name: Medicine_testing number_from_doctor_key; Type: FK CONSTRAINT; Schema: Sport_Club; Owner:
postgres
--

ALTER TABLE ONLY "Sport_Club"."Medicine_testing"
    ADD CONSTRAINT number_from_doctor_key FOREIGN KEY (number_from_doctor) REFERENCES
"Sport_Club"."Doctor"(doctor_number) NOT VALID;


--
-- TOC entry 3581 (class 2606 OID 16552)
-- Name: Sportsmen_injury number_of_injury_key; Type: FK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Sportsmen_injury"
    ADD CONSTRAINT number_of_injury_key FOREIGN KEY (number_of_injury) REFERENCES
"Sport_Club"."Injury"(number_of_injury);


--
-- TOC entry 3577 (class 2606 OID 16520)
-- Name: Participation_in_the_training sport_id_key; Type: FK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--
```

```
ALTER TABLE ONLY "Sport_Club"."Participation_in_the_training"
    ADD CONSTRAINT sport_id_key FOREIGN KEY (sport_id) REFERENCES
"Sport_Club"."Sport_type"(number_of_sport_type);


--
-- TOC entry 3584 (class 2606 OID 16568)
-- Name: Participation_in_the_competition  sport_number_key; Type: FK CONSTRAINT; Schema: Sport_Club;
Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Participation_in_the_competition "
    ADD CONSTRAINT sport_number_key FOREIGN KEY (sport_number) REFERENCES
"Sport_Club"."Sport_type"(number_of_sport_type);


--
-- TOC entry 3574 (class 2606 OID 16685)
-- Name: Medicine_card sportsman_id_key; Type: FK CONSTRAINT; Schema: Sport_Club; Owner: postgres
--

ALTER TABLE ONLY "Sport_Club"."Medicine_card"
    ADD CONSTRAINT sportsman_id_key FOREIGN KEY (sportsman_id) REFERENCES
"Sport_Club"."Sportsmen"(sportsman_id) NOT VALID;


--
-- TOC entry 3578 (class 2606 OID 16539)
-- Name: Participation_in_the_training sportsmen_id_key; Type: FK CONSTRAINT; Schema: Sport_Club; Owner:
postgres
--

ALTER TABLE ONLY "Sport_Club"."Participation_in_the_training"
    ADD CONSTRAINT sportsmen_id_key FOREIGN KEY (sportsmen_id) REFERENCES
"Sport_Club"."Sportsmen"(sportsman_id) NOT VALID;


--
-- TOC entry 3579 (class 2606 OID 16525)
-- Name: Participation_in_the_training training_id_key; Type: FK CONSTRAINT; Schema: Sport_Club; Owner:
postgres
```

```
--

ALTER TABLE ONLY "Sport_Club"."Participation_in_the_training"
    ADD CONSTRAINT training_id_key FOREIGN KEY (training_number) REFERENCES
"Sport_Club"."Training"(number_of_training);


-- Completed on 2023-11-13 12:55:25 MSK

--
-- PostgreSQL database dump complete
--
```

Вывод

В ходе лабораторной работы я научился создавать, заполнять, восстанавливать и сохранять баз данных PostgresSQL с использованием программы pgAdmin4. В процессе лабораторной работы была создана база данных и таблицы в соответствии с заданием. Были заданы необходимые привязки и ограничения, после чего таблица была заполнена данными. Для безопасности в случае сбоя было создано две резервные копии, которые позволили восстановить базу данных без потерь, а также посмотреть на листинг кода.