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Дисциплина: Базы данных

Тема «Репетиционная база»
Лабораторная работа №3
Реализация SQL-запросов для создания базы данных

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СОДЕРЖАНИЕ

ВВЕДЕНИЕ

Данная лабораторная работа направлена на детальное изучение процесса проектирования, создания и управления реляционными базами данных с использованием языка SQL. В рамках выполнения заданий предполагается освоить основы работы с архитектурой баз данных, включая разработку схем данных, создание таблиц и определение их структуры. Особый акцент будет сделан на установлении связей между таблицами с использованием первичных и внешних ключей, а также на реализации бизнес-правил, обеспечивающих целостность и корректность данных.

Работа предполагает выполнение практических заданий по внесению данных в таблицы как с помощью SQL-запросов, так и через встроенные инструменты пользовательского интерфейса системы управления базами данных (СУБД). Также будут изучены операции с командой ALTER TABLE для изменения структуры таблиц, создание и удаление временных таблиц, а также экспорт данных в виде SQL-скриптов для их последующего анализа и проверки. Выполнение всех этапов лабораторной работы позволит не только закрепить теоретические знания, но и развить практические умения, необходимые для эффективной работы с реляционными базами данных в профессиональной среде.

1 СОЗДАНИЕ ТАБЛИЦ

Ниже приведены SQL-запросы для создания всех таблиц.

```
CREATE TABLE IF NOT EXISTS main.rehearsal_points (
id SERIAL PRIMARY KEY,
rating REAL,
contact_number VARCHAR(15) NOT NULL,
schedule JSON,
name TEXT NOT NULL,
address TEXT NOT NULL
);

CREATE TABLE IF NOT EXISTS main.rooms (
id SERIAL PRIMARY KEY,
name TEXT NOT NULL,
air_conditioner BOOLEAN NOT NULL DEFAULT FALSE,
price INT NOT NULL,
recording_support BOOLEAN NOT NULL DEFAULT FALSE,
area INT NOT NULL,
id_rehearsal_point INT
);

CREATE TABLE IF NOT EXISTS main.service (
id SERIAL PRIMARY KEY,
name TEXT NOT NULL,
price INT NOT NULL,
type TEXT NOT NULL,
requirements TEXT,
id_rehearsal_point INT
);

CREATE TABLE IF NOT EXISTS main.equipment (
id SERIAL PRIMARY KEY,
name TEXT NOT NULL,
type TEXT NOT NULL,
brand TEXT NOT NULL,
model TEXT NOT NULL,
condition TEXT NOT NULL,
id_rehearsal_point INT
);

CREATE TABLE IF NOT EXISTS main.staff (
id SERIAL PRIMARY KEY,
full_name TEXT NOT NULL,
address TEXT,
experience INT,
phone VARCHAR(15) NOT NULL,
age INT NOT NULL,
id_rehearsal_point INT
);
```

```sql
CREATE TABLE IF NOT EXISTS main.users (
id SERIAL PRIMARY KEY,
full_name TEXT NOT NULL,
phone VARCHAR(15) NOT NULL,
email TEXT NOT NULL,
registration_date TIMESTAMP NOT NULL
);

CREATE TABLE IF NOT EXISTS main.booking (
id SERIAL PRIMARY KEY,
time TIMESTAMP NOT NULL,
cost INT NOT NULL,
creation_date TIMESTAMP NOT NULL,
status VARCHAR(50) NOT NULL,
number_of_people INT NOT NULL,
id_room INT,
id_user INT
);

CREATE TABLE IF NOT EXISTS main.service_booking (
id_service INT NOT NULL,
id_booking INT NOT NULL,
PRIMARY KEY (id_service, id_booking)
);

CREATE TABLE IF NOT EXISTS main.equipment_booking (
id_equipment INT NOT NULL,
id_booking INT NOT NULL,
PRIMARY KEY (id_equipment, id_booking)
);

ALTER TABLE IF EXISTS main.rooms
ADD CONSTRAINT fk_rooms_rehearsal_point FOREIGN KEY
(id_rehearsal_point)
REFERENCES main.rehearsal_points(id) ON DELETE CASCADE;

ALTER TABLE IF EXISTS main.service
ADD CONSTRAINT fk_service_rehearsal_point FOREIGN KEY
(id_rehearsal_point)
REFERENCES main.rehearsal_points(id) ON DELETE CASCADE;

ALTER TABLE IF EXISTS main.equipment
ADD CONSTRAINT fk_equipment_rehearsal_point FOREIGN KEY
(id_rehearsal_point)
REFERENCES main.rehearsal_points(id) ON DELETE CASCADE;

ALTER TABLE IF EXISTS main.staff
ADD CONSTRAINT fk_staff_rehearsal_point FOREIGN KEY
(id_rehearsal_point)
REFERENCES main.rehearsal_points(id) ON DELETE SET NULL;
```

```sql
ALTER TABLE IF EXISTS main.booking
ADD CONSTRAINT fk_booking_room FOREIGN KEY (id_room)
REFERENCES main.rooms(id) ON DELETE SET NULL;

ALTER TABLE IF EXISTS main.booking
ADD CONSTRAINT fk_booking_user FOREIGN KEY (id_user)
REFERENCES main.users(id) ON DELETE SET NULL;

ALTER TABLE IF EXISTS main.service_booking
ADD CONSTRAINT fk_service_booking_service FOREIGN KEY
(id_service)
REFERENCES main.service(id) ON DELETE SET NULL;

ALTER TABLE IF EXISTS main.service_booking
ADD CONSTRAINT fk_service_booking_booking FOREIGN KEY
(id_booking)
REFERENCES main.booking(id) ON DELETE SET NULL;

ALTER TABLE IF EXISTS main.equipment_booking
ADD CONSTRAINT fk_equipment_booking_equipment FOREIGN KEY
(id_equipment)
REFERENCES main.equipment(id) ON DELETE SET NULL;

ALTER TABLE IF EXISTS main.equipment_booking
ADD CONSTRAINT fk_equipment_booking_booking FOREIGN KEY
(id_booking)
REFERENCES main.booking(id) ON DELETE SET NULL;
```

2 НАПОЛНЕНИЕ ТАБЛИЦ

Для заполнения таблиц информацией используется директива INSERT. Ниже приведены SQL-запросы и скриншоты заполненных таблиц.

Таблица rehearsal_points: заполнение вручную.

На рисунке 2.1 представлен функционал добавления строки данных в таблицу, на рисунке 2.2 функционал сохранения изменений в базе данных.
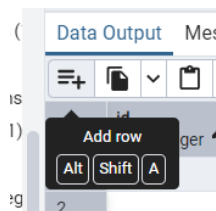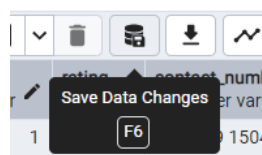

Рисунок 2.1 – Добавление данных

Рисунок 2.2 – Сохранение в базу данных

На рисунке 2.3 представлено содержание таблицы rehearsal_points.

	id [PK] integer	rating real	contact_number character varying (15)	schedule json	name text	address text
1	53	4.5	+375 29 1504505	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-24:00", "Thur...	Black Line Studio	Minsk, Fabriziusa 8
2	54	4.8	+375 29 5714120	{"Monday": "09:00-21:00", "Tuesday": "09:00-21:00", "Wednesday": "09:00-21:00", "Thur...	BooM Studio	Minsk, Lenina St., 4
3	55	4.6	+375 33 3036355	{"Monday": "10:00-22:00", "Tuesday": "10:00-20:00", "Wednesday": "10:00-24:00", "Thur...	Raga Doo Music Studio	Minsk, Very Khoruzhey St., 29
4	56	4.7	+375 44 7469444	{"Monday": "11:00-23:00", "Tuesday": "11:00-23:00", "Wednesday": "11:00-24:00", "Thur...	Studio 9	Minsk, Hikalo St., 9, 4th building BGUIR
5	57	4.5	+375 29 2939033	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-22:00", "Thur...	Black Beauty Studio	Minsk, Korolya St., 2
6	58	4.3	+375 29 7925455	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	MetraMusic	Minsk, Danila Serdicha St., 30A
7	59	4.6	+375 29 7608134	{"Monday": "10:00-24:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-22:00", "Thur...	LIVEBOX	Minsk, Masherova Ave., 11
8	60	4.4	+375 29 7608135	{"Monday": "09:00-21:00", "Tuesday": "09:00-21:00", "Wednesday": "09:00-22:00", "Thur...	Chilli Records	Minsk, Zmitroka Biaduli St., 13
9	61	4.2	+375 29 5714121	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	JAM Studio (BooM)	Minsk, K. Marksa St., 50A
10	62	4.5	+375 25 9501863	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-22:00", "Thur...	BIG AIR STUDIO	Minsk, Bohdanovicha St., 232
11	63	4.7	+375 25 7792203	{"Monday": "10:00-22:00", "Tuesday": "10:00-24:00", "Wednesday": "10:00-22:00", "Thur...	Melody Studio	Minsk, Korolya St., 2/11
12	64	4.6	+375 29 5528552	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	Sunset	Minsk, Mashinostroiteley St.
13	65	4.5	+375 29 2574410	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	OVERTONE Studio	Minsk, Korolya St., 2
14	66	4.8	+375 25 7151359	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-22:00", "Thur...	JKBX Studio	Minsk, Masherova Ave., 11, 5th Floor
15	67	4.3	+375 29 3364499	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	Microfon	Minsk, Tolbukhina St., 2, office 13-5
16	68	4.5	+375 29 1504506	{"Monday": "10:00-22:00", "Tuesday": "10:00-24:00", "Wednesday": "10:00-22:00", "Thur...	New Sound Studio	Minsk, Masherova Ave., 10
17	69	4.4	+375 29 1234567	{"Monday": "09:00-21:00", "Tuesday": "09:00-21:00", "Wednesday": "09:00-22:00", "Thur...	Sound Factory	Minsk, Zmitroka Biaduli St., 1
18	70	4.2	+375 29 7654321	{"Monday": "11:00-23:00", "Tuesday": "11:00-23:00", "Wednesday": "11:00-24:00", "Thur...	Studio 55	Minsk, K. Marksa St., 12
19	71	4.1	+375 29 1112233	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	Music Hall	Minsk, Bohdanovicha St., 15
20	72	4.3	+375 29 2223344	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	Harmony Studio	Minsk, Lenina St., 14
21	73	4.5	+375 29 3334455	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	Echo Studio	Minsk, October St., 5
22	74	4.4	+375 29 4445566	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	Studio 77	Minsk, K. Marksa St., 20
23	75	4.6	+375 29 5556677	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	Sound Lab	Minsk, Hikalo St., 3
24	76	4.5	+375 29 6667788	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	Vibe Studio	Minsk, Zmitroka Biaduli St., 8
25	77	4.2	+375 29 7778899	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	Rhythm Studio	Minsk, Bohdanovicha St., 30
26	78	4.3	+375 29 8889900	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	Echo Sound	Minsk, October St., 10
27	79	4.4	+375 29 9990011	{"Monday": "10:00-22:00", "Tuesday": "10:00-20:00", "Wednesday": "10:00-22:00", "Thur...	Harmony Sound	Minsk, Lenina St., 25
28	80	4.5	+375 29 0001122	{"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thur...	Beat Studio	Minsk, Mashinostroiteley St., 15

Рисунок 2.3 – Содержание таблицы «rehearsal_points»

Таблица rooms: заполнение вручную.

Заполнение таблицы происходит способом, аналогичным с таблицей rehearsal_points, отображенным на рисунках 2.1 и 2.2.

Содержание таблицы rooms отображено на рисунке 2.4.

	id [PK] integer	name text	air_conditioner boolean	price integer	recording_support boolean	area integer	id_rehearsal_point integer
1	1	Large Room	true	50	true	35	53
2	2	Medium Room	true	40	true	25	53
3	3	Small Room	false	30	false	15	53
4	4	Blue Room	true	45	true	30	54
5	5	Red Room	false	35	true	20	54
6	6	Green Room	true	25	false	28	54
7	7	Large Room	true	50	true	35	55
8	8	Medium Room	true	45	true	25	55
9	9	Small Room	false	20	false	12	55
10	10	Yellow Room	true	50	true	30	56
11	11	Orange Room	false	35	true	18	56
12	12	Purple Room	true	40	false	22	56
13	13	Large Room	true	50	true	35	57
14	14	Medium Room	true	30	true	26	57
15	15	Small Room	false	15	false	14	57
16	16	Black Room	true	45	true	29	58
17	17	White Room	false	25	true	19	58
18	18	Gray Room	true	20	false	27	58
19	19	Large Room	true	50	true	35	59
20	20	Medium Room	true	40	true	24	59
21	21	Small Room	false	10	false	13	59
22	22	Cyan Room	true	35	true	31	60
23	23	Magenta Room	false	30	true	21	60
24	24	Brown Room	true	45	false	23	60
25	25	Large Room	true	50	true	35	61
26	26	Medium Room	true	40	true	27	61
27	27	Small Room	false	15	false	11	61
28	28	Light Blue Room	true	35	true	30	62

Рисунок 2.4 – Содержание таблицы «rooms»

Таблица service: заполнение вручную.

Заполнение таблицы происходит способом, аналогичным с таблицей rehearsal_points, отображенным на рисунках 2.1 и 2.2.

Содержание таблицы service отображено на рисунке 2.5.

	id [PK] integer	name text	price integer	type text	requirements text	id_rehearsal_point integer
1	1	Synthesizer Rental	30	Rental	None	53
2	2	Bass Rental	25	Rental	None	53
3	3	Combo Amplifier Rental	40	Rental	None	53
4	4	Mixing Service	150	Recording	DAW, audio interface, monitors	54
5	5	Mastering Service	200	Recording	High-quality monitors, specialized software	54
6	6	Sound Recording	180	Recording	Microphones, audio interface, soundproofing	54
7	7	Vocal Recording	150	Recording	Microphones, pop filter, headphones	55
8	8	Guitar Rental	20	Rental	None	55
9	9	Drum Kit Rental	35	Rental	None	55
10	10	Keyboard Rental	30	Rental	None	56
11	11	Mixing Service	160	Recording	DAW, audio interface, monitors	56
12	12	Live Sound Engineering	200	Recording	PA system, microphones, mixing console	56
13	13	Sound Design	180	Recording	Synthesizers, effects, DAW	57
14	14	Acoustic Treatment	50	Rental	Acoustic panels, bass traps	57
15	15	Microphone Rental	15	Rental	None	58
16	16	Piano Rental	40	Rental	None	58
17	17	Bass Guitar Rental	25	Rental	None	58
18	18	Editing Service	120	Recording	DAW, editing software	59
19	19	Podcast Recording	150	Recording	Microphones, soundproofing	59
20	20	Home Studio Setup	200	Recording	Monitors, audio interface, software	59
21	21	Vocal Mixing	180	Recording	DAW, effects plugins	60
22	22	Drum Recording	160	Recording	Microphone, soundproofing	60
23	23	Bass Mixing	170	Recording	DAW, effects plugins	60
24	24	Guitar Mixing	150	Recording	DAW, effects plugins	61
25	25	Loop Rental	10	Rental	None	61
26	26	Audio Interface Rental	25	Rental	None	62
27	27	Synth Programming	30	Recording	Synthesizer, DAW	62

Рисунок 2.5 – Содержание таблицы «service»

Таблица equipment: заполнение вручную.

Заполнение таблицы происходит способом, аналогичным с таблицей rehearsal_points, отображенным на рисунках 2.1 и 2.2.

Содержание таблицы equipment отображено на рисунке 2.6.

	id [PK] integer	name text	type text	brand text	model text	condition text	id_rehearsal_point integer
1	1	Combo Amplifier	Amplifier	Fender	Champion 100	New	53
2	2	Combo Amplifier	Amplifier	Fender	Champion 100	New	53
3	3	Combo Amplifier	Amplifier	Marshall	MG30GFX	Used	53
4	4	Drum Kit	Drum Set	Pearl	Export Series	Used	53
5	5	Drum Kit	Drum Set	Tama	Starclassic	New	53
6	6	Synthesizer	Synthesizer	Yamaha	MX61	New	53
7	7	Bass Rental	Instrument	Fender	Precision Bass	New	53
8	8	Combo Amplifier	Amplifier	Roland	CUBE-40GX	New	54
9	9	Combo Amplifier	Amplifier	Orange	Crush Pro	Used	54
10	10	Drum Kit	Drum Set	Yamaha	Stage Custom	New	54
11	11	Combo Amplifier	Amplifier	Fender	Champion 100	New	55
12	12	Combo Amplifier	Amplifier	Marshall	MG30GFX	Used	55
13	13	Drum Kit	Drum Set	Pearl	Export Series	Used	55
14	14	Drum Kit	Drum Set	Tama	Starclassic	New	55
15	15	Synthesizer	Synthesizer	Yamaha	MX61	New	55
16	16	Bass Rental	Instrument	Fender	Precision Bass	New	56
17	17	Combo Amplifier	Amplifier	Roland	CUBE-40GX	New	57
18	18	Combo Amplifier	Amplifier	Orange	Crush Pro	Used	57
19	19	Drum Kit	Drum Set	Yamaha	Stage Custom	New	57
20	20	Drum Kit	Drum Set	Mapex	Armory	Used	58
21	21	Synthesizer	Synthesizer	Nord	Electro 5	New	58
22	22	Bass Rental	Instrument	Epiphone	EB-3	New	58
23	23	Combo Amplifier	Amplifier	Roland	AC30	New	59
24	24	Combo Amplifier	Amplifier	Vox	Pathfinder	Used	59
25	25	Drum Kit	Drum Set	Tama	Starclassic	New	59
26	26	Drum Kit	Drum Set	Yamaha	Live Custom	New	59
27	27	Synthesizer	Synthesizer	Korg	Volca FM	New	59

Рисунок 2.6 – Содержание таблицы «equipment»

Таблица staff: заполнение вручную.

Заполнение таблицы происходит способом, аналогичным с таблицей rehearsal_points, отображенным на рисунках 2.1 и 2.2.

Содержание таблицы staff отображено на рисунке 2.7.

	id [PK] integer	full_name text	address text	experience integer	phone character varying (15)	age integer	id_rehearsal_point integer
1	1	Alexey Petrov	Minsk, Lenin St., 1	5	+375291234567	30	53
2	2	Darya Ivanova	Minsk, Nezavisimosti Ave., 10	7	+375291234568	35	54
3	3	Sergey Sokolov	Minsk, Mira St., 5	4	+375291234569	28	55
4	4	Natalia Kuznetsova	Minsk, Pobedy Ave., 20	6	+375291234570	32	55
5	5	Igor Moroz	Minsk, Sovetskaya St., 15	3	+375291234571	26	55
6	6	Olga Smirnova	Minsk, Chekistov St., 30	8	+375291234572	40	58
7	7	Vladimir Ivanov	Minsk, Gorkogo St., 12	5	+375291234573	29	59
8	8	Maria Orlova	Minsk, Lenin St., 25	4	+375291234574	31	60
9	9	Andrey Nikiforov	Minsk, Pushkina St., 10	6	+375291234575	34	61
10	10	Svetlana Pavlova	Minsk, Stalingrad St., 50	5	+375291234576	33	61
11	11	Antonina Sergeeva	Minsk, Chernomorskaya St., 45	9	+375291234577	36	54
12	12	Kirill Fedorov	Minsk, Kirova St., 11	2	+375291234578	25	53
13	13	Yulia Alexandrova	Minsk, Frunze St., 22	7	+375291234579	38	54
14	14	Mikhail Gromov	Minsk, Michurina St., 32	5	+375291234580	27	54
15	15	Elena Romanova	Minsk, Lenin St., 3	10	+375291234581	42	61
16	16	Dmitry Tikhonov	Minsk, Gogolya St., 8	4	+375291234582	30	57
17	17	Tamara Ivanova	Minsk, Gagarina St., 6	6	+375291234583	37	53
18	18	Alexandra Guseva	Minsk, Revolyutsii St., 9	3	+375291234584	28	59
19	19	Viktor Petrovich	Minsk, Pervomayskaya St., 14	5	+375291234585	29	60
20	20	Anastasia Semyonova	Minsk, Lenin St., 17	8	+375291234586	39	58
21	21	Igor Morozov	Minsk, Obronaya St., 19	2	+375291234587	24	62
22	22	Valentina Denisova	Minsk, Sovetskaya St., 7	6	+375291234588	33	58
23	23	Natalya Ivanenko	Minsk, Karl Marx St., 12	4	+375291234589	26	53
24	24	Alexander Zaytsev	Minsk, Kuybysheva St., 28	5	+375291234590	30	53
25	25	Sofia Novik	Minsk, Gagarina St., 33	9	+375291234591	41	55
26	26	Roman Stepanov	Minsk, Koval St., 16	3	+375291234592	27	56
27	27	Igor Lebedev	Minsk, Gagarina St., 10	3	+375291234604	28	63

Рисунок 2.7 – Содержание таблицы «staff»

Таблица users: заполнение вручную.

Заполнение таблицы происходит способом, аналогичным с таблицей rehearsal_points, отображенным на рисунках 2.1 и 2.2.

Содержание таблицы users отображено на рисунке 2.8.

	id [PK] integer	full_name text	phone character varying (15)	email text	registration_date timestamp without time zone
1	1	Alexey Petrov	+375291234567	alexey.petrov@example.com	2023-01-15 10:00:00
2	2	Darya Ivanova	+375291234568	darya.ivanova@example.com	2023-01-16 11:15:00
3	3	Sergey Sokolov	+375291234569	sergey.sokolov@example.com	2023-01-17 12:30:00
4	4	Natalia Kuznetsova	+375291234570	natalia.kuznetsova@example.com	2023-01-18 13:45:00
5	5	Igor Moroz	+375291234571	igor.moroz@example.com	2023-01-19 14:00:00
6	6	Olga Smirnova	+375291234572	olga.smirnova@example.com	2023-01-20 15:10:00
7	7	Vladimir Ivanov	+375291234573	vladimir.ivanov@example.com	2023-01-21 16:20:00
8	8	Maria Orlova	+375291234574	maria.orlova@example.com	2023-01-22 17:30:00
9	9	Andrey Nikiforov	+375291234575	andrey.nikiforov@example.com	2023-01-23 18:40:00
10	10	Svetlana Pavlova	+375291234576	svetlana.pavlova@example.com	2023-01-24 19:50:00
11	11	Antonina Sergeeva	+375291234577	antonina.sergeeva@example.com	2023-01-25 20:00:00
12	12	Kirill Fedorov	+375291234578	kirill.fedorov@example.com	2023-01-26 21:10:00
13	13	Yulia Alexandrova	+375291234579	yulia.alexandrova@example.com	2023-01-27 22:20:00
14	14	Mikhail Gromov	+375291234580	mikhail.gromov@example.com	2023-01-28 23:30:00
15	15	Elena Romanova	+375291234581	elena.romanova@example.com	2023-01-29 09:00:00
16	16	Dmitry Tikhonov	+375291234582	dmitry.tikhonov@example.com	2023-01-30 10:05:00
17	17	Alexandra Guseva	+375291234583	alexandra.guseva@example.com	2023-01-31 11:15:00
18	18	Viktor Petrovich	+375291234584	viktor.petrovich@example.com	2023-02-01 12:20:00
19	19	Anastasia Semyonova	+375291234585	anastasia.semyonova@example.com	2023-02-02 13:25:00
20	20	Maxim Frolov	+375291234600	maxim.frolov@example.com	2023-02-03 14:30:00
21	21	Anna Frolova	+375291234601	anna.frolova@example.com	2023-02-04 15:35:00
22	22	Dmitry Sergeyev	+375291234602	dmitry.sergeyev@example.com	2023-02-05 16:40:00
23	23	Tatiana Sergeyeva	+375291234603	tatiana.sergeyeva@example.com	2023-02-06 17:45:00
24	24	Igor Lebedev	+375291234604	igor.lebedev@example.com	2023-02-07 18:50:00
25	25	Svetlana Lebedeva	+375291234605	svetlana.lebedeva@example.com	2023-02-08 19:55:00
26	26	Yuri Smirnov	+375291234606	yuri.smirnov@example.com	2023-02-09 20:00:00
27	27	Elena Smirnova	+375291234607	elena.smirnova@example.com	2023-02-10 21:05:00

Рисунок 2.8 – Содержание таблицы «users»

Таблица booking: заполнение вручную.

Заполнение таблицы происходит способом, аналогичным с таблицей rehearsal_points, отображенным на рисунках 2.1 и 2.2.

Содержание таблицы booking отображено на рисунке 2.9.

	id [PK] integer	time timestamp without time zone	cost integer	creation_date timestamp without time zone	status character varying (50)	number_of_people integer	id_room integer	id_user integer	duration integer
1	28	2023-03-01 09:00:00	50	2023-02-28 10:00:00	active	4	1	1	2
2	29	2023-03-05 10:30:00	30	2023-03-04 11:00:00	canceled	2	2	2	1
3	30	2023-03-03 11:15:00	70	2023-03-02 12:00:00	completed	6	3	3	3
4	31	2023-03-07 14:00:00	25	2023-03-06 13:00:00	active	3	4	4	1
5	32	2023-03-02 15:45:00	45	2023-03-01 14:30:00	active	5	5	5	4
6	33	2023-03-04 08:30:00	15	2023-03-03 15:00:00	completed	1	6	6	2
7	34	2023-03-08 09:00:00	80	2023-03-07 16:00:00	canceled	7	7	7	3
8	35	2023-03-09 10:00:00	60	2023-03-08 17:00:00	active	8	8	8	1
9	36	2023-03-10 12:30:00	40	2023-03-09 18:00:00	completed	4	9	9	2
10	37	2023-03-11 14:15:00	55	2023-03-10 19:00:00	active	3	10	10	3
11	38	2023-03-12 09:30:00	20	2023-03-11 09:15:00	canceled	2	11	11	1
12	39	2023-03-13 11:00:00	35	2023-03-12 10:15:00	completed	6	12	12	2
13	40	2023-03-14 13:30:00	65	2023-03-13 11:15:00	active	5	13	13	4
14	41	2023-03-15 15:00:00	50	2023-03-14 12:15:00	active	1	14	14	3
15	42	2023-03-16 16:45:00	10	2023-03-15 13:15:00	completed	3	15	15	2
16	43	2023-03-17 10:00:00	75	2023-03-16 14:15:00	canceled	2	16	16	1
17	44	2023-03-18 11:30:00	45	2023-03-17 15:15:00	active	4	17	17	3
18	45	2023-03-19 12:00:00	30	2023-03-18 16:15:00	completed	8	18	18	1
19	46	2023-03-20 08:15:00	65	2023-03-19 17:15:00	active	7	19	19	2
20	47	2023-03-21 09:45:00	15	2023-03-20 18:15:00	canceled	1	20	20	4
21	48	2023-03-22 10:30:00	55	2023-03-21 19:15:00	completed	6	21	21	3
22	49	2023-03-23 11:00:00	80	2023-03-22 09:00:00	active	5	22	22	1
23	50	2023-03-24 12:30:00	40	2023-03-23 10:00:00	active	3	23	23	2
24	51	2023-03-25 14:15:00	20	2023-03-24 11:00:00	completed	2	24	24	4
25	52	2023-03-26 15:00:00	60	2023-03-25 12:00:00	canceled	4	25	25	3
26	53	2023-03-27 16:30:00	35	2023-03-26 13:00:00	active	7	26	26	2
27	54	2023-03-28 17:00:00	50	2023-03-27 14:00:00	completed	8	27	27	1

Рисунок 2.9 – Содержание таблицы «booking»

Таблица service_booking:

```
      INSERT INTO main.service_booking (id_service, id_booking)
VALUES (1, 28), (2, 29), (3, 30), (4, 31), (5, 32), (6, 33), (7,
34), (8, 35), (9, 36), (10, 37), (11, 38), (12, 39), (13, 40),
(14, 41), (15, 42), (16, 43), (17, 44), (18, 45), (19, 46), (20,
47), (21, 48), (22, 49), (23, 50);
```

Содержание таблицы service_booking отображено на рисунке 2.10.

	id_service [PK] integer	id_booking [PK] integer
1	1	28
2	2	29
3	3	28
4	3	30
5	4	31
6	5	32
7	6	33
8	7	34
9	8	35
10	9	30
11	9	36
12	10	37
13	11	38
14	12	39
15	13	40
16	14	41
17	15	42
18	16	43
19	17	34
20	17	44
21	18	45
22	19	46
23	20	47
24	21	48
25	22	49
26	22	50
27	23	50

Рисунок 2.10 – Содержание таблицы «service_booking»

Таблица equipment_booking:

```
    INSERT    INTO    main.equipment_booking    (id_equipment,
id_booking) VALUES (1, 28), (2, 29), (3, 30), (4, 31), (5, 32),
(6, 33), (7, 34), (8, 35), (9, 36), (10, 37), (11, 38), (12, 39),
(13, 40), (14, 41), (15, 42), (16, 43), (17, 44), (18, 45), (19,
46), (20, 47), (21, 48), (22, 49), (23, 50);
```

Содержание таблицы equipment_booking отображено на рисунке 2.11.

	id_equipment [PK] integer	id_booking [PK] integer
1	1	28
2	2	29
3	3	30
4	4	31
5	5	28
6	5	32
7	6	33
8	7	34
9	8	30
10	8	35
11	9	36
12	10	37
13	11	38
14	12	39
15	13	40
16	14	34
17	14	41
18	15	42
19	16	43
20	17	44
21	18	45
22	19	46
23	19	50
24	20	47
25	21	48
26	22	49
27	23	50

Рисунок 2.11 – Содержание таблицы «equipment_booking»

3 ДРУГИЕ SQL-КОМАНДЫ

В процессе работы с базами данных часто возникает необходимость изменять структуру таблиц без потери данных. Для этого используется оператор `ALTER TABLE`, который позволяет вносить изменения в существующую таблицу, такие как переименование столбцов, изменение типов данных, добавление и удаление ограничений. Далее будут рассмотрены основные операции, выполняемые с помощью `ALTER TABLE`.

Для добавления столбца в таблицу используется следующая команда:
```
ALTER TABLE main.booking ADD COLUMN duration INT;
```

Для переименования столбца в таблице используется следующая команда:
```
ALTER TABLE main.booking RENAME COLUMN time TO booking_time;
```

Для изменения типа данных столбца используется следующая команда:
```
ALTER TABLE main.booking ALTER COLUMN cost TYPE DECIMAL(10, 2);
```

Ограничения (constraints) в SQL обеспечивают целостность данных и позволяют задавать дополнительные правила для столбцов. К основным ограничениям относятся `NOT NULL`, `UNIQUE`, `PRIMARY KEY`, `FOREIGN KEY` и `CHECK`.
```
ALTER TABLE IF EXISTS main.booking
ADD CONSTRAINT fk_booking_room FOREIGN KEY (id_room)
REFERENCES main.rooms(id) ON DELETE SET NULL;
```

Удалить ограничение можно с помощью следующей команды:
```
ALTER TABLE main.booking DROP CONSTRAINT fk_booking_room;
```

Для удаления столбца используется следующая команда:
```
ALTER TABLE main.booking DROP COLUMN duration;
```

4 СОЗДАНИЕ ВРЕМЕННОЙ ТАБЛИЦЫ
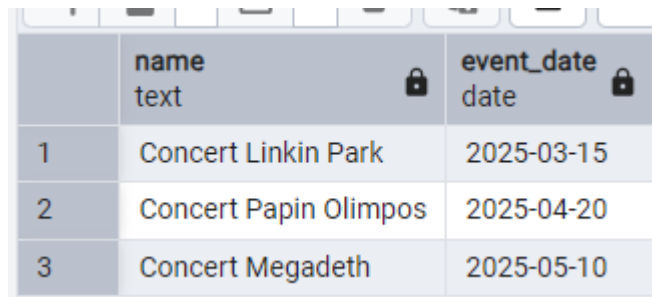
Создадим временную таблицу music_events которая будет хранить поля
`name, event_date:` `CREATE TEMP TABLE music_events ( name TEXT NOT NULL, event_date DATE NOT NULL );`

Вставим во временную таблицу тестовые данные:
```
INSERT INTO music_events (name, event_date) VALUES
('Concert Linkin Park', '2025-03-15'),
('Concert Papin Olimpos', '2025-04-20'),
('Concert Megadeth', '2025-05-10');
```
Сделаем выборку: `SELECT * FROM music_events;`

Результат представлен на рисунке 4.1.

Рисунок 4.1 – Выборка данных из временной таблицы

Удалим временную таблицу: `DROP TABLE music_events;`

5 ГЕНЕРАЦИЯ ERD-ДИАГРАММЫ

После создания всех таблиц можно экспортировать их структуру в виде UML-диаграммы и сравнить ее с UML-диаграммой, созданной во второй лабораторной работе. Для этого воспользуемся функцией ERD For Schema в меню. На рисунке 5.1 представлен функционал генерации диаграммы. На рисунке 5.2 представлен результат генерации диаграммы.
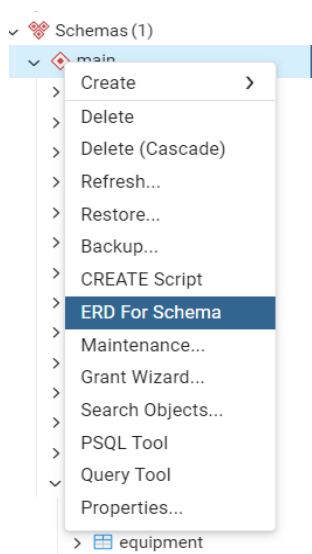
Рисунок 5.1 – Выгрузка диаграммы
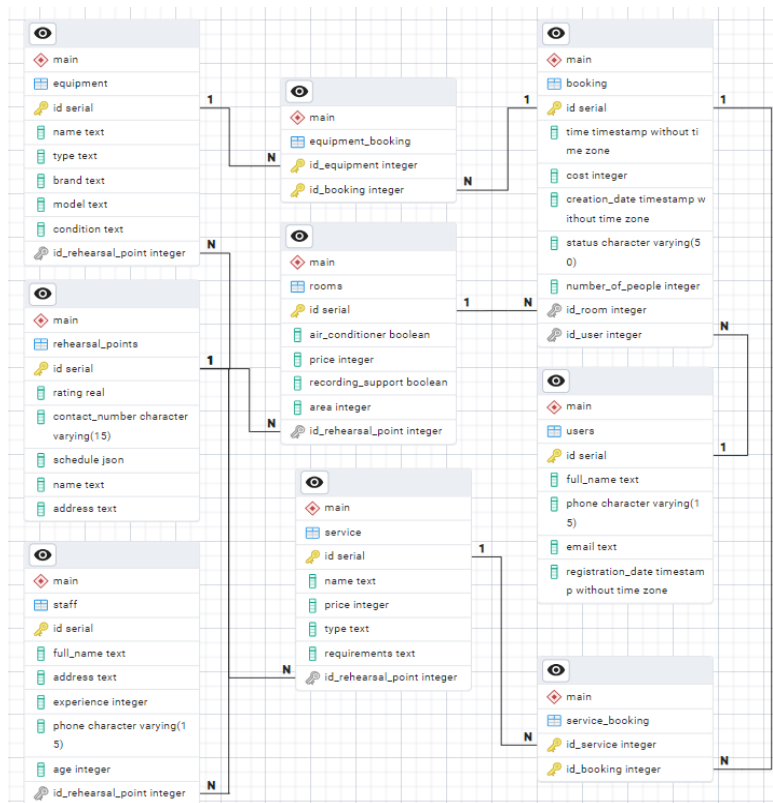
Рисунок 5.2 – Полученная ERD-диаграмма

6 ЭКСПОРТ РЕЗУЛЬТАТОВ

Для восстановления базы данных или создания ее копии необходимо сохранить точную структуру таблиц. В pgAdmin для этого предусмотрено специальное меню: Schema → Backup, где следует указать имя файла и выбрать формат Plain. На рисунке 6.1 представлен функционал создания резервной копии БД.
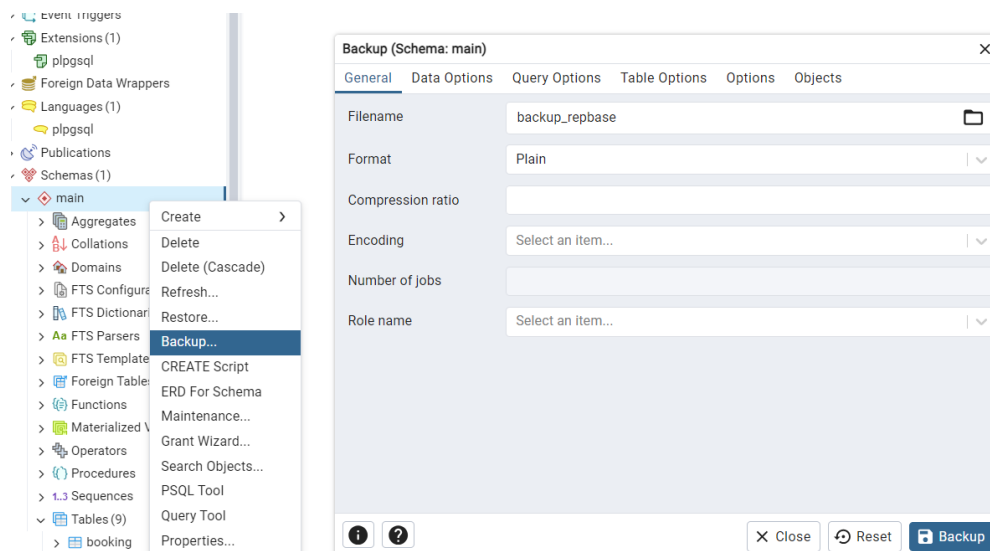
Рисунок 6.1 – Backup

Скрипт для восстановления базы данных:

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

-- Dumped from database version 17.2
-- Dumped by pg_dump version 17.2

-- Started on 2025-02-25 02:12:58

SET statement_timeout = 0;
SET lock_timeout = 0;
SET idle_in_transaction_session_timeout = 0;
SET transaction_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 16927)
-- Name: main; Type: SCHEMA; Schema: -; Owner: postgres
--

CREATE SCHEMA main;

ALTER SCHEMA main OWNER TO postgres;

SET default_tablespace = '';

SET default_table_access_method = heap;

--
```

```
-- TOC entry 234 (class 1259 OID 16985)
-- Name: booking; Type: TABLE; Schema: main; Owner: postgres
--

CREATE TABLE main.booking (
    id integer NOT NULL,
    "time" timestamp without time zone NOT NULL,
    cost integer NOT NULL,
    creation_date timestamp without time zone NOT NULL,
    status character varying(50) NOT NULL,
    number_of_people integer NOT NULL,
    id_room integer,
    id_user integer,
    duration integer
);

ALTER TABLE main.booking OWNER TO postgres;

--
-- TOC entry 233 (class 1259 OID 16984)
-- Name: booking_id_seq; Type: SEQUENCE; Schema: main; Owner: postgres
--

CREATE SEQUENCE main.booking_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

ALTER SEQUENCE main.booking_id_seq OWNER TO postgres;

--
-- TOC entry 4987 (class 0 OID 0)
-- Dependencies: 233
-- Name: booking_id_seq; Type: SEQUENCE OWNED BY; Schema: main; Owner: postgres
--

ALTER SEQUENCE main.booking_id_seq OWNED BY main.booking.id;

--
-- TOC entry 228 (class 1259 OID 16958)
-- Name: equipment; Type: TABLE; Schema: main; Owner: postgres
--

CREATE TABLE main.equipment (
    id integer NOT NULL,
    name text NOT NULL,
    type text NOT NULL,
    brand text NOT NULL,
    model text NOT NULL,
    condition text NOT NULL,
    id_rehearsal_point integer
);

ALTER TABLE main.equipment OWNER TO postgres;

--
-- TOC entry 236 (class 1259 OID 16996)
-- Name: equipment_booking; Type: TABLE; Schema: main; Owner: postgres
--

CREATE TABLE main.equipment_booking (
    id_equipment integer NOT NULL,
    id_booking integer NOT NULL
);

ALTER TABLE main.equipment_booking OWNER TO postgres;

--
-- TOC entry 227 (class 1259 OID 16957)
-- Name: equipment_id_seq; Type: SEQUENCE; Schema: main; Owner: postgres
--

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

```
ALTER SEQUENCE main.equipment_id_seq OWNER TO postgres;


--
-- TOC entry 4988 (class 0 OID 0)
-- Dependencies: 227
-- Name: equipment_id_seq; Type: SEQUENCE OWNED BY; Schema: main; Owner: postgres
--

ALTER SEQUENCE main.equipment_id_seq OWNED BY main.equipment.id;


--
-- TOC entry 222 (class 1259 OID 16929)
-- Name: rehearsal_points; Type: TABLE; Schema: main; Owner: postgres
--

CREATE TABLE main.rehearsal_points (
    id integer NOT NULL,
    rating real,
    contact_number character varying(15) NOT NULL,
    schedule json,
    name text NOT NULL,
    address text NOT NULL
);

ALTER TABLE main.rehearsal_points OWNER TO postgres;


--
-- TOC entry 221 (class 1259 OID 16928)
-- Name: rehearsal_points_id_seq; Type: SEQUENCE; Schema: main; Owner: postgres
--

CREATE SEQUENCE main.rehearsal_points_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

ALTER SEQUENCE main.rehearsal_points_id_seq OWNER TO postgres;


--
-- TOC entry 4989 (class 0 OID 0)
-- Dependencies: 221
-- Name: rehearsal_points_id_seq; Type: SEQUENCE OWNED BY; Schema: main; Owner: postgres
--

ALTER SEQUENCE main.rehearsal_points_id_seq OWNED BY main.rehearsal_points.id;


--
-- TOC entry 224 (class 1259 OID 16938)
-- Name: rooms; Type: TABLE; Schema: main; Owner: postgres
--

CREATE TABLE main.rooms (
    id integer NOT NULL,
    name text NOT NULL,
    air_conditioner boolean DEFAULT false NOT NULL,
    price integer NOT NULL,
    recording_support boolean DEFAULT false NOT NULL,
    area integer NOT NULL,
    id_rehearsal_point integer
);

ALTER TABLE main.rooms OWNER TO postgres;


--
-- TOC entry 223 (class 1259 OID 16937)
-- Name: rooms_id_seq; Type: SEQUENCE; Schema: main; Owner: postgres
--

CREATE SEQUENCE main.rooms_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

ALTER SEQUENCE main.rooms_id_seq OWNER TO postgres;


--
-- TOC entry 4990 (class 0 OID 0)
```

```
-- Dependencies: 223
-- Name: rooms_id_seq; Type: SEQUENCE OWNED BY; Schema: main; Owner: postgres
--

ALTER SEQUENCE main.rooms_id_seq OWNED BY main.rooms.id;


--
-- TOC entry 226 (class 1259 OID 16949)
-- Name: service; Type: TABLE; Schema: main; Owner: postgres
--

CREATE TABLE main.service (
    id integer NOT NULL,
    name text NOT NULL,
    price integer NOT NULL,
    type text NOT NULL,
    requirements text,
    id_rehearsal_point integer
);

ALTER TABLE main.service OWNER TO postgres;


--
-- TOC entry 235 (class 1259 OID 16991)
-- Name: service_booking; Type: TABLE; Schema: main; Owner: postgres
--

CREATE TABLE main.service_booking (
    id_service integer NOT NULL,
    id_booking integer NOT NULL
);

ALTER TABLE main.service_booking OWNER TO postgres;


--
-- TOC entry 225 (class 1259 OID 16948)
-- Name: service_id_seq; Type: SEQUENCE; Schema: main; Owner: postgres
--

CREATE SEQUENCE main.service_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

ALTER SEQUENCE main.service_id_seq OWNER TO postgres;


--
-- TOC entry 4991 (class 0 OID 0)
-- Dependencies: 225
-- Name: service_id_seq; Type: SEQUENCE OWNED BY; Schema: main; Owner: postgres
--

ALTER SEQUENCE main.service_id_seq OWNED BY main.service.id;


--
-- TOC entry 230 (class 1259 OID 16967)
-- Name: staff; Type: TABLE; Schema: main; Owner: postgres
--

CREATE TABLE main.staff (
    id integer NOT NULL,
    full_name text NOT NULL,
    address text,
    experience integer,
    phone character varying(15) NOT NULL,
    age integer NOT NULL,
    id_rehearsal_point integer
);

ALTER TABLE main.staff OWNER TO postgres;


--
-- TOC entry 229 (class 1259 OID 16966)
-- Name: staff_id_seq; Type: SEQUENCE; Schema: main; Owner: postgres
--

CREATE SEQUENCE main.staff_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
```

```
        NO MINVALUE
        NO MAXVALUE
        CACHE 1;


ALTER SEQUENCE main.staff_id_seq OWNER TO postgres;


--
-- TOC entry 4992 (class 0 OID 0)
-- Dependencies: 229
-- Name: staff_id_seq; Type: SEQUENCE OWNED BY; Schema: main; Owner: postgres
--

ALTER SEQUENCE main.staff_id_seq OWNED BY main.staff.id;


--
-- TOC entry 232 (class 1259 OID 16976)
-- Name: users; Type: TABLE; Schema: main; Owner: postgres
--

CREATE TABLE main.users (
    id integer NOT NULL,
    full_name text NOT NULL,
    phone character varying(15) NOT NULL,
    email text NOT NULL,
    registration_date timestamp without time zone NOT NULL
);

ALTER TABLE main.users OWNER TO postgres;


--
-- TOC entry 231 (class 1259 OID 16975)
-- Name: users_id_seq; Type: SEQUENCE; Schema: main; Owner: postgres
--

CREATE SEQUENCE main.users_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

ALTER SEQUENCE main.users_id_seq OWNER TO postgres;


--
-- TOC entry 4993 (class 0 OID 0)
-- Dependencies: 231
-- Name: users_id_seq; Type: SEQUENCE OWNED BY; Schema: main; Owner: postgres
--

ALTER SEQUENCE main.users_id_seq OWNED BY main.users.id;


--
-- TOC entry 4792 (class 2604 OID 16988)
-- Name: booking id; Type: DEFAULT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.booking ALTER COLUMN id SET DEFAULT nextval('main.booking_id_seq'::regclass);


--
-- TOC entry 4789 (class 2604 OID 16961)
-- Name: equipment id; Type: DEFAULT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.equipment ALTER COLUMN id SET DEFAULT nextval('main.equipment_id_seq'::regclass);


--
-- TOC entry 4784 (class 2604 OID 16932)
-- Name: rehearsal_points id; Type: DEFAULT; Schema: main; Owner: postgres
--

ALTER     TABLE     ONLY     main.rehearsal_points     ALTER     COLUMN     id     SET     DEFAULT
nextval('main.rehearsal_points_id_seq'::regclass);


--
-- TOC entry 4785 (class 2604 OID 16941)
-- Name: rooms id; Type: DEFAULT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.rooms ALTER COLUMN id SET DEFAULT nextval('main.rooms_id_seq'::regclass);


--
-- TOC entry 4788 (class 2604 OID 16952)
```

```
-- Name: service id; Type: DEFAULT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.service ALTER COLUMN id SET DEFAULT nextval('main.service_id_seq'::regclass);


--
-- TOC entry 4790 (class 2604 OID 16970)
-- Name: staff id; Type: DEFAULT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.staff ALTER COLUMN id SET DEFAULT nextval('main.staff_id_seq'::regclass);


--
-- TOC entry 4791 (class 2604 OID 16979)
-- Name: users id; Type: DEFAULT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.users ALTER COLUMN id SET DEFAULT nextval('main.users_id_seq'::regclass);


--
-- TOC entry 4979 (class 0 OID 16985)
-- Dependencies: 234
-- Data for Name: booking; Type: TABLE DATA; Schema: main; Owner: postgres
--

COPY main.booking (id, "time", cost, creation_date, status, number_of_people, id_room, id_user, duration) FROM
stdin;
28   2023-03-01 09:00:00 50   2023-02-28 10:00:00 active  4    1    1    2
29   2023-03-05 10:30:00 30   2023-03-04 11:00:00 canceled   2    2    2    1
30   2023-03-03 11:15:00 70   2023-03-02 12:00:00 completed  6    3    3    3
31   2023-03-07 14:00:00 25   2023-03-06 13:00:00 active  3    4    4    1
32   2023-03-02 15:45:00 45   2023-03-01 14:30:00 active  5    5    5    4
33   2023-03-04 08:30:00 15   2023-03-03 15:00:00 completed  1    6    6    2
34   2023-03-08 09:00:00 80   2023-03-07 16:00:00 canceled   7    7    7    3
35   2023-03-09 10:00:00 60   2023-03-08 17:00:00 active  8    8    8    1
36   2023-03-10 12:30:00 40   2023-03-09 18:00:00 completed  4    9    9    2
37   2023-03-11 14:15:00 55   2023-03-10 19:00:00 active  3    10   10   3
38   2023-03-12 09:30:00 20   2023-03-11 09:15:00 canceled   2    11   11   1
39   2023-03-13 11:00:00 35   2023-03-12 10:15:00 completed  6    12   12   2
40   2023-03-14 13:30:00 65   2023-03-13 11:15:00 active  5    13   13   4
41   2023-03-15 15:00:00 50   2023-03-14 12:15:00 active  1    14   14   3
42   2023-03-16 16:45:00 10   2023-03-15 13:15:00 completed  3    15   15   2
43   2023-03-17 10:00:00 75   2023-03-16 14:15:00 canceled   2    16   16   1
44   2023-03-18 11:30:00 45   2023-03-17 15:15:00 active  4    17   17   3
45   2023-03-19 12:00:00 30   2023-03-18 16:15:00 completed  8    18   18   1
46   2023-03-20 08:15:00 65   2023-03-19 17:15:00 active  7    19   19   2
47   2023-03-21 09:45:00 15   2023-03-20 18:15:00 canceled   1    20   20   4
48   2023-03-22 10:30:00 55   2023-03-21 19:15:00 completed  6    21   21   3
49   2023-03-23 11:00:00 80   2023-03-22 09:00:00 active  5    22   22   1
50   2023-03-24 12:30:00 40   2023-03-23 10:00:00 active  3    23   23   2
51   2023-03-25 14:15:00 20   2023-03-24 11:00:00 completed  2    24   24   4
52   2023-03-26 15:00:00 60   2023-03-25 12:00:00 canceled   4    25   25   3
53   2023-03-27 16:30:00 35   2023-03-26 13:00:00 active  7    26   26   2
54   2023-03-28 17:00:00 50   2023-03-27 14:00:00 completed  8    27   27   1
\.


--
-- TOC entry 4973 (class 0 OID 16958)
-- Dependencies: 228
-- Data for Name: equipment; Type: TABLE DATA; Schema: main; Owner: postgres
--

COPY main.equipment (id, name, type, brand, model, condition, id_rehearsal_point) FROM stdin;
1    Combo Amplifier Amplifier   Fender  Champion 100    New 53
2    Combo Amplifier Amplifier   Fender  Champion 100    New 53
3    Combo Amplifier Amplifier   Marshall    MG30GFX Used    53
4    Drum Kit    Drum Set    Pearl   Export Series   Used    53
5    Drum Kit    Drum Set    Tama    Starclassic New 53
6    Synthesizer Synthesizer Yamaha  MX61    New 53
7    Bass Rental Instrument  Fender  Precision Bass  New 53
8    Combo Amplifier Amplifier   Roland  CUBE-40GX   New 54
9    Combo Amplifier Amplifier   Orange  Crush Pro   Used    54
10   Drum Kit    Drum Set    Yamaha  Stage Custom    New 54
11   Combo Amplifier Amplifier   Fender  Champion 100    New 55
12   Combo Amplifier Amplifier   Marshall    MG30GFX Used    55
13   Drum Kit    Drum Set    Pearl   Export Series   Used    55
14   Drum Kit    Drum Set    Tama    Starclassic New 55
15   Synthesizer Synthesizer Yamaha  MX61    New 55
16   Bass Rental Instrument  Fender  Precision Bass  New 56
17   Combo Amplifier Amplifier   Roland  CUBE-40GX   New 57
18   Combo Amplifier Amplifier   Orange  Crush Pro   Used    57
19   Drum Kit    Drum Set    Yamaha  Stage Custom    New 57
20   Drum Kit    Drum Set    Mapex   Armory  Used    58
```

```
21  Synthesizer Synthesizer Nord    Electro 5    New 58
22  Bass Rental Instrument  Epiphone    EB-3     New 58
23  Combo Amplifier Amplifier    Roland  AC30     New 59
24  Combo Amplifier Amplifier    Vox Pathfinder Used    59
25  Drum Kit    Drum Set    Tama    Starclassic New 59
26  Drum Kit    Drum Set    Yamaha  Live Custom New 59
27  Synthesizer Synthesizer Korg    Volca FM    New 59
28  Bass Rental Instrument  Fender  Jazz Bass   New 59
29  Combo Amplifier Amplifier    Bugera  V55 New 60
30  Combo Amplifier Amplifier    Laney   Ironheart    Used    60
31  Drum Kit    Drum Set    Gretsch New Classic New 60
32  Drum Kit    Drum Set    DW  Design Series   Used    60
33  Synthesizer Synthesizer Roland  Juno-DS New 60
34  Bass Rental Instrument  Ibanez  SR300   New 60
35  Combo Amplifier Amplifier    Marshall    Code 25 New 61
36  Combo Amplifier Amplifier    Orange  Tiny Terror Used    61
37  Drum Kit    Drum Set    Ludwig  Super Classic   New 61
38  Drum Kit    Drum Set    Pearl   Vision  Used    61
39  Synthesizer Synthesizer Yamaha  Reface DX   New 61
40  Bass Rental Instrument  Squier  Affinity    New 61
41  Combo Amplifier Amplifier    Fender  Frontman    New 62
42  Combo Amplifier Amplifier    Vox AC4 Used    62
43  Drum Kit    Drum Set    Mapex   M Series    New 62
44  Drum Kit    Drum Set    Tama    S.L.P.  Used    62
45  Synthesizer Synthesizer Korg    Monologue   New 62
46  Bass Rental Instrument  Music Man   Bongo   New 62
\.


--
-- TOC entry 4981 (class 0 OID 16996)
-- Dependencies: 236
-- Data for Name: equipment_booking; Type: TABLE DATA; Schema: main; Owner: postgres
--

COPY main.equipment_booking (id_equipment, id_booking) FROM stdin;
1   28
2   29
3   30
4   31
5   32
6   33
7   34
8   35
9   36
10  37
11  38
12  39
13  40
14  41
15  42
16  43
17  44
18  45
19  46
20  47
21  48
22  49
23  50
24  51
25  52
26  53
27  54
5   28
8   30
14  34
19  50
\.


--
-- TOC entry 4967 (class 0 OID 16929)
-- Dependencies: 222
-- Data for Name: rehearsal_points; Type: TABLE DATA; Schema: main; Owner: postgres
--

COPY main.rehearsal_points (id, rating, contact_number, schedule, name, address) FROM stdin;
74  4.4 +375 29 4445566 {"Monday": "10:00-22:00",  "Tuesday": "10:00-22:00",  "Wednesday": "10:00-20:00",
"Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} Studio
77  Minsk, K. Marksa St., 20
75  4.6 +375 29 5556677 {"Monday": "10:00-22:00",  "Tuesday": "10:00-20:00",  "Wednesday": "10:00-22:00",
"Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} Sound
Lab Minsk, Hikalo St., 3
```

76 4.5 +375 29 6667788 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-24:00", "Friday": "10:00-22:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} Vibe Studio Minsk, Zmitroka Biaduli St., 8

77 4.2 +375 29 7778899 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-24:00", "Friday": "10:00-22:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} Rhythm Studio Minsk, Bohdanovicha St., 30

78 4.3 +375 29 8889900 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} Echo Sound Minsk, October St., 10

79 4.4 +375 29 9990011 {"Monday": "10:00-22:00", "Tuesday": "10:00-20:00", "Wednesday": "10:00-22:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} Harmony Sound   Minsk, Lenina St., 25

80 4.5 +375 29 0001122 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-24:00", "Friday": "10:00-22:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} Beat Studio Minsk, Mashinostroiteley St., 15

81 4.6 +375 29 1112233 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} Music Studio   Minsk, Very Khoruzhey St., 5

82 4.3 +375 29 2223344 {"Monday": "10:00-22:00", "Tuesday": "10:00-20:00", "Wednesday": "10:00-22:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} Vocal Studio   Minsk, Hikalo St., 12

83 4.4 +375 29 3334455 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} Sound Wave Minsk, Mashinostroiteley St., 18

53 4.5 +375 29 1504505 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-24:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} Black Line Studio   Minsk, Fabriziusa 8

54 4.8 +375 29 5714120 {"Monday": "09:00-21:00", "Tuesday": "09:00-21:00", "Wednesday": "09:00-21:00", "Thursday": "09:00-21:00", "Friday": "09:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} BooM Studio Minsk, Lenina St., 4

55 4.6 +375 33 3036355 {"Monday": "10:00-22:00", "Tuesday": "10:00-20:00", "Wednesday": "10:00-24:00", "Thursday": "10:00-22:00", "Friday": "10:00-22:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} Raga Doo Music Studio   Minsk, Very Khoruzhey St., 29

56 4.7 +375 44 7469444 {"Monday": "11:00-23:00", "Tuesday": "11:00-23:00", "Wednesday": "11:00-24:00", "Thursday": "11:00-23:00", "Friday": "11:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} Studio 9   Minsk, Hikalo St., 9, 4th building BGUIR

57 4.5 +375 29 2939033 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-22:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} Black Beauty Studio Minsk, Korolya St., 2

58 4.3 +375 29 7925455 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} MetraMusic Minsk, Danila Serdicha St., 30A

59 4.6 +375 29 7608134 {"Monday": "10:00-24:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-22:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} LIVEBOX Minsk, Masherova Ave., 11

60 4.4 +375 29 7608135 {"Monday": "09:00-21:00", "Tuesday": "09:00-21:00", "Wednesday": "09:00-22:00", "Thursday": "09:00-22:00", "Friday": "09:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} Chilli Records Minsk, Zmitroka Biaduli St., 13

61 4.2 +375 29 5714121 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} JAM Studio (BooM)   Minsk, K. Marksa St., 50A

62 4.5 +375 25 9501863 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} BIG AIR STUDIO Minsk, Bohdanovicha St., 232

63 4.7 +375 25 7792203 {"Monday": "10:00-22:00", "Tuesday": "10:00-24:00", "Wednesday": "10:00-22:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} Melody Studio   Minsk, Korolya St., 2/11

64 4.6 +375 29 5528552 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-24:00", "Sunday": "10:00-20:00"} Sunset Minsk, Mashinostroiteley St.

65 4.5 +375 29 2574410 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} OVERTONE Studio Minsk, Korolya St., 2

66 4.8 +375 25 7151359 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} JKBX Studio Minsk, Masherova Ave., 11, 5th Floor

67 4.3 +375 29 3364499 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} Microfon   Minsk, Tolbukhina St., 2, office 13-5

68 4.5 +375 29 1504506 {"Monday": "10:00-22:00", "Tuesday": "10:00-24:00", "Wednesday": "10:00-22:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} New Sound Studio   Minsk, Masherova Ave., 10

69 4.4 +375 29 1234567 {"Monday": "09:00-21:00", "Tuesday": "09:00-21:00", "Wednesday": "09:00-22:00", "Thursday": "09:00-22:00", "Friday": "09:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} Sound Factory   Minsk, Zmitroka Biaduli St., 1

70 4.2 +375 29 7654321 {"Monday": "11:00-23:00", "Tuesday": "11:00-23:00", "Wednesday": "11:00-24:00", "Thursday": "11:00-23:00", "Friday": "11:00-24:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} Studio 55 Minsk, K. Marksa St., 12

71 4.1 +375 29 1112233 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "10:00-22:00", "Sunday": "10:00-20:00"} Music Hall Minsk, Bohdanovicha St., 15

72 4.3 +375 29 2223344 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} Harmony Studio Minsk, Lenina St., 14
73 4.5 +375 29 3334455 {"Monday": "10:00-22:00", "Tuesday": "10:00-22:00", "Wednesday": "10:00-20:00", "Thursday": "10:00-22:00", "Friday": "10:00-24:00", "Saturday": "12:00-24:00", "Sunday": "12:00-20:00"} Echo Studio Minsk, October St., 5
\.

--
-- TOC entry 4969 (class 0 OID 16938)
-- Dependencies: 224
-- Data for Name: rooms; Type: TABLE DATA; Schema: main; Owner: postgres
--

COPY main.rooms (id, name, air_conditioner, price, recording_support, area, id_rehearsal_point) FROM stdin;
1   Large Room t   50 t   35 53
2   Medium Room t   40 t   25 53
3   Small Room f   30 f   15 53
4   Blue Room   t   45 t   30 54
5   Red Room   f   35 t   20 54
6   Green Room t   25 f   28 54
7   Large Room t   50 t   35 55
8   Medium Room t   45 t   25 55
9   Small Room f   20 f   12 55
10 Yellow Room t   50 t   30 56
11 Orange Room f   35 t   18 56
12 Purple Room t   40 f   22 56
13 Large Room t   50 t   35 57
14 Medium Room t   30 t   26 57
15 Small Room f   15 f   14 57
16 Black Room t   45 t   29 58
17 White Room f   25 t   19 58
18 Gray Room   t   20 f   27 58
19 Large Room t   50 t   35 59
20 Medium Room t   40 t   24 59
21 Small Room f   10 f   13 59
22 Cyan Room   t   35 t   31 60
23 Magenta Room   f   30 t   21 60
24 Brown Room t   45 f   23 60
25 Large Room t   50 t   35 61
26 Medium Room t   40 t   27 61
27 Small Room f   15 f   11 61
28 Light Blue Room t   25 t   30 62
29 Light Green Room   f   20 t   20 62
30 Dark Room   t   30 f   18 62
31 Meeting Room   t   35 t   22 63
32 Rehearsal Room f   10 f   14 63
\.

--
-- TOC entry 4971 (class 0 OID 16949)
-- Dependencies: 226
-- Data for Name: service; Type: TABLE DATA; Schema: main; Owner: postgres
--

COPY main.service (id, name, price, type, requirements, id_rehearsal_point) FROM stdin;
1   Synthesizer Rental 30 Rental None   53
2   Bass Rental 25 Rental None   53
3   Combo Amplifier Rental 40 Rental None   53
4   Mixing Service 150 Recording   DAW, audio interface, monitors 54
5   Mastering Service   200 Recording   High-quality monitors, specialized software 54
6   Sound Recording 180 Recording   Microphones, audio interface, soundproofing 54
7   Vocal Recording 150 Recording   Microphones, pop filter, headphones 55
8   Guitar Rental   20 Rental None   55
9   Drum Kit Rental 35 Rental None   55
10 Keyboard Rental 30 Rental None   56
11 Mixing Service 160 Recording   DAW, audio interface, monitors 56
12 Live Sound Engineering 200 Recording   PA system, microphones, mixing console 56
13 Sound Design   180 Recording   Synthesizers, effects, DAW 57
14 Acoustic Treatment 50 Rental Acoustic panels, bass traps 57
15 Microphone Rental   15 Rental None   58
16 Piano Rental   40 Rental None   58
17 Bass Guitar Rental 25 Rental None   58
18 Editing Service 120 Recording   DAW, editing software   59
19 Podcast Recording   150 Recording   Microphones, soundproofing 59
20 Home Studio Setup   200 Recording   Monitors, audio interface, software 59
21 Vocal Mixing   180 Recording   DAW, effects plugins   60
22 Drum Recording 160 Recording   Microphones, soundproofing 60
23 Bass Mixing 170 Recording   DAW, effects plugins   60
24 Guitar Mixing   150 Recording   DAW, effects plugins   61
25 Loop Rental 10 Rental None   61
26 Audio Interface Rental 25 Rental None   62
27 Synth Programming   30 Recording   Synthesizer, DAW   62

24

```
28  Sample Library Access    20  Rental   None     62
29  Soundtrack Composition   200 Recording    DAW, instruments    63
30  Live Streaming Setup     150 Recording   Camera, microphone, streaming software  63
\.


--
-- TOC entry 4980 (class 0 OID 16991)
-- Dependencies: 235
-- Data for Name: service_booking; Type: TABLE DATA; Schema: main; Owner: postgres
--

COPY main.service_booking (id_service, id_booking) FROM stdin;
1   28
2   29
3   30
4   31
5   32
6   33
7   34
8   35
9   36
10  37
11  38
12  39
13  40
14  41
15  42
16  43
17  44
18  45
19  46
20  47
21  48
22  49
23  50
24  51
25  52
26  53
27  54
3   28
9   30
17  34
22  50
\.


--
-- TOC entry 4975 (class 0 OID 16967)
-- Dependencies: 230
-- Data for Name: staff; Type: TABLE DATA; Schema: main; Owner: postgres
--

COPY main.staff (id, full_name, address, experience, phone, age, id_rehearsal_point) FROM stdin;
1   Alexey Petrov    Minsk, Lenin St., 1 5   +375291234567    30  53
2   Darya Ivanova    Minsk, Nezavisimosti Ave., 10    7   +375291234568    35  54
3   Sergey Sokolov   Minsk, Mira St., 5  4   +375291234569    28  55
6   Olga Smirnova    Minsk, Chekistov St., 30    8   +375291234572    40  58
7   Vladimir Ivanov Minsk, Gorkogo St., 12  5   +375291234573    29  59
8   Maria Orlova     Minsk, Lenin St., 25    4   +375291234574    31  60
9   Andrey Nikiforov     Minsk, Pushkina St., 10 6   +375291234575    34  61
12  Kirill Fedorov  Minsk, Kirova St., 11    2   +375291234578    25  53
13  Yulia Alexandrova    Minsk, Frunze St., 22   7   +375291234579    38  54
16  Dmitry Tikhonov Minsk, Gogolya St., 8   4   +375291234582    30  57
18  Alexandra Guseva     Minsk, Revolyutsii St., 9   3   +375291234584    28  59
19  Viktor Petrovich     Minsk, Pervomayskaya St., 14    5   +375291234585    29  60
21  Igor Morozov     Minsk, Obronaya St., 19 2   +375291234587    24  62
23  Natalya Ivanenko     Minsk, Karl Marx St., 12    4   +375291234589    26  53
25  Sofia Novik Minsk, Gagarina St., 33 9   +375291234591    41  55
26  Roman Stepanov  Minsk, Koval St., 16    3   +375291234592    27  56
27  Igor Lebedev     Minsk, Gagarina St., 10 3   +375291234604    28  63
28  Maria Morozova  Minsk, Frunze St., 25   2   +375291234611    24  56
4   Natalia Kuznetsova  Minsk, Pobedy Ave., 20  6   +375291234570    32  55
5   Igor Moroz  Minsk, Sovetskaya St., 15   3   +375291234571    26  55
10  Svetlana Pavlova     Minsk, Stalingrad St., 50   5   +375291234576    33  61
11  Antonina Sergeeva    Minsk, Chernomorskaya St., 45   9   +375291234577    36  54
14  Mikhail Gromov  Minsk, Michurina St., 32    5   +375291234580    27  54
15  Elena Romanova  Minsk, Lenin St., 3 10  +375291234581    42  61
17  Tamara Ivanova  Minsk, Gagarina St., 6  6   +375291234583    37  53
20  Anastasia Semyonova Minsk, Lenin St., 17    8   +375291234586    39  58
22  Valentina Denisova  Minsk, Sovetskaya St., 7    6   +375291234588    33  58
24  Alexander Zaytsev    Minsk, Kuybysheva St., 28   5   +375291234590    30  53
\.


--
```

```
-- TOC entry 4977 (class 0 OID 16976)
-- Dependencies: 232
-- Data for Name: users; Type: TABLE DATA; Schema: main; Owner: postgres
--

COPY main.users (id, full_name, phone, email, registration_date) FROM stdin;
1    Alexey Petrov    +375291234567    alexey.petrov@example.com    2023-01-15 10:00:00
2    Darya Ivanova    +375291234568    darya.ivanova@example.com    2023-01-16 11:15:00
3    Sergey Sokolov    +375291234569    sergey.sokolov@example.com    2023-01-17 12:30:00
4    Natalia Kuznetsova +375291234570    natalia.kuznetsova@example.com  2023-01-18 13:45:00
5    Igor Moroz  +375291234571    igor.moroz@example.com  2023-01-19 14:00:00
6    Olga Smirnova    +375291234572    olga.smirnova@example.com    2023-01-20 15:10:00
7    Vladimir Ivanov +375291234573    vladimir.ivanov@example.com 2023-01-21 16:20:00
8    Maria Orlova    +375291234574    maria.orlova@example.com    2023-01-22 17:30:00
9    Andrey Nikiforov    +375291234575    andrey.nikiforov@example.com    2023-01-23 18:40:00
10   Svetlana Pavlova    +375291234576    svetlana.pavlova@example.com    2023-01-24 19:50:00
11   Antonina Sergeeva    +375291234577    antonina.sergeeva@example.com    2023-01-25 20:00:00
12   Kirill Fedorov    +375291234578    kirill.fedorov@example.com    2023-01-26 21:10:00
13   Yulia Alexandrova    +375291234579    yulia.alexandrova@example.com    2023-01-27 22:20:00
14   Mikhail Gromov    +375291234580    mikhail.gromov@example.com    2023-01-28 23:30:00
15   Elena Romanova    +375291234581    elena.romanova@example.com    2023-01-29 09:00:00
16   Dmitry Tikhonov +375291234582    dmitry.tikhonov@example.com 2023-01-30 10:05:00
17   Alexandra Guseva    +375291234583    alexandra.guseva@example.com    2023-01-31 11:15:00
18   Viktor Petrovich    +375291234584    viktor.petrovich@example.com    2023-02-01 12:20:00
19   Anastasia Semyonova +375291234585    anastasia.semyonova@example.com 2023-02-02 13:25:00
20   Maxim Frolov    +375291234600    maxim.frolov@example.com    2023-02-03 14:30:00
21   Anna Frolova    +375291234601    anna.frolova@example.com    2023-02-04 15:35:00
22   Dmitry Sergeyev +375291234602    dmitry.sergeyev@example.com 2023-02-05 16:40:00
23   Tatiana Sergeyeva    +375291234603    tatiana.sergeyeva@example.com    2023-02-06 17:45:00
24   Igor Lebedev    +375291234604    igor.lebedev@example.com    2023-02-07 18:50:00
25   Svetlana Lebedeva    +375291234605    svetlana.lebedeva@example.com    2023-02-08 19:55:00
26   Yuri Smirnov    +375291234606    yuri.smirnov@example.com    2023-02-09 20:00:00
27   Elena Smirnova    +375291234607    elena.smirnova@example.com    2023-02-10 21:05:00
28   Vladimir Petrov +375291234608    vladimir.petrov@example.com 2023-02-11 22:10:00
29   Olga Petrova    +375291234609    olga.petrova@example.com    2023-02-12 23:15:00
30   Andrey Morozov    +375291234610    andrey.morozov@example.com    2023-02-13 09:20:00
31   Maria Morozova    +375291234611    maria.morozova@example.com    2023-02-14 10:25:00
\.


--
-- TOC entry 4994 (class 0 OID 0)
-- Dependencies: 233
-- Name: booking_id_seq; Type: SEQUENCE SET; Schema: main; Owner: postgres
--

SELECT pg_catalog.setval('main.booking_id_seq', 54, true);


--
-- TOC entry 4995 (class 0 OID 0)
-- Dependencies: 227
-- Name: equipment_id_seq; Type: SEQUENCE SET; Schema: main; Owner: postgres
--

SELECT pg_catalog.setval('main.equipment_id_seq', 48, true);


--
-- TOC entry 4996 (class 0 OID 0)
-- Dependencies: 221
-- Name: rehearsal_points_id_seq; Type: SEQUENCE SET; Schema: main; Owner: postgres
--

SELECT pg_catalog.setval('main.rehearsal_points_id_seq', 83, true);


--
-- TOC entry 4997 (class 0 OID 0)
-- Dependencies: 223
-- Name: rooms_id_seq; Type: SEQUENCE SET; Schema: main; Owner: postgres
--

SELECT pg_catalog.setval('main.rooms_id_seq', 32, true);


--
-- TOC entry 4998 (class 0 OID 0)
-- Dependencies: 225
-- Name: service_id_seq; Type: SEQUENCE SET; Schema: main; Owner: postgres
--

SELECT pg_catalog.setval('main.service_id_seq', 30, true);


--
-- TOC entry 4999 (class 0 OID 0)
-- Dependencies: 229
-- Name: staff_id_seq; Type: SEQUENCE SET; Schema: main; Owner: postgres
```

```
--

SELECT pg_catalog.setval('main.staff_id_seq', 28, true);


--
-- TOC entry 5000 (class 0 OID 0)
-- Dependencies: 231
-- Name: users_id_seq; Type: SEQUENCE SET; Schema: main; Owner: postgres
--

SELECT pg_catalog.setval('main.users_id_seq', 31, true);


--
-- TOC entry 4806 (class 2606 OID 16990)
-- Name: booking booking_pkey; Type: CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.booking
    ADD CONSTRAINT booking_pkey PRIMARY KEY (id);


--
-- TOC entry 4810 (class 2606 OID 17000)
-- Name: equipment_booking equipment_booking_pkey; Type: CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.equipment_booking
    ADD CONSTRAINT equipment_booking_pkey PRIMARY KEY (id_equipment, id_booking);


--
-- TOC entry 4800 (class 2606 OID 16965)
-- Name: equipment equipment_pkey; Type: CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.equipment
    ADD CONSTRAINT equipment_pkey PRIMARY KEY (id);


--
-- TOC entry 4794 (class 2606 OID 16936)
-- Name: rehearsal_points rehearsal_points_pkey; Type: CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.rehearsal_points
    ADD CONSTRAINT rehearsal_points_pkey PRIMARY KEY (id);


--
-- TOC entry 4796 (class 2606 OID 16947)
-- Name: rooms rooms_pkey; Type: CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.rooms
    ADD CONSTRAINT rooms_pkey PRIMARY KEY (id);


--
-- TOC entry 4808 (class 2606 OID 16995)
-- Name: service_booking service_booking_pkey; Type: CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.service_booking
    ADD CONSTRAINT service_booking_pkey PRIMARY KEY (id_service, id_booking);


--
-- TOC entry 4798 (class 2606 OID 16956)
-- Name: service service_pkey; Type: CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.service
    ADD CONSTRAINT service_pkey PRIMARY KEY (id);


--
-- TOC entry 4802 (class 2606 OID 16974)
-- Name: staff staff_pkey; Type: CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.staff
    ADD CONSTRAINT staff_pkey PRIMARY KEY (id);


--
-- TOC entry 4804 (class 2606 OID 16983)
-- Name: users users_pkey; Type: CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.users
    ADD CONSTRAINT users_pkey PRIMARY KEY (id);
```

```
--
-- TOC entry 4815 (class 2606 OID 17021)
-- Name: booking fk_booking_room; Type: FK CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.booking
    ADD CONSTRAINT fk_booking_room FOREIGN KEY (id_room) REFERENCES main.rooms(id) ON DELETE SET NULL;

--
-- TOC entry 4816 (class 2606 OID 17026)
-- Name: booking fk_booking_user; Type: FK CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.booking
    ADD CONSTRAINT fk_booking_user FOREIGN KEY (id_user) REFERENCES main.users(id) ON DELETE SET NULL;

--
-- TOC entry 4819 (class 2606 OID 17046)
-- Name: equipment_booking fk_equipment_booking_booking; Type: FK CONSTRAINT; Schema: main; Owner: postgres
--
ALTER TABLE ONLY main.equipment_booking
    ADD CONSTRAINT fk_equipment_booking_booking FOREIGN KEY (id_booking) REFERENCES main.booking(id) ON DELETE
SET NULL
--
-- TOC entry 4820 (class 2606 OID 17041)
-- Name: equipment_booking fk_equipment_booking_equipment; Type: FK CONSTRAINT; Schema: main; Owner: postgres
--
ALTER TABLE ONLY main.equipment_booking
    ADD CONSTRAINT fk_equipment_booking_equipment FOREIGN KEY (id_equipment) REFERENCES main.equipment(id) ON
DELETE SET NULL;
--
-- TOC entry 4813 (class 2606 OID 17011)
-- Name: equipment fk_equipment_rehearsal_point; Type: FK CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.equipment
        ADD   CONSTRAINT   fk_equipment_rehearsal_point   FOREIGN   KEY   (id_rehearsal_point)   REFERENCES
main.rehearsal_points(id) ON DELETE CASCADE;

--
-- TOC entry 4811 (class 2606 OID 17001)
-- Name: rooms fk_rooms_rehearsal_point; Type: FK CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.rooms
    ADD CONSTRAINT fk_rooms_rehearsal_point FOREIGN KEY (id_rehearsal_point) REFERENCES main.rehearsal_points(id)
ON DELETE CASCADE;
--
-- TOC entry 4817 (class 2606 OID 17036)
-- Name: service_booking fk_service_booking_booking; Type: FK CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.service_booking
    ADD CONSTRAINT fk_service_booking_booking FOREIGN KEY (id_booking) REFERENCES main.booking(id) ON DELETE SET
NULL;
--
-- TOC entry 4818 (class 2606 OID 17031)
-- Name: service_booking fk_service_booking_service; Type: FK CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.service_booking
    ADD CONSTRAINT fk_service_booking_service FOREIGN KEY (id_service) REFERENCES main.service(id) ON DELETE SET
NULL;
--
-- TOC entry 4812 (class 2606 OID 17006)
-- Name: service fk_service_rehearsal_point; Type: FK CONSTRAINT; Schema: main; Owner: postgres
--
ALTER TABLE ONLY main.service
        ADD   CONSTRAINT   fk_service_rehearsal_point   FOREIGN   KEY   (id_rehearsal_point)   REFERENCES
main.rehearsal_points(id) ON DELETE CASCADE;
--
-- TOC entry 4814 (class 2606 OID 17016)
-- Name: staff fk_staff_rehearsal_point; Type: FK CONSTRAINT; Schema: main; Owner: postgres
--

ALTER TABLE ONLY main.staff
    ADD CONSTRAINT fk_staff_rehearsal_point FOREIGN KEY (id_rehearsal_point) REFERENCES main.rehearsal_points(id)
ON DELETE SET NULL;
-- Completed on 2025-02-25 02:12:59
--
-- PostgreSQL database dump complete
```

ЗАКЛЮЧЕНИЕ

В процессе выполнения лабораторной работы были успешно решены все поставленные задачи, включая разработку новой схемы данных, проектирование и наполнение таблиц базы данных, а также проверку их взаимосвязей. Получены навыки работы с SQL-операторами, такими как CREATE TABLE, INSERT и ALTER TABLE, что позволило изменять структуру данных в соответствии с требованиями задания. Экспорт результатов в SQL-скрипт позволил сравнить полученные данные с эталонными, что подтвердило правильность выполнения всех операций. Работа помогла углубить понимание принципов проектирования и управления реляционными базами данных, а также улучшить навыки написания SQL-запросов для создания, модификации и наполнения таблиц.