

**Министерство науки и высшего образования Российской Федерации  
ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ АВТОНОМНОЕ ОБРАЗОВАТЕЛЬНОЕ  
УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ  
НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИТМО**

## **ОТЧЕТ**

### **ПО ЛАБОРАТОРНОЙ РАБОТЕ №3**

#### **«СОЗДАНИЕ ТАБЛИЦ БАЗЫ ДАННЫХ POSTGRESQL. ЗАПОЛНЕНИЕ ТАБЛИЦ РАБОЧИМИ ДАННЫМИ»**

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

**Обучающийся Христофоров Владислав Николаевич**

**Факультет прикладной информатики**

**Группа K3240**

**Направление подготовки 09.03.03 Прикладная информатика**

**Образовательная программа Мобильные и сетевые технологии 2023**

**Преподаватель Говорова Марина Михайловна**

Санкт-Петербург  
2024/2025

**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.

**Индивидуальное задание: Вариант 3. БД «Библиотека»**

Описание предметной области: Каждая книга может храниться в нескольких экземплярах. Для каждого экземпляра известно место его хранения (комната, стеллаж, полка). Читателю не может быть выдано более 3-х книг одновременно. Книги выдаются читателям на срок не более 10 дней. В случае просрочки читателю назначается денежный штраф.

Все издания, поступающие в библиотеку, ставятся на библиотечный учет, согласно существующим требованиям. Необходимо хранить информацию, кто из сотрудников поставил экземпляр на учет.

Книги принимаются к учету на основании первичных учетных документов (накладной от поставщика, акта о приеме документов). Если

документы поступают на безвозмездной основе (в результате передачи обязательных экземпляров и т. п.), оформляется акт о приеме документов. Документы, поступающие от читателей взамен утерянных и признанные равноценными утраченным, оформляются актом о приеме документов взамен утерянных.

Выбытие документов из библиотеки отражается в учете в связи с физической утратой либо утратой потребительских свойств (по причине ветхости, дефектности, устарелости по содержанию, непрофильности). Непрофильность издания определяется на основании профиля комплектования фонда или иного документа, утверждаемого руководителем библиотеки. При выбытии документов из библиотеки оформляется акт о списании исключенных объектов библиотечного фонда (далее – акт о списании), к которому прилагается список исключаемых объектов библиотечного фонда. В акте о списании отражаются сведения о количестве и общей стоимости исключаемых документов, а также причина списания и направление изданий после выбытия с учета. В прилагаемом к акту списке указываются:

- регистрационный номер и шифр хранения издания;
- краткое библиографическое описание;
- стоимость, зафиксированная в регистре индивидуального учета издания;
- коэффициент переоценки, стоимость после переоценки;
- общая стоимость исключаемых документов.

## Выполнение:

1. Наименование БД: **library**.
2. Схема инфологической модели данных БД в нотации Питера Чена-

Кириллова:

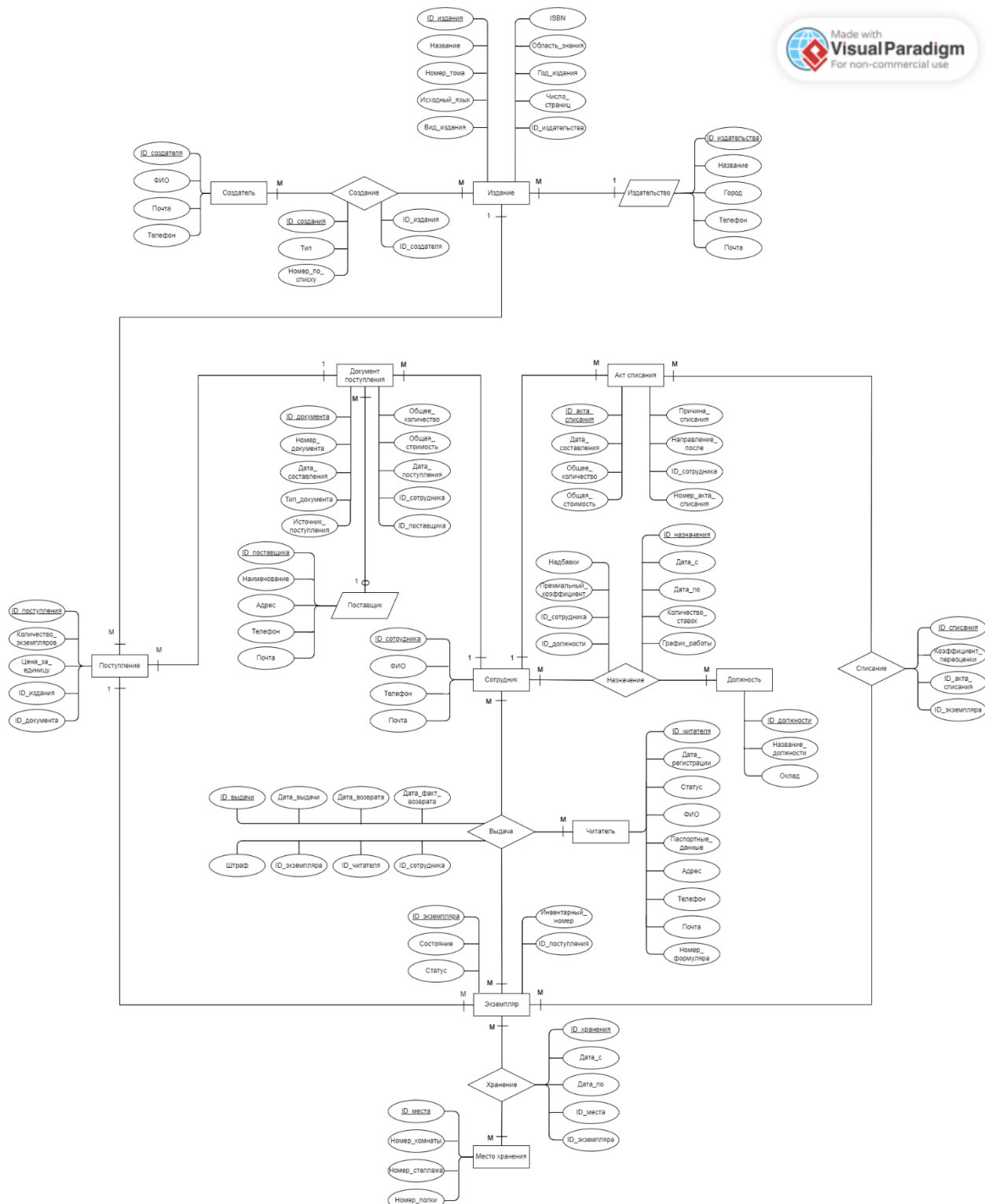


Рисунок 1 — Схема инфологической модели данных БД в нотации Питера Чена-Кириллова

## Схема инфологической модели данных БД в нотации IDEF1X:

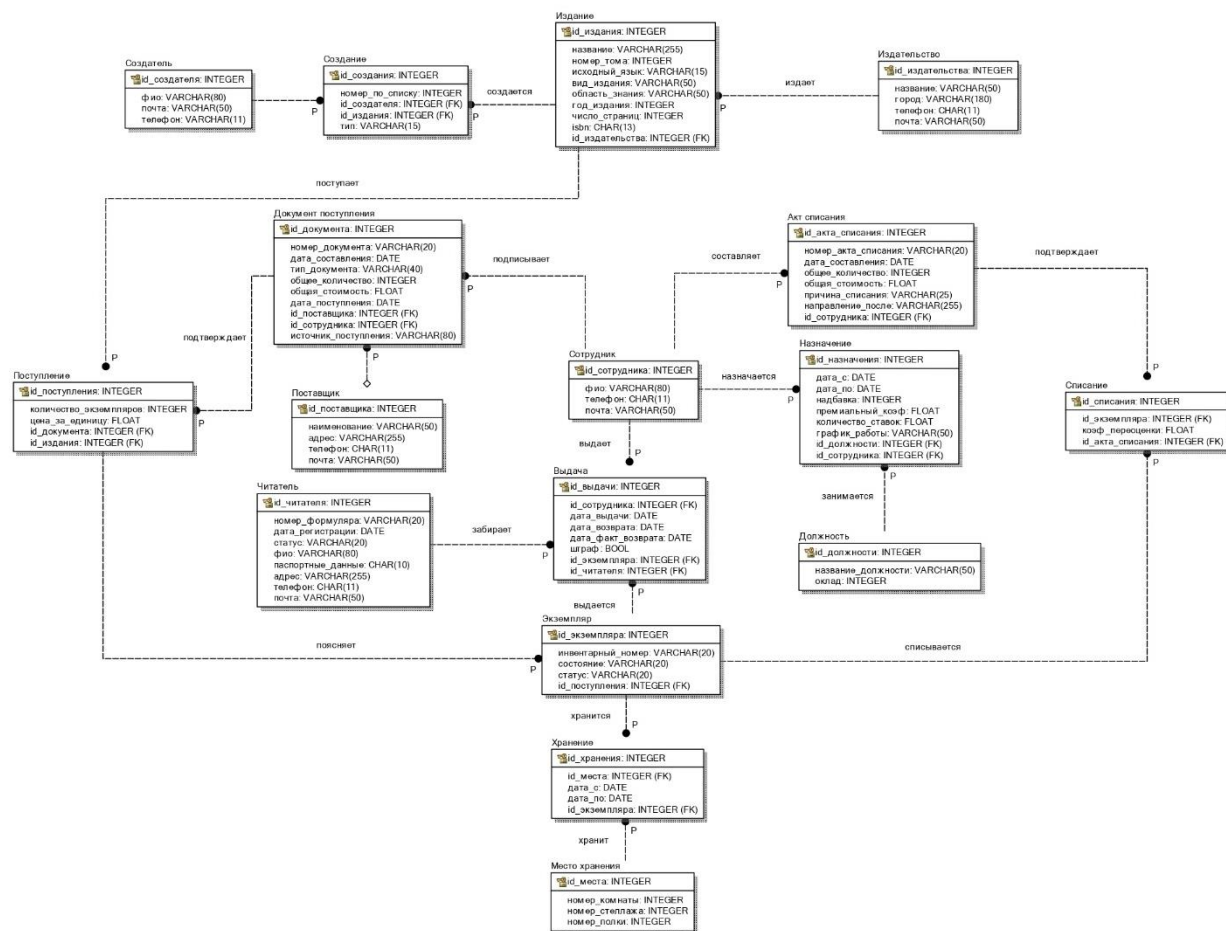


Рисунок 2 — Схема инфологической модели данных БД в нотации IDEF1X

3. Схема логической модели базы данных, сгенерированная в Generate ERD:

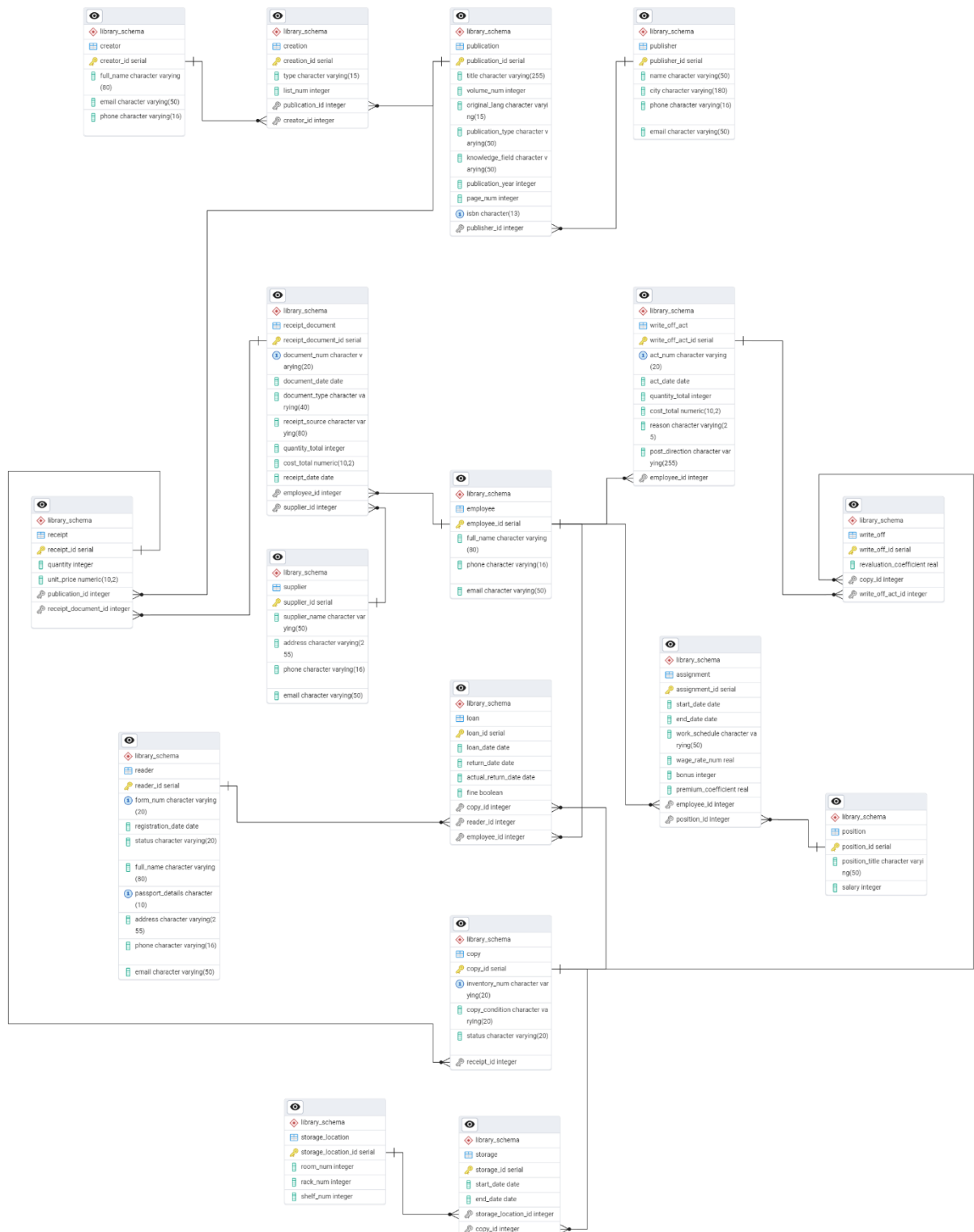


Рисунок 3 — Схема логической модели базы данных ERD

#### 4. Dump, содержащий скрипты работы с БД

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

-- Dumped from database version 17.4
-- Dumped by pg_dump version 17.4

-- Started on 2025-04-03 22:40:34

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 5042 (class 1262 OID 16400)
-- Name: library; Type: DATABASE; Schema: -; Owner: postgres
--

/*Создание БД*/
CREATE DATABASE library WITH TEMPLATE = template0 ENCODING = 'UTF8'
LOCALE_PROVIDER = libc LOCALE = 'ru-RU';

ALTER DATABASE library OWNER TO postgres;

\connect library

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 6 (class 2615 OID 16401)
-- Name: library_schema; Type: SCHEMA; Schema: -; Owner: postgres
--

/*Создание схемы (пространства имен) для организации объектов БД*/
CREATE SCHEMA library_schema;

ALTER SCHEMA library_schema OWNER TO postgres;

SET default_tablespace = '';
```

```
SET default_table_access_method = heap;
```

```
-- =====  
-- СОЗДАНИЕ ТАБЛИЦ  
-- =====
```

```
--  
-- TOC entry 231 (class 1259 OID 16502)  
-- Name: assignment; Type: TABLE; Schema: library_schema; Owner: postgres  
--
```

```
/*Создание таблицы assignment (Назначение)*/
```

```
CREATE TABLE library_schema.assignment (  
    assignment_id integer NOT NULL,  
    start_date date NOT NULL,  
    end_date date DEFAULT '10000-01-01'::date NOT NULL,  
    work_schedule character varying(50) NOT NULL,  
    wage_rate_num real NOT NULL,  
    bonus integer DEFAULT 0 NOT NULL,  
    premium_coefficient real DEFAULT 0 NOT NULL,  
    employee_id integer NOT NULL,  
    position_id integer NOT NULL,  
    CONSTRAINT assignment_date_chk CHECK ((end_date >= start_date)),  
    CONSTRAINT bonus_chk CHECK ((bonus >= 0)),  
    CONSTRAINT premium_coefficient_chk CHECK ((premium_coefficient >=  
(0)::double precision)),  
    CONSTRAINT wage_rate_num_chk CHECK ((wage_rate_num > (0)::double  
precision))  
);
```

```
ALTER TABLE library_schema.assignment OWNER TO postgres;
```

```
--  
-- TOC entry 230 (class 1259 OID 16501)  
-- Name: assignment_assignment_id_seq; Type: SEQUENCE; Schema:  
library_schema; Owner: postgres  
--
```

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

```
ALTER SEQUENCE library_schema.assignment_assignment_id_seq OWNER TO  
postgres;
```

```
--  
-- TOC entry 5043 (class 0 OID 0)  
-- Dependencies: 230  
-- Name: assignment_assignment_id_seq; Type: SEQUENCE OWNED BY; Schema:  
library_schema; Owner: postgres  
--
```

```
ALTER SEQUENCE library_schema.assignment_assignment_id_seq OWNED BY  
library_schema.assignment.assignment_id;
```



```

--
-- TOC entry 235 (class 1259 OID 16544)
-- Name: copy; Type: TABLE; Schema: library_schema; Owner: postgres
--
/*Создание таблицы copy (Экземпляр)*/
CREATE TABLE library_schema.copy (
    copy_id integer NOT NULL,
    inventory_num character varying(20) NOT NULL,
    copy_condition character varying(20) NOT NULL,
    status character varying(20) NOT NULL,
    receipt_id integer NOT NULL,
    CONSTRAINT copy_condition_chk CHECK (((copy_condition)::text = ANY
((ARRAY['good'::character varying, 'worn'::character varying,
'defective'::character varying, 'other'::character varying])::text[]))),
    CONSTRAINT copy_status_chk CHECK (((status)::text = ANY
((ARRAY['issued'::character varying, 'available'::character varying,
'written_off'::character varying, 'other'::character varying])::text[])))
);

ALTER TABLE library_schema.copy OWNER TO postgres;

--
-- TOC entry 234 (class 1259 OID 16543)
-- Name: copy_copy_id_seq; Type: SEQUENCE; Schema: library_schema; Owner:
postgres
--

CREATE SEQUENCE library_schema.copy_copy_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

ALTER SEQUENCE library_schema.copy_copy_id_seq OWNER TO postgres;

--
-- TOC entry 5044 (class 0 OID 0)
-- Dependencies: 234
-- Name: copy_copy_id_seq; Type: SEQUENCE OWNED BY; Schema:
library_schema; Owner: postgres
--

ALTER SEQUENCE library_schema.copy_copy_id_seq OWNED BY
library_schema.copy.copy_id;

--
-- TOC entry 225 (class 1259 OID 16450)
-- Name: creation; Type: TABLE; Schema: library_schema; Owner: postgres
--
/*Создание таблицы creation (Создание)*/
CREATE TABLE library_schema.creation (
    creation_id integer NOT NULL,
    type character varying(15) NOT NULL,

```

```

        list_num integer NOT NULL,
        publication_id integer NOT NULL,
        creator_id integer NOT NULL,
        CONSTRAINT creation_type_chk CHECK (((type)::text = ANY
((ARRAY['authorship'::character varying, 'translation'::character varying,
'compilation'::character varying, 'editing'::character varying,
'illustration'::character varying]))::text[]))),
        CONSTRAINT list_num_chk CHECK ((list_num > 0))
);

```

```

ALTER TABLE library_schema.creation OWNER TO postgres;

```

```

--
-- TOC entry 224 (class 1259 OID 16449)
-- Name: creation_creation_id_seq; Type: SEQUENCE; Schema: library_schema;
Owner: postgres
--

```

```

CREATE SEQUENCE library_schema.creation_creation_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

```

```

ALTER SEQUENCE library_schema.creation_creation_id_seq OWNER TO postgres;

```

```

--
-- TOC entry 5045 (class 0 OID 0)
-- Dependencies: 224
-- Name: creation_creation_id_seq; Type: SEQUENCE OWNED BY; Schema:
library_schema; Owner: postgres
--

```

```

ALTER SEQUENCE library_schema.creation_creation_id_seq OWNED BY
library_schema.creation.creation_id;

```

```

--
-- TOC entry 223 (class 1259 OID 16435)
-- Name: creator; Type: TABLE; Schema: library_schema; Owner: postgres
--

```

**/\*Создание таблицы creator (Создатель)\*/**

```

CREATE TABLE library_schema.creator (
    creator_id integer NOT NULL,
    full_name character varying(80) NOT NULL,
    email character varying(50),
    phone character varying(16),
    CONSTRAINT creator_email_chk CHECK (((email IS NULL) OR ((email)::text
~* '^[A-Z0-9._%+-]+@[A-Z0-9.-]+\.[A-Z]{2,}$'::text))),
    CONSTRAINT creator_phone_chk CHECK (((phone IS NULL) OR ((phone)::text
~ '^\\+[1-9][0-9]{7,15}$'::text)))
);

```

```

ALTER TABLE library_schema.creator OWNER TO postgres;

```

```

--
-- TOC entry 222 (class 1259 OID 16434)
-- Name: creator_creator_id_seq; Type: SEQUENCE; Schema: library_schema;
Owner: postgres
--

CREATE SEQUENCE library_schema.creator_creator_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

ALTER SEQUENCE library_schema.creator_creator_id_seq OWNER TO postgres;

--
-- TOC entry 5046 (class 0 OID 0)
-- Dependencies: 222
-- Name: creator_creator_id_seq; Type: SEQUENCE OWNED BY; Schema:
library_schema; Owner: postgres
--

ALTER SEQUENCE library_schema.creator_creator_id_seq OWNED BY
library_schema.creator.creator_id;

--
-- TOC entry 227 (class 1259 OID 16469)
-- Name: employee; Type: TABLE; Schema: library_schema; Owner: postgres
--

/*Создание таблицы employee (Сотрудник)*/
CREATE TABLE library_schema.employee (
    employee_id integer NOT NULL,
    full_name character varying(80) NOT NULL,
    phone character varying(16) NOT NULL,
    email character varying(50) NOT NULL,
    CONSTRAINT employee_email_chk CHECK (((email)::text ~* '^[A-Z0-9._%+-
]+@[A-Z0-9.-]+\.[A-Z]{2,}$'::text)),
    CONSTRAINT employee_phone_chk CHECK (((phone)::text ~ '^[1-9][0-
9]{7,15}$'::text))
);

ALTER TABLE library_schema.employee OWNER TO postgres;

--
-- TOC entry 226 (class 1259 OID 16468)
-- Name: employee_employee_id_seq; Type: SEQUENCE; Schema: library_schema;
Owner: postgres
--

CREATE SEQUENCE library_schema.employee_employee_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

```

```
ALTER SEQUENCE library_schema.employee_employee_id_seq OWNER TO postgres;
```

```
--
```

```
-- TOC entry 5047 (class 0 OID 0)
```

```
-- Dependencies: 226
```

```
-- Name: employee_employee_id_seq; Type: SEQUENCE OWNED BY; Schema:  
library_schema; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE library_schema.employee_employee_id_seq OWNED BY  
library_schema.employee_employee_id;
```

```
--
```

```
-- TOC entry 237 (class 1259 OID 16555)
```

```
-- Name: loan; Type: TABLE; Schema: library_schema; Owner: postgres
```

```
--
```

```
/*Создание таблицы loan (Выдача)*/
```

```
CREATE TABLE library_schema.loan (  
    loan_id integer NOT NULL,  
    loan_date date DEFAULT CURRENT_DATE NOT NULL,  
    return_date date NOT NULL,  
    actual_return_date date,  
    fine boolean DEFAULT false NOT NULL,  
    copy_id integer NOT NULL,  
    reader_id integer NOT NULL,  
    employee_id integer NOT NULL,  
    CONSTRAINT loan_actual_return_date_chk CHECK (((actual_return_date IS  
NULL) OR ((actual_return_date >= loan_date) AND (actual_return_date <=  
CURRENT_DATE)))),  
    CONSTRAINT loan_date_chk CHECK ((loan_date <= CURRENT_DATE)),  
    CONSTRAINT loan_return_date_chk CHECK (((return_date >= loan_date) AND  
(return_date <= (loan_date + '10 days'::interval))))  
);
```

```
ALTER TABLE library_schema.loan OWNER TO postgres;
```

```
--
```

```
-- TOC entry 236 (class 1259 OID 16554)
```

```
-- Name: loan_loan_id_seq; Type: SEQUENCE; Schema: library_schema; Owner:  
postgres
```

```
--
```

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

```
ALTER SEQUENCE library_schema.loan_loan_id_seq OWNER TO postgres;
```

```
--
```

```
-- TOC entry 5048 (class 0 OID 0)
```

```
-- Dependencies: 236
```

```

-- Name: loan_loan_id_seq; Type: SEQUENCE OWNED BY; Schema:
library_schema; Owner: postgres
--

ALTER SEQUENCE library_schema.loan_loan_id_seq OWNED BY
library_schema.loan.loan_id;

--
-- TOC entry 229 (class 1259 OID 16478)
-- Name: position; Type: TABLE; Schema: library_schema; Owner: postgres
--

/*Создание таблицы position (Должность)*/
CREATE TABLE library_schema."position" (
    position_id integer NOT NULL,
    position_title character varying(50) NOT NULL,
    salary integer NOT NULL,
    CONSTRAINT salary_chk CHECK ((salary > 0))
);

ALTER TABLE library_schema."position" OWNER TO postgres;

--
-- TOC entry 228 (class 1259 OID 16477)
-- Name: position_position_id_seq; Type: SEQUENCE; Schema: library_schema;
Owner: postgres
--

CREATE SEQUENCE library_schema.position_position_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

ALTER SEQUENCE library_schema.position_position_id_seq OWNER TO postgres;

--
-- TOC entry 5049 (class 0 OID 0)
-- Dependencies: 228
-- Name: position_position_id_seq; Type: SEQUENCE OWNED BY; Schema:
library_schema; Owner: postgres
--

ALTER SEQUENCE library_schema.position_position_id_seq OWNED BY
library_schema."position".position_id;

--
-- TOC entry 219 (class 1259 OID 16403)
-- Name: publication; Type: TABLE; Schema: library_schema; Owner: postgres
--

/*Создание таблицы publication (Издание)*/
CREATE TABLE library_schema.publication (
    publication_id integer NOT NULL,
    title character varying(255) NOT NULL,

```

```

        volume_num integer DEFAULT 0 NOT NULL,
        original_lang character varying(15) NOT NULL,
        publication_type character varying(50) NOT NULL,
        knowledge_field character varying(50) NOT NULL,
        publication_year integer NOT NULL,
        page_num integer NOT NULL,
        isbn character(13) NOT NULL,
        publisher_id integer NOT NULL
    );

ALTER TABLE library_schema.publication OWNER TO postgres;

--
-- TOC entry 218 (class 1259 OID 16402)
-- Name: publication_publication_id_seq; Type: SEQUENCE; Schema:
library_schema; Owner: postgres
--

CREATE SEQUENCE library_schema.publication_publication_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

ALTER SEQUENCE library_schema.publication_publication_id_seq OWNER TO
postgres;

--
-- TOC entry 5050 (class 0 OID 0)
-- Dependencies: 218
-- Name: publication_publication_id_seq; Type: SEQUENCE OWNED BY; Schema:
library_schema; Owner: postgres
--

ALTER SEQUENCE library_schema.publication_publication_id_seq OWNED BY
library_schema.publication_publication_id;

--
-- TOC entry 221 (class 1259 OID 16420)
-- Name: publisher; Type: TABLE; Schema: library_schema; Owner: postgres
--

/*Создание таблицы publisher (Издатель)*/
CREATE TABLE library_schema.publisher (
    publisher_id integer NOT NULL,
    name character varying(50) NOT NULL,
    city character varying(180) NOT NULL,
    phone character varying(16) NOT NULL,
    email character varying(50) NOT NULL
);

ALTER TABLE library_schema.publisher OWNER TO postgres;

--
-- TOC entry 220 (class 1259 OID 16419)

```

```
-- Name: publisher_publisher_id_seq; Type: SEQUENCE; Schema:
library_schema; Owner: postgres
--
```

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

```
ALTER SEQUENCE library_schema.publisher_publisher_id_seq OWNER TO
postgres;
```

```
--
-- TOC entry 5051 (class 0 OID 0)
-- Dependencies: 220
-- Name: publisher_publisher_id_seq; Type: SEQUENCE OWNED BY; Schema:
library_schema; Owner: postgres
--
```

```
ALTER SEQUENCE library_schema.publisher_publisher_id_seq OWNED BY
library_schema.publisher_publisher_id;
```

```
--
-- TOC entry 233 (class 1259 OID 16526)
-- Name: reader; Type: TABLE; Schema: library_schema; Owner: postgres
--
```

**/\*Создание таблицы reader (Читатель)\*/**

```
CREATE TABLE library_schema.reader (
    reader_id integer NOT NULL,
    form_num character varying(20) NOT NULL,
    registration_date date NOT NULL,
    status character varying(20) NOT NULL,
    full_name character varying(80) NOT NULL,
    passport_details character(10) NOT NULL,
    address character varying(255) NOT NULL,
    phone character varying(16) NOT NULL,
    email character varying(50) NOT NULL,
    CONSTRAINT reader_email_chk CHECK (((email)::text ~* '^[A-Z0-9._%+-
]+@[A-Z0-9.-]+\.[A-Z]{2,}$'::text)),
    CONSTRAINT reader_full_name_chk CHECK (((full_name)::text ~ '^[A-Za-
zÀ-ÖØ-öø-ÿА-Яа-яЁё-]+([ -][A-Za-zÀ-ÖØ-öø-ÿА-Яа-яЁё-])*$'::text)),
    CONSTRAINT reader_phone_chk CHECK (((phone)::text ~ '^+[1-9][0-
9]{7,15}$'::text)),
    CONSTRAINT reader_status_chk CHECK (((status)::text = ANY
((ARRAY['active'::character varying, 'suspended'::character varying,
'blocked'::character varying])::text[]))),
    CONSTRAINT registration_date_chk CHECK (((registration_date >= '2000-
01-01'::date) AND (registration_date <= CURRENT_DATE)))
);
```

```
ALTER TABLE library_schema.reader OWNER TO postgres;
```

```
--
-- TOC entry 232 (class 1259 OID 16525)
```

```
-- Name: reader_reader_id_seq; Type: SEQUENCE; Schema: library_schema;  
Owner: postgres  
--
```

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

```
ALTER SEQUENCE library_schema.reader_reader_id_seq OWNER TO postgres;
```

```
--  
-- TOC entry 5052 (class 0 OID 0)  
-- Dependencies: 232  
-- Name: reader_reader_id_seq; Type: SEQUENCE OWNED BY; Schema:  
library_schema; Owner: postgres  
--
```

```
ALTER SEQUENCE library_schema.reader_reader_id_seq OWNED BY  
library_schema.reader.reader_id;
```

```
--  
-- TOC entry 247 (class 1259 OID 16644)  
-- Name: receipt; Type: TABLE; Schema: library_schema; Owner: postgres  
--
```

```
/*Создание таблицы receipt (Поступление)*/
```

```
CREATE TABLE library_schema.receipt (  
    receipt_id integer NOT NULL,  
    quantity integer NOT NULL,  
    unit_price numeric(10,2) NOT NULL,  
    publication_id integer NOT NULL,  
    receipt_document_id integer NOT NULL,  
    CONSTRAINT receipt_quantity_chk CHECK ((quantity > 0)),  
    CONSTRAINT receipt_unit_price_chk CHECK ((unit_price > (0)::numeric))  
);
```

```
ALTER TABLE library_schema.receipt OWNER TO postgres;
```

```
--  
-- TOC entry 245 (class 1259 OID 16621)  
-- Name: receipt_document; Type: TABLE; Schema: library_schema; Owner:  
postgres  
--
```

```
/*Создание таблицы receipt_document (Документ поступления)*/
```

```
CREATE TABLE library_schema.receipt_document (  
    receipt_document_id integer NOT NULL,  
    document_num character varying(20) NOT NULL,  
    document_date date NOT NULL,  
    document_type character varying(40) NOT NULL,  
    receipt_source character varying(80) NOT NULL,  
    quantity_total integer NOT NULL,  
    cost_total numeric(10,2) NOT NULL,  
    receipt_date date NOT NULL,
```



```

        employee_id integer NOT NULL,
        supplier_id integer,
        CONSTRAINT rd_cost_total_chk CHECK ((cost_total > (0)::numeric)),
        CONSTRAINT rd_quantity_total_chk CHECK ((quantity_total > 0)),
        CONSTRAINT rd_type_chk CHECK (((document_type)::text = ANY
((ARRAY['invoice'::character varying, 'acceptance_act'::character varying,
'donation_act'::character varying, 'replacement_act'::character
varying])::text[]))),
        CONSTRAINT receipt_date_chk CHECK (((receipt_date >= document_date)
AND (receipt_date <= CURRENT_DATE)))
);

```

```

ALTER TABLE library_schema.receipt_document OWNER TO postgres;

```

```

--
-- TOC entry 244 (class 1259 OID 16620)
-- Name: receipt_document_receipt_document_id_seq; Type: SEQUENCE; Schema:
library_schema; Owner: postgres
--

```

```

CREATE SEQUENCE library_schema.receipt_document_receipt_document_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

```

```

ALTER SEQUENCE library_schema.receipt_document_receipt_document_id_seq
OWNER TO postgres;

```

```

--
-- TOC entry 5053 (class 0 OID 0)
-- Dependencies: 244
-- Name: receipt_document_receipt_document_id_seq; Type: SEQUENCE OWNED
BY; Schema: library_schema; Owner: postgres
--

```

```

ALTER SEQUENCE library_schema.receipt_document_receipt_document_id_seq
OWNED BY library_schema.receipt_document.receipt_document_id;

```

```

--
-- TOC entry 246 (class 1259 OID 16643)
-- Name: receipt_receipt_id_seq; Type: SEQUENCE; Schema: library_schema;
Owner: postgres
--

```

```

CREATE SEQUENCE library_schema.receipt_receipt_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

```

```

ALTER SEQUENCE library_schema.receipt_receipt_id_seq OWNER TO postgres;

```

```

--
-- TOC entry 5054 (class 0 OID 0)
-- Dependencies: 246
-- Name: receipt_receipt_id_seq; Type: SEQUENCE OWNED BY; Schema:
library_schema; Owner: postgres
--

ALTER SEQUENCE library_schema.receipt_receipt_id_seq OWNED BY
library_schema.receipt_receipt_id;

--
-- TOC entry 241 (class 1259 OID 16593)
-- Name: storage; Type: TABLE; Schema: library_schema; Owner: postgres
--

/*Создание таблицы storage (Хранение)*/
CREATE TABLE library_schema.storage (
    storage_id integer NOT NULL,
    start_date date NOT NULL,
    end_date date DEFAULT '10000-01-01'::date NOT NULL,
    storage_location_id integer NOT NULL,
    copy_id integer NOT NULL,
    CONSTRAINT storage_end_date_chk CHECK ((end_date >= start_date))
);

ALTER TABLE library_schema.storage OWNER TO postgres;

--
-- TOC entry 239 (class 1259 OID 16583)
-- Name: storage_location; Type: TABLE; Schema: library_schema; Owner:
postgres
--

/*Создание таблицы storage_location (Место хранения)*/
CREATE TABLE library_schema.storage_location (
    storage_location_id integer NOT NULL,
    room_num integer NOT NULL,
    rack_num integer NOT NULL,
    shelf_num integer NOT NULL,
    CONSTRAINT rack_num_chk CHECK ((rack_num > 0)),
    CONSTRAINT room_num_chk CHECK ((room_num > 0)),
    CONSTRAINT shelf_num_chk CHECK ((shelf_num > 0))
);

ALTER TABLE library_schema.storage_location OWNER TO postgres;

--
-- TOC entry 238 (class 1259 OID 16582)
-- Name: storage_location_storage_location_id_seq; Type: SEQUENCE; Schema:
library_schema; Owner: postgres
--

CREATE SEQUENCE library_schema.storage_location_storage_location_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE

```

```

    CACHE 1;

ALTER SEQUENCE library_schema.storage_location_storage_location_id_seq
OWNER TO postgres;

--
-- TOC entry 5055 (class 0 OID 0)
-- Dependencies: 238
-- Name: storage_location_storage_location_id_seq; Type: SEQUENCE OWNED
BY; Schema: library_schema; Owner: postgres
--

ALTER SEQUENCE library_schema.storage_location_storage_location_id_seq
OWNED BY library_schema.storage_location.storage_location_id;

--
-- TOC entry 240 (class 1259 OID 16592)
-- Name: storage_storage_id_seq; Type: SEQUENCE; Schema: library_schema;
Owner: postgres
--

CREATE SEQUENCE library_schema.storage_storage_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

ALTER SEQUENCE library_schema.storage_storage_id_seq OWNER TO postgres;

--
-- TOC entry 5056 (class 0 OID 0)
-- Dependencies: 240
-- Name: storage_storage_id_seq; Type: SEQUENCE OWNED BY; Schema:
library_schema; Owner: postgres
--

ALTER SEQUENCE library_schema.storage_storage_id_seq OWNED BY
library_schema.storage.storage_id;

--
-- TOC entry 243 (class 1259 OID 16612)
-- Name: supplier; Type: TABLE; Schema: library_schema; Owner: postgres
--

/*Создание таблицы supplier (Поставщик)*/
CREATE TABLE library_schema.supplier (
    supplier_id integer NOT NULL,
    supplier_name character varying(50) NOT NULL,
    address character varying(255) NOT NULL,
    phone character varying(16) NOT NULL,
    email character varying(50) NOT NULL,
    CONSTRAINT supplier_email_chk CHECK (((email)::text ~* '^[A-Z0-9._%+
-]+@[A-Z0-9.-]+\.[A-Z]{2,}$'::text)),
    CONSTRAINT supplier_phone_chk CHECK (((phone)::text ~ '^+[1-9][0-
9]{7,15}$'::text))

```

```
);
```

```
ALTER TABLE library_schema.supplier OWNER TO postgres;
```

```
--
```

```
-- TOC entry 242 (class 1259 OID 16611)
```

```
-- Name: supplier_supplier_id_seq; Type: SEQUENCE; Schema: library_schema;  
Owner: postgres
```

```
--
```

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

```
ALTER SEQUENCE library_schema.supplier_supplier_id_seq OWNER TO postgres;
```

```
--
```

```
-- TOC entry 5057 (class 0 OID 0)
```

```
-- Dependencies: 242
```

```
-- Name: supplier_supplier_id_seq; Type: SEQUENCE OWNED BY; Schema:  
library_schema; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE library_schema.supplier_supplier_id_seq OWNED BY  
library_schema.supplier.supplier_id;
```

```
--
```

```
-- TOC entry 251 (class 1259 OID 16681)
```

```
-- Name: write_off; Type: TABLE; Schema: library_schema; Owner: postgres
```

```
--
```

```
/*Создание таблицы write_off (Списание)*/
```

```
CREATE TABLE library_schema.write_off (  
    " write_off_id" integer NOT NULL,  
    revaluation_coefficient real NOT NULL,  
    copy_id integer NOT NULL,  
    write_off_act_id integer NOT NULL,  
    CONSTRAINT wo_revaluation_coef_chk CHECK ((revaluation_coefficient >=  
(0)::double precision))  
);
```

```
ALTER TABLE library_schema.write_off OWNER TO postgres;
```

```
--
```

```
-- TOC entry 250 (class 1259 OID 16680)
```

```
-- Name: write_off_write_off_id_seq; Type: SEQUENCE; Schema:  
library_schema; Owner: postgres
```

```
--
```

```
CREATE SEQUENCE library_schema."write_off_write_off_id_seq"  
    AS integer  
    START WITH 1  
    INCREMENT BY 1
```

```

        NO MINVALUE
        NO MAXVALUE
        CACHE 1;

ALTER SEQUENCE library_schema."write_off_ write_off_id_seq" OWNER TO
postgres;

--
-- TOC entry 5058 (class 0 OID 0)
-- Dependencies: 250
-- Name: write_off_ write_off_id_seq; Type: SEQUENCE OWNED BY; Schema:
library_schema; Owner: postgres
--

ALTER SEQUENCE library_schema."write_off_ write_off_id_seq" OWNED BY
library_schema.write_off." write_off_id";

--
-- TOC entry 249 (class 1259 OID 16664)
-- Name: write_off_act; Type: TABLE; Schema: library_schema; Owner:
postgres
--

/*Создание таблицы write_off_act (Акт списания)*/
CREATE TABLE library_schema.write_off_act (
    write_off_act_id integer NOT NULL,
    act_num character varying(20) NOT NULL,
    act_date date NOT NULL,
    quantity_total integer NOT NULL,
    cost_total numeric(10,2) NOT NULL,
    reason character varying(25) NOT NULL,
    post_direction character varying(255) NOT NULL,
    employee_id integer NOT NULL,
    CONSTRAINT woa_cost_total_chk CHECK ((cost_total > (0)::numeric)),
    CONSTRAINT woa_quantity_total_chk CHECK ((quantity_total > 0)),
    CONSTRAINT woa_reason_chk CHECK (((reason)::text = ANY
((ARRAY['physical_loss'::character varying, 'worn_out'::character varying,
'defective'::character varying, 'obsolete'::character varying,
'non_core'::character varying]))::text[])))
);

ALTER TABLE library_schema.write_off_act OWNER TO postgres;

--
-- TOC entry 248 (class 1259 OID 16663)
-- Name: write_off_act_write_off_act_id_seq; Type: SEQUENCE; Schema:
library_schema; Owner: postgres
--

CREATE SEQUENCE library_schema.write_off_act_write_off_act_id_seq
    AS integer
    START WITH 1
    INCREMENT BY 1
    NO MINVALUE
    NO MAXVALUE
    CACHE 1;

```

```
ALTER SEQUENCE library_schema.write_off_act_write_off_act_id_seq OWNER TO
postgres;
```

```
--
```

```
-- TOC entry 5059 (class 0 OID 0)
```

```
-- Dependencies: 248
```

```
-- Name: write_off_act_write_off_act_id_seq; Type: SEQUENCE OWNED BY;
```

```
Schema: library_schema; Owner: postgres
```

```
--
```

```
ALTER SEQUENCE library_schema.write_off_act_write_off_act_id_seq OWNED BY
library_schema.write_off_act.write_off_act_id;
```

```
--
```

```
-- TOC entry 4729 (class 2604 OID 16505)
```

```
-- Name: assignment assignment_id; Type: DEFAULT; Schema: library_schema;
```

```
Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY library_schema.assignment ALTER COLUMN assignment_id SET
DEFAULT nextval('library_schema.assignment_assignment_id_seq'::regclass);
```

```
--
```

```
-- TOC entry 4734 (class 2604 OID 16547)
```

```
-- Name: copy copy_id; Type: DEFAULT; Schema: library_schema; Owner:
postgres
```

```
--
```

```
ALTER TABLE ONLY library_schema.copy ALTER COLUMN copy_id SET DEFAULT
nextval('library_schema.copy_copy_id_seq'::regclass);
```

```
--
```

```
-- TOC entry 4726 (class 2604 OID 16453)
```

```
-- Name: creation creation_id; Type: DEFAULT; Schema: library_schema;
```

```
Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY library_schema.creation ALTER COLUMN creation_id SET
DEFAULT nextval('library_schema.creation_creation_id_seq'::regclass);
```

```
--
```

```
-- TOC entry 4725 (class 2604 OID 16438)
```

```
-- Name: creator creator_id; Type: DEFAULT; Schema: library_schema; Owner:
postgres
```

```
--
```

```
ALTER TABLE ONLY library_schema.creator ALTER COLUMN creator_id SET
DEFAULT nextval('library_schema.creator_creator_id_seq'::regclass);
```

```
--
```

```
-- TOC entry 4727 (class 2604 OID 16472)
```

```
-- Name: employee employee_id; Type: DEFAULT; Schema: library_schema;
```

```
Owner: postgres
```

```
--
```

```
ALTER TABLE ONLY library_schema.employee ALTER COLUMN employee_id SET
DEFAULT nextval('library_schema.employee_employee_id_seq'::regclass);
```

```
--
-- TOC entry 4735 (class 2604 OID 16558)
-- Name: loan loan_id; Type: DEFAULT; Schema: library_schema; Owner:
postgres
--
```

```
ALTER TABLE ONLY library_schema.loan ALTER COLUMN loan_id SET DEFAULT
nextval('library_schema.loan_loan_id_seq'::regclass);
```

```
--
-- TOC entry 4728 (class 2604 OID 16481)
-- Name: position position_id; Type: DEFAULT; Schema: library_schema;
Owner: postgres
--
```

```
ALTER TABLE ONLY library_schema."position" ALTER COLUMN position_id SET
DEFAULT nextval('library_schema.position_position_id_seq'::regclass);
```

```
--
-- TOC entry 4722 (class 2604 OID 16406)
-- Name: publication publication_id; Type: DEFAULT; Schema:
library_schema; Owner: postgres
--
```

```
ALTER TABLE ONLY library_schema.publication ALTER COLUMN publication_id
SET DEFAULT
nextval('library_schema.publication_publication_id_seq'::regclass);
```

```
--
-- TOC entry 4724 (class 2604 OID 16423)
-- Name: publisher publisher_id; Type: DEFAULT; Schema: library_schema;
Owner: postgres
--
```

```
ALTER TABLE ONLY library_schema.publisher ALTER COLUMN publisher_id SET
DEFAULT nextval('library_schema.publisher_publisher_id_seq'::regclass);
```

```
--
-- TOC entry 4733 (class 2604 OID 16529)
-- Name: reader reader_id; Type: DEFAULT; Schema: library_schema; Owner:
postgres
--
```

```
ALTER TABLE ONLY library_schema.reader ALTER COLUMN reader_id SET DEFAULT
nextval('library_schema.reader_reader_id_seq'::regclass);
```

```
--
-- TOC entry 4743 (class 2604 OID 16647)
-- Name: receipt receipt_id; Type: DEFAULT; Schema: library_schema; Owner:
postgres
--
```

```

ALTER TABLE ONLY library_schema.receipt ALTER COLUMN receipt_id SET
DEFAULT nextval('library_schema.receipt_receipt_id_seq'::regclass);

--
-- TOC entry 4742 (class 2604 OID 16624)
-- Name: receipt_document receipt_document_id; Type: DEFAULT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.receipt_document ALTER COLUMN
receipt_document_id SET DEFAULT
nextval('library_schema.receipt_document_receipt_document_id_seq'::regclas
s);

--
-- TOC entry 4739 (class 2604 OID 16596)
-- Name: storage storage_id; Type: DEFAULT; Schema: library_schema; Owner:
postgres
--

ALTER TABLE ONLY library_schema.storage ALTER COLUMN storage_id SET
DEFAULT nextval('library_schema.storage_storage_id_seq'::regclass);

--
-- TOC entry 4738 (class 2604 OID 16586)
-- Name: storage_location storage_location_id; Type: DEFAULT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.storage_location ALTER COLUMN
storage_location_id SET DEFAULT
nextval('library_schema.storage_location_storage_location_id_seq'::regclas
s);

--
-- TOC entry 4741 (class 2604 OID 16615)
-- Name: supplier supplier_id; Type: DEFAULT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.supplier ALTER COLUMN supplier_id SET
DEFAULT nextval('library_schema.supplier_supplier_id_seq'::regclass);

--
-- TOC entry 4745 (class 2604 OID 16684)
-- Name: write_off write_off_id; Type: DEFAULT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.write_off ALTER COLUMN " write_off_id" SET
DEFAULT nextval('library_schema."write_off_ write_off_id_seq"'::regclass);

--
-- TOC entry 4744 (class 2604 OID 16667)

```



```
-- Name: write_off_act write_off_act_id; Type: DEFAULT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.write_off_act ALTER COLUMN
write_off_act_id SET DEFAULT
nextval('library_schema.write_off_act_write_off_act_id_seq'::regclass);
```

```
-- =====
-- ЗАПОЛНЕНИЕ ТАБЛИЦ
-- =====
```

```
--
-- TOC entry 5016 (class 0 OID 16502)
-- Dependencies: 231
-- Data for Name: assignment; Type: TABLE DATA; Schema: library_schema;
Owner: postgres
--
```

```
/*Заполнение таблицы assignment*/
```

```
INSERT INTO library_schema.assignment VALUES (1, '2024-01-01', '2024-12-
31', '9-5', 1, 5000, 1.2, 1, 1);
INSERT INTO library_schema.assignment VALUES (2, '2024-01-01', '2024-12-
31', '9-5', 1, 3000, 1.1, 2, 2);
INSERT INTO library_schema.assignment VALUES (3, '2024-01-01', '2024-12-
31', '9-5', 1, 2000, 1, 3, 3);
INSERT INTO library_schema.assignment VALUES (4, '2024-01-01', '2024-12-
31', '9-5', 1, 1500, 1, 4, 4);
INSERT INTO library_schema.assignment VALUES (5, '2024-01-01', '2024-12-
31', '9-5', 1, 1500, 1, 5, 5);
INSERT INTO library_schema.assignment VALUES (6, '2024-01-01', '2024-12-
31', '9-5', 1, 1000, 1, 6, 6);
```

```
--
-- TOC entry 5020 (class 0 OID 16544)
-- Dependencies: 235
-- Data for Name: copy; Type: TABLE DATA; Schema: library_schema; Owner:
postgres
--
```

```
/*Заполнение таблицы copy*/
```

```
INSERT INTO library_schema.copy VALUES (11, 'INV1001', 'good',
'available', 1);
INSERT INTO library_schema.copy VALUES (12, 'INV1002', 'good',
'available', 1);
INSERT INTO library_schema.copy VALUES (13, 'INV1003', 'worn',
'written_off', 2);
INSERT INTO library_schema.copy VALUES (14, 'INV1004', 'good',
'available', 2);
INSERT INTO library_schema.copy VALUES (15, 'INV1005', 'defective',
'written_off', 3);
INSERT INTO library_schema.copy VALUES (16, 'INV1006', 'good',
'available', 3);
INSERT INTO library_schema.copy VALUES (17, 'INV1007', 'worn', 'issued',
4);
INSERT INTO library_schema.copy VALUES (18, 'INV1008', 'good',
'available', 4);
INSERT INTO library_schema.copy VALUES (19, 'INV1009', 'good',
'available', 5);
```

```

INSERT INTO library_schema.copy VALUES (20, 'INV1010', 'good',
'available', 5);
INSERT INTO library_schema.copy VALUES (21, 'INV1011', 'good',
'available', 6);
INSERT INTO library_schema.copy VALUES (22, 'INV1012', 'worn',
'written_off', 6);
INSERT INTO library_schema.copy VALUES (23, 'INV1013', 'good',
'available', 7);
INSERT INTO library_schema.copy VALUES (24, 'INV1014', 'good',
'available', 7);
INSERT INTO library_schema.copy VALUES (25, 'INV1015', 'good',
'available', 8);
INSERT INTO library_schema.copy VALUES (26, 'INV1016', 'defective',
'written_off', 8);
INSERT INTO library_schema.copy VALUES (27, 'INV1017', 'good',
'available', 9);
INSERT INTO library_schema.copy VALUES (28, 'INV1018', 'worn',
'written_off', 9);
INSERT INTO library_schema.copy VALUES (29, 'INV1019', 'good',
'available', 10);
INSERT INTO library_schema.copy VALUES (30, 'INV1020', 'good',
'available', 10);

--
-- TOC entry 5010 (class 0 OID 16450)
-- Dependencies: 225
-- Data for Name: creation; Type: TABLE DATA; Schema: library_schema;
Owner: postgres
--

```

**/\*Заполнение таблицы creation\*/**

```

INSERT INTO library_schema.creation VALUES (46, 'authorship', 1, 8, 4);
INSERT INTO library_schema.creation VALUES (47, 'authorship', 1, 9, 5);
INSERT INTO library_schema.creation VALUES (48, 'authorship', 1, 10, 6);
INSERT INTO library_schema.creation VALUES (49, 'authorship', 1, 11, 7);
INSERT INTO library_schema.creation VALUES (50, 'authorship', 1, 12, 8);
INSERT INTO library_schema.creation VALUES (51, 'authorship', 1, 13, 9);
INSERT INTO library_schema.creation VALUES (52, 'authorship', 1, 14, 8);
INSERT INTO library_schema.creation VALUES (53, 'authorship', 1, 15, 11);
INSERT INTO library_schema.creation VALUES (54, 'authorship', 1, 16, 12);
INSERT INTO library_schema.creation VALUES (55, 'authorship', 1, 17, 13);
INSERT INTO library_schema.creation VALUES (56, 'translation', 1, 9, 4);
INSERT INTO library_schema.creation VALUES (57, 'translation', 2, 10, 5);
INSERT INTO library_schema.creation VALUES (58, 'editing', 1, 11, 6);
INSERT INTO library_schema.creation VALUES (59, 'illustration', 1, 12, 7);
INSERT INTO library_schema.creation VALUES (60, 'compilation', 1, 13, 8);

```

```

--
-- TOC entry 5008 (class 0 OID 16435)
-- Dependencies: 223
-- Data for Name: creator; Type: TABLE DATA; Schema: library_schema;
Owner: postgres
--

```

**/\*Заполнение таблицы creator\*/**

```

INSERT INTO library_schema.creator VALUES (4, 'Stephen Hawking',
'shawking@example.com', '+441234567891');
INSERT INTO library_schema.creator VALUES (5, 'Leo Tolstoy',
'tolstoy@example.com', '+71234567890');

```

```

INSERT INTO library_schema.creator VALUES (6, 'Francis Scott Fitzgerald',
'fscott@example.com', '+12125550126');
INSERT INTO library_schema.creator VALUES (7, 'Charles Darwin',
'darwin@example.com', '+441234567892');
INSERT INTO library_schema.creator VALUES (8, 'Dan Brown',
'danbrown@example.com', '+12125550127');
INSERT INTO library_schema.creator VALUES (9, 'Victor Hugo',
'victorhugo@example.com', '+33123456789');
INSERT INTO library_schema.creator VALUES (10, 'Dan Simmons',
'dansimmons@example.com', '+12125550128');
INSERT INTO library_schema.creator VALUES (11, 'Carl Sagan',
'carlsagan@example.com', '+441234567893');
INSERT INTO library_schema.creator VALUES (12, 'Paulo Coelho',
'paulocoelho@example.com', '+551234567890');
INSERT INTO library_schema.creator VALUES (13, 'George Orwell',
'gorwell@example.com', '+441234567894');

```

```

--
-- TOC entry 5012 (class 0 OID 16469)
-- Dependencies: 227
-- Data for Name: employee; Type: TABLE DATA; Schema: library_schema;
Owner: postgres
--

```

**/\*Заполнение таблицы employee\*/**

```

INSERT INTO library_schema.employee VALUES (1, 'Alice Johnson',
'+12125550129', 'alice.johnson@library.com');
INSERT INTO library_schema.employee VALUES (2, 'Bob Smith',
'+12125550130', 'bob.smith@library.com');
INSERT INTO library_schema.employee VALUES (3, 'Carol White',
'+12125550131', 'carol.white@library.com');
INSERT INTO library_schema.employee VALUES (4, 'David Brown',
'+12125550132', 'david.brown@library.com');
INSERT INTO library_schema.employee VALUES (5, 'Eve Black',
'+12125550133', 'eve.black@library.com');
INSERT INTO library_schema.employee VALUES (6, 'Frank Green',
'+12125550134', 'frank.green@library.com');

```

```

--
-- TOC entry 5022 (class 0 OID 16555)
-- Dependencies: 237
-- Data for Name: loan; Type: TABLE DATA; Schema: library_schema; Owner:
postgres
--

```

**/\*Заполнение таблицы loan\*/**

```

INSERT INTO library_schema.loan VALUES (32, '2024-06-20', '2024-06-30',
'2024-06-29', false, 13, 2, 2);
INSERT INTO library_schema.loan VALUES (33, '2024-06-21', '2024-06-30',
'2024-06-30', false, 22, 3, 3);
INSERT INTO library_schema.loan VALUES (34, '2024-06-22', '2024-07-02',
NULL, false, 17, 4, 4);
INSERT INTO library_schema.loan VALUES (35, '2024-06-23', '2024-07-03',
'2024-07-03', true, 28, 5, 5);
INSERT INTO library_schema.loan VALUES (36, '2024-06-24', '2024-07-04',
NULL, false, 12, 6, 6);
INSERT INTO library_schema.loan VALUES (37, '2024-06-25', '2024-07-05',
'2024-07-05', false, 14, 7, 1);

```

```

INSERT INTO library_schema.loan VALUES (38, '2024-06-26', '2024-07-06',
NULL, false, 19, 8, 2);
INSERT INTO library_schema.loan VALUES (39, '2024-06-27', '2024-07-07',
'2024-07-07', false, 20, 9, 3);
INSERT INTO library_schema.loan VALUES (40, '2024-06-28', '2024-07-08',
'2024-07-08', true, 21, 10, 4);
INSERT INTO library_schema.loan VALUES (41, '2024-06-29', '2024-07-09',
NULL, false, 24, 11, 5);
INSERT INTO library_schema.loan VALUES (42, '2024-06-30', '2024-07-10',
'2024-07-10', false, 25, 2, 6);
INSERT INTO library_schema.loan VALUES (43, '2024-07-01', '2024-07-11',
NULL, false, 26, 3, 1);
INSERT INTO library_schema.loan VALUES (44, '2024-07-02', '2024-07-12',
'2024-07-12', false, 27, 4, 2);
INSERT INTO library_schema.loan VALUES (45, '2024-07-03', '2024-07-13',
NULL, true, 28, 5, 3);
INSERT INTO library_schema.loan VALUES (46, '2024-07-04', '2024-07-14',
'2024-07-14', false, 25, 6, 4);
INSERT INTO library_schema.loan VALUES (47, '2024-07-05', '2024-07-15',
NULL, false, 26, 7, 5);
INSERT INTO library_schema.loan VALUES (48, '2024-07-06', '2024-07-16',
'2024-07-16', false, 23, 8, 6);
INSERT INTO library_schema.loan VALUES (49, '2024-07-07', '2024-07-17',
NULL, true, 30, 9, 1);
INSERT INTO library_schema.loan VALUES (50, '2024-07-08', '2024-07-18',
'2024-07-18', false, 29, 10, 2);
INSERT INTO library_schema.loan VALUES (51, '2024-07-09', '2024-07-19',
NULL, false, 11, 11, 3);
INSERT INTO library_schema.loan VALUES (52, '2024-07-10', '2024-07-20',
'2024-07-20', false, 12, 2, 4);
INSERT INTO library_schema.loan VALUES (53, '2024-07-11', '2024-07-21',
NULL, false, 13, 3, 5);
INSERT INTO library_schema.loan VALUES (54, '2024-07-12', '2024-07-22',
'2024-07-22', false, 14, 4, 6);
INSERT INTO library_schema.loan VALUES (55, '2024-07-13', '2024-07-23',
NULL, true, 15, 5, 1);
INSERT INTO library_schema.loan VALUES (56, '2024-07-14', '2024-07-24',
'2024-07-24', false, 16, 6, 2);
INSERT INTO library_schema.loan VALUES (57, '2024-07-15', '2024-07-25',
NULL, false, 17, 7, 3);
INSERT INTO library_schema.loan VALUES (58, '2024-07-16', '2024-07-26',
'2024-07-26', false, 18, 8, 4);
INSERT INTO library_schema.loan VALUES (59, '2024-07-17', '2024-07-27',
NULL, false, 19, 9, 5);
INSERT INTO library_schema.loan VALUES (60, '2024-07-18', '2024-07-28',
'2024-07-28', false, 20, 10, 6);
INSERT INTO library_schema.loan VALUES (61, '2024-07-19', '2024-07-29',
NULL, true, 21, 11, 1);
INSERT INTO library_schema.loan VALUES (62, '2024-07-20', '2024-07-30',
'2024-07-30', false, 22, 2, 2);

```

```

--
-- TOC entry 5014 (class 0 OID 16478)
-- Dependencies: 229
-- Data for Name: position; Type: TABLE DATA; Schema: library_schema;
Owner: postgres
--

```

**/\*Заполнение таблицы position\*/**

```

INSERT INTO library_schema."position" VALUES (1, 'Library Director',
80000);
INSERT INTO library_schema."position" VALUES (2, 'Senior Librarian',
60000);
INSERT INTO library_schema."position" VALUES (3, 'Librarian', 45000);
INSERT INTO library_schema."position" VALUES (4, 'Archivist', 40000);
INSERT INTO library_schema."position" VALUES (5, 'Cataloguer', 35000);
INSERT INTO library_schema."position" VALUES (6, 'Research Librarian',
50000);
INSERT INTO library_schema."position" VALUES (7, 'Library Assistant',
30000);
INSERT INTO library_schema."position" VALUES (8, 'Digital Services
Librarian', 55000);
INSERT INTO library_schema."position" VALUES (9, 'Children's Librarian',
40000);
INSERT INTO library_schema."position" VALUES (10, 'Reference Librarian',
45000);
INSERT INTO library_schema."position" VALUES (11, 'Circulation Manager',
50000);
INSERT INTO library_schema."position" VALUES (12, 'Library Technician',
32000);
INSERT INTO library_schema."position" VALUES (13, 'Conservator', 48000);

```

```

--
-- TOC entry 5004 (class 0 OID 16403)
-- Dependencies: 219
-- Data for Name: publication; Type: TABLE DATA; Schema: library_schema;
Owner: postgres
--

```

**/\*Заполнение таблицы publication\*/**

```

INSERT INTO library_schema.publication VALUES (8, 'A Brief History of
Time', 1, 'English', 'Book', 'Science', 1988, 256, '9780553380163', 3);
INSERT INTO library_schema.publication VALUES (9, 'War and Peace', 1,
'Russian', 'Book', 'Literature', 1869, 1225, '9780199232765', 1);
INSERT INTO library_schema.publication VALUES (10, 'The Great Gatsby', 1,
'English', 'Book', 'Literature', 1925, 180, '9780743273565', 4);
INSERT INTO library_schema.publication VALUES (11, 'The Origin of
Species', 1, 'English', 'Book', 'Science', 1859, 502, '9780192806238', 2);
INSERT INTO library_schema.publication VALUES (12, 'Digital Fortress', 1,
'English', 'Book', 'Technology', 1998, 384, '9780312944926', 5);
INSERT INTO library_schema.publication VALUES (13, 'Les Misérables', 1,
'French', 'Book', 'Literature', 1862, 1463, '9780451419439', 1);
INSERT INTO library_schema.publication VALUES (14, 'The Da Vinci Code', 1,
'English', 'Book', 'Literature', 2003, 489, '9780307474278', 3);
INSERT INTO library_schema.publication VALUES (15, 'Cosmos', 1, 'English',
'Book', 'Science', 1980, 365, '9780345539434', 2);
INSERT INTO library_schema.publication VALUES (16, 'The Alchemist', 1,
'Portuguese', 'Book', 'Literature', 1988, 208, '9780061122415', 4);
INSERT INTO library_schema.publication VALUES (17, '1984', 1, 'English',
'Book', 'Literature', 1949, 328, '9780451524935', 5);

```

```

--
-- TOC entry 5006 (class 0 OID 16420)
-- Dependencies: 221
-- Data for Name: publisher; Type: TABLE DATA; Schema: library_schema;
Owner: postgres
--

```

**/\*Заполнение таблицы publisher\*/**

```
INSERT INTO library_schema.publisher VALUES (1, 'Oxford Press', 'London',
'+441234567890', 'contact@oxfordpress.com');
INSERT INTO library_schema.publisher VALUES (2, 'Cambridge University
Press', 'Cambridge', '+441234567891', 'info@cambridge.org');
INSERT INTO library_schema.publisher VALUES (3, 'Penguin Random House',
'New York', '+12125550123', 'support@penguinrandomhouse.com');
INSERT INTO library_schema.publisher VALUES (4, 'HarperCollins', 'New
York', '+12125550124', 'info@harpercollins.com');
INSERT INTO library_schema.publisher VALUES (5, 'Simon & Schuster', 'New
York', '+12125550125', 'contact@simonandschuster.com');
```

```
--
-- TOC entry 5018 (class 0 OID 16526)
-- Dependencies: 233
-- Data for Name: reader; Type: TABLE DATA; Schema: library_schema; Owner:
postgres
--
```

**/\*Заполнение таблицы reader\*/**

```
INSERT INTO library_schema.reader VALUES (2, 'RF1001', '2024-01-15',
'active', 'Michael Brown', 'AB12345678', '123 Main St, City',
'+12125550135', 'michael.brown@example.com');
INSERT INTO library_schema.reader VALUES (3, 'RF1002', '2024-02-20',
'active', 'Susan Green', 'CD23456789', '456 Oak St, City', '+12125550136',
'susan.green@example.com');
INSERT INTO library_schema.reader VALUES (4, 'RF1003', '2024-03-05',
'suspended', 'Robert Black', 'EF34567890', '789 Pine St, City',
'+12125550137', 'robert.black@example.com');
INSERT INTO library_schema.reader VALUES (5, 'RF1004', '2024-03-10',
'blocked', 'Linda White', 'GH45678901', '101 Maple Ave, City',
'+12125550138', 'linda.white@example.com');
INSERT INTO library_schema.reader VALUES (6, 'RF1005', '2024-04-01',
'suspended', 'James Smith', 'IJ56789012', '202 Birch Rd, City',
'+12125550139', 'james.smith@example.com');
INSERT INTO library_schema.reader VALUES (7, 'RF1006', '2024-04-15',
'active', 'Patricia Taylor', 'KL67890123', '303 Cedar Ln, City',
'+12125550140', 'patricia.taylor@example.com');
INSERT INTO library_schema.reader VALUES (8, 'RF1007', '2024-05-01',
'active', 'Barbara Davis', 'MN78901234', '404 Elm St, City',
'+12125550141', 'barbara.davis@example.com');
INSERT INTO library_schema.reader VALUES (9, 'RF1008', '2024-05-20',
'active', 'Christopher Miller', 'OP89012345', '505 Spruce St, City',
'+12125550142', 'christopher.miller@example.com');
INSERT INTO library_schema.reader VALUES (10, 'RF1009', '2024-06-05',
'active', 'Jennifer Wilson', 'QR90123456', '606 Fir St, City',
'+12125550143', 'jennifer.wilson@example.com');
INSERT INTO library_schema.reader VALUES (11, 'RF1010', '2024-06-15',
'active', 'William Moore', 'ST01234567', '707 Poplar St, City',
'+12125550144', 'william.moore@example.com');
```

```
--
-- TOC entry 5032 (class 0 OID 16644)
-- Dependencies: 247
-- Data for Name: receipt; Type: TABLE DATA; Schema: library_schema;
Owner: postgres
--
```

**/\*Заполнение таблицы receipt\*/**

```
INSERT INTO library_schema.receipt VALUES (1, 2, 25.00, 8, 1);
INSERT INTO library_schema.receipt VALUES (2, 3, 30.00, 9, 2);
INSERT INTO library_schema.receipt VALUES (3, 1, 20.00, 10, 3);
INSERT INTO library_schema.receipt VALUES (4, 4, 22.50, 11, 4);
INSERT INTO library_schema.receipt VALUES (5, 2, 27.50, 12, 5);
INSERT INTO library_schema.receipt VALUES (6, 3, 25.00, 13, 6);
INSERT INTO library_schema.receipt VALUES (7, 1, 30.00, 14, 7);
INSERT INTO library_schema.receipt VALUES (8, 4, 28.00, 15, 8);
INSERT INTO library_schema.receipt VALUES (9, 2, 24.00, 16, 9);
INSERT INTO library_schema.receipt VALUES (10, 3, 26.00, 17, 10);
```

```
--
-- TOC entry 5030 (class 0 OID 16621)
-- Dependencies: 245
-- Data for Name: receipt_document; Type: TABLE DATA; Schema:
library_schema; Owner: postgres
--
```

**/\*Заполнение таблицы receipt\_document\*/**

```
INSERT INTO library_schema.receipt_document VALUES (1, 'DOC1001', '2024-
05-01', 'invoice', 'Supplier Invoice', 100, 2500.00, '2024-05-02', 1, 1);
INSERT INTO library_schema.receipt_document VALUES (2, 'DOC1002', '2024-
05-05', 'acceptance_act', 'Delivery Note', 150, 3750.00, '2024-05-06', 2,
2);
INSERT INTO library_schema.receipt_document VALUES (3, 'DOC1003', '2024-
05-10', 'donation_act', 'Donation', 50, 1250.00, '2024-05-11', 3, NULL);
INSERT INTO library_schema.receipt_document VALUES (4, 'DOC1004', '2024-
05-15', 'replacement_act', 'Replacement', 30, 900.00, '2024-05-16', 4, 3);
INSERT INTO library_schema.receipt_document VALUES (5, 'DOC1005', '2024-
05-20', 'invoice', 'Supplier Invoice', 200, 5000.00, '2024-05-21', 5, 4);
INSERT INTO library_schema.receipt_document VALUES (6, 'DOC1006', '2024-
05-25', 'acceptance_act', 'Delivery Note', 120, 3000.00, '2024-05-26', 6,
5);
INSERT INTO library_schema.receipt_document VALUES (7, 'DOC1007', '2024-
05-30', 'donation_act', 'Donation', 80, 2000.00, '2024-05-31', 1, NULL);
INSERT INTO library_schema.receipt_document VALUES (8, 'DOC1008', '2024-
06-01', 'replacement_act', 'Replacement', 60, 1500.00, '2024-06-02', 2,
1);
INSERT INTO library_schema.receipt_document VALUES (9, 'DOC1009', '2024-
06-05', 'invoice', 'Supplier Invoice', 90, 2250.00, '2024-06-06', 3, 2);
INSERT INTO library_schema.receipt_document VALUES (10, 'DOC1010', '2024-
06-10', 'acceptance_act', 'Delivery Note', 110, 2750.00, '2024-06-11', 4,
3);
```

```
--
-- TOC entry 5026 (class 0 OID 16593)
-- Dependencies: 241
-- Data for Name: storage; Type: TABLE DATA; Schema: library_schema;
Owner: postgres
--
```

**/\*Заполнение таблицы storage\*/**

```
INSERT INTO library_schema.storage VALUES (1, '2024-06-01', '2024-12-31',
1, 11);
INSERT INTO library_schema.storage VALUES (2, '2024-06-01', '2024-12-31',
1, 12);
INSERT INTO library_schema.storage VALUES (3, '2024-06-01', '2024-12-31',
2, 13);
```

```
INSERT INTO library_schema.storage VALUES (4, '2024-06-01', '2024-12-31',
2, 14);
INSERT INTO library_schema.storage VALUES (5, '2024-06-01', '2024-12-31',
3, 15);
INSERT INTO library_schema.storage VALUES (6, '2024-06-01', '2024-12-31',
3, 16);
INSERT INTO library_schema.storage VALUES (7, '2024-06-01', '2024-12-31',
4, 17);
INSERT INTO library_schema.storage VALUES (8, '2024-06-01', '2024-12-31',
4, 18);
INSERT INTO library_schema.storage VALUES (9, '2024-06-01', '2024-12-31',
5, 19);
INSERT INTO library_schema.storage VALUES (10, '2024-06-01', '2024-12-31',
5, 20);
```

```
--
-- TOC entry 5024 (class 0 OID 16583)
-- Dependencies: 239
-- Data for Name: storage_location; Type: TABLE DATA; Schema:
library_schema; Owner: postgres
--
```

**/\*Заполнение таблицы storage\_location\*/**

```
INSERT INTO library_schema.storage_location VALUES (1, 101, 1, 1);
INSERT INTO library_schema.storage_location VALUES (2, 102, 2, 2);
INSERT INTO library_schema.storage_location VALUES (3, 103, 3, 3);
INSERT INTO library_schema.storage_location VALUES (4, 104, 4, 4);
INSERT INTO library_schema.storage_location VALUES (5, 105, 5, 5);
```

```
--
-- TOC entry 5028 (class 0 OID 16612)
-- Dependencies: 243
-- Data for Name: supplier; Type: TABLE DATA; Schema: library_schema;
Owner: postgres
--
```

**/\*Заполнение таблицы supplier\*/**

```
INSERT INTO library_schema.supplier VALUES (1, 'Global Books', '123
International Ave, London', '+441234567895', 'info@globalbooks.com');
INSERT INTO library_schema.supplier VALUES (2, 'Book World', '456 World
St, New York', '+12125550145', 'contact@bookworld.com');
INSERT INTO library_schema.supplier VALUES (3, 'Universal Publishing',
'789 Universal Rd, Berlin', '+493012345678', 'sales@universalpub.com');
INSERT INTO library_schema.supplier VALUES (4, 'Elite Books', '101 Elite
Blvd, Paris', '+33123456780', 'support@elitebooks.fr');
INSERT INTO library_schema.supplier VALUES (5, 'Modern Publishing', '202
Modern St, Tokyo', '+81312345678', 'info@modernpub.jp');
```

```
--
-- TOC entry 5036 (class 0 OID 16681)
-- Dependencies: 251
-- Data for Name: write_off; Type: TABLE DATA; Schema: library_schema;
Owner: postgres
--
```

**/\*Заполнение таблицы write\_off\*/**

```
INSERT INTO library_schema.write_off VALUES (1, 1, 15, 1);
```



```

INSERT INTO library_schema.write_off VALUES (2, 0.8, 22, 2);
INSERT INTO library_schema.write_off VALUES (3, 1.2, 26, 3);

--
-- TOC entry 5034 (class 0 OID 16664)
-- Dependencies: 249
-- Data for Name: write_off_act; Type: TABLE DATA; Schema: library_schema;
Owner: postgres
--

/*Заполнение таблицы write_off_act*/
INSERT INTO library_schema.write_off_act VALUES (1, 'WOA1001', '2024-07-
01', 5, 125.00, 'worn_out', 'Sent for recycling', 1);
INSERT INTO library_schema.write_off_act VALUES (2, 'WOA1002', '2024-07-
05', 3, 75.00, 'defective', 'Archived', 2);
INSERT INTO library_schema.write_off_act VALUES (3, 'WOA1003', '2024-07-
10', 2, 50.00, 'obsolete', 'Disposed', 3);

--
-- TOC entry 5060 (class 0 OID 0)
-- Dependencies: 230
-- Name: assignment_assignment_id_seq; Type: SEQUENCE SET; Schema:
library_schema; Owner: postgres
--

SELECT pg_catalog.setval('library_schema.assignment_assignment_id_seq', 6,
true);

--
-- TOC entry 5061 (class 0 OID 0)
-- Dependencies: 234
-- Name: copy_copy_id_seq; Type: SEQUENCE SET; Schema: library_schema;
Owner: postgres
--

SELECT pg_catalog.setval('library_schema.copy_copy_id_seq', 30, true);

--
-- TOC entry 5062 (class 0 OID 0)
-- Dependencies: 224
-- Name: creation_creation_id_seq; Type: SEQUENCE SET; Schema:
library_schema; Owner: postgres
--

SELECT pg_catalog.setval('library_schema.creation_creation_id_seq', 60,
true);

--
-- TOC entry 5063 (class 0 OID 0)
-- Dependencies: 222
-- Name: creator_creator_id_seq; Type: SEQUENCE SET; Schema:
library_schema; Owner: postgres
--

SELECT pg_catalog.setval('library_schema.creator_creator_id_seq', 13,
true);

```

```

--
-- TOC entry 5064 (class 0 OID 0)
-- Dependencies: 226
-- Name: employee_employee_id_seq; Type: SEQUENCE SET; Schema:
library_schema; Owner: postgres
--

SELECT pg_catalog.setval('library_schema.employee_employee_id_seq', 6,
true);

--
-- TOC entry 5065 (class 0 OID 0)
-- Dependencies: 236
-- Name: loan_loan_id_seq; Type: SEQUENCE SET; Schema: library_schema;
Owner: postgres
--

SELECT pg_catalog.setval('library_schema.loan_loan_id_seq', 62, true);

--
-- TOC entry 5066 (class 0 OID 0)
-- Dependencies: 228
-- Name: position_position_id_seq; Type: SEQUENCE SET; Schema:
library_schema; Owner: postgres
--

SELECT pg_catalog.setval('library_schema.position_position_id_seq', 13,
true);

--
-- TOC entry 5067 (class 0 OID 0)
-- Dependencies: 218
-- Name: publication_publication_id_seq; Type: SEQUENCE SET; Schema:
library_schema; Owner: postgres
--

SELECT pg_catalog.setval('library_schema.publication_publication_id_seq',
17, true);

--
-- TOC entry 5068 (class 0 OID 0)
-- Dependencies: 220
-- Name: publisher_publisher_id_seq; Type: SEQUENCE SET; Schema:
library_schema; Owner: postgres
--

SELECT pg_catalog.setval('library_schema.publisher_publisher_id_seq', 7,
true);

--
-- TOC entry 5069 (class 0 OID 0)
-- Dependencies: 232
-- Name: reader_reader_id_seq; Type: SEQUENCE SET; Schema: library_schema;
Owner: postgres

```

```

--

SELECT pg_catalog.setval('library_schema.reader_reader_id_seq', 11, true);

--
-- TOC entry 5070 (class 0 OID 0)
-- Dependencies: 244
-- Name: receipt_document_receipt_document_id_seq; Type: SEQUENCE SET;
Schema: library_schema; Owner: postgres
--

SELECT
pg_catalog.setval('library_schema.receipt_document_receipt_document_id_seq', 10, true);

--
-- TOC entry 5071 (class 0 OID 0)
-- Dependencies: 246
-- Name: receipt_receipt_id_seq; Type: SEQUENCE SET; Schema:
library_schema; Owner: postgres
--

SELECT pg_catalog.setval('library_schema.receipt_receipt_id_seq', 10,
true);

--
-- TOC entry 5072 (class 0 OID 0)
-- Dependencies: 238
-- Name: storage_location_storage_location_id_seq; Type: SEQUENCE SET;
Schema: library_schema; Owner: postgres
--

SELECT
pg_catalog.setval('library_schema.storage_location_storage_location_id_seq', 5, true);

--
-- TOC entry 5073 (class 0 OID 0)
-- Dependencies: 240
-- Name: storage_storage_id_seq; Type: SEQUENCE SET; Schema:
library_schema; Owner: postgres
--

SELECT pg_catalog.setval('library_schema.storage_storage_id_seq', 10,
true);

--
-- TOC entry 5074 (class 0 OID 0)
-- Dependencies: 242
-- Name: supplier_supplier_id_seq; Type: SEQUENCE SET; Schema:
library_schema; Owner: postgres
--

SELECT pg_catalog.setval('library_schema.supplier_supplier_id_seq', 5,
true);

```

```

--
-- TOC entry 5075 (class 0 OID 0)
-- Dependencies: 250
-- Name: write_off_write_off_id_seq; Type: SEQUENCE SET; Schema:
library_schema; Owner: postgres
--

SELECT pg_catalog.setval('library_schema.write_off_write_off_id_seq',
3, true);

--
-- TOC entry 5076 (class 0 OID 0)
-- Dependencies: 248
-- Name: write_off_act_write_off_act_id_seq; Type: SEQUENCE SET; Schema:
library_schema; Owner: postgres
--

SELECT
pg_catalog.setval('library_schema.write_off_act_write_off_act_id_seq', 3,
true);

-- =====
-- ОПРЕДЕЛЕНИЕ ОГРАНИЧЕНИЙ
-- =====

--
-- TOC entry 4835 (class 2606 OID 16674)
-- Name: write_off_act_act_number_unique; Type: CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.write_off_act
    ADD CONSTRAINT act_number_unique UNIQUE (act_num);

--
-- TOC entry 4809 (class 2606 OID 16514)
-- Name: assignment_assignment_pkey; Type: CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.assignment
    ADD CONSTRAINT assignment_pkey PRIMARY KEY (assignment_id);

--
-- TOC entry 4817 (class 2606 OID 16551)
-- Name: copy_copy_pkey; Type: CONSTRAINT; Schema: library_schema; Owner:
postgres
--

ALTER TABLE ONLY library_schema.copy
    ADD CONSTRAINT copy_pkey PRIMARY KEY (copy_id);

--
-- TOC entry 4803 (class 2606 OID 16457)
-- Name: creation_creation_pkey; Type: CONSTRAINT; Schema: library_schema;
Owner: postgres

```

```

--

ALTER TABLE ONLY library_schema.creation
    ADD CONSTRAINT creation_pkey PRIMARY KEY (creation_id);

--
-- TOC entry 4755 (class 2606 OID 16542)
-- Name: creator creator_name_chk; Type: CHECK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE library_schema.creator
    ADD CONSTRAINT creator_name_chk CHECK (((full_name)::text ~ '^[A-Za-
zÀ-ÖØ-öø-ÿА-Яа-яЁё-]+([ -][A-Za-zÀ-ÖØ-öø-ÿА-Яа-яЁё-]+)*$'::text)) NOT
VALID;

--
-- TOC entry 4801 (class 2606 OID 16442)
-- Name: creator creator_pkey; Type: CONSTRAINT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.creator
    ADD CONSTRAINT creator_pkey PRIMARY KEY (creator_id);

--
-- TOC entry 4760 (class 2606 OID 16541)
-- Name: employee employee_name_chk; Type: CHECK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE library_schema.employee
    ADD CONSTRAINT employee_name_chk CHECK (((full_name)::text ~ '^[A-Za-
zÀ-ÖØ-öø-ÿА-Яа-яЁё-]+([ -][A-Za-zÀ-ÖØ-öø-ÿА-Яа-яЁё-]+)*$'::text)) NOT
VALID;

--
-- TOC entry 4805 (class 2606 OID 16476)
-- Name: employee employee_pkey; Type: CONSTRAINT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.employee
    ADD CONSTRAINT employee_pkey PRIMARY KEY (employee_id);

--
-- TOC entry 4811 (class 2606 OID 16538)
-- Name: reader form_num_unique; Type: CONSTRAINT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.reader
    ADD CONSTRAINT form_num_unique UNIQUE (form_num);

--

```

```

-- TOC entry 4819 (class 2606 OID 16553)
-- Name: copy inventory_num_unique; Type: CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.copy
    ADD CONSTRAINT inventory_num_unique UNIQUE (inventory_num);

--

-- TOC entry 4795 (class 2606 OID 16418)
-- Name: publication isbn_unique; Type: CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.publication
    ADD CONSTRAINT isbn_unique UNIQUE (isbn);

--

-- TOC entry 4746 (class 2606 OID 16414)
-- Name: publication knowledge_field_chk; Type: CHECK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE library_schema.publication
    ADD CONSTRAINT knowledge_field_chk CHECK (((knowledge_field)::text =
ANY ((ARRAY['Literature'::character varying, 'Science'::character varying,
'Technology'::character varying, 'Engineering'::character varying,
'Mathematics'::character varying, 'Medicine'::character varying,
'Law'::character varying, 'Economics'::character varying,
'History'::character varying, 'Philosophy'::character varying,
'Psychology'::character varying, 'Sociology'::character varying,
'Education'::character varying, 'Linguistics'::character varying,
'Political Science'::character varying, 'Art'::character varying,
'Music'::character varying, 'Religion'::character varying,
'Astronomy'::character varying, 'Physics'::character varying,
'Chemistry'::character varying, 'Biology'::character varying, 'Computer
Science'::character varying, 'Environmental Science'::character varying,
'Geography'::character varying, 'Anthropology'::character varying,
'Archaeology'::character varying, 'Military Science'::character varying,
'Sports Science'::character varying, 'Cultural Studies'::character
varying, 'Library Science'::character varying]))::text[]))) NOT VALID;

--

-- TOC entry 4821 (class 2606 OID 16565)
-- Name: loan loan_pkey; Type: CONSTRAINT; Schema: library_schema; Owner:
postgres
--

ALTER TABLE ONLY library_schema.loan
    ADD CONSTRAINT loan_pkey PRIMARY KEY (loan_id);

--

-- TOC entry 4747 (class 2606 OID 16413)
-- Name: publication original_lang_chk; Type: CHECK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

```

```

ALTER TABLE library_schema.publication
    ADD CONSTRAINT original_lang_chk CHECK (((original_lang)::text = ANY
((ARRAY['English'::character varying, 'Russian'::character varying,
'French'::character varying, 'German'::character varying,
'Spanish'::character varying, 'Chinese'::character varying,
'Japanese'::character varying, 'Italian'::character varying,
'Portuguese'::character varying, 'Arabic'::character varying,
'Hindi'::character varying, 'Dutch'::character varying,
'Korean'::character varying, 'Turkish'::character varying,
'Greek'::character varying, 'Polish'::character varying,
'Swedish'::character varying, 'Finnish'::character varying,
'Czech'::character varying, 'Ukrainian'::character varying,
'Hebrew'::character varying, 'Latin'::character varying,
'Esperanto'::character varying])::text[]))) NOT VALID;

--
-- TOC entry 4748 (class 2606 OID 16416)
-- Name: publication page_num_chk; Type: CHECK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE library_schema.publication
    ADD CONSTRAINT page_num_chk CHECK ((page_num > 0)) NOT VALID;

--
-- TOC entry 4807 (class 2606 OID 16484)
-- Name: position position_pkey; Type: CONSTRAINT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema."position"
    ADD CONSTRAINT position_pkey PRIMARY KEY (position_id);

--
-- TOC entry 4762 (class 2606 OID 16485)
-- Name: position position_title_chk; Type: CHECK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE library_schema."position"
    ADD CONSTRAINT position_title_chk CHECK (((position_title)::text = ANY
((ARRAY['Librarian'::character varying, 'Senior Librarian'::character
varying, 'Archivist'::character varying, 'Library Assistant'::character
varying, 'Library Director'::character varying, 'Cataloguer'::character
varying, 'Research Librarian'::character varying, 'Acquisitions
Librarian'::character varying, 'Digital Services Librarian'::character
varying, 'Children's Librarian'::character varying, 'Reference
Librarian'::character varying, 'Circulation Manager'::character varying,
'Library Technician'::character varying, 'Conservator'::character
varying])::text[]))) NOT VALID;

--
-- TOC entry 4797 (class 2606 OID 16409)
-- Name: publication publication_pkey; Type: CONSTRAINT; Schema:
library_schema; Owner: postgres
--

```

```

ALTER TABLE ONLY library_schema.publication
    ADD CONSTRAINT publication_pkey PRIMARY KEY (publication_id);

--
-- TOC entry 4749 (class 2606 OID 16412)
-- Name: publication publication_type_chk; Type: CHECK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE library_schema.publication
    ADD CONSTRAINT publication_type_chk CHECK (((publication_type)::text =
ANY ((ARRAY['Book'::character varying, 'Journal'::character varying,
'Magazine'::character varying, 'Newspaper'::character varying, 'E-
book'::character varying, 'Manuscript'::character varying,
'Thesis'::character varying, 'Report'::character varying, 'Conference
Proceedings'::character varying, 'Reference Book'::character varying,
'Encyclopedia'::character varying, 'Dictionary'::character varying,
'Technical Document'::character varying, 'Research Paper'::character
varying, 'White Paper'::character varying, 'Graphic Novel'::character
varying, 'Comic Book'::character varying, 'Sheet Music'::character
varying, 'Map'::character varying, 'Patent Document'::character varying,
'Government Publication'::character varying, 'Audio Book'::character
varying])::text[]))) NOT VALID;

--
-- TOC entry 4750 (class 2606 OID 16415)
-- Name: publication publication_year_chk; Type: CHECK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE library_schema.publication
    ADD CONSTRAINT publication_year_chk CHECK (((publication_year >= 1400)
AND ((publication_year)::numeric <= EXTRACT(year FROM CURRENT_DATE)))) NOT
VALID;

--
-- TOC entry 4752 (class 2606 OID 16427)
-- Name: publisher publisher_email_chk; Type: CHECK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE library_schema.publisher
    ADD CONSTRAINT publisher_email_chk CHECK (((email)::text ~* '^[A-Z0-
9._%+-]+@[A-Z0-9.-]+\.[A-Z]{2,}$'::text)) NOT VALID;

--
-- TOC entry 4753 (class 2606 OID 16448)
-- Name: publisher publisher_phone_chk; Type: CHECK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE library_schema.publisher
    ADD CONSTRAINT publisher_phone_chk CHECK (((phone IS NULL) OR
((phone)::text ~ '^\\+[1-9][0-9]{7,15}$'::text))) NOT VALID;

--

```



```

-- TOC entry 4799 (class 2606 OID 16425)
-- Name: publisher publisher_pkey; Type: CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.publisher
    ADD CONSTRAINT publisher_pkey PRIMARY KEY (publisher_id);

--

-- TOC entry 4829 (class 2606 OID 16632)
-- Name: receipt_document rd_num_unique; Type: CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.receipt_document
    ADD CONSTRAINT rd_num_unique UNIQUE (document_num);

--

-- TOC entry 4813 (class 2606 OID 16540)
-- Name: reader reader_passport_unique; Type: CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.reader
    ADD CONSTRAINT reader_passport_unique UNIQUE (passport_details);

--

-- TOC entry 4815 (class 2606 OID 16536)
-- Name: reader reader_pkey; Type: CONSTRAINT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.reader
    ADD CONSTRAINT reader_pkey PRIMARY KEY (reader_id);

--

-- TOC entry 4831 (class 2606 OID 16630)
-- Name: receipt_document receipt_document_pkey; Type: CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.receipt_document
    ADD CONSTRAINT receipt_document_pkey PRIMARY KEY
(receipt_document_id);

--

-- TOC entry 4833 (class 2606 OID 16651)
-- Name: receipt receipt_pkey; Type: CONSTRAINT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.receipt
    ADD CONSTRAINT receipt_pkey PRIMARY KEY (receipt_id);

--

```

```

-- TOC entry 4823 (class 2606 OID 16591)
-- Name: storage_location storage_location_pkey; Type: CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.storage_location
    ADD CONSTRAINT storage_location_pkey PRIMARY KEY
(storage_location_id);

--

-- TOC entry 4825 (class 2606 OID 16600)
-- Name: storage storage_pkey; Type: CONSTRAINT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.storage
    ADD CONSTRAINT storage_pkey PRIMARY KEY (storage_id);

--

-- TOC entry 4827 (class 2606 OID 16619)
-- Name: supplier supplier_pkey; Type: CONSTRAINT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.supplier
    ADD CONSTRAINT supplier_pkey PRIMARY KEY (supplier_id);

--

-- TOC entry 4751 (class 2606 OID 16410)
-- Name: publication volume_num_chk; Type: CHECK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE library_schema.publication
    ADD CONSTRAINT volume_num_chk CHECK ((volume_num >= 0)) NOT VALID;

--

-- TOC entry 4837 (class 2606 OID 16672)
-- Name: write_off_act write_off_act_pkey; Type: CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.write_off_act
    ADD CONSTRAINT write_off_act_pkey PRIMARY KEY (write_off_act_id);

--

-- TOC entry 4839 (class 2606 OID 16687)
-- Name: write_off write_off_pkey; Type: CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.write_off
    ADD CONSTRAINT write_off_pkey PRIMARY KEY (" write_off_id");

--

```

```

-- TOC entry 4843 (class 2606 OID 16515)
-- Name: assignment fk_assignment_employee; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.assignment
    ADD CONSTRAINT fk_assignment_employee FOREIGN KEY (employee_id)
REFERENCES library_schema.employee(employee_id);

--

-- TOC entry 4844 (class 2606 OID 16520)
-- Name: assignment fk_assignment_position; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.assignment
    ADD CONSTRAINT fk_assignment_position FOREIGN KEY (position_id)
REFERENCES library_schema."position"(position_id);

--

-- TOC entry 4845 (class 2606 OID 16698)
-- Name: copy fk_copy_receipt; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.copy
    ADD CONSTRAINT fk_copy_receipt FOREIGN KEY (receipt_id) REFERENCES
library_schema.receipt(receipt_id) NOT VALID;

--

-- TOC entry 4841 (class 2606 OID 16463)
-- Name: creation fk_creator; Type: FK CONSTRAINT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.creation
    ADD CONSTRAINT fk_creator FOREIGN KEY (creator_id) REFERENCES
library_schema.creator(creator_id);

--

-- TOC entry 4846 (class 2606 OID 16566)
-- Name: loan fk_loan_copy; Type: FK CONSTRAINT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.loan
    ADD CONSTRAINT fk_loan_copy FOREIGN KEY (copy_id) REFERENCES
library_schema.copy(copy_id);

--

-- TOC entry 4847 (class 2606 OID 16576)
-- Name: loan fk_loan_employee; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.loan

```

```

        ADD CONSTRAINT fk_loan_employee FOREIGN KEY (employee_id) REFERENCES
library_schema.employee(employee_id);

--
-- TOC entry 4848 (class 2606 OID 16571)
-- Name: loan fk_loan_reader; Type: FK CONSTRAINT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.loan
    ADD CONSTRAINT fk_loan_reader FOREIGN KEY (reader_id) REFERENCES
library_schema.reader(reader_id);

--
-- TOC entry 4842 (class 2606 OID 16458)
-- Name: creation fk_publication; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.creation
    ADD CONSTRAINT fk_publication FOREIGN KEY (publication_id) REFERENCES
library_schema.publication(publication_id);

--
-- TOC entry 4840 (class 2606 OID 16428)
-- Name: publication fk_publisher; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.publication
    ADD CONSTRAINT fk_publisher FOREIGN KEY (publisher_id) REFERENCES
library_schema.publisher(publisher_id) NOT VALID;

--
-- TOC entry 4851 (class 2606 OID 16633)
-- Name: receipt_document fk_rd_employee; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.receipt_document
    ADD CONSTRAINT fk_rd_employee FOREIGN KEY (employee_id) REFERENCES
library_schema.employee(employee_id);

--
-- TOC entry 4852 (class 2606 OID 16638)
-- Name: receipt_document fk_rd_supplier; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.receipt_document
    ADD CONSTRAINT fk_rd_supplier FOREIGN KEY (supplier_id) REFERENCES
library_schema.supplier(supplier_id);

--
-- TOC entry 4853 (class 2606 OID 16652)

```

```

-- Name: receipt fk_receipt_publication; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.receipt
    ADD CONSTRAINT fk_receipt_publication FOREIGN KEY (publication_id)
REFERENCES library_schema.publication(publication_id);

--

-- TOC entry 4854 (class 2606 OID 16657)
-- Name: receipt fk_receipt_rd; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.receipt
    ADD CONSTRAINT fk_receipt_rd FOREIGN KEY (receipt_document_id)
REFERENCES library_schema.receipt_document(receipt_document_id);

--

-- TOC entry 4849 (class 2606 OID 16606)
-- Name: storage fk_storage_copy; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.storage
    ADD CONSTRAINT fk_storage_copy FOREIGN KEY (copy_id) REFERENCES
library_schema.copy(copy_id);

--

-- TOC entry 4850 (class 2606 OID 16601)
-- Name: storage fk_storage_location; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.storage
    ADD CONSTRAINT fk_storage_location FOREIGN KEY (storage_location_id)
REFERENCES library_schema.storage_location(storage_location_id);

--

-- TOC entry 4856 (class 2606 OID 16693)
-- Name: write_off fk_wo_act; Type: FK CONSTRAINT; Schema: library_schema;
Owner: postgres
--

ALTER TABLE ONLY library_schema.write_off
    ADD CONSTRAINT fk_wo_act FOREIGN KEY (write_off_act_id) REFERENCES
library_schema.write_off_act(write_off_act_id);

--

-- TOC entry 4857 (class 2606 OID 16688)
-- Name: write_off fk_wo_copy; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.write_off

```

```
        ADD CONSTRAINT fk_wo_copy FOREIGN KEY (copy_id) REFERENCES
library_schema.copy(copy_id);

--
-- TOC entry 4855 (class 2606 OID 16675)
-- Name: write_off_act fk_woa_employee; Type: FK CONSTRAINT; Schema:
library_schema; Owner: postgres
--

ALTER TABLE ONLY library_schema.write_off_act
    ADD CONSTRAINT fk_woa_employee FOREIGN KEY (employee_id) REFERENCES
library_schema.employee(employee_id);

-- Completed on 2025-04-03 22:40:35

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

### **Выводы:**

В ходе лабораторной работы была создана база данных library в PostgreSQL с использованием pgAdmin 4. Были разработаны и структурированы основные элементы базы: таблицы, связи между ними, ограничения. Для обеспечения целостности данных в таблицах были определены первичные и внешние ключи, а также уникальные и проверочные ограничения. После создания структуры базы данных выполнено наполнение таблиц записями с помощью SQL-запросов. В завершение работы была создана резервная копия (дамп) базы данных и по ней была восстановлена.