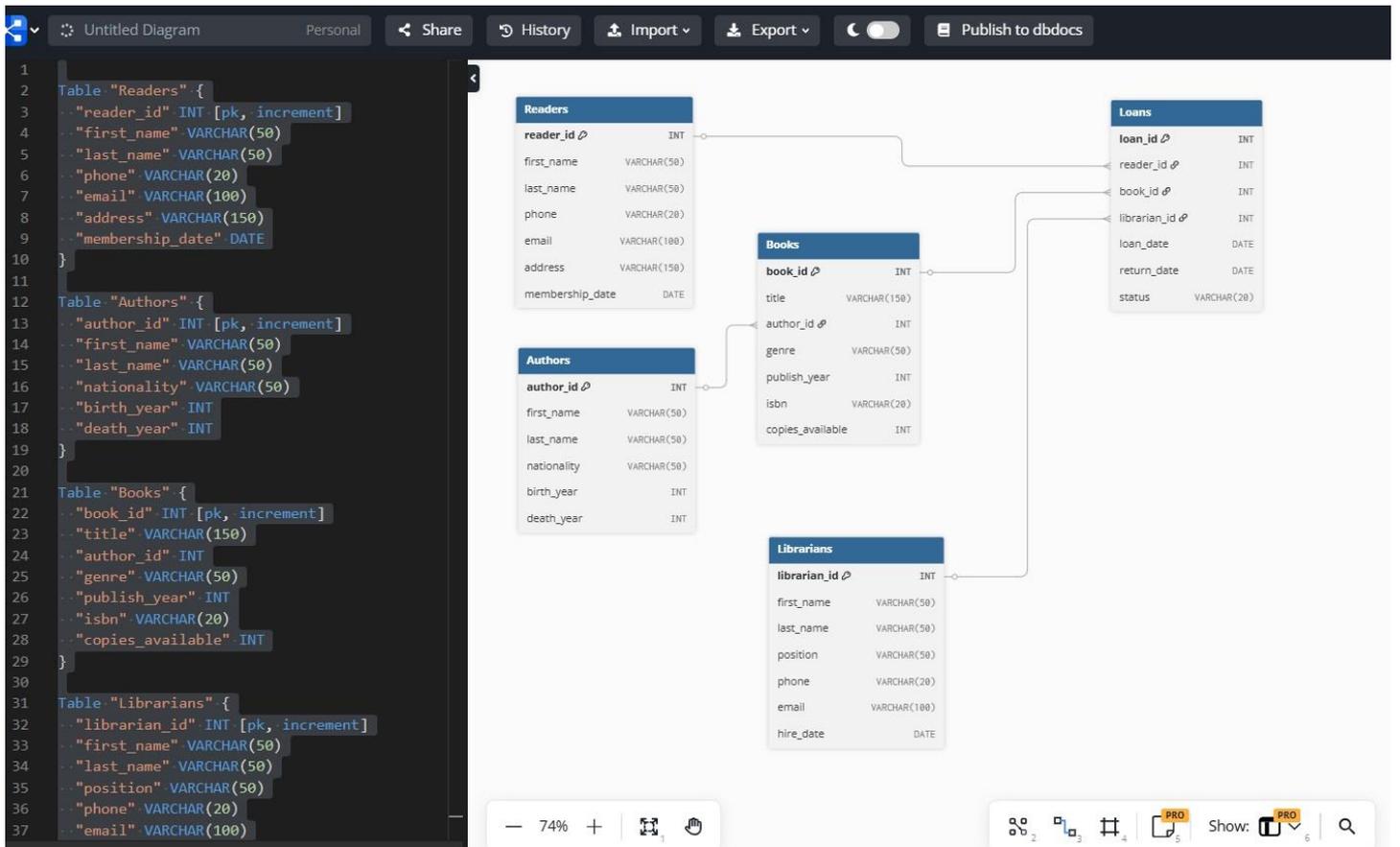БИБЛИОТЕКА

-- Таблица за читатели

CREATE TABLE Readers (

    reader_id INT PRIMARY KEY AUTO_INCREMENT,

    first_name VARCHAR(50),

    last_name VARCHAR(50),

    phone VARCHAR(20),

    email VARCHAR(100),

    address VARCHAR(150),

    membership_date DATE

);

-- Таблица за автори

CREATE TABLE Authors (

    author_id INT PRIMARY KEY AUTO_INCREMENT,

    first_name VARCHAR(50),

    last_name VARCHAR(50),

    nationality VARCHAR(50),

    birth_year INT,

```sql
    death_year INT
);
-- Таблица за книги
CREATE TABLE Books (
    book_id INT PRIMARY KEY AUTO_INCREMENT,
    title VARCHAR(150),
    author_id INT,
    genre VARCHAR(50),
    publish_year INT,
    isbn VARCHAR(20),
    copies_available INT,
    FOREIGN KEY (author_id) REFERENCES Authors(author_id)
);
-- Таблица за служители
CREATE TABLE Librarians (
    librarian_id INT PRIMARY KEY AUTO_INCREMENT,
    first_name VARCHAR(50),
    last_name VARCHAR(50),
    position VARCHAR(50),
    phone VARCHAR(20),
    email VARCHAR(100),
    hire_date DATE
);
-- Таблица за заемания
CREATE TABLE Loans (
    loan_id INT PRIMARY KEY AUTO_INCREMENT,
    reader_id INT,
    book_id INT,
    librarian_id INT,
    loan_date DATE,
    return_date DATE,
```

```sql
    status VARCHAR(20),

    FOREIGN KEY (reader_id) REFERENCES Readers(reader_id),

    FOREIGN KEY (book_id) REFERENCES Books(book_id),

    FOREIGN KEY (librarian_id) REFERENCES Librarians(librarian_id)

);

-- Читатели

INSERT INTO Readers (first_name, last_name, phone, email, address, membership_date) VALUES

('Ivan', 'Petrov', '0888123456', 'ivan@mail.bg', 'Sofia', '2023-01-10'),

('Maria', 'Georgieva', '0888234567', 'maria@mail.bg', 'Varna', '2022-05-15'),

('Georgi', 'Dimitrov', '0888345678', 'georgi@mail.bg', 'Plovdiv', '2021-09-20'),

('Elena', 'Stoyanova', '0888456789', 'elena@mail.bg', 'Burgas', '2023-03-01'),

('Petya', 'Koleva', '0888567890', 'petya@mail.bg', 'Ruse', '2022-07-12'),

('Nikolay', 'Hristov', '0888678901', 'nik@mail.bg', 'Veliko Tarnovo', '2021-11-05'),

('Dimitar', 'Ivanov', '0888789012', 'dimitar@mail.bg', 'Stara Zagora', '2024-02-17'),

('Svetlana', 'Popova', '0888890123', 'svetlana@mail.bg', 'Shumen', '2023-06-25');

-- Автори

INSERT INTO Authors (first_name, last_name, nationality, birth_year, death_year) VALUES

('Lev', 'Tolstoy', 'Russian', 1828, 1910),

('Jane', 'Austen', 'British', 1775, 1817),

('George', 'Orwell', 'British', 1903, 1950),

('Mark', 'Twain', 'American', 1835, 1910),

('J.K.', 'Rowling', 'British', 1965, NULL),

('Stephen', 'King', 'American', 1947, NULL),

('Elin', 'Pelín', 'Bulgarian', 1877, 1949),

('Dimitar', 'Dimov', 'Bulgarian', 1909, 1966);

-- Книги

INSERT INTO Books (title, author_id, genre, publish_year, isbn, copies_available) VALUES

('War and Peace', 1, 'Historical', 1869, 'ISBN001', 5),

('Pride and Prejudice', 2, 'Romance', 1813, 'ISBN002', 3),

('1984', 3, 'Dystopian', 1949, 'ISBN003', 4),

('Adventures of Tom Sawyer', 4, 'Adventure', 1876, 'ISBN004', 6),
```

```sql
('Harry Potter and the Philosopher\'s Stone', 5, 'Fantasy', 1997, 'ISBN005', 10),

('It', 6, 'Horror', 1986, 'ISBN006', 2),

('Under the Yoke', 7, 'Historical', 1894, 'ISBN007', 4),

('Tobacco', 8, 'Drama', 1951, 'ISBN008', 3);

-- Служители

INSERT INTO Librarians (first_name, last_name, position, phone, email, hire_date) VALUES

('Petar', 'Ivanov', 'Senior Librarian', '0888123000', 'petar@mail.bg', '2020-01-10'),

('Anna', 'Koleva', 'Assistant', '0888234000', 'anna@mail.bg', '2021-05-20'),

('Stefan', 'Georgiev', 'Manager', '0888345000', 'stefan@mail.bg', '2019-09-15'),

('Viktoria', 'Dimitrova', 'Assistant', '0888456000', 'vik@mail.bg', '2022-03-01'),

('Kiril', 'Stoyanov', 'Archivist', '0888567000', 'kiril@mail.bg', '2021-07-12'),

('Mila', 'Petrova', 'Accountant', '0888678000', 'mila@mail.bg', '2018-11-05'),

('Rosen', 'Hristov', 'Assistant', '0888789000', 'rosen@mail.bg', '2020-02-17'),

('Daniela', 'Popova', 'Assistant', '0888890000', 'daniela@mail.bg', '2023-06-25');

-- Заемания

INSERT INTO Loans (reader_id, book_id, librarian_id, loan_date, return_date, status) VALUES

(1, 1, 1, '2024-03-01', '2024-03-20', 'Returned'),

(2, 2, 2, '2024-04-10', '2024-04-25', 'Returned'),

(3, 3, 3, '2024-05-15', NULL, 'Borrowed'),

(4, 4, 4, '2024-06-01', '2024-06-18', 'Returned'),

(5, 5, 5, '2024-07-12', NULL, 'Borrowed'),

(6, 6, 6, '2024-08-20', NULL, 'Borrowed'),

(7, 7, 7, '2024-09-25', '2024-10-10', 'Returned'),

(8, 8, 8, '2024-10-05', NULL, 'Borrowed');

--Всички книги, заемани от читатели от София

SELECT r.first_name, r.last_name, b.title, l.loan_date

FROM Loans l

JOIN Readers r ON l.reader_id = r.reader_id

JOIN Books b ON l.book_id = b.book_id

WHERE r.address = 'Sofia'

ORDER BY l.loan_date DESC;
```

```sql
--Среден брой налични копия по жанр

SELECT genre, AVG(copies_available) AS avg_copies

FROM Books

GROUP BY genre

ORDER BY avg_copies DESC;

--Общ брой заемания по служител

SELECT lib.first_name, lib.last_name, COUNT(*) AS total_loans

FROM Loans l

JOIN Librarians lib ON l.librarian_id = lib.librarian_id

GROUP BY lib.librarian_id

ORDER BY total_loans DESC;

--Читатели с повече от 1 заемана книга

SELECT r.first_name, r.last_name, COUNT(l.loan_id) AS loans_count

FROM Loans l

JOIN Readers r ON l.reader_id = r.reader_id

GROUP BY r.reader_id

HAVING COUNT(l.loan_id) > 1

ORDER BY loans_count DESC;

--Брой заемания по статус

SELECT status, COUNT(*) AS count_loans

FROM Loans

GROUP BY status

ORDER BY count_loans DESC;
```