ОТЧЕТ
по лабораторной работе №3
на тему

Реализация SQL-запросов для создания схемы базы данных

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1 Цель работы

В лабораторной работе выполняется реализация схемы базы данных по ранее построенной реляционной схеме данных (см. лабораторную работу № 2). Требуется сформировать SQL-запросы для создания таблиц базы данных и выполнить их в СУБД. Требуется заполнить таблицы данными с помощью оператора INSERT.

2 Порядок выполнения работы

1) Создать в СУБД новую схему данных для хранения пользовательских объектов (см. часть 2).

2) В этой новой схеме данных с помощью скрипта с запросами на языке DDL SQL реализовать таблицы, соответствующие реляционным отношениям схемы данных полученной в лабораторной работе No2, с помощью одного (желательно) оператора CREATE TABLE для каждой таблицы в следующем порядке:

- реализовать простую структуру таблиц, включающую только набор столбцов с добавлением описаний первичного ключа;

- дополнить описание таблицы реализацией ограничений для описания внешних ключей; для внешних ключей установить свойства контроля целостности данных (каскадное удаление и обновление), если это возможно в целевой СУБД;

- дополнить описание таблицы реализацией ограничений для описания бизнес-правил;

- дополнить описание таблицы реализацией комментариев для значимых элементов таблицы.

3) Заполнить с помощью SQL-скрипта с использованием оператора INSERT таблицы строками данных для проверки правильного выбора первичных ключей и работоспособности ссылок между таблицами:

- строками данных сначала заполнять мастер-таблицы (или таблицы, которые НЕ ссылаются на другие таблицы);

- в каждую таблицу добавить 30 строк осмысленных данных;

- если не удается добавить данные в таблицу по причине нарушения уникальности первичного ключа, то следует перепроверить описание этого первичного ключа и его смысл для реального мира;

- если не удается добавить данные в таблицу по причине нарушения ссылочной целостности, то следует убедиться, что целевые данные существуют, иначе перепроверить описание внешнего ключа.

4) Рассмотреть простые действия по изменению структуры таблицы (переименование столбца таблицы, добавление и удаление ограничений на столбец таблицы или всю таблицу) и реализовать их с помощью оператора ALTER TABLE.

5) Создать временную таблицу с помощью оператора CREATE TABLE и удалить ее с помощью оператора DROP TABLE.

6) Экспортировать результаты работы в SQL-скрипт (см. часть 2), сравнить полученный скрипт со скриптами, созданными на этапах 2 и 3.

3 Выполнение работы

Реляционная схема данных, построенная в лабораторной работе №2 приведена на рисунке 3.1.

Рисунок 3.1 – Реляционная схема данных

База данных создаётся при помощи запроса CREATE DATABASE hospital.

Для создания таблиц использовался следующий запрос:

```
CREATE TABLE department (
department_name text PRIMARY KEY,
number_of_beds integer,
```

```sql
surname_of_head text,
first_name_of_head text,
middle_name_of_head text
);

CREATE TABLE patient (
history_number integer PRIMARY KEY,
type_of_treatment text,
surname text,
first_name text,
middle_name text,
department_name text references department(department_name)
);

CREATE TABLE diagnosis(
diagnosis_id integer PRIMARY KEY,
code text,
diagnosis_name text,
date_ date,
history_number integer references parient(history_number)
);

CREATE TABLE doctor(
doctor_id integer PRIMARY KEY
surname text,
first_name text,
middle_name text,
speciality text,
qualification text
);

CREATE TABLE service(
service_name text PRIMARY KEY,
price_for_belarusian integer,
```

```sql
price_for_foreigners integer
);


CREATE TABLE test(
test_id integer PRIMARY KEY,
name_of_nurse text,
test_name text,
date_ date,
history_number integer references patient(history_number)
);


CREATE TABLE department_doctor(
department_name text references department(department_name),
doctor_id integer references doctor(doctor_id),
PRIMARY KEY(department_name, doctor_id)
);


CREATE TABLE doctor_service(
service_name text references service(service_name),
doctor_id integer references doctor(doctor_id),
PRIMARY KEY(service_name, doctor_id)
);


CREATE TABLE doctor_patient(
history_number integer references patient(history_number),
doctor_id integer references doctor(doctor_id),
date_ date,
note text,
PRIMARY KEY(history_number, doctor_id, date_)
);
```

Для добавления ограничений используются конструкция ADD CONSTRAINT в связке с оператором ALTER. Пример добавления условия, что ни одно из полей не нулевое, для таблицы service представлен ниже:

```
ALTER TABLE IF EXISTS service
ADD CONSTRAINT not_null CHECK(
service_name IS NOT NULL AND
price_for_belarusian IS NOT NULL AND
price_for_foreigners IS NOT NULL
);
```

Пример добавления комментария к таблице department_doctor:

```
COMMENT ON TABLE department_doctor
IS 'Intermediate table between tables department and doctor';
```

Пример установки свойства контроля целостности данных (каскадное удаление и обновление) в таблице test:

```
ALTER TABLE test
ADD CONSTRAINT del_upd
FOREIGN KEY (history_number)
REFERENCES patient (history_number)
ON DELETE CASCADE
ON UPDATE CASCADE
```

Заполнение таблиц test, doctor, diagnosis, patient, department при помощи оператора INSERT INTO:

```
INSERT   INTO   department (department_name,   number_of_beds,
surname_of_head, first_name_of_head, middle_name_of_head)
VALUES
  ('Cardiology', 50, 'Smith', 'John', 'Alexander'),
  ('Pediatrics', 30, 'Johnson', 'Emily', 'Rose'),
  ('Orthopedics', 25, 'Williams', 'James', 'Matthew'),
  ('Ophthalmology', 20, 'Brown', 'Olivia', 'Sophia'),
  ('Dermatology', 15, 'Jones', 'Emma', 'Grace'),
  ('Neurology', 40, 'Taylor', 'Daniel', 'Joseph'),
  ('Gastroenterology', 35, 'Wilson', 'Sophia', 'Elizabeth'),
  ('Urology', 15, 'Miller', 'Michael', 'David'),
  ('Otolaryngology', 20, 'Anderson', 'Ava', 'Grace'),
  ('Psychiatry', 30, 'Thomas', 'Ethan', 'Benjamin'),
  ('Radiology', 25, 'Martinez', 'Isabella', 'Lily'),
  ('Endocrinology', 20, 'Harris', 'Mia', 'Charlotte'),
```

```sql
        ('Rheumatology', 15, 'Clark', 'Abigail', 'Elizabeth'),
        ('Hematology', 30, 'Lewis', 'Elijah', 'Alexander'),
        ('Nephrology', 20, 'Lee', 'Amelia', 'Madison'),
        ('Gynecology', 25, 'Walker', 'Liam', 'Christopher'),
        ('Pulmonology', 30, 'Green', 'Harper', 'Grace'),
        ('Oncology', 25, 'Gonzalez', 'Evelyn', 'Victoria'),
        ('Neonatology', 20, 'Morris', 'Charlotte', 'Rose'),
        ('Allergy and Immunology', 15, 'Allen', 'Henry', 'William'),
        ('Infectious Diseases', 20, 'Young', 'Scarlett', 'Isabella'),
        ('Dentistry', 25, 'King', 'Zoe', 'Elizabeth'),
        ('Physical Therapy', 30, 'Wright', 'Carter', 'James'),
        ('Occupational Therapy', 25, 'Hall', 'Grace', 'Ann'),
        ('Speech-language Pathology', 20, 'Turner', 'Samuel', 'Jacob'),
        ('Emergency Medicine', 15, 'Baker', 'Lily', 'Grace'),
        ('General Surgery', 30, 'Hill', 'Lucas', 'Matthew'),
        ('Plastic Surgery', 25, 'Ward', 'Nora', 'Emily'),
        ('Anesthesiology', 20, 'Cook', 'Levi', 'Benjamin'),
        ('Pathology', 15, 'Price', 'Ella', 'Sophia');


        INSERT INTO patient (history_number, type_of_treatment, surname,
first_name, middle_name, department_name)
        VALUES
        (1001, 'Consultation', 'Smith', 'John', 'Alexander',
'Cardiology'),
        (1002, 'Surgery', 'Johnson', 'Emily', 'Rose', 'Orthopedics'),
        (1003, 'Check-up', 'Williams', 'James', 'Matthew',
'Pediatrics'),
        (1004, 'Treatment', 'Brown', 'Olivia', 'Sophia', 'Dermatology'),
        (1005, 'Consultation', 'Jones', 'Emma', 'Grace',
'Gastroenterology'),
        (1006, 'Surgery', 'Taylor', 'Daniel', 'Joseph', 'Neurology'),
        (1007, 'Check-up', 'Wilson', 'Sophia', 'Elizabeth',
'Gynecology'),
        (1008, 'Treatment', 'Miller', 'Michael', 'David', 'Urology'),
        (1009, 'Consultation', 'Anderson', 'Ava', 'Grace',
'Otolaryngology'),
        (1010, 'Surgery', 'Thomas', 'Ethan', 'Benjamin', 'Radiology'),
```

```
    (1011,    'Check-up',    'Martinez',    'Isabella',    'Lily',
'Endocrinology'),
    (1012,    'Treatment',    'Harris',    'Mia',    'Charlotte',
'Rheumatology'),
    (1013,    'Consultation',    'Clark',    'Abigail',    'Elizabeth',
'Hematology'),
    (1014, 'Surgery', 'Lewis', 'Elijah', 'Alexander', 'Nephrology'),
    (1015, 'Check-up', 'Lee', 'Amelia', 'Madison', 'Oncology'),
    (1016,    'Treatment',    'Walker',    'Liam',    'Christopher',
'Neonatology'),
    (1017, 'Consultation', 'Green', 'Harper', 'Grace', 'Allergy and
Immunology'),
    (1018, 'Surgery', 'Gonzalez', 'Evelyn', 'Victoria', 'Infectious
Diseases'),
    (1019, 'Check-up', 'Morris', 'Charlotte', 'Rose', 'Dentistry'),
    (1020,    'Treatment',    'Allen',    'Henry',    'William',    'Physical
Therapy'),
    (1021,    'Consultation',    'Smith',    'Sophia',    'Grace',
'Cardiology'),
    (1022, 'Surgery', 'Johnson', 'Liam', 'James', 'Orthopedics'),
    (1023,    'Check-up',    'Williams',    'Ava',    'Elizabeth',
'Pediatrics'),
    (1024,    'Treatment',    'Brown',    'Oliver',    'Matthew',
'Dermatology'),
    (1025,    'Consultation',    'Jones',    'Mia',    'Grace',
'Gastroenterology'),
    (1026, 'Surgery', 'Taylor', 'Noah', 'Joseph', 'Neurology'),
    (1027, 'Check-up', 'Wilson', 'Olivia', 'Rose', 'Gynecology'),
    (1028, 'Treatment', 'Miller', 'James', 'David', 'Urology'),
    (1029,    'Consultation',    'Anderson',    'Emma',    'Grace',
'Otolaryngology'),
    (1030, 'Surgery', 'Thomas', 'Liam', 'Benjamin', 'Radiology');


    INSERT INTO diagnosis (diagnosis_id, code, diagnosis_name, date_,
history_number)
    VALUES
    (1, 'A001', 'Common Cold', '2023-10-05', 1001),
    (2, 'B352', 'Pneumonia', '2023-08-15', 1002),
    (3, 'C526', 'Gastroenteritis', '2023-09-22', 1003),
    (4, 'D723', 'Skin Infection', '2023-11-10', 1004),
    (5, 'E905', 'Allergic Rhinitis', '2023-07-29', 1005),
```

```sql
    (6, 'F201', 'Migraine', '2023-12-02', 1006),
    (7, 'G431', 'Urinary Tract Infection', '2023-10-18', 1007),
    (8, 'H821', 'Otitis Media', '2023-06-14', 1008),
    (9, 'I509', 'Hypertension', '2023-09-01', 1009),
    (10, 'J303', 'Bronchitis', '2023-11-26', 1010),
    (11, 'A001', 'Common Cold', '2023-08-28', 1001),
    (12, 'B352', 'Pneumonia', '2023-10-12', 1012),
    (13, 'C526', 'Gastroenteritis', '2023-07-17', 1003),
    (14, 'D723', 'Skin Infection', '2023-09-05', 1014),
    (15, 'E905', 'Allergic Rhinitis', '2023-11-21', 1005),
    (16, 'F201', 'Migraine', '2023-08-08', 1016),
    (17, 'G431', 'Urinary Tract Infection', '2023-10-25', 1007),
    (18, 'H821', 'Otitis Media', '2023-12-19', 1018),
    (19, 'I509', 'Hypertension', '2023-09-15', 1009),
    (20, 'J303', 'Bronchitis', '2023-06-30', 1020),
    (21, 'A001', 'Common Cold', '2023-11-15', 1021),
    (22, 'B352', 'Pneumonia', '2023-07-04', 1022),
    (23, 'C526', 'Gastroenteritis', '2023-09-09', 1023),
    (24, 'D723', 'Skin Infection', '2023-12-25', 1024),
    (25, 'E905', 'Allergic Rhinitis', '2023-10-02', 1025),
    (26, 'F201', 'Migraine', '2023-08-20', 1026),
    (27, 'G431', 'Urinary Tract Infection', '2023-11-06', 1027),
    (28, 'H821', 'Otitis Media', '2023-07-23', 1028),
    (29, 'I509', 'Hypertension', '2023-09-29', 1029),
    (30, 'J303', 'Bronchitis', '2023-06-07', 1030);


    INSERT INTO doctor (doctor_id, surname, first_name, middle_name, speciality, qualification)
    VALUES
    (1, 'Smith', 'John', 'Michael', 'Cardiology', 'First'),
    (2, 'Johnson', 'Robert', 'David', 'Orthopedics', 'Second'),
    (3, 'Williams', 'James', 'Thomas', 'Dermatology', 'Higher'),
    (4, 'Jones', 'William', 'Christopher', 'Pediatrics', 'First'),
    (5, 'Brown', 'David', 'Joseph', 'Ophthalmology', 'Second'),
    (6, 'Davis', 'Charles', 'Daniel', 'Gastroenterology', 'Higher'),
    (7, 'Miller', 'Daniel', 'Matthew', 'Neurology', 'First'),
```

```sql
    (8, 'Wilson', 'Joseph', 'Anthony', 'Otolaryngology', 'Second'),
    (9, 'Moore', 'Thomas', 'Andrew', 'Urology', 'Higher'),
    (10, 'Taylor', 'Mark', 'Jason', 'Psychiatry', 'First'),
    (11, 'Anderson', 'Michael', 'Timothy', 'Cardiology', 'Second'),
    (12, 'Thomas', 'David', 'Richard', 'Orthopedics', 'Higher'),
    (13, 'Jackson', 'Charles', 'Edward', 'Dermatology', 'First'),
    (14, 'White', 'Robert', 'William', 'Pediatrics', 'Second'),
    (15, 'Harris', 'Matthew', 'George', 'Ophthalmology', 'Higher'),
    (16, 'Martin', 'Brian', 'Scott', 'Gastroenterology', 'First'),
    (17, 'Thompson', 'Jason', 'Alexander', 'Neurology', 'Second'),
    (18, 'Garcia', 'Kevin', 'Joseph', 'Otolaryngology', 'Higher'),
    (19, 'Martinez', 'Edward', 'Ryan', 'Urology', 'First'),
    (20, 'Robinson', 'William', 'Benjamin', 'Psychiatry', 'Second'),
    (21, 'Clark', 'Joshua', 'Samuel', 'Cardiology', 'Higher'),
    (22, 'Rodriguez', 'Daniel', 'Stephen', 'Orthopedics', 'First'),
    (23, 'Lewis', 'Andrew', 'Peter', 'Dermatology', 'Second'),
    (24, 'Lee', 'Christopher', 'Frank', 'Pediatrics', 'Higher'),
    (25, 'Walker', 'Matthew', 'Raymond', 'Ophthalmology', 'First'),
    (26, 'Hall', 'Joseph', 'Patrick', 'Gastroenterology', 'Second'),
    (27, 'Allen', 'David', 'Jack', 'Neurology', 'Higher'),
    (28, 'Young', 'Daniel', 'Henry', 'Otolaryngology', 'First'),
    (29, 'Hernandez', 'Anthony', 'Ronald', 'Urology', 'Second'),
    (30, 'King', 'Thomas', 'Edward', 'Psychiatry', 'Higher');


    INSERT INTO test (test_id, name_of_nurse, test_name, date_,
history_number)
    VALUES
    (1, 'Johnson', 'Blood Test', '2024-01-01', 1001),
    (2, 'Smith', 'X-ray', '2024-01-02', 1002),
    (3, 'Williams', 'Ultrasound', '2024-01-03', 1003),
    (4, 'Brown', 'MRI', '2024-01-04', 1004),
    (5, 'Jones', 'CT Scan', '2024-01-05', 1001),
    (6, 'Davis', 'Blood Test', '2024-01-06', 1005),
    (7, 'Miller', 'X-ray', '2024-01-07', 1017),
    (8, 'Wilson', 'Ultrasound', '2024-01-08', 1017),
    (9, 'Moore', 'MRI', '2024-01-09', 1018),
    (10, 'Taylor', 'CT Scan', '2024-01-10', 1020),
```

```
(11, 'Johnson', 'Blood Test', '2024-01-11', 1008),
(12, 'Thomas', 'X-ray', '2024-01-12', 1009),
(13, 'Johnson', 'Ultrasound', '2024-01-13', 1002),
(14, 'White', 'MRI', '2024-01-14', 1010),
(15, 'Johnson', 'CT Scan', '2024-01-15', 1010),
(16, 'Martin', 'Blood Test', '2024-01-16', 1011),
(17, 'Johnson', 'X-ray', '2024-01-17', 1012),
(18, 'Garcia', 'Ultrasound', '2024-01-18', 1013),
(19, 'Johnson', 'MRI', '2024-01-19', 1014),
(20, 'Robinson', 'CT Scan', '2024-01-20', 1013),
(21, 'Clark', 'Blood Test', '2024-01-21', 1015),
(22, 'Rodriguez', 'X-ray', '2024-01-22', 1018),
(23, 'Lewis', 'Ultrasound', '2024-01-23', 1021),
(24, 'Lee', 'MRI', '2024-01-24', 1022),
(25, 'Walker', 'CT Scan', '2024-01-25', 1023),
(26, 'Hall', 'Blood Test', '2024-01-26', 1024),
(27, 'Johnson', 'X-ray', '2024-01-27', 1025),
(28, 'Young', 'Ultrasound', '2024-01-28', 1025),
(29, 'Hernandez', 'MRI', '2024-01-29', 1027),
(30, 'King', 'CT Scan', '2024-01-30', 1026);
```

Таблицы service, department_doctor, doctor_service и doctor_patient были заполнены вручную.

Для заполнения вручную необходимо выбрать нужную таблицу, далее выбрать View/Edit Data, потом выбрать All Rows.
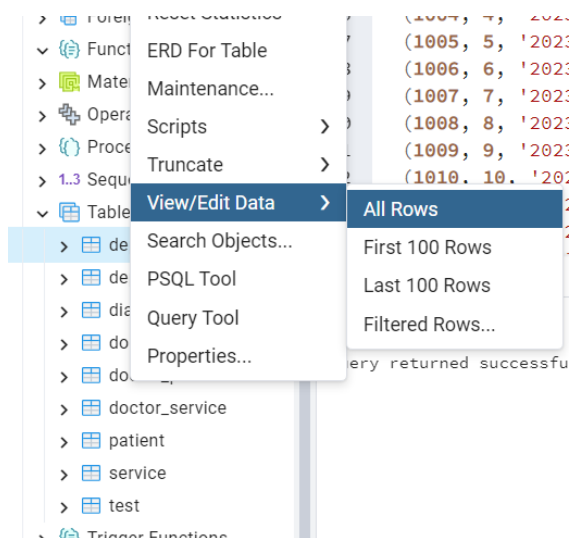

Рисунок 3.2 – Открытие окна для ручного ввода значений.

	department_name [PK] text	number_of_beds integer	surname_of_head text	first_name_of_head text	middle_name_of_head text
1	Allergy and Immunology	15	Allen	Henry	William
2	Anesthesiology	20	Cook	Levi	Benjamin
3	Cardiology	50	Smith	John	Alexander
4	Dentistry	25	King	Zoe	Elizabeth
5	Dermatology	15	Jones	Emma	Grace
6	Emergency Medicine	15	Baker	Lily	Grace
7	Endocrinology	20	Harris	Mia	Charlotte
8	Gastroenterology	35	Wilson	Sophia	Elizabeth
9	General Surgery	30	Hill	Lucas	Matthew
10	Gynecology	25	Walker	Liam	Christopher
11	Hematology	30	Lewis	Elijah	Alexander
12	Infectious Diseases	20	Young	Scarlett	Isabella
13	Neonatology	20	Morris	Charlotte	Rose
14	Nephrology	20	Lee	Amelia	Madison
15	Neurology	40	Taylor	Daniel	Joseph
16	Occupational Therapy	25	Hall	Grace	Ann
17	Oncology	25	Gonzalez	Evelyn	Victoria
18	Ophthalmology	20	Brown	Olivia	Sophia
19	Orthopedics	25	Williams	James	Matthew
20	Otolaryngology	20	Anderson	Ava	Grace
21	Pathology	15	Price	Ella	Sophia
22	Pediatrics	30	Johnson	Emily	Rose
23	Physical Therapy	30	Wright	Carter	James
24	Plastic Surgery	25	Ward	Nora	Emily
25	Psychiatry	30	Thomas	Ethan	Benjamin
26	Pulmonology	30	Green	Harper	Grace
27	Radiology	25	Martinez	Isabella	Lily
28	Rheumatology	15	Clark	Abigail	Elizabeth
29	Speech-language Pathology	20	Turner	Samuel	Jacob
30	Urology	15	Miller	Michael	David

Рисунок 3.3 – Заполненная таблица department.

	department_name [PK] text	doctor_id [PK] integer
1	Cardiology	1
2	Cardiology	2
3	Cardiology	3
4	Dermatology	4
5	Dermatology	5
6	Dermatology	6
7	Endocrinology	7
8	Endocrinology	8
9	Endocrinology	9
10	Gastroenterology	10
11	Gastroenterology	11
12	Gastroenterology	12
13	Neurology	13
14	Neurology	14
15	Neurology	15
16	Ophthalmology	16
17	Ophthalmology	17
18	Ophthalmology	18
19	Orthopedics	19
20	Orthopedics	20
21	Orthopedics	21
22	Pediatrics	22
23	Pediatrics	23
24	Pediatrics	24
25	Pulmonology	25
26	Pulmonology	26
27	Pulmonology	27
28	Radiology	28
29	Radiology	29
30	Radiology	30

Рисунок 3.4 – Заполненная таблица department-doctor.

	diagnosis_id [PK] integer	code text	diagnosis_name text	date_ date	history_number integer
1	1	A001	Common Cold	2023-10-05	1001
2	2	B352	Pneumonia	2023-08-15	1002
3	3	C526	Gastroenteritis	2023-09-22	1003
4	4	D723	Skin Infection	2023-11-10	1004
5	5	E905	Allergic Rhinitis	2023-07-29	1005
6	6	F201	Migraine	2023-12-02	1006
7	7	G431	Urinary Tract Infection	2023-10-18	1007
8	8	H821	Otitis Media	2023-06-14	1008
9	9	I509	Hypertension	2023-09-01	1009
10	10	J303	Bronchitis	2023-11-26	1010
11	11	A001	Common Cold	2023-08-28	1001
12	12	B352	Pneumonia	2023-10-12	1012
13	13	C526	Gastroenteritis	2023-07-17	1003
14	14	D723	Skin Infection	2023-09-05	1014
15	15	E905	Allergic Rhinitis	2023-11-21	1005
16	16	F201	Migraine	2023-08-08	1016
17	17	G431	Urinary Tract Infection	2023-10-25	1007
18	18	H821	Otitis Media	2023-12-19	1018
19	19	I509	Hypertension	2023-09-15	1009
20	20	J303	Bronchitis	2023-06-30	1020
21	21	A001	Common Cold	2023-11-15	1021
22	22	B352	Pneumonia	2023-07-04	1022
23	23	C526	Gastroenteritis	2023-09-09	1023
24	24	D723	Skin Infection	2023-12-25	1024
25	25	E905	Allergic Rhinitis	2023-10-02	1025
26	26	F201	Migraine	2023-08-20	1026
27	27	G431	Urinary Tract Infection	2023-11-06	1027
28	28	H821	Otitis Media	2023-07-23	1028
29	29	I509	Hypertension	2023-09-29	1029
30	30	J303	Bronchitis	2023-06-07	1030

Рисунок 3.5 – Заполненная таблица diagnosis.

	doctor_id [PK] integer	surname text	first_name text	middle_name text	speciality text	qualification text
1	1	Smith	John	Michael	Cardiology	First
2	2	Johnson	Robert	David	Orthopedics	Second
3	3	Williams	James	Thomas	Dermatology	Higher
4	4	Jones	William	Christopher	Pediatrics	First
5	5	Brown	David	Joseph	Ophthalmology	Second
6	6	Davis	Charles	Daniel	Gastroenterology	Higher
7	7	Miller	Daniel	Matthew	Neurology	First
8	8	Wilson	Joseph	Anthony	Otolaryngology	Second
9	9	Moore	Thomas	Andrew	Urology	Higher
10	10	Taylor	Mark	Jason	Psychiatry	First
11	11	Anderson	Michael	Timothy	Cardiology	Second
12	12	Thomas	David	Richard	Orthopedics	Higher
13	13	Jackson	Charles	Edward	Dermatology	First
14	14	White	Robert	William	Pediatrics	Second
15	15	Harris	Matthew	George	Ophthalmology	Higher
16	16	Martin	Brian	Scott	Gastroenterology	First
17	17	Thompson	Jason	Alexander	Neurology	Second
18	18	Garcia	Kevin	Joseph	Otolaryngology	Higher
19	19	Martinez	Edward	Ryan	Urology	First
20	20	Robinson	William	Benjamin	Psychiatry	Second
21	21	Clark	Joshua	Samuel	Cardiology	Higher
22	22	Rodriguez	Daniel	Stephen	Orthopedics	First
23	23	Lewis	Andrew	Peter	Dermatology	Second
24	24	Lee	Christopher	Frank	Pediatrics	Higher
25	25	Walker	Matthew	Raymond	Ophthalmology	First
26	26	Hall	Joseph	Patrick	Gastroenterology	Second
27	27	Allen	David	Jack	Neurology	Higher
28	28	Young	Daniel	Henry	Otolaryngology	First
29	29	Hernandez	Anthony	Ronald	Urology	Second
30	30	King	Thomas	Edward	Psychiatry	Higher

Рисунок 3.6 – Заполненная таблица doctor.

	history_number [PK] integer	doctor_id [PK] integer	date_ [PK] date	note text
1	1001	1	2023-01-01	Patient had a routine check-up.
2	1002	2	2023-01-02	Patient reported symptoms of cough and fever.
3	1003	3	2023-01-03	Patient came in for a follow-up appointment.
4	1004	4	2023-01-04	Patient received X-ray examination.
5	1005	5	2023-01-05	Patient underwent blood test.
6	1006	6	2023-01-06	Patient had an EKG performed.
7	1007	7	2023-01-07	Patient underwent endoscopy procedure.
8	1008	8	2023-01-08	Patient received colonoscopy.
9	1009	9	2023-01-09	Patient had a mammography.
10	1010	10	2023-01-10	Patient received bone density test.
11	1011	11	2023-01-11	Patient came in for allergy testing.
12	1012	12	2023-01-12	Patient underwent pulmonary function test.
13	1013	13	2023-01-13	Patient had a nerve conduction study.
14	1014	14	2023-01-14	Patient underwent sleep study.
15	1015	15	2023-01-15	Patient received gastroscopy.
16	1016	16	2023-01-16	Patient had a dental cleaning.
17	1017	17	2023-01-17	Patient came in for an eye examination.
18	1018	18	2023-01-18	Patient received a physical therapy session.
19	1019	19	2023-01-19	Patient underwent an acupuncture session.
20	1020	20	2023-01-20	Patient had a massage therapy session.
21	1021	21	2023-01-21	Patient received nutritional counseling.
22	1022	22	2023-01-22	Patient had a psychological counseling session.
23	1023	23	2023-01-23	Patient received a chiropractic adjustment.
24	1024	24	2023-01-24	Patient had an occupational therapy session.
25	1025	25	2023-01-25	Patient underwent a speech therapy session.
26	1026	26	2023-01-26	Patient received a cosmetic procedure.
27	1027	27	2023-01-27	Patient had laser hair removal.
28	1028	28	2023-01-28	Patient came in for tattoo removal.
29	1029	29	2023-01-29	Patient underwent plastic surgery.
30	1030	30	2023-01-30	Patient had a dermatology consultation.

Рисунок 3.7 – Заполненная таблица doctor-patient.

	service_name [PK] text	doctor_id [PK] integer
1	Acupuncture Session	19
2	Allergy Testing	11
3	Blood Test	5
4	Bone Density Test	10
5	Chiropractic Adjustment	23
6	Colonoscopy	8
7	Cosmetic Procedure	26
8	CT Scan	2
9	Dental Cleaning	16
10	EKG	6
11	Endoscopy	7
12	Eye Examination	17
13	Gastroscopy	15
14	Laser Hair Removal	27
15	Mammography	9
16	Massage Therapy Session	20
17	MRI	1
18	Nerve Conduction Study	13
19	Nutritional Counseling	21
20	Occupational Therapy Session	24
21	Physical Therapy Session	18
22	Plastic Surgery	29
23	Psychological Counseling	22
24	Pulmonary Function Test	12
25	Sleep Study	14
26	Speech Therapy Session	25
27	Tattoo Removal	28
28	Tattoo Removal	30
29	Ultrasound	3
30	X-ray	4

Рисунок 3.8 – Заполненная таблица doctor-service.

#	history_number [PK] integer	type_of_treatment text	surname text	first_name text	middle_name text	department_name text
1	1001	Consultation	Smith	John	Alexander	Cardiology
2	1002	Surgery	Johnson	Emily	Rose	Orthopedics
3	1003	Check-up	Williams	James	Matthew	Pediatrics
4	1004	Treatment	Brown	Olivia	Sophia	Dermatology
5	1005	Consultation	Jones	Emma	Grace	Gastroenterology
6	1006	Surgery	Taylor	Daniel	Joseph	Neurology
7	1007	Check-up	Wilson	Sophia	Elizabeth	Gynecology
8	1008	Treatment	Miller	Michael	David	Urology
9	1009	Consultation	Anderson	Ava	Grace	Otolaryngology
10	1010	Surgery	Thomas	Ethan	Benjamin	Radiology
11	1011	Check-up	Martinez	Isabella	Lily	Endocrinology
12	1012	Treatment	Harris	Mia	Charlotte	Rheumatology
13	1013	Consultation	Clark	Abigail	Elizabeth	Hematology
14	1014	Surgery	Lewis	Elijah	Alexander	Nephrology
15	1015	Check-up	Lee	Amelia	Madison	Oncology
16	1016	Treatment	Walker	Liam	Christopher	Neonatology
17	1017	Consultation	Green	Harper	Grace	Allergy and Immunology
18	1018	Surgery	Gonzalez	Evelyn	Victoria	Infectious Diseases
19	1019	Check-up	Morris	Charlotte	Rose	Dentistry
20	1020	Treatment	Allen	Henry	William	Physical Therapy
21	1021	Consultation	Smith	Sophia	Grace	Cardiology
22	1022	Surgery	Johnson	Liam	James	Orthopedics
23	1023	Check-up	Williams	Ava	Elizabeth	Pediatrics
24	1024	Treatment	Brown	Oliver	Matthew	Dermatology
25	1025	Consultation	Jones	Mia	Grace	Gastroenterology
26	1026	Surgery	Taylor	Noah	Joseph	Neurology
27	1027	Check-up	Wilson	Olivia	Rose	Gynecology
28	1028	Treatment	Miller	James	David	Urology
29	1029	Consultation	Anderson	Emma	Grace	Otolaryngology
30	1030	Surgery	Thomas	Liam	Benjamin	Radiology

Рисунок 3.9 – Заполненная таблица pacient.

	service_name [PK] text	price_for_belarusian integer	price_for_foreigners integer
1	Acupuncture Session	60	120
2	Allergy Testing	50	100
3	Blood Test	20	40
4	Bone Density Test	60	120
5	Chiropractic Adjustment	100	200
6	Colonoscopy	120	240
7	Cosmetic Procedure	150	300
8	CT Scan	80	160
9	Dental Cleaning	40	80
10	EKG	30	60
11	Endoscopy	150	300
12	Eye Examination	30	60
13	Gastroscopy	100	200
14	Hypnosis session	130	300
15	Laser Hair Removal	120	240
16	Mammography	70	140
17	Massage Therapy Session	80	160
18	MRI	100	200
19	Nerve Conduction Study	90	180
20	Nutritional Counseling	50	100
21	Occupational Therapy Session	80	160
22	Physical Therapy Session	70	140
23	Plastic Surgery	200	400
24	Psychological Counseling	90	180
25	Pulmonary Function Test	80	160
26	Sleep Study	200	400
27	Speech Therapy Session	70	140
28	Tattoo Removal	100	200
29	Ultrasound	50	100
30	X-ray	40	80

Рисунок 3.10 – Заполненная таблица service.

	test_id [PK] integer	name_of_nurse text	test_name text	date_ date	history_number integer
1	1	Johnson	Blood Test	2024-01-01	1001
2	2	Smith	X-ray	2024-01-02	1002
3	3	Williams	Ultrasound	2024-01-03	1003
4	4	Brown	MRI	2024-01-04	1004
5	5	Jones	CT Scan	2024-01-05	1001
6	6	Davis	Blood Test	2024-01-06	1005
7	7	Miller	X-ray	2024-01-07	1017
8	8	Wilson	Ultrasound	2024-01-08	1017
9	9	Moore	MRI	2024-01-09	1018
10	10	Taylor	CT Scan	2024-01-10	1020
11	11	Johnson	Blood Test	2024-01-11	1008
12	12	Thomas	X-ray	2024-01-12	1009
13	13	Johnson	Ultrasound	2024-01-13	1002
14	14	White	MRI	2024-01-14	1010
15	15	Johnson	CT Scan	2024-01-15	1010
16	16	Martin	Blood Test	2024-01-16	1011
17	17	Johnson	X-ray	2024-01-17	1012
18	18	Garcia	Ultrasound	2024-01-18	1013
19	19	Johnson	MRI	2024-01-19	1014
20	20	Robinson	CT Scan	2024-01-20	1013
21	21	Clark	Blood Test	2024-01-21	1015
22	22	Rodriguez	X-ray	2024-01-22	1018
23	23	Lewis	Ultrasound	2024-01-23	1021
24	24	Lee	MRI	2024-01-24	1022
25	25	Walker	CT Scan	2024-01-25	1023
26	26	Hall	Blood Test	2024-01-26	1024
27	27	Johnson	X-ray	2024-01-27	1025
28	28	Young	Ultrasound	2024-01-28	1025
29	29	Hernandez	MRI	2024-01-29	1027
30	30	King	CT Scan	2024-01-30	1026

Рисунок 3.11 – Заполненная таблица test.

Также была создана реляционная диаграмма, приведенная на рисунке 3.12.
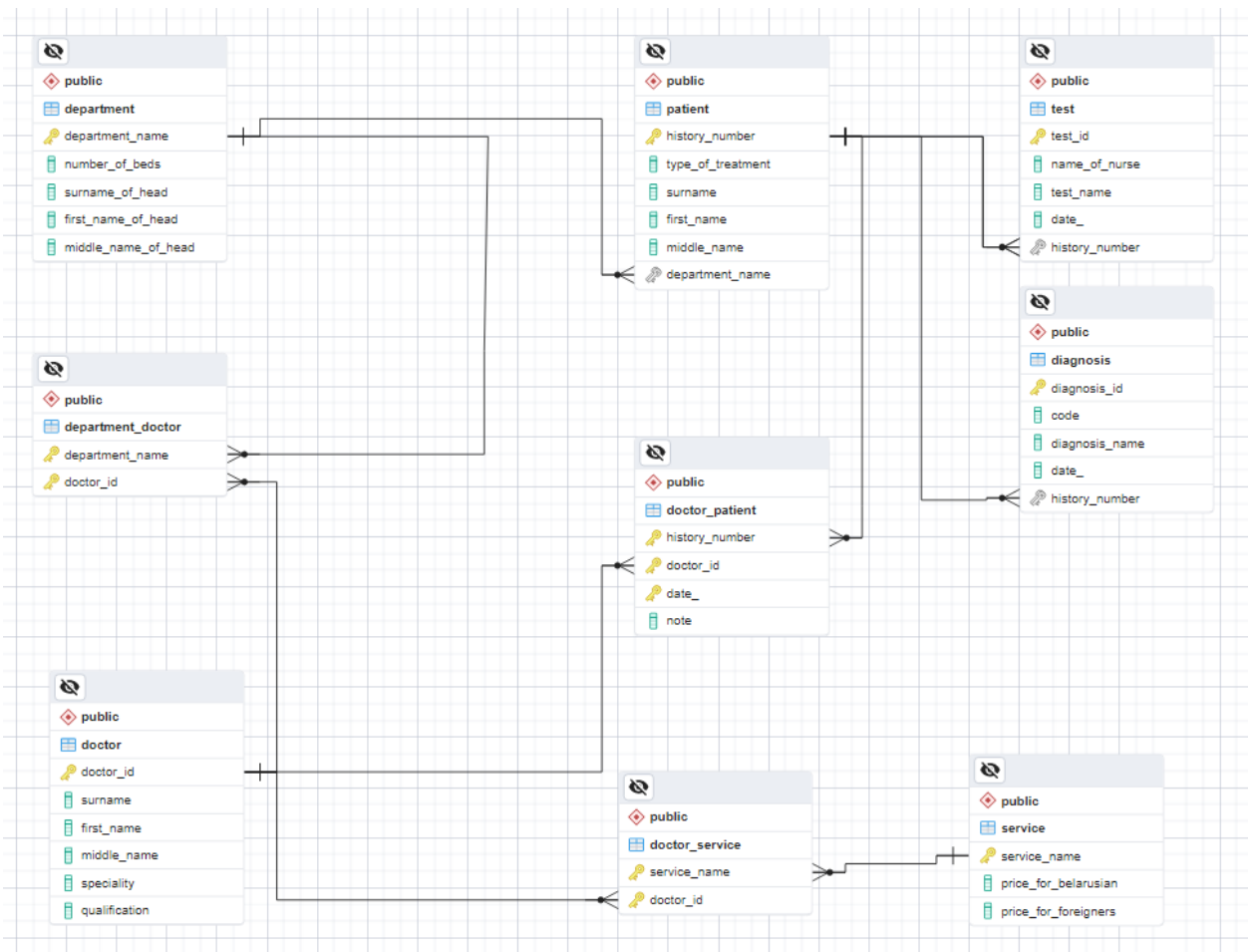
Рисунок 3.12 – Реляционная модель «Больница» в «PgAdmin 4»

После сравнения полученной диаграммы и схемы реляционной модели из отчета по лабораторной работе №2 различий в структуре этих диаграмм не было обнаружено.

Результатом выполнения шага 6 является нижепреведенный SQL-скрипт:

```
SET statement_timeout = 0;
SET lock_timeout = 0;
SET idle_in_transaction_session_timeout = 0;
SET client_encoding = 'UTF8';
SET standard_conforming_strings = on;
SELECT pg_catalog.set_config('search_path', '', false);
SET check_function_bodies = false;
SET xmloption = content;
SET client_min_messages = warning;
SET row_security = off;

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

ALTER DATABASE hospital OWNER TO postgres;

\connect hospital

SET statement_timeout = 0;
SET lock_timeout = 0;
```

```sql
SET idle_in_transaction_session_timeout = 0;
SET client_encoding = 'UTF8';
SET standard_conforming_strings = on;
SELECT pg_catalog.set_config('search_path', '', false);
SET check_function_bodies = false;
SET xmloption = content;
SET client_min_messages = warning;
SET row_security = off;


SET default_tablespace = '';


SET default_table_access_method = heap;

CREATE TABLE public.department (
    department_name text NOT NULL,
    number_of_beds integer,
    surname_of_head text,
    first_name_of_head text,
    middle_name_of_head text
);


ALTER TABLE public.department OWNER TO postgres;

CREATE TABLE public.department_doctor (
    department_name text NOT NULL,
    doctor_id integer NOT NULL
);


ALTER TABLE public.department_doctor OWNER TO postgres;

COMMENT ON TABLE public.department_doctor IS 'Intermediate table between
tables department and doctor';

CREATE TABLE public.diagnosis (
    diagnosis_id integer NOT NULL,
    code text,
    diagnosis_name text,
    date_ date,
    history_number integer
);

ALTER TABLE public.diagnosis OWNER TO postgres;

CREATE TABLE public.doctor (
    doctor_id integer NOT NULL,
    surname text,
    first_name text,
    middle_name text,
    speciality text,
    qualification text
);

ALTER TABLE public.doctor OWNER TO postgres;

CREATE TABLE public.doctor_patient (
    history_number integer NOT NULL,
    doctor_id integer NOT NULL,
    date_ date NOT NULL,
    note text
);
```

```sql
ALTER TABLE public.doctor_patient OWNER TO postgres;

CREATE TABLE public.doctor_service (
    service_name text NOT NULL,
    doctor_id integer NOT NULL
);


ALTER TABLE public.doctor_service OWNER TO postgres;

CREATE TABLE public.patient (
    history_number integer NOT NULL,
    type_of_treatment text,
    surname text,
    first_name text,
    middle_name text,
    department_name text
);


ALTER TABLE public.patient OWNER TO postgres;

CREATE TABLE public.service (
    service_name text NOT NULL,
    price_for_belarusian integer,
    price_for_foreigners integer,
    CONSTRAINT not_null CHECK (((service_name IS NOT NULL) AND
(price_for_belarusian IS NOT NULL) AND (price_for_foreigners IS NOT NULL)))
);


ALTER TABLE public.service OWNER TO postgres;


CREATE TABLE public.test (
    test_id integer NOT NULL,
    name_of_nurse text,
    test_name text,
    date_ date,
    history_number integer
);


ALTER TABLE public.test OWNER TO postgres;


INSERT INTO public.department VALUES ('Cardiology', 50, 'Smith', 'John',
'Alexander') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Pediatrics', 30, 'Johnson',
'Emily', 'Rose') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Orthopedics', 25, 'Williams',
'James', 'Matthew') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Ophthalmology', 20, 'Brown',
'Olivia', 'Sophia') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Dermatology', 15, 'Jones', 'Emma',
'Grace') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Neurology', 40, 'Taylor',
'Daniel', 'Joseph') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Gastroenterology', 35, 'Wilson',
'Sophia', 'Elizabeth') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Urology', 15, 'Miller', 'Michael',
'David') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Otolaryngology', 20, 'Anderson',
'Ava', 'Grace') ON CONFLICT DO NOTHING;
```

```sql
INSERT INTO public.department VALUES ('Psychiatry', 30, 'Thomas', 'Ethan', 'Benjamin') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Radiology', 25, 'Martinez', 'Isabella', 'Lily') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Endocrinology', 20, 'Harris', 'Mia', 'Charlotte') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Rheumatology', 15, 'Clark', 'Abigail', 'Elizabeth') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Hematology', 30, 'Lewis', 'Elijah', 'Alexander') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Nephrology', 20, 'Lee', 'Amelia', 'Madison') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Gynecology', 25, 'Walker', 'Liam', 'Christopher') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Pulmonology', 30, 'Green', 'Harper', 'Grace') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Oncology', 25, 'Gonzalez', 'Evelyn', 'Victoria') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Neonatology', 20, 'Morris', 'Charlotte', 'Rose') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Allergy and Immunology', 15, 'Allen', 'Henry', 'William') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Infectious Diseases', 20, 'Young', 'Scarlett', 'Isabella') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Dentistry', 25, 'King', 'Zoe', 'Elizabeth') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Physical Therapy', 30, 'Wright', 'Carter', 'James') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Occupational Therapy', 25, 'Hall', 'Grace', 'Ann') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Speech-language Pathology', 20, 'Turner', 'Samuel', 'Jacob') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Emergency Medicine', 15, 'Baker', 'Lily', 'Grace') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('General Surgery', 30, 'Hill', 'Lucas', 'Matthew') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Plastic Surgery', 25, 'Ward', 'Nora', 'Emily') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Anesthesiology', 20, 'Cook', 'Levi', 'Benjamin') ON CONFLICT DO NOTHING;
INSERT INTO public.department VALUES ('Pathology', 15, 'Price', 'Ella', 'Sophia') ON CONFLICT DO NOTHING;


INSERT INTO public.department_doctor VALUES ('Cardiology', 1) ON CONFLICT DO NOTHING;
INSERT INTO public.department_doctor VALUES ('Cardiology', 2) ON CONFLICT DO NOTHING;
INSERT INTO public.department_doctor VALUES ('Cardiology', 3) ON CONFLICT DO NOTHING;
INSERT INTO public.department_doctor VALUES ('Dermatology', 4) ON CONFLICT DO NOTHING;
INSERT INTO public.department_doctor VALUES ('Dermatology', 5) ON CONFLICT DO NOTHING;
INSERT INTO public.department_doctor VALUES ('Dermatology', 6) ON CONFLICT DO NOTHING;
INSERT INTO public.department_doctor VALUES ('Endocrinology', 7) ON CONFLICT DO NOTHING;
INSERT INTO public.department_doctor VALUES ('Endocrinology', 8) ON CONFLICT DO NOTHING;
INSERT INTO public.department_doctor VALUES ('Endocrinology', 9) ON CONFLICT DO NOTHING;
INSERT INTO public.department_doctor VALUES ('Gastroenterology', 10) ON CONFLICT DO NOTHING;
```

```sql
    INSERT INTO public.department_doctor VALUES ('Gastroenterology', 11) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Gastroenterology', 12) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Neurology', 13) ON CONFLICT
DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Neurology', 14) ON CONFLICT
DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Neurology', 15) ON CONFLICT
DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Ophthalmology', 16) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Ophthalmology', 17) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Ophthalmology', 18) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Orthopedics', 19) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Orthopedics', 20) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Orthopedics', 21) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Pediatrics', 22) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Pediatrics', 23) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Pediatrics', 24) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Pulmonology', 25) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Pulmonology', 26) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Pulmonology', 27) ON
CONFLICT DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Radiology', 28) ON CONFLICT
DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Radiology', 29) ON CONFLICT
DO NOTHING;
    INSERT INTO public.department_doctor VALUES ('Radiology', 30) ON CONFLICT
DO NOTHING;


    INSERT INTO public.diagnosis VALUES (1, 'A001', 'Common Cold', '2023-10-
05', 1001) ON CONFLICT DO NOTHING;
    INSERT INTO public.diagnosis VALUES (2, 'B352', 'Pneumonia', '2023-08-
15', 1002) ON CONFLICT DO NOTHING;
    INSERT INTO public.diagnosis VALUES (3, 'C526', 'Gastroenteritis', '2023-
09-22', 1003) ON CONFLICT DO NOTHING;
    INSERT INTO public.diagnosis VALUES (4, 'D723', 'Skin Infection', '2023-
11-10', 1004) ON CONFLICT DO NOTHING;
    INSERT INTO public.diagnosis VALUES (5, 'E905', 'Allergic Rhinitis',
'2023-07-29', 1005) ON CONFLICT DO NOTHING;
    INSERT INTO public.diagnosis VALUES (6, 'F201', 'Migraine', '2023-12-02',
1006) ON CONFLICT DO NOTHING;
    INSERT INTO public.diagnosis VALUES (7, 'G431', 'Urinary Tract
Infection', '2023-10-18', 1007) ON CONFLICT DO NOTHING;
    INSERT INTO public.diagnosis VALUES (8, 'H821', 'Otitis Media', '2023-
06-14', 1008) ON CONFLICT DO NOTHING;
    INSERT INTO public.diagnosis VALUES (9, 'I509', 'Hypertension', '2023-
09-01', 1009) ON CONFLICT DO NOTHING;
    INSERT INTO public.diagnosis VALUES (10, 'J303', 'Bronchitis', '2023-11-
26', 1010) ON CONFLICT DO NOTHING;
    INSERT INTO public.diagnosis VALUES (11, 'A001', 'Common Cold', '2023-
08-28', 1001) ON CONFLICT DO NOTHING;
```

```sql
        INSERT INTO public.diagnosis VALUES (12, 'B352', 'Pneumonia', '2023-10-12', 1012) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (13, 'C526', 'Gastroenteritis', '2023-07-17', 1003) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (14, 'D723', 'Skin Infection', '2023-09-05', 1014) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (15, 'E905', 'Allergic Rhinitis', '2023-11-21', 1005) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (16, 'F201', 'Migraine', '2023-08-08', 1016) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (17, 'G431', 'Urinary Tract Infection', '2023-10-25', 1007) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (18, 'H821', 'Otitis Media', '2023-12-19', 1018) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (19, 'I509', 'Hypertension', '2023-09-15', 1009) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (20, 'J303', 'Bronchitis', '2023-06-30', 1020) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (21, 'A001', 'Common Cold', '2023-11-15', 1021) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (22, 'B352', 'Pneumonia', '2023-07-04', 1022) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (23, 'C526', 'Gastroenteritis', '2023-09-09', 1023) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (24, 'D723', 'Skin Infection', '2023-12-25', 1024) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (25, 'E905', 'Allergic Rhinitis', '2023-10-02', 1025) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (26, 'F201', 'Migraine', '2023-08-20', 1026) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (27, 'G431', 'Urinary Tract Infection', '2023-11-06', 1027) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (28, 'H821', 'Otitis Media', '2023-07-23', 1028) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (29, 'I509', 'Hypertension', '2023-09-29', 1029) ON CONFLICT DO NOTHING;
        INSERT INTO public.diagnosis VALUES (30, 'J303', 'Bronchitis', '2023-06-07', 1030) ON CONFLICT DO NOTHING;


        INSERT INTO public.doctor VALUES (1, 'Smith', 'John', 'Michael', 'Cardiology', 'First') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (2, 'Johnson', 'Robert', 'David', 'Orthopedics', 'Second') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (3, 'Williams', 'James', 'Thomas', 'Dermatology', 'Higher') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (4, 'Jones', 'William', 'Christopher', 'Pediatrics', 'First') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (5, 'Brown', 'David', 'Joseph', 'Ophthalmology', 'Second') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (6, 'Davis', 'Charles', 'Daniel', 'Gastroenterology', 'Higher') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (7, 'Miller', 'Daniel', 'Matthew', 'Neurology', 'First') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (8, 'Wilson', 'Joseph', 'Anthony', 'Otolaryngology', 'Second') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (9, 'Moore', 'Thomas', 'Andrew', 'Urology', 'Higher') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (10, 'Taylor', 'Mark', 'Jason', 'Psychiatry', 'First') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (11, 'Anderson', 'Michael', 'Timothy', 'Cardiology', 'Second') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (12, 'Thomas', 'David', 'Richard', 'Orthopedics', 'Higher') ON CONFLICT DO NOTHING;
```

```sql
        INSERT INTO public.doctor VALUES (13, 'Jackson', 'Charles', 'Edward', 'Dermatology', 'First') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (14, 'White', 'Robert', 'William', 'Pediatrics', 'Second') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (15, 'Harris', 'Matthew', 'George', 'Ophthalmology', 'Higher') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (16, 'Martin', 'Brian', 'Scott', 'Gastroenterology', 'First') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (17, 'Thompson', 'Jason', 'Alexander', 'Neurology', 'Second') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (18, 'Garcia', 'Kevin', 'Joseph', 'Otolaryngology', 'Higher') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (19, 'Martinez', 'Edward', 'Ryan', 'Urology', 'First') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (20, 'Robinson', 'William', 'Benjamin', 'Psychiatry', 'Second') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (21, 'Clark', 'Joshua', 'Samuel', 'Cardiology', 'Higher') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (22, 'Rodriguez', 'Daniel', 'Stephen', 'Orthopedics', 'First') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (23, 'Lewis', 'Andrew', 'Peter', 'Dermatology', 'Second') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (24, 'Lee', 'Christopher', 'Frank', 'Pediatrics', 'Higher') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (25, 'Walker', 'Matthew', 'Raymond', 'Ophthalmology', 'First') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (26, 'Hall', 'Joseph', 'Patrick', 'Gastroenterology', 'Second') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (27, 'Allen', 'David', 'Jack', 'Neurology', 'Higher') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (28, 'Young', 'Daniel', 'Henry', 'Otolaryngology', 'First') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (29, 'Hernandez', 'Anthony', 'Ronald', 'Urology', 'Second') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor VALUES (30, 'King', 'Thomas', 'Edward', 'Psychiatry', 'Higher') ON CONFLICT DO NOTHING;


        INSERT INTO public.doctor_patient VALUES (1001, 1, '2023-01-01', 'Patient had a routine check-up.') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_patient VALUES (1002, 2, '2023-01-02', 'Patient reported symptoms of cough and fever.') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_patient VALUES (1003, 3, '2023-01-03', 'Patient came in for a follow-up appointment.') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_patient VALUES (1004, 4, '2023-01-04', 'Patient received X-ray examination.') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_patient VALUES (1005, 5, '2023-01-05', 'Patient underwent blood test.') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_patient VALUES (1006, 6, '2023-01-06', 'Patient had an EKG performed.') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_patient VALUES (1007, 7, '2023-01-07', 'Patient underwent endoscopy procedure.') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_patient VALUES (1008, 8, '2023-01-08', 'Patient received colonoscopy.') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_patient VALUES (1009, 9, '2023-01-09', 'Patient had a mammography.') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_patient VALUES (1010, 10, '2023-01-10', 'Patient received bone density test.') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_patient VALUES (1011, 11, '2023-01-11', 'Patient came in for allergy testing.') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_patient VALUES (1012, 12, '2023-01-12', 'Patient underwent pulmonary function test.') ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_patient VALUES (1013, 13, '2023-01-13', 'Patient had a nerve conduction study.') ON CONFLICT DO NOTHING;
```

```sql
        INSERT  INTO  public.doctor_patient  VALUES  (1014,  14,  '2023-01-14',
'Patient underwent sleep study.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1015,  15,  '2023-01-15',
'Patient received gastroscopy.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1016,  16,  '2023-01-16',
'Patient had a dental cleaning.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1017,  17,  '2023-01-17',
'Patient came in for an eye examination.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1018,  18,  '2023-01-18',
'Patient received a physical therapy session.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1019,  19,  '2023-01-19',
'Patient underwent an acupuncture session.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1020,  20,  '2023-01-20',
'Patient had a massage therapy session.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1021,  21,  '2023-01-21',
'Patient received nutritional counseling.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1022,  22,  '2023-01-22',
'Patient had a psychological counseling session.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1023,  23,  '2023-01-23',
'Patient received a chiropractic adjustment.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1024,  24,  '2023-01-24',
'Patient had an occupational therapy session.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1025,  25,  '2023-01-25',
'Patient underwent a speech therapy session.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1026,  26,  '2023-01-26',
'Patient received a cosmetic procedure.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1027,  27,  '2023-01-27',
'Patient had laser hair removal.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1028,  28,  '2023-01-28',
'Patient came in for tattoo removal.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1029,  29,  '2023-01-29',
'Patient underwent plastic surgery.') ON CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_patient  VALUES  (1030,  30,  '2023-01-30',
'Patient had a dermatology consultation.') ON CONFLICT DO NOTHING;


        INSERT  INTO  public.doctor_service  VALUES  ('MRI',  1)  ON  CONFLICT  DO
NOTHING;
        INSERT INTO public.doctor_service VALUES ('CT Scan', 2) ON CONFLICT DO
NOTHING;
        INSERT INTO public.doctor_service VALUES ('Ultrasound', 3) ON CONFLICT DO
NOTHING;
        INSERT  INTO  public.doctor_service  VALUES  ('X-ray',  4)  ON  CONFLICT  DO
NOTHING;
        INSERT INTO public.doctor_service VALUES ('Blood Test', 5) ON CONFLICT DO
NOTHING;
        INSERT  INTO  public.doctor_service  VALUES  ('EKG',  6)  ON  CONFLICT  DO
NOTHING;
        INSERT INTO public.doctor_service VALUES ('Endoscopy', 7) ON CONFLICT DO
NOTHING;
        INSERT INTO public.doctor_service VALUES ('Colonoscopy', 8) ON CONFLICT
DO NOTHING;
        INSERT INTO public.doctor_service VALUES ('Mammography', 9) ON CONFLICT
DO NOTHING;
        INSERT  INTO public.doctor_service VALUES ('Bone Density Test', 10) ON
CONFLICT DO NOTHING;
        INSERT  INTO  public.doctor_service  VALUES  ('Allergy  Testing',  11)  ON
CONFLICT DO NOTHING;
        INSERT INTO public.doctor_service VALUES ('Pulmonary Function Test', 12)
ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_service VALUES ('Nerve Conduction Study', 13)
ON CONFLICT DO NOTHING;
        INSERT INTO public.doctor_service VALUES ('Sleep Study', 14) ON CONFLICT
DO NOTHING;
```

```sql
INSERT INTO public.doctor_service VALUES ('Gastroscopy', 15) ON CONFLICT
DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Dental Cleaning', 16) ON
CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Eye Examination', 17) ON
CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Physical Therapy Session', 18)
ON CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Acupuncture Session', 19) ON
CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Massage Therapy Session', 20)
ON CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Nutritional Counseling', 21)
ON CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Psychological Counseling', 22)
ON CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Chiropractic Adjustment', 23)
ON CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Occupational Therapy Session',
24) ON CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Speech Therapy Session', 25)
ON CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Cosmetic Procedure', 26) ON
CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Laser Hair Removal', 27) ON
CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Tattoo Removal', 28) ON
CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Plastic Surgery', 29) ON
CONFLICT DO NOTHING;
INSERT INTO public.doctor_service VALUES ('Tattoo Removal', 30) ON
CONFLICT DO NOTHING;


INSERT INTO public.patient VALUES (1001, 'Consultation', 'Smith', 'John',
'Alexander', 'Cardiology') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1002, 'Surgery', 'Johnson', 'Emily',
'Rose', 'Orthopedics') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1003, 'Check-up', 'Williams', 'James',
'Matthew', 'Pediatrics') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1004, 'Treatment', 'Brown', 'Olivia',
'Sophia', 'Dermatology') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1005, 'Consultation', 'Jones', 'Emma',
'Grace', 'Gastroenterology') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1006, 'Surgery', 'Taylor', 'Daniel',
'Joseph', 'Neurology') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1007, 'Check-up', 'Wilson', 'Sophia',
'Elizabeth', 'Gynecology') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1008, 'Treatment', 'Miller',
'Michael', 'David', 'Urology') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1009, 'Consultation', 'Anderson',
'Ava', 'Grace', 'Otolaryngology') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1010, 'Surgery', 'Thomas', 'Ethan',
'Benjamin', 'Radiology') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1011, 'Check-up', 'Martinez',
'Isabella', 'Lily', 'Endocrinology') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1012, 'Treatment', 'Harris', 'Mia',
'Charlotte', 'Rheumatology') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1013, 'Consultation', 'Clark',
'Abigail', 'Elizabeth', 'Hematology') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1014, 'Surgery', 'Lewis', 'Elijah',
'Alexander', 'Nephrology') ON CONFLICT DO NOTHING;
INSERT INTO public.patient VALUES (1015, 'Check-up', 'Lee', 'Amelia',
'Madison', 'Oncology') ON CONFLICT DO NOTHING;
```

```sql
        INSERT INTO public.patient VALUES (1016, 'Treatment', 'Walker', 'Liam',
'Christopher', 'Neonatology') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1017, 'Consultation', 'Green',
'Harper', 'Grace', 'Allergy and Immunology') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1018, 'Surgery', 'Gonzalez', 'Evelyn',
'Victoria', 'Infectious Diseases') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1019, 'Check-up', 'Morris',
'Charlotte', 'Rose', 'Dentistry') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1020, 'Treatment', 'Allen', 'Henry',
'William', 'Physical Therapy') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1021, 'Consultation', 'Smith',
'Sophia', 'Grace', 'Cardiology') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1022, 'Surgery', 'Johnson', 'Liam',
'James', 'Orthopedics') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1023, 'Check-up', 'Williams', 'Ava',
'Elizabeth', 'Pediatrics') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1024, 'Treatment', 'Brown', 'Oliver',
'Matthew', 'Dermatology') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1025, 'Consultation', 'Jones', 'Mia',
'Grace', 'Gastroenterology') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1026, 'Surgery', 'Taylor', 'Noah',
'Joseph', 'Neurology') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1027, 'Check-up', 'Wilson', 'Olivia',
'Rose', 'Gynecology') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1028, 'Treatment', 'Miller', 'James',
'David', 'Urology') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1029, 'Consultation', 'Anderson',
'Emma', 'Grace', 'Otolaryngology') ON CONFLICT DO NOTHING;
        INSERT INTO public.patient VALUES (1030, 'Surgery', 'Thomas', 'Liam',
'Benjamin', 'Radiology') ON CONFLICT DO NOTHING;


        INSERT INTO public.service VALUES ('MRI', 100, 200) ON CONFLICT DO
NOTHING;
        INSERT INTO public.service VALUES ('CT Scan', 80, 160) ON CONFLICT DO
NOTHING;
        INSERT INTO public.service VALUES ('Ultrasound', 50, 100) ON CONFLICT DO
NOTHING;
        INSERT INTO public.service VALUES ('X-ray', 40, 80) ON CONFLICT DO
NOTHING;
        INSERT INTO public.service VALUES ('Blood Test', 20, 40) ON CONFLICT DO
NOTHING;
        INSERT INTO public.service VALUES ('EKG', 30, 60) ON CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Endoscopy', 150, 300) ON CONFLICT DO
NOTHING;
        INSERT INTO public.service VALUES ('Colonoscopy', 120, 240) ON CONFLICT
DO NOTHING;
        INSERT INTO public.service VALUES ('Mammography', 70, 140) ON CONFLICT DO
NOTHING;
        INSERT INTO public.service VALUES ('Bone Density Test', 60, 120) ON
CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Allergy Testing', 50, 100) ON CONFLICT
DO NOTHING;
        INSERT INTO public.service VALUES ('Pulmonary Function Test', 80, 160) ON
CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Nerve Conduction Study', 90, 180) ON
CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Sleep Study', 200, 400) ON CONFLICT
DO NOTHING;
        INSERT INTO public.service VALUES ('Gastroscopy', 100, 200) ON CONFLICT
DO NOTHING;
        INSERT INTO public.service VALUES ('Dental Cleaning', 40, 80) ON CONFLICT
DO NOTHING;
```

```sql
        INSERT INTO public.service VALUES ('Eye Examination', 30, 60) ON CONFLICT
DO NOTHING;
        INSERT INTO public.service VALUES ('Physical Therapy Session', 70, 140)
ON CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Acupuncture Session', 60, 120) ON
CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Massage Therapy Session', 80, 160) ON
CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Nutritional Counseling', 50, 100) ON
CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Psychological Counseling', 90, 180)
ON CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Chiropractic Adjustment', 100, 200)
ON CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Occupational Therapy Session', 80,
160) ON CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Speech Therapy Session', 70, 140) ON
CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Cosmetic Procedure', 150, 300) ON
CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Laser Hair Removal', 120, 240) ON
CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Tattoo Removal', 100, 200) ON CONFLICT
DO NOTHING;
        INSERT INTO public.service VALUES ('Plastic Surgery', 200, 400) ON
CONFLICT DO NOTHING;
        INSERT INTO public.service VALUES ('Hypnosis session', 130, 300) ON
CONFLICT DO NOTHING;


        INSERT INTO public.test VALUES (1, 'Johnson', 'Blood Test', '2024-01-01',
1001) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (2, 'Smith', 'X-ray', '2024-01-02', 1002)
ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (3, 'Williams', 'Ultrasound', '2024-01-
03', 1003) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (4, 'Brown', 'MRI', '2024-01-04', 1004) ON
CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (5, 'Jones', 'CT Scan', '2024-01-05', 1001)
ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (6, 'Davis', 'Blood Test', '2024-01-06',
1005) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (7, 'Miller', 'X-ray', '2024-01-07', 1017)
ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (8, 'Wilson', 'Ultrasound', '2024-01-08',
1017) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (9, 'Moore', 'MRI', '2024-01-09', 1018) ON
CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (10, 'Taylor', 'CT Scan', '2024-01-10',
1020) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (11, 'Johnson', 'Blood Test', '2024-01-
11', 1008) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (12, 'Thomas', 'X-ray', '2024-01-12',
1009) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (13, 'Johnson', 'Ultrasound', '2024-01-
13', 1002) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (14, 'White', 'MRI', '2024-01-14', 1010)
ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (15, 'Johnson', 'CT Scan', '2024-01-15',
1010) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (16, 'Martin', 'Blood Test', '2024-01-16',
1011) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (17, 'Johnson', 'X-ray', '2024-01-17',
1012) ON CONFLICT DO NOTHING;
```

```sql
        INSERT INTO public.test VALUES (18, 'Garcia', 'Ultrasound', '2024-01-18',
1013) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (19, 'Johnson', 'MRI', '2024-01-19', 1014)
ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (20, 'Robinson', 'CT Scan', '2024-01-20',
1013) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (21, 'Clark', 'Blood Test', '2024-01-21',
1015) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (22, 'Rodriguez', 'X-ray', '2024-01-22',
1018) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (23, 'Lewis', 'Ultrasound', '2024-01-23',
1021) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (24, 'Lee', 'MRI', '2024-01-24', 1022) ON
CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (25, 'Walker', 'CT Scan', '2024-01-25',
1023) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (26, 'Hall', 'Blood Test', '2024-01-26',
1024) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (27, 'Johnson', 'X-ray', '2024-01-27',
1025) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (28, 'Young', 'Ultrasound', '2024-01-28',
1025) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (29, 'Hernandez', 'MRI', '2024-01-29',
1027) ON CONFLICT DO NOTHING;
        INSERT INTO public.test VALUES (30, 'King', 'CT Scan', '2024-01-30', 1026)
ON CONFLICT DO NOTHING;


        ALTER TABLE ONLY public.department_doctor
            ADD CONSTRAINT department_doctor_pkey PRIMARY KEY (department_name,
doctor_id);

        ALTER TABLE ONLY public.department
            ADD CONSTRAINT department_pkey PRIMARY KEY (department_name);

        ALTER TABLE ONLY public.diagnosis
            ADD CONSTRAINT diagnosis_pkey PRIMARY KEY (diagnosis_id);

        ALTER TABLE ONLY public.doctor_patient
            ADD CONSTRAINT doctor_patient_pkey PRIMARY KEY (history_number,
doctor_id, date_);

        ALTER TABLE ONLY public.doctor
            ADD CONSTRAINT doctor_pkey PRIMARY KEY (doctor_id);

        ALTER TABLE ONLY public.doctor_service
            ADD CONSTRAINT doctor_service_pkey PRIMARY KEY (service_name,
doctor_id);

        ALTER TABLE ONLY public.patient
            ADD CONSTRAINT patient_pkey PRIMARY KEY (history_number);

        ALTER TABLE ONLY public.service
            ADD CONSTRAINT service_pkey PRIMARY KEY (service_name);

        ALTER TABLE ONLY public.test
            ADD CONSTRAINT test_pkey PRIMARY KEY (test_id);

        ALTER TABLE ONLY public.test
            ADD CONSTRAINT del_upd FOREIGN KEY (history_number) REFERENCES
public.patient(history_number) ON UPDATE CASCADE ON DELETE CASCADE;

        ALTER TABLE ONLY public.department_doctor
```

```
        ADD  CONSTRAINT  department_doctor_department_name_fkey  FOREIGN  KEY
(department_name) REFERENCES public.department(department_name);

    ALTER TABLE ONLY public.department_doctor
        ADD    CONSTRAINT   department_doctor_doctor_id_fkey   FOREIGN    KEY
(doctor_id) REFERENCES public.doctor(doctor_id);

    ALTER TABLE ONLY public.diagnosis
        ADD    CONSTRAINT    diagnosis_history_number_fkey    FOREIGN    KEY
(history_number) REFERENCES public.patient(history_number);

    ALTER TABLE ONLY public.doctor_patient
        ADD CONSTRAINT doctor_patient_doctor_id_fkey FOREIGN KEY (doctor_id)
REFERENCES public.doctor(doctor_id);

    ALTER TABLE ONLY public.doctor_patient
        ADD   CONSTRAINT   doctor_patient_history_number_fkey   FOREIGN   KEY
(history_number) REFERENCES public.patient(history_number);

    ALTER TABLE ONLY public.doctor_service
        ADD CONSTRAINT doctor_service_doctor_id_fkey FOREIGN KEY (doctor_id)
REFERENCES public.doctor(doctor_id);

    ALTER TABLE ONLY public.doctor_service
        ADD   CONSTRAINT   doctor_service_service_name_fkey   FOREIGN   KEY
(service_name) REFERENCES public.service(service_name);

    ALTER TABLE ONLY public.patient
        ADD    CONSTRAINT    patient_department_name_fkey    FOREIGN    KEY
(department_name) REFERENCES public.department(department_name);

    ALTER TABLE ONLY public.test
        ADD CONSTRAINT test_history_number_fkey FOREIGN KEY (history_number)
REFERENCES public.patient(history_number);
```

4 Вывод

В ходе лабораторной работы было выполнена реализация схемы базы данных по ранее построенной реляционной схеме данных, были сформированы SQL-запросы для создания таблиц базы данных и выполнены их в СУБД, также были заполнены эти таблицы.