БГУИР

Кафедра ЭВМ

Отчет по лабораторной работе № 3
Тема: «Реализация SQL-запросов для создания схемы базы данных и запросов на модификацию данных»

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**СОДЕРЖАНИЕ**

## 1 ИСХОДНОЕ ЗАДАНИЕ

Реализовать реляционную схему данных с помощью SQL-операторов для создания схемы, таблиц и индексов. Сформировать SQL-операторы для добавления, изменения и удаления данных.

Вариант задания: организация «Туристическое агентство».

## 2 РЕЛЯЦИОННАЯ СХЕМА ДАННЫХ

UML-диаграмма приведена на рисунке 2.1.

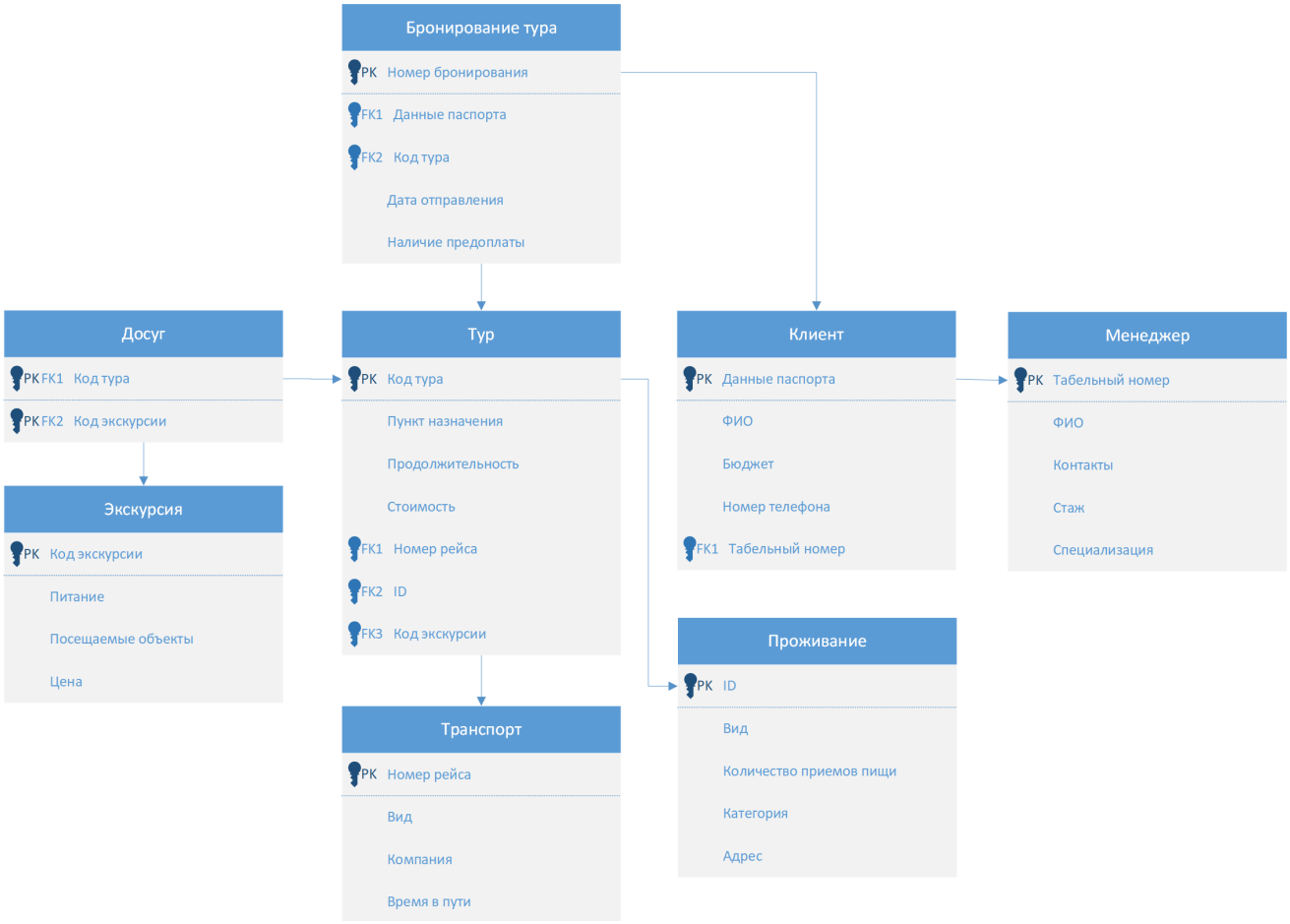


Рисунок 2.1 – Реляционная модель данных

## 3 РЕЛЯЦИОННАЯ СХЕМА ДАННЫХ, РЕАЛИЗОВАННАЯ С ПОМОЩЬЮ SQL-ОПЕРАТОРОВ

Реляционная модель данных, созданная с помощью средств pgAdmin 4, приведена на рисунке 3.1.


Рисунок 3.1 – Реляционная модель данных (pgAdmin 4)

## 4 СОЗДАНИЕ ТАБЛИЦ БАЗЫ ДАННЫХ

Описание скрипта создания таблицы `managers` имеет следующий вид:

```
CREATE TABLE managers (
      employee_number VARCHAR(15) PRIMARY KEY,
      full_name VARCHAR(50),
      contacts VARCHAR(25),
      experience INT,
      specialisation VARCHAR(15)
);
```

Описание скрипта создания таблицы `clients` имеет следующий вид:

```
CREATE TABLE clients (
      passport_data VARCHAR(9) PRIMARY KEY,
      full_name VARCHAR(50),
      budget INT,
      phone_number VARCHAR(15),
```

```
      employee_number VARCHAR(15),
      FOREIGN KEY (employee_number) REFERENCES managers
(employee_number)
);
```

Описание скрипта создания таблицы `accommodations` имеет следующий вид:

```
CREATE TABLE accommodations (
      accommodation_id INT PRIMARY KEY,
      kind VARCHAR(20),
      num_of_meals INT,
      category INT,
      address VARCHAR(30)
);
```

Описание скрипта создания таблицы `transportations` имеет следующий вид:

```
CREATE TABLE transportations (
      trip_number INT PRIMARY KEY,
      means_of_transport VARCHAR(15),
      company VARCHAR(15),
      travel_time INT
);
```

Описание скрипта создания таблицы `excursions` имеет следующий вид:

```
CREATE TABLE excursions (
      excursion_id INT PRIMARY KEY,
      is_meal_provided BOOL,
      sights VARCHAR[],
      price INT
);
```

Описание скрипта создания таблицы `tours` имеет следующий вид:

```
CREATE TABLE tours (
     tour_code INT PRIMARY KEY,
     destination VARCHAR(20),
     duration INT,
     price INT,
     trip_number INT,
     accommodation_id INT,
     excursion_id INT,
      FOREIGN KEY (trip_number) REFERENCES transportations
(trip_number),
      FOREIGN KEY (accommodation_id) REFERENCES accommodations
(accommodation_id),
```

```
     excursion_id INT
);
```

Описание скрипта создания таблицы tour_bookings имеет следующий вид:

```
CREATE TABLE tour_bookings (
     booking_number INT PRIMARY KEY,
     passport_data VARCHAR(9),
     tour_code INT,
     departure_date VARCHAR(10),
     is_prepaid BOOL,
     FOREIGN KEY (passport_data) REFERENCES clients (passport_data),
     FOREIGN KEY (tour_code) REFERENCES tours (tour_code)
);
```

Описание скрипта создания таблицы leisure имеет следующий вид:

```
CREATE TABLE leisure (
     tour_code INT REFERENCES tours (tour_code),
     excursion_id INT REFERENCES excursions (excursion_id),
     PRIMARY KEY (tour_code, excursion_id)
);
```

# 5 ДОПОЛНЕНИЕ ОПИСАНИЯ ТАБЛИЦ БАЗЫ ДАННЫХ

## 5.1 Реализация ограничений для описания внешних ключей

Описание скрипта установки свойств контроля целостности данных (каскадного удаления и обновления) для внешнего ключа employee_number таблицы clients имеет следующий вид:

```
ALTER TABLE clients
    DROP CONSTRAINT IF EXISTS clients_employee_number_fkey,
    ADD CONSTRAINT clients_employee_number_fkey
        FOREIGN KEY (employee_number)
        REFERENCES managers (employee_number)
        ON DELETE CASCADE
        ON UPDATE CASCADE;
```

Описание скрипта установки свойств контроля целостности данных (каскадного удаления и обновления) для внешнего ключа accommodation_id таблицы tours имеет следующий вид:

```
ALTER TABLE tours
    DROP CONSTRAINT IF EXISTS tours_accommodation_id_fkey,
    ADD CONSTRAINT tours_accommodation_id_fkey
        FOREIGN KEY (accommodation_id)
        REFERENCES accommodations (accommodation_id)
```

```
        ON DELETE CASCADE
        ON UPDATE CASCADE;
```

Описание скрипта установки свойств контроля целостности данных (каскадного удаления и обновления) для внешнего ключа `excursion_id` таблицы `tours` имеет следующий вид:

```
ALTER TABLE tours
    DROP CONSTRAINT IF EXISTS tours_excursion_id_fkey,
    ADD CONSTRAINT tours_excursion_id_fkey
        FOREIGN KEY (excursion_id)
        REFERENCES excursions (excursion_id)
        ON DELETE CASCADE
        ON UPDATE CASCADE;
```

Описание скрипта установки свойств контроля целостности данных (каскадного удаления и обновления) для внешнего ключа `trip_number` таблицы `tours` имеет следующий вид:

```
ALTER TABLE tours
    DROP CONSTRAINT IF EXISTS tours_trip_number_fkey,
    ADD CONSTRAINT tours_trip_number_fkey
        FOREIGN KEY (trip_number)
        REFERENCES transportations (trip_number)
        ON DELETE CASCADE
        ON UPDATE CASCADE;
```

Описание скрипта установки свойств контроля целостности данных (каскадного удаления и обновления) для внешнего ключа `passport_data` таблицы `tour_bookings` имеет следующий вид:

```
ALTER TABLE tour_bookings
    DROP CONSTRAINT IF EXISTS tours_bookings_passport_data_fkey,
    ADD CONSTRAINT tours_bookings_passport_data_fkey
        FOREIGN KEY (passport_data)
        REFERENCES clients (passport_data)
        ON DELETE CASCADE
        ON UPDATE CASCADE;
```

Описание скрипта установки свойств контроля целостности данных (каскадного удаления и обновления) для внешнего ключа `tour_code` таблицы `tour_bookings` имеет следующий вид:

```
ALTER TABLE tour_bookings
    DROP CONSTRAINT IF EXISTS tour_bookings_tour_code_fkey,
    ADD CONSTRAINT tour_bookings_tour_code_fkey
        FOREIGN KEY (tour_code)
        REFERENCES tours (tour_code)
```

```
    ON DELETE CASCADE
    ON UPDATE CASCADE;
```

### 5.2 Реализация ограничений для описания бизнес-правил

Описание скрипта установки запрета неопределенных значений в столбце `full_name` таблицы `managers` имеет следующий вид:

```
ALTER TABLE managers
ALTER COLUMN full_name SET NOT NULL;
```

Описание скрипта задания бизнес-правила по условию, согласно которому в столбце `experience` таблицы `managers` не может храниться отрицательное число, имеет следующий вид:

```
ALTER TABLE managers
ADD CONSTRAINT non_negative_experience CHECK (experience >= 0);
```

Описание скрипта установки запрета неопределенных значений в столбце `full_name` таблицы `clients` имеет следующий вид:

```
ALTER TABLE clients
ALTER COLUMN full_name SET NOT NULL;
```

Описание скрипта задания бизнес-правила по условию, согласно которому в столбце `budget` таблицы `clients` не может храниться отрицательное число, имеет следующий вид:

```
ALTER TABLE clients
ADD CONSTRAINT non_negative_budget CHECK (budget >= 0);
```

Описание скрипта установки запрета неопределенных значений в столбце `duration` таблицы `tours` имеет следующий вид:

```
ALTER TABLE tours
ALTER COLUMN duration SET NOT NULL;
```

Описание скрипта установки запрета неопределенных значений в столбце `price` таблицы `tours` имеет следующий вид:

```
ALTER TABLE tours
ALTER COLUMN price SET NOT NULL;
```

Описание скрипта задания бизнес-правила по условию, согласно которому в столбце `departure_date` таблицы `tour_bookings` не может храниться прошедшая дата, имеет следующий вид:

```
ALTER TABLE tour_bookings
```

```
ADD CONSTRAINT departure_date_check CHECK (departure_date >=
CURRENT_DATE);
```

Описание скрипта задания бизнес-правила по условию, согласно которому в столбце price таблицы excursions не может храниться отрицательное число, имеет следующий вид:

```
ALTER TABLE excursions
ADD CONSTRAINT non_negative_price CHECK (price >= 0);
```

### 5.3 Реализация комментариев для значимых элементов таблицы

Описание скрипта добавления описания столбца contacts таблицы managers имеет следующий вид:

```
COMMENT ON COLUMN managers.contacts IS 'Can store a phone number or an
email, or a link';
```

Описание скрипта добавления описания столбца experience таблицы managers имеет следующий вид:

```
COMMENT ON COLUMN managers.experience IS 'Years of professional
expertise';
```

Описание скрипта добавления описания столбца specialisation таблицы managers имеет следующий вид:

```
COMMENT ON COLUMN managers.specialisation IS 'Either a type of holiday
or a region';
```

Описание скрипта добавления описания столбца num_of_meals таблицы accommodations имеет следующий вид:

```
COMMENT ON COLUMN accommodations.num_of_meals IS 'Only breakfast or
breakfast+dinner, or all three';
```

Описание скрипта добавления описания столбца category таблицы accommodations имеет следующий вид:

```
COMMENT ON COLUMN accommodations.category IS 'Number of stars';
```

## 6 ЗАПОЛНЕНИЕ ТАБЛИЦ БАЗЫ ДАННЫХ

Описание скрипта заполнения таблицы managers имеет следующий вид:

```
INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10001', 'John Doe', 'john@example.com', 5, 'Asia');
```

```
INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10002', 'Jane Smith', 'jane@example.com', 1, 'Europe');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10003', 'Michael Johnson', 'michael@example.com', 2,
'Carpathians');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10004', 'Emily Brown', '+375 (44) 9876543', 1, 'Adventures');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10005', 'David Wilson', 'https://t.me/davidwilson', 3, 'Beach
Vacations');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10006', 'Emma Taylor', 'emma@example.com', 5, 'Cultural
Tourism');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10007', 'Oliver Garcia', '+375 (29) 4567890', 4, 'Africa');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10008', 'Sophia Martinez', '+375 (44) 8765432', 6, 'Europe');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10009', 'William Anderson', 'william@example.com', 7,
'Carpathians');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10010', 'Isabella Hernandez', 'isabella@example.com', 2,
'Eco-Tourism');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10011', 'James Gonzalez', '+375 (29) 7654321', 1, 'Family
Vacations');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10012', 'Mia Perez', 'https://t.me/miaperez', 3, 'South
America');
```

```
INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10013', 'Alexander Smith', 'alexander@example.com', 4,
'Adventure Travel');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10014', 'Ava Lopez', '+375 (44) 6543210', 5, 'Europe');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10015', 'Benjamin Ramirez', 'benjamin@example.com', 2, 'Beach
Vacations');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10016', 'Charlotte Torres', 'charlotte@example.com', 3,
'Asia');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10017', 'Chloe Flores', 'https://t.me/chloeflores', 1, 'North
America');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10018', 'Daniel Adams', 'daniel@example.com', 2, 'Luxury
Travel');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10019', 'Ella Parker', '+375 (29) 5432109', 1,
'Carpathians');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10020', 'Ethan Turner', 'ethan@example.com', 2, 'Cultural
Tourism');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10021', 'Grace Carter', '+375 (44) 4321098', 3, 'Asia');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10022', 'Henry Ward', 'https://t.me/henryward', 1, 'Beach
Vacations');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
```

```
VALUES ('10023', 'Liam Brooks', 'liam@example.com', 2, 'Europe');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10024', 'Lily Kelly', 'https://t.me/lilykelly', 3, 'Family
Vacations');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10025', 'Lucas Ross', '+375 (29) 3210987', 1, 'Carpathians');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10026', 'Madison Morgan', 'madison@example.com', 2,
'Adventure Travel');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10027', 'Mason Wood', 'https://t.me/masonwood', 3, 'Africa');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10028', 'Mia Bell', '+375 (44) 2109876', 1, 'Eco-Tourism');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10029', 'Natalie Hayes', 'natalie@example.com', 2, 'North
America');

INSERT INTO managers (employee_number, full_name, contacts,
experience, specialisation)
VALUES ('10030', 'Olivia Turner', '+375 (29) 1098765', 3, 'Luxury
Travel');
```

На рисунке 6.1 представлен результат заполнения таблицы `managers` в графическом клиенте pgAdmin 4:

| | employee_number [PK] character varying (15) | full_name character varying (50) | contacts character varying (25) | experience integer | specialisation character varying (25) |
|---|---|---|---|---|---|
| 1 | 10001 | John Doe | john@example.com | 5 | Asia |
| 2 | 10002 | Jane Smith | jane@example.com | 1 | Europe |
| 3 | 10003 | Michael Johnson | michael@example.com | 2 | Carpathians |
| 4 | 10004 | Emily Brown | +375 (44) 9876543 | 1 | Adventures |
| 5 | 10005 | David Wilson | https://t.me/davidwilson | 3 | Beach Vacations |
| 6 | 10006 | Emma Taylor | emma@example.com | 5 | Cultural Tourism |
| 7 | 10007 | Oliver Garcia | +375 (29) 4567890 | 4 | Africa |
| 8 | 10008 | Sophia Martinez | +375 (44) 8765432 | 6 | Europe |
| 9 | 10009 | William Anderson | william@example.com | 7 | Carpathians |
| 10 | 10010 | Isabella Hernandez | isabella@example.com | 2 | Eco-Tourism |
| 11 | 10011 | James Gonzalez | +375 (29) 7654321 | 1 | Family Vacations |
| 12 | 10012 | Mia Perez | https://t.me/miaperez | 3 | South America |
| 13 | 10013 | Alexander Smith | alexander@example.com | 4 | Adventure Travel |
| 14 | 10014 | Ava Lopez | +375 (44) 6543210 | 5 | Europe |
| 15 | 10015 | Benjamin Ramirez | benjamin@example.com | 2 | Beach Vacations |
| 16 | 10016 | Charlotte Torres | charlotte@example.com | 3 | Asia |
| 17 | 10017 | Chloe Flores | https://t.me/chloeflores | 1 | North America |
| 18 | 10018 | Daniel Adams | daniel@example.com | 2 | Luxury Travel |
| 19 | 10019 | Ella Parker | +375 (29) 5432109 | 1 | Carpathians |
| 20 | 10020 | Ethan Turner | ethan@example.com | 2 | Cultural Tourism |
| 21 | 10021 | Grace Carter | +375 (44) 4321098 | 3 | Asia |
| 22 | 10022 | Henry Ward | https://t.me/henryward | 1 | Beach Vacations |
| 23 | 10023 | Liam Brooks | liam@example.com | 2 | Europe |
| 24 | 10024 | Lily Kelly | https://t.me/lilykelly | 3 | Family Vacations |
| 25 | 10025 | Lucas Ross | +375 (29) 3210987 | 1 | Carpathians |
| 26 | 10026 | Madison Morgan | madison@example.com | 2 | Adventure Travel |
| 27 | 10027 | Mason Wood | https://t.me/masonwood | 3 | Africa |
| 28 | 10028 | Mia Bell | +375 (44) 2109876 | 1 | Eco-Tourism |
| 29 | 10029 | Natalie Hayes | natalie@example.com | 2 | North America |
| 30 | 10030 | Olivia Turner | +375 (29) 1098765 | 3 | Luxury Travel |

Рисунок 6.1 – Результат заполнения таблицы `managers`

Описание скрипта заполнения таблицы `excursions` имеет следующий вид:

```
INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (1, TRUE, '{"Empire State Building", "Central Park", "Statue of
Liberty"}', 200);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (2, FALSE, '{"Eiffel Tower", "Louvre Museum"}', 150);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (3, TRUE, '{"Colosseum", "Trevi Fountain", "Vatican City",
"Pantheon"}', 250);
```

```
INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (4, TRUE, '{"Tower of London", "Big Ben", "Buckingham Palace",
"British Museum"}', 300);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (5, FALSE, '{"Sagrada Familia", "Park Güell", "Casa Batlló"}',
180);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (6, TRUE, '{"Sydney Opera House", "Harbour Bridge"}', 220);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (7, FALSE, '{"Golden Gate Bridge", "Alcatraz Island"}', 170);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (8, TRUE, '{"Grand Canyon", "Hoover Dam", "Red Rock Canyon"}',
280);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (9, TRUE, '{"Great Wall of China", "Forbidden City"}', 320);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (10, FALSE, '{"Taj Mahal", "Agra Fort"}', 200);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (11, TRUE, '{"Machu Picchu", "Sacred Valley"}', 350);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (12, FALSE, '{"Imperial Palace", "Shinjuku Gyoen"}', 150);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (13, TRUE, '{"Petra", "Wadi Rum"}', 400);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (14, TRUE, '{"Great Pyramid of Giza", "Karnak Temple"}', 420);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (15, FALSE, '{"Christ the Redeemer", "Sugarloaf Mountain"}',
190);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (16, TRUE, '{"Hofburg", "Vienna State Opera", "Schonbrunn
Palace", "St. Stephen''s Cathedral"}', 270);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (17, FALSE, '{"Niagara Falls", "Skylon Tower"}', 140);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (18, TRUE, '{"Victoria Peak", "Tian Tan Buddha"}', 280);
```

```
INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (19, FALSE, '{"Acropolis of Athens", "Parthenon"}', 220);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (20, TRUE, '{"Dubai Mall", "Burj Khalifa", "Palm Jumeirah"}',
400);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (21, TRUE, '{"Venice Canals", "St. Mark''s Basilica"}', 300);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (22, FALSE, '{"Deoksugung Palace", "Jogyesa Temple", "JYP
Entertainment"}', 180);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (23, TRUE, '{"ABBA The Museum", "Kungstradgarden",
"Drottningholm Palace"}', 250);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (24, FALSE, '{"Chichen Itza", "Cenote Ik Kil"}', 190);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (25, TRUE, '{"Royal Botanic Garden", "Darling Harbour"}', 350);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (26, TRUE, '{"Berlin Wall", "Brandenburg Gate"}', 280);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (27, FALSE, '{"Tower Bridge", "Tower of London", "The Shard"}',
220);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (28, TRUE, '{"Shotover Canyon Swing", "Queenstown Bay Beach"}',
300);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (29, FALSE, '{"Dancing House", "Loreto"}', 250);

INSERT INTO excursions (excursion_id, is_meal_provided, sights, price)
VALUES (30, TRUE, '{"Rijksmuseum", "Vondelpark"}', 320);
```

На рисунке 6.2 представлен результат заполнения таблицы `excursions` в графическом клиенте pgAdmin 4:

| | excursion_id [PK] integer | is_meal_provided boolean | sights character varying[] | price integer |
|---|---|---|---|---|
| 1 | 1 | true | {"Empire State Building","Central Park","Statue of Liberty"} | 200 |
| 2 | 2 | false | {"Eiffel Tower","Louvre Museum"} | 150 |
| 3 | 3 | true | {Colosseum,"Trevi Fountain","Vatican City",Pantheon} | 250 |
| 4 | 4 | true | {"Tower of London","Big Ben","Buckingham Palace","British Museum"} | 300 |
| 5 | 5 | false | {"Sagrada Familia","Park Güell","Casa Batlló"} | 180 |
| 6 | 6 | true | {"Sydney Opera House","Harbour Bridge"} | 220 |
| 7 | 7 | false | {"Golden Gate Bridge","Alcatraz Island"} | 170 |
| 8 | 8 | true | {"Grand Canyon","Hoover Dam","Red Rock Canyon"} | 280 |
| 9 | 9 | true | {"Great Wall of China","Forbidden City"} | 320 |
| 10 | 10 | false | {"Taj Mahal","Agra Fort"} | 200 |
| 11 | 11 | true | {"Machu Picchu","Sacred Valley"} | 350 |
| 12 | 12 | false | {"Imperial Palace","Shinjuku Gyoen"} | 150 |
| 13 | 13 | true | {Petra,"Wadi Rum"} | 400 |
| 14 | 14 | true | {"Great Pyramid of Giza","Karnak Temple"} | 420 |
| 15 | 15 | false | {"Christ the Redeemer","Sugarloaf Mountain"} | 190 |
| 16 | 16 | true | {Hofburg,"Vienna State Opera","Schonbrunn Palace","St. Stephen's Cathedral"} | 270 |
| 17 | 17 | false | {"Niagara Falls","Skylon Tower"} | 140 |
| 18 | 18 | true | {"Victoria Peak","Tian Tan Buddha"} | 280 |
| 19 | 19 | false | {"Acropolis of Athens",Parthenon} | 220 |
| 20 | 20 | true | {"Dubai Mall","Burj Khalifa","Palm Jumeirah"} | 400 |
| 21 | 21 | true | {"Venice Canals","St. Mark's Basilica"} | 300 |
| 22 | 22 | false | {"Victoria and Albert Museum","Tower Bridge"} | 180 |
| 23 | 23 | true | {"ABBA The Museum",Kungstradgarden,"Drottningholm Palace"} | 250 |
| 24 | 24 | false | {"Chichen Itza","Cenote Ik Kil"} | 190 |
| 25 | 25 | true | {"Royal Botanic Garden","Darling Harbour"} | 350 |
| 26 | 26 | true | {"Berlin Wall","Brandenburg Gate"} | 280 |
| 27 | 27 | false | {"Tower Bridge","Tower of London","The Shard"} | 220 |
| 28 | 28 | true | {"Statue of Liberty","Ellis Island"} | 300 |
| 29 | 29 | false | {"Dancing House",Loreto} | 250 |
| 30 | 30 | true | {Rijksmuseum,Vondelpark} | 320 |

Рисунок 6.2 – Результат заполнения таблицы `excursions`

Описание скрипта заполнения таблицы `accommodations` имеет следующий вид:

```
INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (1, 'Apartment', 2, 4, '123 Main St, London, United Kingdom');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (2, 'Hostel', 1, 2, '456 Elm St, Paris, France');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
```

```
VALUES (3, 'Hotel', 3, 5, '789 Oak St, New York City, United States');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (4, 'Hotel', 2, 4, '234 High St, New York City, United
States');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (5, 'Hotel', 3, 5, '40 Fifth Avenue, New York City, United
States');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (6, 'Bed and Breakfast', 2, 3, '101 Maple St, Rome, Italy');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (7, 'Resort', 3, 5, '111 Pine St, Tokyo, Japan');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (8, 'Motel', 1, 2, '222 Cedar St, Barcelona, Spain');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (9, 'Guesthouse', 2, 4, '333 Walnut St, Sydney, Australia');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (10, 'Guesthouse', 3, 5, '333 Walnut St, Sydney, Australia');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (11, 'Cabin', 1, 3, '555 Oak St, Banff, Canada');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (12, 'Inn', 2, 4, '666 Elm St, Amsterdam, Netherlands');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (13, 'Chalet', 3, 5, '777 Pine St, Zurich, Switzerland');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (14, 'Holiday Home', 2, 4, '888 Oak St, Rio de Janeiro,
Brazil');
```

```
INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (15, 'Campground', 1, 3, '999 Maple St, Vancouver, Canada');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (16, 'Lodge', 2, 4, '123 Cedar St, Queenstown, New Zealand');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (17, 'Farmstay', 3, 5, '456 Walnut St, Queenstown, New
Zealand');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (18, 'Castle', 2, 4, '789 Elm St, Edinburgh, Scotland');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (19, 'Ryokan', 3, 5, '101 Pine St, Kyoto, Japan');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (20, 'Pension', 1, 3, '111 Maple St, Prague, Czech Republic');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (21, 'Cottage', 2, 4, '222 Cedar St, Stockholm, Sweden');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (22, 'Treehouse', 3, 5, '333 Walnut St, Bali, Indonesia');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (23, 'Boat', 1, 2, '444 Birch St, Venice, Italy');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (24, 'Tent', 2, 4, '555 Oak St, Yosemite, United States');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (25, 'Ski Chalet', 3, 5, '666 Elm St, Chamonix, France');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (26, 'Yurt', 2, 4, '777 Pine St, Ulaanbaatar, Mongolia');
```

```
INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (27, 'Capsule Hotel', 1, 3, '888 Oak St, Tokyo, Japan');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (28, 'Eco-lodge', 2, 4, '999 Maple St, Amazon Rainforest,
Brazil');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (29, 'Spa Resort', 3, 5, '123 Cedar St, Bali, Indonesia');

INSERT INTO accommodations (accommodation_id, kind, num_of_meals,
category, address)
VALUES (30, 'Glamping', 2, 4, '456 Walnut St, Maldives');
```

На рисунке 6.3 представлен результат заполнения таблицы `accommodations` в графическом клиенте pgAdmin 4:

| | accommodation_id [PK] integer | kind character varying (20) | num_of_meals integer | category integer | address character varying (50) |
|---|---|---|---|---|---|
| 1 | 1 | Apartment | 2 | 4 | 123 Main St, London, United Kingdom |
| 2 | 2 | Hostel | 1 | 2 | 456 Elm St, Paris, France |
| 3 | 3 | Hotel | 3 | 5 | 789 Oak St, New York City, United States |
| 4 | 4 | Hotel | 2 | 4 | 234 High St, New York City, United States |
| 5 | 5 | Hotel | 3 | 5 | 40 Fifth Avenue, New York City, United States |
| 6 | 6 | Bed and Breakfast | 2 | 3 | 101 Maple St, Rome, Italy |
| 7 | 7 | Resort | 3 | 5 | 111 Pine St, Tokyo, Japan |
| 8 | 8 | Motel | 1 | 2 | 222 Cedar St, Barcelona, Spain |
| 9 | 9 | Guesthouse | 2 | 4 | 333 Walnut St, Sydney, Australia |
| 10 | 10 | Guesthouse | 3 | 5 | 203 Walnut St, Sydney, Australia |
| 11 | 11 | Cabin | 1 | 3 | 555 Oak St, Banff, Canada |
| 12 | 12 | Inn | 2 | 4 | 666 Elm St, Amsterdam, Netherlands |
| 13 | 13 | Chalet | 3 | 5 | 777 Pine St, Zurich, Switzerland |
| 14 | 14 | Holiday Home | 2 | 4 | 888 Oak St, Rio de Janeiro, Brazil |
| 15 | 15 | Campground | 1 | 3 | 999 Maple St, Vancouver, Canada |
| 16 | 16 | Lodge | 2 | 4 | 123 Cedar St, Queenstown, New Zealand |
| 17 | 17 | Farmstay | 3 | 5 | 456 Walnut St, Queenstown, New Zealand |
| 18 | 18 | Castle | 2 | 4 | 789 Elm St, Edinburgh, Scotland |
| 19 | 19 | Ryokan | 3 | 5 | 101 Pine St, Kyoto, Japan |
| 20 | 20 | Pension | 1 | 3 | 111 Maple St, Prague, Czech Republic |
| 21 | 21 | Cottage | 2 | 4 | 222 Cedar St, Stockholm, Sweden |
| 22 | 22 | Treehouse | 3 | 5 | 333 Walnut St, Bali, Indonesia |
| 23 | 23 | Boat | 1 | 2 | 444 Birch St, Venice, Italy |
| 24 | 24 | Tent | 2 | 4 | 555 Oak St, Yosemite, United States |
| 25 | 25 | Ski Chalet | 3 | 5 | 666 Elm St, Chamonix, France |
| 26 | 26 | Yurt | 2 | 4 | 777 Pine St, Ulaanbaatar, Mongolia |
| 27 | 27 | Capsule Hotel | 1 | 3 | 888 Oak St, Tokyo, Japan |
| 28 | 28 | Eco-lodge | 2 | 4 | 999 Maple St, Amazon Rainforest, Brazil |
| 29 | 29 | Spa Resort | 3 | 5 | 123 Cedar St, Bali, Indonesia |
| 30 | 30 | Glamping | 2 | 4 | 456 Walnut St, Maldives |

Рисунок 6.3 – Результат заполнения таблицы `accommodations`

Описание скрипта заполнения таблицы `transportations` имеет следующий вид:

```
INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (101, 'Train', 'Amtrak', 5);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (102, 'Bus', 'Ecolines', 4);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
```

```
VALUES (103, 'Flight', 'Ryanair', 2.5);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (104, 'Car', 'Hertz', 3);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (105, 'Ferry', 'Brittany Ferries', 6.5);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (106, 'Train', 'Eurostar', 2);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (107, 'Bus', 'Eurolines', 4.5);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (108, 'Flight', 'Lufthansa', 3.25);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (109, 'Car', 'Avis', 2.75);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (110, 'Ferry', 'Stena Line', 8);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (111, 'Train', 'SNCF', 6);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (112, 'Bus', 'Greyhound', 7.5);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (113, 'Flight', 'EasyJet', 1.75);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (114, 'Car', 'Enterprise', 4.5);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (115, 'Ferry', 'P&O Ferries', 5);
```

```
INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (116, 'Train', 'Thalys', 1.5);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (117, 'Bus', 'Megabus', 3.25);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (118, 'Flight', 'Air France', 4.5);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (119, 'Car', 'Budget', 6);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (120, 'Ferry', 'Irish Ferries', 3);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (121, 'Train', 'Virgin Trains', 4);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (122, 'Bus', 'National Express', 5.5);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (123, 'Flight', 'British Airways', 2.75);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (124, 'Car', 'Sixt', 1.25);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (125, 'Ferry', 'DFDS', 7);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (126, 'Train', 'TGV', 3.5);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (127, 'Bus', 'FlixBus', 2.75);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
```

```
VALUES (128, 'Flight', 'Norwegian', 3.75);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (129, 'Car', 'Alamo', 5.5);

INSERT INTO transportations (trip_number, means_of_transport, company,
travel_time)
VALUES (130, 'Ferry', 'Corsica Ferries', 6.5);
```

На рисунке 6.4 представлен результат заполнения таблицы `transportations` в графическом клиенте pgAdmin 4:

| | trip_number [PK] integer | means_of_transport character varying (15) | company character varying (25) | travel_time integer |
|---|---|---|---|---|
| 1 | 101 | Train | Amtrak | 5 |
| 2 | 102 | Bus | Ecolines | 4 |
| 3 | 103 | Flight | Ryanair | 3 |
| 4 | 104 | Car | Hertz | 3 |
| 5 | 105 | Ferry | Brittany Ferries | 7 |
| 6 | 106 | Train | Eurostar | 2 |
| 7 | 107 | Bus | Eurolines | 5 |
| 8 | 108 | Flight | Lufthansa | 3 |
| 9 | 109 | Car | Avis | 3 |
| 10 | 110 | Ferry | Stena Line | 8 |
| 11 | 111 | Train | SNCF | 6 |
| 12 | 112 | Bus | Greyhound | 8 |
| 13 | 113 | Flight | EasyJet | 2 |
| 14 | 114 | Car | Enterprise | 5 |
| 15 | 115 | Ferry | P&O Ferries | 5 |
| 16 | 116 | Train | Thalys | 2 |
| 17 | 117 | Bus | Megabus | 3 |
| 18 | 118 | Flight | Air France | 5 |
| 19 | 119 | Car | Budget | 6 |
| 20 | 120 | Ferry | Irish Ferries | 3 |
| 21 | 121 | Train | Virgin Trains | 4 |
| 22 | 122 | Bus | National Express | 6 |
| 23 | 123 | Flight | British Airways | 3 |
| 24 | 124 | Car | Sixt | 1 |
| 25 | 125 | Ferry | DFDS | 7 |
| 26 | 126 | Train | TGV | 4 |
| 27 | 127 | Bus | FlixBus | 3 |
| 28 | 128 | Flight | Norwegian | 4 |
| 29 | 129 | Car | Alamo | 6 |
| 30 | 130 | Ferry | Corsica Ferries | 7 |

Рисунок 6.4 – Результат заполнения таблицы `transportations`

Описание скрипта заполнения таблицы `clients` имеет следующий вид:

```
INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('AB1234567', 'John Doe', 2500, '+375 (44) 1234567', '10001');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('BM2345678', 'Alice White', 3200, '+375 (29) 2345678',
'10002');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('HB3456789', 'Michael Green', 4800, '+375 (44) 3456789',
'10003');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('KH4567890', 'Emma Lee', 1500, '+375 (29) 4567890', '10004');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('MP5678901', 'Sophia Baker', 4200, '+375 (44) 5678901',
'10005');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('MC6789012', 'William Hill', 3700, '+375 (29) 6789012',
'10006');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('KB7890123', 'Olivia Young', 2800, '+375 (44) 7890123',
'10007');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('PP8901234', 'James Brown', 3000, '+375 (29) 8901234',
'10008');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('SP9012345', 'Emily Harris', 4300, '+375 (44) 9012345',
'10009');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('DP0123456', 'Daniel Clark', 2200, '+375 (29) 0123456',
'10010');
```

```
INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('AB1234568', 'Sophia Turner', 3500, '+375 (44) 1234568',
'10020');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('BM2345679', 'Oliver King', 2800, '+375 (29) 2345679',
'10025');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('HB3456790', 'Emma Cooper', 4900, '+375 (44) 3456790',
'10012');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('KH4567891', 'William Parker', 1700, '+375 (29) 4567891',
'10017');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('MP5678902', 'Charlotte Wright', 4300, '+375 (44) 5678902',
'10022');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('MC6789013', 'James Evans', 3900, '+375 (29) 6789013',
'10027');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('KB7890124', 'Amelia Moore', 2600, '+375 (44) 7890124',
'10013');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('PP8901235', 'Benjamin Nelson', 3200, '+375 (29) 8901235',
'10018');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('SP9012346', 'Mia Allen', 4400, '+375 (44) 9012346', '10023');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('DP0123457', 'Ethan Carter', 2300, '+375 (29) 0123457',
'10028');
```

```
INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('AB1234569', 'Olivia Adams', 3700, '+375 (44) 1234569',
'10014');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('BM2345680', 'Noah Mitchell', 3000, '+375 (29) 2345680',
'10019');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('HB3456791', 'Ava Hall', 4700, '+375 (44) 3456791', '10024');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('KH4567892', 'Liam Morris', 1900, '+375 (29) 4567892',
'10029');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('MP5678903', 'Isabella Nelson', 4100, '+375 (44) 5678903',
'10011');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('MC6789014', 'Lucas Martinez', 3600, '+375 (29) 6789014',
'10016');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('KB7890125', 'Sophie Thompson', 2700, '+375 (44) 7890125',
'10021');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('PP8901236', 'Alexander Scott', 3300, '+375 (29) 8901236',
'10026');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('SP9012347', 'Ella Phillips', 4500, '+375 (44) 9012347',
'10015');

INSERT INTO clients (passport_data, full_name, budget, phone_number,
employee_number)
VALUES ('DP0123458', 'Mason Davis', 2400, '+375 (29) 0123458',
'10030');
```

На рисунке 6.5 представлен результат заполнения таблицы `clients` в графическом клиенте pgAdmin 4:

| | passport_data [PK] character varying (9) | full_name character varying (50) | budget integer | phone_number character varying (25) | employee_number character varying (15) |
|---|---|---|---|---|---|
| 1 | AB1234567 | John Doe | 2500 | +375 (44) 1234567 | 10001 |
| 2 | AB1234568 | Sophia Turner | 3500 | +375 (44) 1234568 | 10020 |
| 3 | AB1234569 | Olivia Adams | 3700 | +375 (44) 1234569 | 10014 |
| 4 | BM2345678 | Alice White | 3200 | +375 (29) 2345678 | 10002 |
| 5 | BM2345679 | Oliver King | 2800 | +375 (29) 2345679 | 10025 |
| 6 | BM2345680 | Noah Mitchell | 3000 | +375 (29) 2345680 | 10019 |
| 7 | DP0123456 | Daniel Clark | 2200 | +375 (29) 0123456 | 10010 |
| 8 | DP0123457 | Ethan Carter | 2300 | +375 (29) 0123457 | 10028 |
| 9 | DP0123458 | Mason Davis | 2400 | +375 (29) 0123458 | 10030 |
| 10 | HB3456789 | Michael Green | 4800 | +375 (44) 3456789 | 10003 |
| 11 | HB3456790 | Emma Cooper | 4900 | +375 (44) 3456790 | 10012 |
| 12 | HB3456791 | Ava Hall | 4700 | +375 (44) 3456791 | 10024 |
| 13 | KB7890123 | Olivia Young | 2800 | +375 (44) 7890123 | 10007 |
| 14 | KB7890124 | Amelia Moore | 2600 | +375 (44) 7890124 | 10013 |
| 15 | KB7890125 | Sophie Thompson | 2700 | +375 (44) 7890125 | 10021 |
| 16 | KH4567890 | Emma Lee | 1500 | +375 (29) 4567890 | 10004 |
| 17 | KH4567891 | William Parker | 1700 | +375 (29) 4567891 | 10017 |
| 18 | KH4567892 | Liam Morris | 1900 | +375 (29) 4567892 | 10029 |
| 19 | MC6789012 | William Hill | 3700 | +375 (29) 6789012 | 10006 |
| 20 | MC6789013 | James Evans | 3900 | +375 (29) 6789013 | 10027 |
| 21 | MC6789014 | Lucas Martinez | 3600 | +375 (29) 6789014 | 10016 |
| 22 | MP5678901 | Sophia Baker | 4200 | +375 (44) 5678901 | 10005 |
| 23 | MP5678902 | Charlotte Wright | 4300 | +375 (44) 5678902 | 10022 |
| 24 | MP5678903 | Isabella Nelson | 4100 | +375 (44) 5678903 | 10011 |
| 25 | PP8901234 | James Brown | 3000 | +375 (29) 8901234 | 10008 |
| 26 | PP8901235 | Benjamin Nelson | 3200 | +375 (29) 8901235 | 10018 |
| 27 | PP8901236 | Alexander Scott | 3300 | +375 (29) 8901236 | 10026 |
| 28 | SP9012345 | Emily Harris | 4300 | +375 (44) 9012345 | 10009 |
| 29 | SP9012346 | Mia Allen | 4400 | +375 (44) 9012346 | 10023 |
| 30 | SP9012347 | Ella Phillips | 4500 | +375 (44) 9012347 | 10015 |

Рисунок 6.5 – Результат заполнения таблицы `clients`

Описание скрипта заполнения таблицы `tours` имеет следующий вид:

```
INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1001, 'Paris', 7, 2500, 101, 2, 2);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
```

```
VALUES (1002, 'Rome', 10, 3200, 102, 6, 3);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1003, 'Barcelona', 14, 4800, 103, 8, 5);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1004, 'London', 8, 1500, 104, 1, 27);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1005, 'Tokyo', 12, 4200, 105, 27, 12);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1006, 'Sydney', 16, 3700, 106, 10, 25);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1007, 'New York', 21, 2800, 107, 3, 1);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1008, 'Ubud', 7, 3000, 108, 29, 6);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1009, 'Berlin', 10, 4300, 109, 13, 26);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1010, 'Amsterdam', 14, 2200, 110, 12, 30);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1011, 'Vancouver', 8, 3500, 111, 15, 7);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1012, 'Rio de Janeiro', 12, 2800, 112, 14, 15);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1013, 'Moscow', 16, 4900, 113, 20, 29);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1014, 'Queenstown', 7, 1700, 114, 16, 28);
```

```
INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1015, 'Queenstown', 10, 4300, 115, 17, 6);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1016, 'Edinburgh', 14, 3900, 116, 18, 22);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1017, 'Yosemite', 21, 2600, 117, 24, 17);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1018, 'Venice', 7, 3200, 118, 23, 21);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1019, 'Seoul', 10, 4400, 119, 7, 22);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1020, 'Hong Cong', 14, 2300, 120, 26, 18);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1021, 'Banff', 8, 3700, 121, 11, 8);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1022, 'Vienna', 12, 3000, 122, 20, 16);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1023, 'Chamonix', 16, 4700, 123, 25, 4);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1024, 'Stockholm', 21, 1900, 124, 21, 23);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1025, 'Maldives', 7, 4100, 125, 30, 10);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1026, 'Bali', 10, 3600, 126, 22, 9);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
```

```
VALUES (1027, 'New York City', 14, 2700, 127, 4, 11);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1028, 'Kyoto', 21, 3300, 128, 19, 12);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1029, 'New York City', 8, 4500, 129, 5, 24);

INSERT INTO tours (tour_code, destination, duration, price,
trip_number, accommodation_id, excursion_id)
VALUES (1030, 'Rome', 12, 2400, 130, 6, 21);
```

На рисунке 6.6 представлен результат заполнения таблицы `tours` в графическом клиенте pgAdmin 4:

| | tour_code [PK] integer | destination character varying (20) | duration integer | price integer | trip_number integer | accommodation_id integer | excursion_id integer |
|---|---|---|---|---|---|---|---|
| 1 | 1001 | Paris | 7 | 2500 | 101 | 2 | 2 |
| 2 | 1002 | Rome | 10 | 3200 | 102 | 6 | 3 |
| 3 | 1003 | Barcelona | 14 | 4800 | 103 | 8 | 5 |
| 4 | 1004 | London | 8 | 1500 | 104 | 1 | 27 |
| 5 | 1005 | Tokyo | 12 | 4200 | 105 | 27 | 12 |
| 6 | 1006 | Sydney | 16 | 3700 | 106 | 10 | 25 |
| 7 | 1007 | New York | 21 | 2800 | 107 | 3 | 1 |
| 8 | 1008 | Ubud | 7 | 3000 | 108 | 29 | 6 |
| 9 | 1009 | Berlin | 10 | 4300 | 109 | 13 | 26 |
| 10 | 1010 | Amsterdam | 14 | 2200 | 110 | 12 | 30 |
| 11 | 1011 | Vancouver | 8 | 3500 | 111 | 15 | 7 |
| 12 | 1012 | Rio de Janeiro | 12 | 2800 | 112 | 14 | 15 |
| 13 | 1013 | Moscow | 16 | 4900 | 113 | 20 | 29 |
| 14 | 1014 | Queenstown | 7 | 1700 | 114 | 16 | 28 |
| 15 | 1015 | Queenstown | 10 | 4300 | 115 | 17 | 6 |
| 16 | 1016 | Edinburgh | 14 | 3900 | 116 | 18 | 22 |
| 17 | 1017 | Yosemite | 21 | 2600 | 117 | 24 | 17 |
| 18 | 1018 | Venice | 7 | 3200 | 118 | 23 | 21 |
| 19 | 1019 | Seoul | 10 | 4400 | 119 | 7 | 22 |
| 20 | 1020 | Hong Cong | 14 | 2300 | 120 | 26 | 18 |
| 21 | 1021 | Banff | 8 | 3700 | 121 | 11 | 8 |
| 22 | 1022 | Vienna | 12 | 3000 | 122 | 20 | 16 |
| 23 | 1023 | Chamonix | 16 | 4700 | 123 | 25 | 4 |
| 24 | 1024 | Stockholm | 21 | 1900 | 124 | 21 | 23 |
| 25 | 1025 | Maldives | 7 | 4100 | 125 | 30 | 10 |
| 26 | 1026 | Bali | 10 | 3600 | 126 | 22 | 9 |
| 27 | 1027 | New York City | 14 | 2700 | 127 | 4 | 11 |
| 28 | 1028 | Kyoto | 21 | 3300 | 128 | 19 | 12 |
| 29 | 1029 | New York City | 8 | 4500 | 129 | 5 | 24 |
| 30 | 1030 | Rome | 12 | 2400 | 130 | 6 | 21 |

Рисунок 6.6 – Результат заполнения таблицы `tours`

Описание скрипта заполнения таблицы tour_bookings имеет следующий вид:

```
INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (1, 'AB1234567', 1001, '2024-03-10', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (2, 'AB1234568', 1002, '2024-03-12', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (3, 'AB1234569', 1003, '2024-03-15', FALSE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (4, 'BM2345678', 1004, '2024-03-20', FALSE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (5, 'BM2345679', 1005, '2024-03-22', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (6, 'BM2345680', 1006, '2024-03-25', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (7, 'DP0123456', 1007, '2024-03-28', FALSE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (8, 'DP0123457', 1008, '2024-03-30', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (9, 'DP0123458', 1009, '2024-04-02', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (10, 'HB3456789', 1010, '2024-04-05', FALSE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (11, 'HB3456790', 1011, '2024-04-08', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (12, 'HB3456791', 1012, '2024-04-10', TRUE);
```

```
INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (13, 'KB7890123', 1013, '2024-04-15', FALSE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (14, 'KB7890124', 1014, '2024-04-18', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (15, 'KB7890125', 1015, '2024-04-20', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (16, 'KH4567890', 1016, '2024-04-25', FALSE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (17, 'KH4567891', 1017, '2024-04-28', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (18, 'KH4567892', 1018, '2024-05-01', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (19, 'MC6789012', 1019, '2024-05-05', FALSE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (20, 'MC6789013', 1020, '2024-05-08', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (21, 'MC6789014', 1021, '2024-05-10', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (22, 'MP5678901', 1022, '2024-05-15', FALSE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (23, 'MP5678902', 1023, '2024-05-18', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (24, 'MP5678903', 1024, '2024-05-20', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
```

```
VALUES (25, 'PP8901234', 1025, '2024-05-25', FALSE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (26, 'PP8901235', 1026, '2024-05-28', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (27, 'PP8901236', 1027, '2024-06-01', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (28, 'SP9012345', 1028, '2024-06-05', FALSE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (29, 'SP9012346', 1029, '2024-06-08', TRUE);

INSERT INTO tour_bookings (booking_number, passport_data, tour_code,
departure_date, is_prepaid)
VALUES (30, 'SP9012347', 1030, '2024-06-10', TRUE);
```

На рисунке 6.7 представлен результат заполнения таблицы `tour_bookings` в графическом клиенте pgAdmin 4:

| | booking_number [PK] integer | passport_data character varying (9) | tour_code integer | departure_date timestamp without time zone | is_prepaid boolean |
|---|---|---|---|---|---|
| 1 | 1 | AB1234567 | 1001 | 2024-03-10 00:00:00 | true |
| 2 | 2 | AB1234568 | 1002 | 2024-03-12 00:00:00 | true |
| 3 | 3 | AB1234569 | 1003 | 2024-03-15 00:00:00 | false |
| 4 | 4 | BM2345678 | 1004 | 2024-03-20 00:00:00 | false |
| 5 | 5 | BM2345679 | 1005 | 2024-03-22 00:00:00 | true |
| 6 | 6 | BM2345680 | 1006 | 2024-03-25 00:00:00 | true |
| 7 | 7 | DP0123456 | 1007 | 2024-03-28 00:00:00 | false |
| 8 | 8 | DP0123457 | 1008 | 2024-03-30 00:00:00 | true |
| 9 | 9 | DP0123458 | 1009 | 2024-04-02 00:00:00 | true |
| 10 | 10 | HB3456789 | 1010 | 2024-04-05 00:00:00 | false |
| 11 | 11 | HB3456790 | 1011 | 2024-04-08 00:00:00 | true |
| 12 | 12 | HB3456791 | 1012 | 2024-04-10 00:00:00 | true |
| 13 | 13 | KB7890123 | 1013 | 2024-04-15 00:00:00 | false |
| 14 | 14 | KB7890124 | 1014 | 2024-04-18 00:00:00 | true |
| 15 | 15 | KB7890125 | 1015 | 2024-04-20 00:00:00 | true |
| 16 | 16 | KH4567890 | 1016 | 2024-04-25 00:00:00 | false |
| 17 | 17 | KH4567891 | 1017 | 2024-04-28 00:00:00 | true |
| 18 | 18 | KH4567892 | 1018 | 2024-05-01 00:00:00 | true |
| 19 | 19 | MC6789012 | 1019 | 2024-05-05 00:00:00 | false |
| 20 | 20 | MC6789013 | 1020 | 2024-05-08 00:00:00 | true |
| 21 | 21 | MC6789014 | 1021 | 2024-05-10 00:00:00 | true |
| 22 | 22 | MP5678901 | 1022 | 2024-05-15 00:00:00 | false |
| 23 | 23 | MP5678902 | 1023 | 2024-05-18 00:00:00 | true |
| 24 | 24 | MP5678903 | 1024 | 2024-05-20 00:00:00 | true |
| 25 | 25 | PP8901234 | 1025 | 2024-05-25 00:00:00 | false |
| 26 | 26 | PP8901235 | 1026 | 2024-05-28 00:00:00 | true |
| 27 | 27 | PP8901236 | 1027 | 2024-06-01 00:00:00 | true |
| 28 | 28 | SP9012345 | 1028 | 2024-06-05 00:00:00 | false |
| 29 | 29 | SP9012346 | 1029 | 2024-06-08 00:00:00 | true |
| 30 | 30 | SP9012347 | 1030 | 2024-06-10 00:00:00 | true |

Рисунок 6.7 – Результат заполнения таблицы `tour_bookings`

Описание скрипта заполнения таблицы `leisure` имеет следующий вид:

```
INSERT INTO leisure (tour_code, excursion_id)
VALUES (1001, 2);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1002, 3);
```

```
INSERT INTO leisure (tour_code, excursion_id)
VALUES (1003, 5);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1004, 27);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1005, 12);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1006, 25);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1007, 1);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1008, 6);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1009, 26);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1010, 30);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1011, 7);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1012, 15);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1013, 29);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1014, 28);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1015, 6);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1016, 22);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1017, 17);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1018, 21);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1019, 22);
```

```
INSERT INTO leisure (tour_code, excursion_id)
VALUES (1020, 18);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1021, 8);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1022, 16);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1023, 4);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1024, 23);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1025, 10);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1026, 9);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1027, 11);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1028, 12);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1029, 24);

INSERT INTO leisure (tour_code, excursion_id)
VALUES (1030, 21);
```

На рисунке 6.8 представлен результат заполнения таблицы `leisure` в графическом клиенте pgAdmin 4:

| | tour_code [PK] integer | excursion_id [PK] integer |
|---|---|---|
| 1 | 1001 | 2 |
| 2 | 1002 | 3 |
| 3 | 1003 | 5 |
| 4 | 1004 | 27 |
| 5 | 1005 | 12 |
| 6 | 1006 | 25 |
| 7 | 1007 | 1 |
| 8 | 1008 | 6 |
| 9 | 1009 | 26 |
| 10 | 1010 | 30 |
| 11 | 1011 | 7 |
| 12 | 1012 | 15 |
| 13 | 1013 | 29 |
| 14 | 1014 | 28 |
| 15 | 1015 | 6 |
| 16 | 1016 | 22 |
| 17 | 1017 | 17 |
| 18 | 1018 | 21 |
| 19 | 1019 | 22 |
| 20 | 1020 | 18 |
| 21 | 1021 | 8 |
| 22 | 1022 | 16 |
| 23 | 1023 | 4 |
| 24 | 1024 | 23 |
| 25 | 1025 | 10 |
| 26 | 1026 | 9 |
| 27 | 1027 | 11 |
| 28 | 1028 | 12 |
| 29 | 1029 | 24 |
| 30 | 1030 | 21 |

Рисунок 6.8 – Результат заполнения таблицы `leisure`

# 7 ИЗМЕНЕНИЕ СТРУКТУРЫ ТАБЛИЦ БАЗЫ ДАННЫХ

Описание скрипта изменения размера данных, хранящихся в столбце `specialisation` таблицы `managers`, имеет следующий вид:

```
ALTER TABLE managers
ALTER COLUMN specialisation TYPE VARCHAR(25);
```

Описание скрипта изменения размера данных, хранящихся в столбце `phone_number` таблицы `clients`, имеет следующий вид:

```
ALTER TABLE clients
ALTER COLUMN phone_number TYPE VARCHAR(25);
```

Описание скрипта изменения таблицы `clients` для задания бизнес-правила по условию, согласно которому в столбце `passport_data` данные должны соответствовать определенному формату, имеет следующий вид:

```
ALTER TABLE clients
ADD CONSTRAINT check_passport_data_format
CHECK (passport_data ~ '^[A-Z]{2}\d{7}$');
```

Описание скрипта изменения типа данных, хранящихся в столбце `departure_date` таблицы `tour_bookings`, имеет следующий вид:

```
ALTER TABLE tour_bookings
ALTER COLUMN departure_date TYPE TIMESTAMP
USING departure_date::timestamp without time zone;
```

## 8 РАБОТА С ВРЕМЕННОЙ ТАБЛИЦЕЙ

Описание скрипта создания временной таблицы `temp_table` имеет следующий вид:

```
CREATE TABLE temp_table (
    id SERIAL PRIMARY KEY,
    name VARCHAR(50)
);
```

Описание скрипта удаления временной таблицы `temp_table` имеет следующий вид:

```
DROP TABLE IF EXISTS temp_table;
```