-- Создание таблицы "Поезда"

CREATE TABLE Trains (

train\_id SERIAL PRIMARY KEY,

train\_number VARCHAR(20) NOT NULL,

departure\_station\_id INT NOT NULL,

arrival\_station\_id INT NOT NULL,

departure\_time TIMESTAMP NOT NULL,

arrival\_time TIMESTAMP NOT NULL,

train\_type VARCHAR(50) NOT NULL

);

-- Создание таблицы "Станции"

CREATE TABLE Stations (

station\_id SERIAL PRIMARY KEY,

station\_name VARCHAR(50) NOT NULL,

city VARCHAR(50) NOT NULL,

country VARCHAR(50) NOT NULL,

latitude FLOAT NOT NULL,

longitude FLOAT NOT NULL

);

-- Создание таблицы "Пассажиры"

CREATE TABLE Passengers (

passenger\_id SERIAL PRIMARY KEY,

passenger\_name VARCHAR(100) NOT NULL,

age INT NOT NULL,

gender VARCHAR(10) NOT NULL,

nationality VARCHAR(50) NOT NULL,

ticket\_number VARCHAR(50) NOT NULL

);

-- Создание таблицы "Расписание"

CREATE TABLE Schedule (

schedule\_id SERIAL PRIMARY KEY,

train\_id INT NOT NULL,

departure\_time TIMESTAMP NOT NULL,

arrival\_time TIMESTAMP NOT NULL,

gate VARCHAR(100),

stop\_time VARCHAR(100)

);

-- Создание таблицы "Билеты"

CREATE TABLE Tickets (

ticket\_id SERIAL PRIMARY KEY,

passenger\_id INT NOT NULL,

route\_id INT NOT NULL,

ticket\_price FLOAT NOT NULL,

seat\_number INT NOT NULL,

purchase\_date TIMESTAMP NOT NULL

);

-- Создание таблицы "Маршруты"

CREATE TABLE Routes (

route\_id SERIAL PRIMARY KEY,

route\_name VARCHAR(50) NOT NULL,

distance FLOAT NOT NULL,

duration INTERVAL NOT NULL,

train\_id INT NOT NULL,

start\_station\_id INT NOT NULL,

end\_station\_id INT NOT NULL

);

-- Создание таблицы "Касса"

CREATE TABLE TicketOffice (

office\_id SERIAL PRIMARY KEY,

office\_name VARCHAR(50) NOT NULL,

city VARCHAR(50) NOT NULL,

country VARCHAR(50) NOT NULL,

phone\_number VARCHAR(20) NOT NULL,

address VARCHAR(100) NOT NULL,

train\_id INT

);

-- Добавление внешних ключей

ALTER TABLE Trains ADD CONSTRAINT fk\_departure\_station FOREIGN KEY (departure\_station\_id) REFERENCES Stations(station\_id);

ALTER TABLE Trains ADD CONSTRAINT fk\_arrival\_station FOREIGN KEY (arrival\_station\_id) REFERENCES Stations(station\_id);

ALTER TABLE Schedule ADD CONSTRAINT fk\_train FOREIGN KEY (train\_id) REFERENCES Trains(train\_id);

ALTER TABLE Tickets ADD CONSTRAINT fk\_passenger FOREIGN KEY (passenger\_id) REFERENCES Passengers(passenger\_id);

ALTER TABLE Tickets ADD CONSTRAINT fk\_route FOREIGN KEY (route\_id) REFERENCES Routes(route\_id);

ALTER TABLE Routes ADD CONSTRAINT fk\_train FOREIGN KEY (train\_id) REFERENCES Trains(train\_id);

ALTER TABLE Routes ADD CONSTRAINT fk\_start\_station FOREIGN KEY (start\_station\_id) REFERENCES Stations(station\_id);

ALTER TABLE Routes ADD CONSTRAINT fk\_end\_station FOREIGN KEY (end\_station\_id) REFERENCES Stations(station\_id);

ALTER TABLE TicketOffice ADD CONSTRAINT fk\_train FOREIGN KEY (train\_id) REFERENCES Trains(train\_id);

-- Заполнение таблицы "Станции"

INSERT INTO Stations (station\_name, city, country, latitude, longitude)

VALUES

('Station1', 'City1', 'Country1', 40.7128, -74.0060),

('Station2', 'City2', 'Country2', 51.5074, -0.1278);

-- Заполнение таблицы "Пассажиры"

INSERT INTO Passengers (passenger\_name, age, gender, nationality, ticket\_number)

VALUES

('Passenger1', 25, 'Male', 'Nationality1', 'T12345'),

('Passenger2', 30, 'Female', 'Nationality2', 'T67890');

-- Заполнение таблицы "Поезда"

INSERT INTO Trains (train\_number, departure\_station\_id, arrival\_station\_id, departure\_time, arrival\_time, train\_type)

VALUES

('Train1', (SELECT station\_id FROM Stations LIMIT 1), (SELECT station\_id FROM Stations LIMIT 1 OFFSET 1), '2023-05-24 10:00:00', '2023-05-24 14:00:00', 'Express'),

('Train2', (SELECT station\_id FROM Stations LIMIT 1), (SELECT station\_id FROM Stations LIMIT 1 OFFSET 1), '2023-05-24 12:00:00', '2023-05-24 16:00:00', 'Local');

-- Заполнение таблицы "Расписание"

INSERT INTO Schedule (train\_id, departure\_time, arrival\_time, gate, stop\_time)

VALUES

((SELECT train\_id FROM Trains LIMIT 1), '2023-05-24 10:00:00', '2023-05-24 14:00:00', 'Gate1', '10 minutes'),

((SELECT train\_id FROM Trains LIMIT 1 OFFSET 1), '2023-05-24 12:00:00', '2023-05-24 16:00:00', 'Gate2', '5 minutes');

-- Заполнение таблицы "Маршруты"

INSERT INTO Routes (route\_name, distance, duration, train\_id, start\_station\_id, end\_station\_id)

VALUES

('Route1', 100.0, '4 hours', (SELECT train\_id FROM Trains LIMIT 1), (SELECT station\_id FROM Stations LIMIT 1), (SELECT station\_id FROM Stations LIMIT 1 OFFSET 1)),

('Route2', 200.0, '6 hours', (SELECT train\_id FROM Trains LIMIT 1 OFFSET 1), (SELECT station\_id FROM Stations LIMIT 1), (SELECT station\_id FROM Stations LIMIT 1 OFFSET 1));

-- Заполнение таблицы "Билеты"

INSERT INTO Tickets (passenger\_id, route\_id, ticket\_price, seat\_number, purchase\_date)

VALUES

((SELECT passenger\_id FROM Passengers LIMIT 1), (SELECT route\_id FROM Routes LIMIT 1), 50.0, 1, '2023-05-24 08:00:00'),

((SELECT passenger\_id FROM Passengers LIMIT 1 OFFSET 1), (SELECT route\_id FROM Routes LIMIT 1 OFFSET 1), 30.0, 2, '2023-05-24 10:00:00');

-- Заполнение таблицы "Касса"

INSERT INTO TicketOffice (office\_name, city, country, phone\_number, address)

VALUES

('TicketOffice1', 'City1', 'Country1', '1234567890', 'Address1'),

('TicketOffice2', 'City2', 'Country2', '0987654321', 'Address2');