A

Task №1

In this task we will use service draw-sql

a-1

Task №2

```sql
CREATE SCHEMA IF NOT EXISTS travels;


CREATE TABLE travels.Employee (
    id INT PRIMARY KEY,
    employee_name VARCHAR(10),
    company_id INT
);

CREATE TABLE travels.Company (
    id INT PRIMARY KEY,
    company_name VARCHAR(10)
);

CREATE TABLE travels.Trip (
    id INT PRIMARY KEY,
    employee_id INT,
    startdate DATE,
    enddate DATE,
    cancelationdate DATE,
    hotel_id INT,
    ticket_1_id INT,
    ticket_2_id INT
);

CREATE TABLE travels.Flight (
    flight_number INT PRIMARY KEY,
    oigin_city_id INT,
    destination_city_id INT,
    air_company VARCHAR(10),
    departure TIMESTAMP,
    ticket_price FLOAT
);

CREATE TABLE travels.Hotel (
    id INT PRIMARY KEY,
    hotel_name VARCHAR(10),
    hotel_address VARCHAR(10),
    city_id INT,
    room_charge FLOAT
```

```sql
);

CREATE TABLE travels.City (
    id INT PRIMARY KEY,
    city_name VARCHAR(10)
);


ALTER TABLE travels.Employee ADD FOREIGN KEY (company_id) REFERENCES
travels.Company (id);

ALTER TABLE travels.Trip ADD FOREIGN KEY (employee_id) REFERENCES
travels.Employee (id);

ALTER TABLE travels.Trip ADD FOREIGN KEY (hotel_id) REFERENCES
travels.Hotel (id);

ALTER TABLE travels.Trip ADD FOREIGN KEY (ticket_1_id) REFERENCES
travels.Flight (flight_number);

ALTER TABLE travels.Trip ADD FOREIGN KEY (ticket_2_id) REFERENCES
travels.Flight (flight_number);

ALTER TABLE travels.Hotel ADD FOREIGN KEY (city_id) REFERENCES
travels.City (id);

ALTER TABLE travels.Flight ADD FOREIGN KEY (oigin_city_id) REFERENCES
travels.City (id);

ALTER TABLE travels.Flight ADD FOREIGN KEY (destination_city_id)
REFERENCES travels.City (id);
```

Task №3

```sql
SELECT DISTINCT travels.Hotel.id, travels.Hotel.hotel_name
FROM
    travels.Employee,
    travels.Trip,
    travels.Flight,
    travels.City AS from_city,
    travels.City AS to_city,
    travels.Hotel
WHERE travels.Employee.id = travels.Trip.employee_id
    AND travels.Trip.ticket_1_id = travels.Flight.flight_number

    -- Employees who travel from Berlin to Paris
    AND travels.Flight.origin_city_id = from_city.id
    AND travels.Flight.destination_city_id = from_city.id
    AND from_city.name LIKE "%Berlin%"
    AND to_city.name LIKE "%Paris%"
```

```
    -- Employees who travel this year and their flights were not cancelled
    AND travels.Trip.canceletiondate IS NULL
    AND travels.Trip.startdate
        BETWEEN to_date('01-01-2022', 'dd-mm-yyyy')
        AND to_date('31-12-2022', 'dd-mm-yyyy')

    -- Hotels booked in these flights
    AND travels.Trip.hotel_id = travels.Hotel.id;
```

Task №4

```
SELECT DISTINCT
    travels.Company.id,
    travels.company.company_name
FROM
    travels.Company,
    travels.Employee,
    travels.Trip
WHERE travels.Employee.comapny_id = travels.Company.id
    AND travels.Trip.employee_id = travels.Employee.id
GROUP BY travels.Trip.hotel_id
```

Task №5

Task №6

Task №7