1. Normalize the following blog database and write the DDL scripts to create the database tables:

```sql
use blog;
CREATE TABLE authors (
author_id INT AUTO_INCREMENT PRIMARY KEY,
author_name VARCHAR(30) NOT NULL
);
CREATE TABLE visits (
visits_id INT AUTO_INCREMENT PRIMARY KEY,
title VARCHAR(50) NOT NULL,
word_count INT NOT NULL,
views INT NOT NULL,
author_id INT REFERENCES authors(author_id)
);
```

```sql
ALTER TABLE authors ADD UNIQUE (author_name);
INSERT INTO authors (author_name)
VALUES
('Maria Charlotte'),
('Juan Perez'),
('Gemma Alcocer');

INSERT INTO visits (title, word_count, views, author_id)
VALUES
('Best Paint Colors', 814, 14, 1),
('Small Space Decorating Tips', 1146, 221, 2),
('Hot Accessories', 986, 105, 1),
('Mixing Textures', 765, 22, 1),
('Kitchen Refresh', 1242, 307, 2),
('Homemade Art Hacks', 1002, 193, 1),
('Refinishing Wood Floors', 1571, 7542, 3);
```

2. Normalize the following airline database and write the DDL scripts to create the database tables:

```sql
CREATE DATABASE airline;
use airline;
CREATE TABLE customer_file (
id_client INT AUTO_INCREMENT PRIMARY KEY,
customer_name VARCHAR(50) NOT NULL,
customer_status VARCHAR(20) NOT NULL,
total_customer_mileage INT
);
```

```sql
CREATE TABLE aircraft(
id_aircraft INT AUTO_INCREMENT PRIMARY KEY,
aircraft_name VARCHAR(50) NOT NULL,
total_aircraft_seats INT NOT NULL
);
CREATE TABLE flight(
id_flight INT AUTO_INCREMENT PRIMARY KEY,
flight_number VARCHAR(20) NOT NULL,
id_aircraft INT NOT NULL REFERENCES aircraft(id_aircraft),
flight_mileage INT NOT NULL
);
CREATE TABLE reservation(
id_reservation INT AUTO_INCREMENT PRIMARY KEY,
id_client INT NOT NULL REFERENCES customer_file(id_client),
id_flight INT NOT NULL REFERENCES flight(id_flight)
)
```

3. In the Airline database write the SQL script to get the total number of flights in the database.

```sql
SELECT count(flight_number) FROM flight; -- 3
```

4. In the Airline database write the SQL script to get the average flight distance.

```sql
SELECT AVG(flight_mileage) FROM flight; -- 4
```

5. In the Airline database write the SQL script to get the average number of seats.

```sql
SELECT AVG (total_aircraft_seats) FROM aircraft; -- 5
```

6. In the Airline database write the SQL script to get the average number of miles flown by customers grouped by status.

```sql
SELECT customer_status, AVG(total_customer_mileage)
AS customer_status FROM customer_file GROUP BY customer_status; -- 6
```

7. In the Airline database write the SQL script to get the maximum number of miles flown by customers grouped by status.

```sql
SELECT customer_status, MAX(total_customer_mileage)
AS customer_status FROM customer_file GROUP BY customer_status; -- 7
```

8. In the Airline database write the SQL script to get the total number of aircraft with a name containing Boeing.

```sql
SELECT COUNT(aircraft_name) FROM aircraft WHERE aircraft_name LIKE '%Boeing%'; -- 8
```

9. In the Airline database write the SQL script to find all flights with a distance between 300 and 2000 miles.

```sql
SELECT flight_number, flight_mileage FROM flight WHERE flight_mileage BETWEEN '300' AND '2000'; -- 9
```

10. In the Airline database write the SQL script to find the average flight distance booked grouped by customer status (this should require a join).

```sql
SELECT customer_file.customer_status, AVG(reservation.id_flight) FROM reservation
INNER JOIN customer_file ON reservation.id_client = customer_file.id_client
GROUP BY customer_file.customer_status; -- 10
```

11. In the Airline database write the SQL script to find the most often booked aircraft by gold status members (this should require a join).

```sql
SELECT aircraft.aircraft_name, COUNT(*) AS reservation FROM reservation
INNER JOIN customer_file ON reservation.id_client = customer_file.id_client
INNER JOIN flight ON reservation.id_flight = flight.id_flight
INNER JOIN aircraft ON flight.id_aircraft = aircraft.id_aircraft
WHERE customer_file.customer_status LIKE '%Gold%'
GROUP BY aircraft.aircraft_name ORDER BY reservation DESC LIMIT 1; -- 11
```