

--question 1

--Anusha Mittal, am98968

```
SELECT count(frequent_flyer_id) as frequent_flyer_count,  
ROUND(AVG(miles_balance)) as avg_miles,  
SUM(miles_balance) as sum_miles  
FROM frequent_flyer_profile;
```

--question 2

--Anusha Mittal, am98968

```
SELECT p.passenger_id, count(pp.payment_id) as cards_on_file,  
MAX(pp.expiration_date) as latest_exp_date  
FROM passenger p  
INNER JOIN passenger_payment pp  
ON p.passenger_id = pp.passenger_id
```

```
GROUP BY p.passenger_id;
```

--question 3

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```
SELECT flight_number, count(DISTINCT employee_id) as employee_count,  
MAX(birthday) as oldest_employee_DOB, MIN(birthday) as  
youngest_employee_DOB  
FROM flight f  
INNER JOIN employee e  
ON f.assigned_employee = e.employee_id
```

```
GROUP BY flight_number
```

```
ORDER BY employee_count DESC;
```

--question 4

--Anusha Mittal, am98968

```
SELECT (first_name || ' ' || last_name) as passenger_name,  
trip_contact_phone, count(r.reservation_id) as reservation_count  
FROM passenger p  
JOIN pass_resv_flight_linking prfl
```

```
ON p.passenger_id = prfl.passenger_id
```

```
JOIN reservation r
```

```
ON prfl.reservation_id = r.reservation_id
```

```
GROUP BY p.first_name, p.middle_name, p.last_name, r.trip_contact_phone  
ORDER BY reservation_count DESC;
```

--question 5

--Anusha Mittal, am98968

```
SELECT first_name, last_name, TRUNC((miles_balance - 5000)/10000) AS
```

```
vouchers_earned
FROM passenger p
JOIN frequent_flyer_profile ffp
ON p.passenger_id = ffp.passenger_id
```

```
GROUP BY first_name, last_name, TRUNC((miles_balance - 5000)/10000)
HAVING TRUNC((miles_balance - 5000)/10000) >= 2
ORDER BY vouchers_earned DESC, last_name ASC;
--question 6
--Anusha Mittal, am98968
```

```
SELECT first_name, last_name, TRUNC((miles_balance - 5000)/10000) AS
vouchers_earned
FROM passenger p
JOIN frequent_flyer_profile ffp
ON p.passenger_id = ffp.passenger_id
```

```
WHERE ff_level <> 'G'
GROUP BY first_name, last_name, TRUNC((miles_balance - 5000)/10000)
HAVING TRUNC((miles_balance - 5000)/10000) >= 2
ORDER BY vouchers_earned DESC, last_name ASC;
--question 7
--Anusha Mittal, am98968
SELECT mailing_city, cardtype, count(cardtype)
FROM passenger p
JOIN passenger_payment pp
ON p.passenger_id = pp.passenger_id
```

```
WHERE mailing_city LIKE 'A%' AND cardtype <> 'DEBIT'
GROUP BY ROLLUP(cardtype, mailing_city)
ORDER BY mailing_city, cardtype;
--rollup is used in the group by clause for hierarchies while cube is used
for every possible combination
--of groups. CUBE is useful to answer every possible combination of non
aggregate columns to answer any question
--question 8
```

```
--Anusha Mittal, am98968
SELECT flight_number, departure_city, arrival_city, count(DISTINCT
prfl.passenger_id) as unique_passengers
FROM flight f
JOIN pass_resv_flight_linking prfl
ON f.flight_id = prfl.flight_id
JOIN passenger p
ON prfl.passenger_id = p.passenger_id
```

```
GROUP BY f.flight_number, f.departure_city, f.arrival_city
HAVING count(DISTINCT p.passenger_id) >=2
ORDER BY f.flight_number ASC;
```

--question 9

--Anusha Mittal, am98968

```
SELECT DISTINCT employee_id, first_name, last_name
FROM employee e
WHERE employee_id IN (SELECT assigned_employee
```

```
FROM flight)
```

```
ORDER BY employee_id;
```

--question 10

--Anusha Mittal, am98968

```
SELECT frequent_flyer_id, last_name, ff_level, miles_balance
FROM frequent_flyer_profile ffp
JOIN passenger p
ON ffp.passenger_id = p.passenger_id
```

```
WHERE miles_balance > 25000 + (SELECT MIN(miles_balance) FROM
frequent_flyer_profile)
```

```
ORDER BY miles_balance;
```

--question 11

--Anusha Mittal, am98968

```
SELECT first_name, last_name, email, primary_phone, secondary_phone
FROM passenger p
WHERE p.passenger_id IN (SELECT passenger_id
```

```
FROM pass_resv_flight_linking
GROUP BY passenger_id --whats this for
HAVING COUNT(reservation_id) > 3);
```

--question 12

--Anusha Mittal, am98968

```
SELECT last_name, first_name, (num_flight - num_seat) as flights_no_seat
FROM passenger p
JOIN (
SELECT passenger_id, COUNT(flight_id) as num_flight,
COUNT(seat_assignment) as num_seat
FROM pass_resv_flight_linking prfl
GROUP BY passenger_id
) prfl
```

```
ON p.passenger_id = prfl.passenger_id
WHERE (num_flight - num_seat) >= 1
ORDER BY last_name;
```

--question 13

--Anusha Mittal, am98968

```
SELECT first_name, last_name, emp_level, total_flight
FROM employee e JOIN
```

```
(SELECT assigned_employee,
COUNT(flight_id) as total_flight
FROM flight
GROUP BY assigned_employee
HAVING COUNT((flight_id)) >= 5) F
ON e.employee_id = f.assigned_employee
```

```
ORDER BY total_flight;
```

--question 14

--Anusha Mittal, am98968

```
SELECT p.passenger_id, p.email, days_since_latest_booking
FROM passenger p
JOIN (SELECT passenger_id, MAX(date_booked) as latest_date_booking,
TRUNC(SYSDATE - MAX(r.date_booked)) AS days_since_latest_booking
FROM pass_resv_flight_linking prfl
JOIN reservation r
ON r.reservation_id = prfl.reservation_id
GROUP BY passenger_id
) q
ON p.passenger_id = q.passenger_id;
```