

SQL Group Assignment

SQL Group Assignment: Airplane Queries

1. What is the build date of the airplanes that have flown in 2014?

-- Answering the question using Left Join

```
SELECT A.AIRCRAFT_REGISTRATION, T.FLIGHT_DATE, A.BUILD_DATE
FROM AIRPLANES A
LEFT JOIN TICKETS T
ON A.AIRCRAFT_REGISTRATION = T.AIRCRAFT_ID
WHERE YEAR(T.FLIGHT_DATE) = 2014;
```

-- Having the same results using Inner Join:

```
SELECT A.AIRCRAFT_REGISTRATION, T.FLIGHT_DATE, A.BUILD_DATE
FROM AIRPLANES A , TICKETS T
WHERE A.AIRCRAFT_REGISTRATION = T.AIRCRAFT_ID
AND YEAR(T.FLIGHT_DATE) = 2014;
```

2. How many passengers were born in the 70's that have flown to Paris?

```
SELECT COUNT (DISTINCT P.ID) No_Of_Passengers
FROM PASSENGERS P, TICKETS T, ROUTES R
WHERE P.ID = T.PASSENGER_ID
AND T.ROUTE_CODE = R.ROUTE_CODE
AND YEAR(P.BIRTH_DATE) BETWEEN 1970 AND 1979
AND LOWER(R.DESTINATION) = 'paris';
```

3. Telephone number of the oldest passenger

-- Answering the question using the where condition:

```
SELECT NAME, BIRTH_DATE, TELEPHONE FROM PASSENGERS
WHERE BIRTH_DATE = (SELECT MIN(BIRTH_DATE) FROM PASSENGERS);
```

-- Having the same results using Join:

```
SELECT P.NAME,P.BIRTH_DATE, P.TELEPHONE
FROM PASSENGERS P
JOIN
(SELECT MIN(BIRTH_DATE) AS MIN_BIRTH_DATE
FROM PASSENGERS) MINDT
ON P.BIRTH_DATE = MINDT.MIN_BIRTH_DATE;
```

4. How many airplanes have more than 300 seats and tickets more expensive than 1000€

```
SELECT COUNT(*) AS NO_OF_Planes
FROM AIRPLANES A, TICKETS T, ROUTES R
WHERE A.AIRCRAFT_REGISTRATION = T.AIRCRAFT_ID
AND T.ROUTE_CODE = R.ROUTE_CODE
AND A.SEATS > 300
AND R.PRICE > 1000;
```

5. Find the tickets of all the flights to Toronto in planes build before 2010 for passengers born after 2000

```
SELECT R.DESTINATION, T.TICKET_ID, A.BUILD_DATE, P.NAME, P.BIRTH_DATE
FROM TICKETS T, ROUTES R, AIRPLANES A, PASSENGERS P
WHERE T.ROUTE_CODE = R.ROUTE_CODE
AND T.AIRCRAFT_ID = A.AIRCRAFT_REGISTRATION
AND T.PASSENGER_ID = P.ID
AND LOWER(R.DESTINATION) = 'toronto'
AND YEAR(A.BUILD_DATE) < 2010
AND YEAR(P.BIRTH_DATE) > 2000;
```

6. Obtain all the routes that have a price lower than the average price of the route which destination is Madrid, London or Paris.

```
-- This is only for calculating the average price of destinations (Madrid, London, Or Paris)
-- Combined
SELECT 'Madrid, London Or Paris' as Destination , AVG(PRICE) AS AVG_PRICE
FROM ROUTES
WHERE LOWER(DESTINATION) IN ('madrid','london','paris');

-- Average price of the route which destination is Madrid, Lonon, or Paris is equal to roughly
-- 1331

SELECT *
FROM ROUTES
WHERE PRICE < (SELECT AVG(PRICE) FROM ROUTES
WHERE UPPER(DESTINATION) IN ('MADRID','LONDON','PARIS'));
```

7. For each origin how many tickets have been sold only for the tickets more expensive than 300€.

```
SELECT R.ORIGIN, COUNT (T.TICKET_ID) AS NUM_OF_TICKETS
FROM ROUTES R, TICKETS T
WHERE R.ROUTE_CODE = T.ROUTE_CODE
AND R.PRICE > 300
GROUP BY R.ORIGIN;
```

8. How much money has the company earned selling tickets?

-- Answering the question using Left Join:

```
SELECT SUM(R.PRICE) AS TICKET_EARNINGS
FROM TICKETS T
LEFT OUTER JOIN ROUTES R
ON T.ROUTE_CODE = R.ROUTE_CODE;
```

```
-- Having the same results using Inner join:
SELECT SUM(R.PRICE) AS TICKET_EARNINGS
FROM TICKETS T, ROUTES R
WHERE T.ROUTE_CODE = R.ROUTE_CODE;
```

9. List the price of each tickets order by price appearing first the more expensive.

-- Answering the question using Left Join

```
SELECT T.TICKET_ID, R.PRICE
FROM TICKETS T
LEFT JOIN ROUTES R
ON T.ROUTE_CODE = R.ROUTE_CODE
ORDER BY 2 DESC;
```

-- Having the same results using Inner Join

```
SELECT T.TICKET_ID, R.PRICE
FROM TICKETS T, ROUTES R
WHERE T.ROUTE_CODE = R.ROUTE_CODE
ORDER BY 2 DESC;
```

10. Obtain the name and telephone of the passenger that flew the route R7203 the 12/28/2005 in planes with more than 300 seats.

```
SELECT P.NAME, P.TELEPHONE, T.ROUTE_CODE, T.FLIGHT_DATE, A.SEATS
FROM PASSENGERS P, TICKETS T, ROUTES R, AIRPLANES A
WHERE P.ID = T.PASSENGER_ID
AND T.ROUTE_CODE = R.ROUTE_CODE
AND T.AIRCRAFT_ID = A.AIRCRAFT_REGISTRATION
AND T.FLIGHT_DATE = '12/28/2005'
AND T.ROUTE_CODE = 'R7203'
AND A.SEATS > 300;
```

End of SQL Group Assignment: Airplane Queries