Linie lotnicze Projekt 2022

Szymon Pawlak

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Zad 1
Jakie było średnie opóźnienie przylotu?

```sql
select AVG(arr_delay_new) [avg_delay]
        from Flight_delays
```

Table 1: 1 records

avg__delay
15.91152

Zad 2
Jakie było maksymalne opóźnienie przylotu?

```sql
 select MAX(arr_delay_new) [avg_delay]
        from Flight_delays;
```

Table 2: 1 records

avg__delay
1895

Zad 3
Który lot miał największe opóźnienie przylotu?

```sql
SELECT F.arr_delay_new, F.fl_date, F.carrier, F.origin_city_name, F.dest_city_name
FROM Flight_delays F
WHERE F.arr_delay_new = (SELECT MAX(Q.arr_delay_new)
FROM Flight_delays Q)
```

Table 3: 1 records

arr__delay__new	fl__date	carrier	origin__city__name	dest__city__name
1895	2017-07-26	AA	Kona, HI	Los Angeles, CA

Zad 4

Które dni tygodnia są najgorsze do podróżowania?

```
SELECT AVG(F.arr_delay_new) [avg_delay],W.weekday_name
FROM Weekdays W
JOIN Flight_delays F
ON W.weekday_id = F.day_of_week
GROUP BY W.weekday_name
ORDER BY avg_delay DESC
```

Table 4: 7 records

avg_delay	weekday_name
20.80747	Friday
18.04801	Monday
16.10514	Wednesday
15.64696	Thursday
15.21876	Saturday
12.88056	Tuesday
12.77606	Sunday

Zad 5

Które linie lotnicze latające z San Francisco (SFO) mają najmniejsze opóźnienia przylotu?

```
SELECT AVG(F.arr_delay_new) [avg_delay],A.airline_name
FROM Airlines A
JOIN Flight_delays F
ON A.airline_id = F.airline_id
WHERE F.airline_id in (SELECT Z.airline_id
FROM Flight_delays Z
WHERE Z.origin = 'SFO')
GROUP BY A.airline_name
ORDER BY avg_delay DESC
```

Table 5: Displaying records 1 - 10

avg_delay	airline_name
28.841148	JetBlue Airways: B6
18.980300	Frontier Airlines Inc.: F9
18.375314	American Airlines Inc.: AA
16.950403	United Air Lines Inc.: UA
16.808273	SkyWest Airlines Inc.: OO
13.964467	Virgin America: VX
13.823983	Southwest Airlines Co.: WN
12.258788	Delta Air Lines Inc.: DL
7.453927	Alaska Airlines Inc.: AS
4.202719	Hawaiian Airlines Inc.: HA

Zad 7
Jak opóźnienia wylotów wpływają na   opóźnienia przylotów?

```
SELECT (AVG(arr_delay_new * dep_delay_new) - (AVG(arr_delay_new) * AVG(dep_delay_new))) / (STDEVP(arr_d
FROM Flight_delays
```

Table 6: 1 records

Pearsons r
0.97371

Zad 8

Która linia lotnicza miała największy wzrost(różnica) średniego opóźnienia przylotów w ostatnim tygodniu
miesiąca, tj. między 1-23 a 24-31 lipca?

```
SELECT TOP(1)(AVG(CASE WHEN fl_date BETWEEN '2017-07-24' and '2017-07-31' THEN arr_delay_new END) - AVG
FROM Flight_delays F JOIN Airlines A
ON A.airline_id = F.airline_id
GROUP BY airline_name
ORDER BY AVG_DIFF DESC;
```

Table 7: 1 records

AVG_DIFF	airline_name
0.584763	Southwest Airlines Co.: WN

Zad 9

Które linie lotnicze latają zarówno na trasie SFO → PDX (Portland), jak i SFO → EUG (Eugene)?

```
SELECT A.airline_name
FROM Flight_delays F
JOIN Airlines A
ON A.airline_id = F.airline_id
WHERE F.origin = 'SFO' and F.airline_id in (SELECT Q.airline_id
FROM Flight_delays Q
WHERE Q.dest = 'PDX' and Q.airline_id in (SELECT G.airline_id
FROM Flight_delays G
WHERE G.dest = 'EUG'))
GROUP BY A.airline_name
```

Table 8: 2 records

airline_name
SkyWest Airlines Inc.: OO
United Air Lines Inc.: UA

Zad 10

Jak najszybciej dostać się z Chicago do Stanfordu, zakładając wylot po 14:00 czasu lokalnego?

```
SELECT AVG(F.arr_delay_new) [avg_delay],F.origin, F.dest
FROM Flight_delays F
WHERE (F.origin = 'MDW' or F.origin = 'ORD') and (F.dest = 'SFO' or F.dest = 'SJC' or F.dest = 'OAK') a
GROUP BY F.origin, F.dest
ORDER BY avg_delay DESC;
```

Table 9: 5 records

avg_delay	origin	dest
22.19253	ORD	SFO
19.85714	MDW	SFO
17.20000	MDW	SJC
14.81111	ORD	SJC
12.12903	MDW	OAK