

Note:

These are queries that give a direct answer to the question and nothing more.

AQ1.

Which Country Has The Most Amount Of Delays ?

```
SELECT da.country_name, SUM(fd.DELAY_COUNT_MV) AS delay_count
FROM [datawarehouse].[dbo].[fact_delay] fd
INNER JOIN [datawarehouse].[dbo].[dim_airport] da
ON fd.dim_airport_departure_fk = da.airport_sk
GROUP BY da.country_name
ORDER BY delay_count DESC
```

AQ2.

Which Are The Most Visited Countries In Europe ?

```
SELECT arr_a.country_name AS country, COUNT(f.arrival_id) as times_visited

FROM [flightmanagement].[dbo].[flight] f
INNER JOIN [datawarehouse].[dbo].[dim_airport] arr_a
ON f.arrival_id = arr_a.airport_id

WHERE arr_a.region LIKE 'Europe'

GROUP BY arr_a.country_name
ORDER BY times_visited DESC
```

AQ3.

Which Delay Type Has The Longest Average Delay ?

```
SELECT ddt.delay_code, ddt.delay_description,
AVG(fd.EFFECTIVE_DELAY_TIME_MV) AS average_delay

FROM [datawarehouse].[dbo].[fact_delay] fd
INNER JOIN [datawarehouse].[dbo].[dim_delay_type] ddt
ON fd.DIM_DELAY_TYPE_FK = ddt.delay_type_sk

GROUP BY ddt.delay_code, ddt.delay_description
ORDER BY average_delay DESC
```

AQ4.

Which Countries In Europe Have The Most Amount Of Airports Per Capita ?

```
SELECT custom1.country_name, CAST((((custom1.airport_count / custom1.population) *
1000000) AS decimal(10,2)) AS airports_per_million

FROM (SELECT da.country_name, COUNT(airport_name) AS airport_count , c.population
```

```

FROM [datawarehouse].[dbo].[dim_airport] da
INNER JOIN [CountryInfo].[dbo].[Countries] c
ON da.country_name = c.name
GROUP BY da.country_name, c.population) custom1

WHERE custom1.population > 1000000

GROUP BY custom1.country_name, custom1.airport_count, custom1.population
ORDER BY airports_per_million DESC

```

AQ5.

Which Airports In Germany Had The Highest Amount Of Delays In 2021 ?

```

SELECT da.airport_name, SUM(fd.DELAY_COUNT_MV) as 'Delay Count'

FROM [datawarehouse].[dbo].[fact_delay] fd
INNER JOIN [datawarehouse].[dbo].[dim_flight] df
ON fd.dim_flight_fk = df.flight_sk
INNER JOIN [datawarehouse].[dbo].[dim_airport] da
ON (CASE WHEN fd.dim_delay_moment_fk = 1 THEN fd.DIM_AIRPORT_DEPARTURE_FK
WHEN fd.DIM_DELAY_MOMENT_FK = 0 THEN fd.DIM_AIRPORT_ARRIVAL_FK END) =
da.airport_sk
INNER JOIN [datawarehouse].[dbo].[dim_date] dd
ON fd.dim_date_fk = dd.date_sk

WHERE year(dd.date) = 2021 AND da.country_name LIKE 'Germany'

GROUP BY da.airport_name
ORDER BY [Delay Count] DESC

```

AQ6.

Does The Scope Of The Flight Have An Effect On The Average Flight Delays ?

```

SELECT df.flight_number, dd.date, ddm.delay_moment_description, ddt.delay_code,
fd.EFFECTIVE_DELAY_TIME_MV,
(CASE WHEN dep_a.country_name = arr_a.country_name THEN 'Domestic' ELSE
'International' END) AS domestic_or_international

FROM
[datawarehouse].[dbo].[fact_delay] fd
INNER JOIN [datawarehouse].[dbo].[dim_flight] df
ON fd.dim_flight_fk = df.flight_sk
INNER JOIN [datawarehouse].[dbo].[dim_delay_moment] ddm
ON fd.DIM_DELAY_MOMENT_FK = ddm.delay_moment_sk
INNER JOIN [datawarehouse].[dbo].[dim_delay_type] ddt
ON fd.DIM_DELAY_TYPE_FK = ddt.delay_type_sk
INNER JOIN [datawarehouse].[dbo].[dim_date] dd
ON fd.dim_date_fk = dd.date_sk
INNER JOIN [datawarehouse].[dbo].[dim_airport] dep_a
ON fd.DIM_AIRPORT_DEPARTURE_FK = dep_a.airport_sk
INNER JOIN [datawarehouse].[dbo].[dim_airport] arr_a
ON fd.DIM_AIRPORT_ARRIVAL_FK = arr_a.airport_sk

GROUP BY df.flight_number, dd.date, ddm.delay_moment_description, ddt.delay_code,
fd.EFFECTIVE_DELAY_TIME_MV, dep_a.country_name, arr_a.country_name

```

