-- Total Flights

-- On-Time Performance (%)

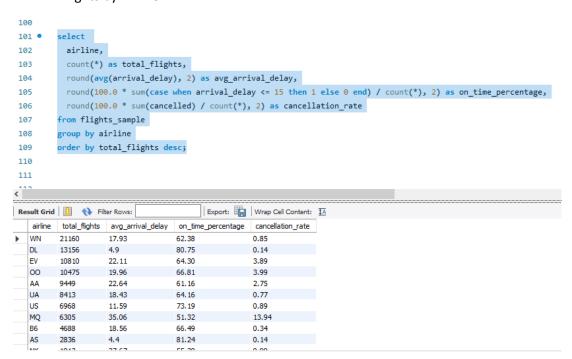
```
51
       -- On-Time Performance (%)
52
       select
53 •
         round(100.0 * sum(case when arrival_delay <= 15 then 1 else 0 end) / count(*),2) as on_time_percentage
54
55
       from flights
56
       where cancelled = 0;
57
       -- Average Arrival Delay
58
59
esult Grid 🔢 🙌 Filter Rows:
                                        Export: Wrap Cell Content: 🔼
 on_time_percentage
77.96
```

-- Average Arrival Delay

```
-- Average Arrival Delay
68
69
70 •
           round(avg(arrival_delay),2 ) as Average_Arrival_Delay
71
72
       from flights
       where cancelled = 0;
73
74
75
Export: Wrap Cell Content: 🔼
  Average_Arrival_Delay
7.74
```

-- Cancellation Rate

■ Flights by Airline



-- KPI Querying

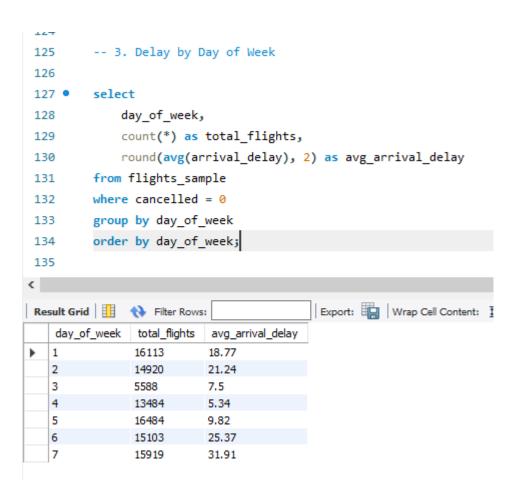
-- 1. Delay Reason Breakdown

```
100
         -- KPI Querying
101
         -- 1. Delay Reason Breakdown
102
103 •
104
            round(avg(arrival_delay), 2) as avg_arrival_delay,
            round(avg(departure_delay), 2) as avg_departure_delay,
105
             round(avg(air_system_delay), 2) as avg_air_system_delay,
106
             round(avg(security_delay), 2) as avg_security_delay,
107
108
             round(avg(airline_delay), 2) as avg_airline_delay,
            round(avg(late aircraft delay), 2) as avg late aircraft delay,
109
110
            round(avg(weather delay), 2) as avg weather delay
         From flights
111
         where cancelled = 0;
112
Export: Wrap Cell Content: IA
   avg_arrival_delay avg_departure_delay avg_air_system_delay avg_security_delay avg_airline_delay
                                                                                     avg_late_aircraft_delay avg_weather_delay
7.74
                  11.4
                                   3.13
                                                      0.01
                                                                      4.15
                                                                                     5.26
                                                                                                        0.8
```

-- 2. Delay by Time of Day

```
-- 2. Delay by Time of Day
114
115
        select
116 •
            hour(scheduled_departure) as departure_hour,
117
            count(*) as total_flights,
118
            round(avg(arrival_delay), 2) as avg_arrival_delay
119
        From flights
120
        where cancelled = 0
121
         group by hour(scheduled_departure)
122
        order by departure hour;
123
                                         Export: Wrap Cell Content:
departure hour
                total flights
                           avg arrival delay
▶ 0
                4359488
                           7.74
```

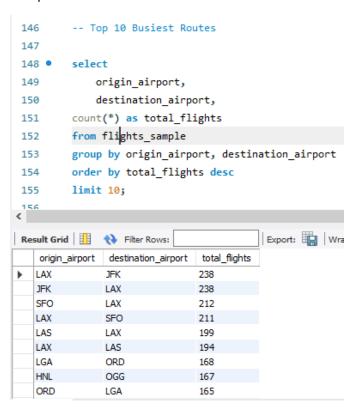
-- 3. Delay by Day of Week



-- 4. Delay by Month

```
-- 4. Delay by Month
136
137
138 •
        select
139
            month,
            count(*) as total_flights,
140
            round(avg(arrival_delay), 2) as avg_arrival_delay
141
142
        from flights_sample
        where cancelled = 0
143
        group by month
144
        order by month;
145
                                        Export: Wrap Cell Content:
total_flights
                    avg_arrival_delay
 1
         97611
                    18.3
```

-- Top 10 Busiest Routes



-- Top 10 Delayed Airports by avg arrival delay

```
-- Top 10 Delayed Airports by avg arrival delay
157
158
        select
159 •
160
            destination_airport,
            round(avg(arrival_delay),2) as Avg_arrival_delay,
161
            count(*) as Total flights
162
        from flights_sample
163
        where cancelled = 0
164
        group by destination_airport
165
166
        having count(*) >100 -- filters noise from low-traffic airports
        order by Avg_arrival_delay desc
167
        limit 10;
168
169
                                      Export: Wrap Cell Content: 🚻 Fetch
Total_flights
  ASE
                 43.08
                                152
  FSD
                 40.25
                                107
  DSM
                                161
  SGE
                 38.09
                                102
  ICT
                 36.63
                                129
  TYS
                 33.95
                                131
  ORD
                 33, 12
                                4639
  XNA
                                141
                 33, 11
  LIT
```

-- Monthly Cancellation Trend

```
172
        select
173
            month,
            count(*) as Total_flights,
174
            sum(cancelled) as cancelled_flights,
175
            round(100.0 * sum(cancelled) * count(*),2) as cancellation_rate
176
        from flights_sample
177
178
        group by month
        order by month;
179
Export: Wrap Cell Content: 1A
                                  cancellation_rate
   month
         Total flights
                    cancelled_flights
         100000
                                  23890000000
· 1
                    2389
```

-- Diversion Summary

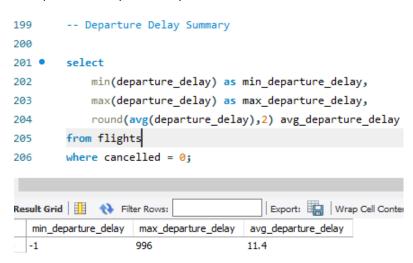
```
-- Diversion Summary
181
182
183 •
         select
             count(*) as Total_flights,
184
185
             sum(diverted) as Total diverted,
             round(100.0 * sum(diverted) / count(*), 2) as diversion rate
186
         from flights_sample;
187
                                            Export: Wrap Cell Content: 1A
Result Grid
              Filter Rows:
   Total_flights
               Total_diverted
                            diversion_rate
 100000
              224
                            0.22
```

-- Delay Statistics - Min, Max, Median (Arrival + Departure)

-- Arrival Delay Summary

```
189
        -- Delay Statistics - Min, Max, Median (Arrival + Departure)
        -- Arrival Delay Summary
190
191
        select
192
            min(arrival_delay) as min_arrival_delay,
193
            max(arrival_delay) as max_arrival_delay,
194
            round(avg(arrival_delay),2) avg_arrival_delay
195
        from flights
196
        where cancelled = 0;
197
Export: Wrap Cell Content: $\frac{1}{2}
  min_arrival_delay
                max_arrival_delay
                                avg_arrival_delay
 -1
                 998
                                7.74
```

-- Departure Delay Summary



-- Scheduled vs Actual Duration

```
208
         -- Scheduled vs Actual Duration
209
         select
210 •
             round(avg(scheduled_time),2) as avg_scheduled_time,
211
             round(avg(air_time), 2) as avg_air_time,
212
             round(avg(scheduled_time - air_time), 2) as avg_buffer_time
213
         from flights
214
         where cancelled = 0 and air_time is not null;
215
216
                                           Export: Wrap Cell Content: IA
Result Grid
             Filter Rows:
   avg_scheduled_time avg_air_time
                                avg buffer time
▶ 140.72
                    112.56
                                28, 15
```

```
219 •
         select
220
             round(avg(weather_delay), 2) as avg_weather_delay
221
         from flights_sample
222
         where cancelled = 0
223
         group by month
224
         order by month;
225
226
                                          Export: Wrap Cell Conter
Result Grid
              Filter Rows:
   month
          avg_weather_delay
 1
         0.98
```

-- Top 10 Delayed Airlines

