**DataMart Creation on tutorial.flights on mode.com**​

**The output should contain all the attributes as different columns in the datamart created**​

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Create a DataMart at airline level with different features like​

1. Total Number of flights​
2. Total Number of delayed flights (Based on arrival delay)​
3. Percentage of delayed flights​
4. Total Number of cancelled flights (All reasons)​
5. Percentage of cancelled flights​
6. Give Rank number to each airline based on percentage of delayed flights​
7. Give Rank number to each airline based on number of destinations it covers​
8. Add additional features which can help understand airlines better based on their performance

Graphical user interface, text, application, email

Description automatically generated



A screenshot of a computer

Description automatically generated with low confidenceGraphical user interface, text, application

Description automatically generated

A screenshot of a computer

Description automatically generated with medium confidence

New Variables Created are :

* Early Arr Percent : This Variable indicates the percent of times airlines reached the destination earlier . If a aircraft reach earlier than its arrival time , airline would have to pay the airport extra Fess , which is a loss for airline.
* Percent delay Friday : This variable idicates the percent of time airlines got delayed on FRIDAY . Most of the people will be going to home town after work . So this would affect the passenger satisfaction.
* Percent delay Monday: This variable idicates the percent of time airlines got delayed on MONDAY.
* Average Airtime
* Average Distance
* Haul : Indicated whether the airline serve short routes or Long routes
* Average arrival delay: Average Minutes delayed at arrival.
* Average departure delay pos:Average minutes delayed at departure.
* Average security delay pos:Average minutes delayed due to security clearance.
* Average weather delay pos: Average minutes delayed due to weather.

SELECT

airline\_name,

COUNT(airline\_name),

COUNT(

CASE

WHEN arrival\_delay > 0 THEN 1

ELSE NULL

END

) AS Delayed\_Flights,

ROUND(

COUNT(

CASE

WHEN arrival\_delay > 0 THEN 1

ELSE NULL

END ) \* 100.0 / COUNT(\*),2) AS Percent\_delay,

COUNT(

CASE

WHEN was\_cancelled =true THEN 1

ELSE NULL

END

) AS cancelled\_flights,

ROUND(

COUNT(

CASE

WHEN was\_cancelled = true THEN 1

ELSE NULL

END ) \* 100.0 / COUNT(\*),2) AS Percent\_cancelled ,

DENSE\_RANK() OVER( ORDER BY COUNT(

CASE

WHEN arrival\_delay > 0 THEN 1

ELSE NULL

END ) \* 100.0 / COUNT(\*))AS rank\_delay ,

DENSE\_RANK() OVER(ORDER BY COUNT(DISTINCT(destination\_airport))) AS Destination\_rank,

ROUND(

COUNT(

CASE

WHEN arrival\_delay < 0 THEN 1

ELSE NULL

END ) \* 100.0 / COUNT(\*),2) AS early\_arr\_Percent,

ROUND(

SUM(

CASE

WHEN arrival\_delay>0 AND day\_of\_week='Friday' THEN 1

ELSE 0

END ) \* 100.0 / COUNT(\*),2) AS Percent\_delay\_friday,

ROUND(

SUM(

CASE

WHEN arrival\_delay>0 AND day\_of\_week='Monday' THEN 1

ELSE 0

END ) \* 100.0 / COUNT(\*),2) AS Percent\_delay\_monday,

AVG(air\_time) as avg\_airtime,

AVG(distance) as avg\_distance,

AVG(CASE

WHEN arrival\_delay > 0 THEN arrival\_delay

ELSE 0

END) AS avg\_arrival\_delay\_pos ,

AVG(CASE

WHEN carrier\_delay > 0 THEN carrier\_delay

ELSE 0

END) AS avg\_carrier\_delay\_pos,

AVG(CASE

WHEN departure\_delay > 0 THEN departure\_delay

ELSE 0

END) AS avg\_departure\_delay\_pos ,

AVG(CASE

WHEN security\_delay > 0 THEN security\_delay

ELSE 0

END) AS avg\_security\_delay\_pos ,

AVG(CASE

WHEN weather\_delay > 0 THEN weather\_delay

ELSE 0

END) AS avg\_weather\_delay\_pos

FROM

tutorial.flights

GROUP BY

airline\_name