

PART 1 – SQL-Based Analysis

```
?5022  
?5023 • SELECT  
?5024     RouteCode,  
?5025     COUNT(FlightID) AS TotalFlights  
?5026 FROM AirlineRoutesData  
?5027 GROUP BY RouteCode  
?5028 ORDER BY TotalFlights DESC  
?5029 LIMIT 10;  
?5030
```

Result Grid	
RouteCode	TotalFlights
JAI-BOM	312
BLR-BOM	311
JAI-AMD	301
BLR-JAI	300
BOM-CCU	299
DEL-GOI	299
AMD-BOM	298
MAA-AMD	297
CCU-JAI	297
PNQ-JAI	297

SELECT

```
RouteCode,  
ROUND(AVG(Revenue), 2) AS AvgRevenue,  
ROUND(AVG(OperationalCost), 2) AS AvgCost,  
ROUND(AVG(Revenue - OperationalCost), 2) AS AvgProfit
```

FROM AirlineRoutesData

GROUP BY RouteCode;

Result Grid			
RouteCode	AvgRevenue	AvgCost	AvgProfit
BLR-HYD	323149.45	138807.85	184341.60
AMD-HYD	348991.84	139717.38	209274.45
DEL-JAI	307624.69	136687.48	170937.20
HYD-AMD	304889.60	138359.34	166530.26
GOI-BLR	327046.87	140960.27	186086.60
GOI-PNQ	321421.88	137279.42	184142.45
GOI-AMD	338824.25	140025.22	198799.03
PNQ-AMD	322610.17	143624.17	178986.00
MAA-PNQ	311473.73	138054.23	173419.50
DEL-BOM	323896.09	141013.87	182882.23
GOI-CCU	313048.48	140234.05	172814.42
BOM-PNQ	319477.71	141778.11	177699.61
PNQ-MAA	330170.83	140539.46	189631.36
AMD-CCU	310426.34	141644.41	168781.93
BOM-CCU	327487.47	139624.76	187862.72
HYD-CCU	325390.98	139111.19	186279.79
MAA-BLR	306168.31	139067.16	167101.15
AMD-BLR	308220.19	137677.19	170543.00
DEL-BLR	320492.84	135034.38	185458.46
CCU-JAI	334847.07	136147.79	198699.29
BOM-MAA	316068.57	138186.19	177882.39
BOM-HYD	312859.89	138898.93	173960.96
BOM-GOI	343599.31	142021.19	201578.12
JAI-BLR	343266.96	141477.49	201789.47
BOM-DEL	324893.65	140107.46	184786.19

SELECT

```
RouteCode,  
ROUND(AVG(Revenue - OperationalCost), 2) AS AvgProfit  
FROM AirlineRoutesData  
GROUP BY RouteCode  
HAVING AVG(Revenue - OperationalCost) < 0  
ORDER BY AvgProfit;
```

```

25039 • SELECT
25040     RouteCode,
25041     ROUND(AVG(Revenue - OperationalCost), 2) AS AvgProfit
25042     FROM AirlineRoutesData
25043     GROUP BY RouteCode
25044     HAVING AVG(Revenue - OperationalCost) < 0
25045     ORDER BY AvgProfit;
25046

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
RouteCode	AvgProfit			

SELECT

 RouteCode,

 ROUND(

 (SUM(SeatsSold) * 100.0) / SUM(SeatsAvailable),

 2

) AS SeatOccupancyPercent

FROM AirlineRoutesData

GROUP BY RouteCode

ORDER BY SeatOccupancyPercent DESC;

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
RouteCode	SeatOccupancyPercent			
BOM-CCU	64.17			
DEL-BOM	64.14			
JAI-DEL	64.12			
BLR-PNQ	64.09			
HYD-BOM	64.05			
PNQ-GOI	63.74			
AMD-MAA	63.69			
CCU-PNQ	63.58			
PNQ-HYD	63.56			
PNQ-BLR	63.53			
BLR-HYD	63.48			
BLR-DEL	63.48			
MAA-CCU	63.46			
BOM-PNQ	63.44			
CCU-HYD	63.36			
MAA-BOM	63.36			
JAI-BOM	63.32			
DEL-MAA	63.29			
HYD-PNQ	63.27			
MAA-GOI	63.21			
JAI-PNQ	63.20			
PNQ-BOM	63.19			
BLR-BOM	63.16			
GOI-BLR	63.11			
BLR-GOI	63.03			
...	...			

SELECT

 RouteCode,

 EXTRACT(YEAR FROM FlightDate) AS Year,

 EXTRACT(MONTH FROM FlightDate) AS Month,

 ROUND(SUM(Revenue - OperationalCost), 2) AS MonthlyProfit

FROM AirlineRoutesData

GROUP BY RouteCode, Year, Month

ORDER BY RouteCode, Year, Month;

RouteCode	Year	Month	MonthlyProfit
AMD-BLR	2025	4	2859333
AMD-BLR	2025	5	1707164
AMD-BLR	2025	6	1221661
AMD-BLR	2025	7	987707
AMD-BLR	2025	8	3291869
AMD-BLR	2025	9	1580340
AMD-BLR	2025	10	1320347
AMD-BLR	2025	11	1817249
AMD-BLR	2025	12	4346120
AMD-BOM	2024	1	2165788
AMD-BOM	2024	2	2339832
AMD-BOM	2024	3	1694730
AMD-BOM	2024	4	4729348
AMD-BOM	2024	5	783678
AMD-BOM	2024	6	1342700
AMD-BOM	2024	7	2467484
AMD-BOM	2024	8	2358673
AMD-BOM	2024	9	1086192
AMD-BOM	2024	10	1951311
AMD-BOM	2024	11	2562295
AMD-BOM	2024	12	3481687
AMD-BOM	2025	1	2847365
AMD-BOM	2025	2	1267651
AMD-BOM	2025	3	2578948
AMD-BOM	2025	4	3951456
AMD-BOM	2025	5	2621422

```
25068 •   SELECT
25069     CASE
25070       WHEN LEFT(Origin, 2) = LEFT(Destination, 2) THEN 'Domestic'
25071       ELSE 'International'
25072     END AS RouteType,
25073     ROUND(SUM(Revenue - OperationalCost), 2) AS TotalProfit,
25074     ROUND(AVG(Revenue - OperationalCost), 2) AS AvgProfit
25075   FROM AirlineRoutesData
25076   GROUP BY RouteType;
25077
```

RouteType	TotalProfit	AvgProfit
International	4639473110	185578.92

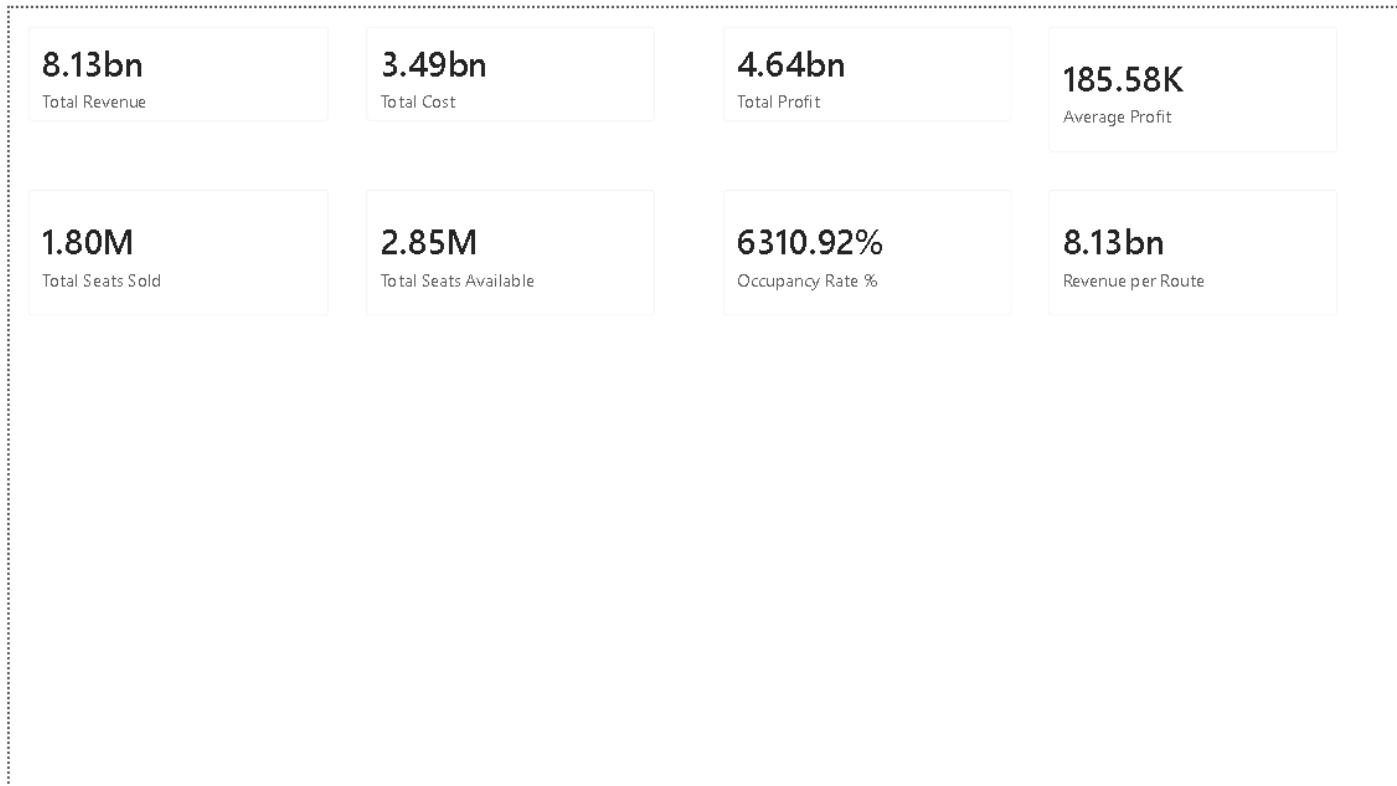
```
25079 •   SELECT
25080   RouteCode,
25081   ROUND(
25082     SUM(Revenue) / SUM(FlightDurationMins),
25083     2
25084   ) AS RevenuePerMinute,
25085   RANK() OVER (
25086     ORDER BY SUM(Revenue) / SUM(FlightDurationMins) DESC

```

RouteCode	RevenuePerMinute	RouteRank
BOM-GOI	2964.85	1
JAI-HYD	2952.36	2
BLR-GOI	2938.91	3
DEL-PNQ	2905.79	4
GOI-AMD	2889.78	5
MAA-DEL	2888.27	6
GOI-DEL	2872.69	7
PNQ-BLR	2857.71	8
JAI-PNQ	2857.34	9
JAI-DEL	2854.69	10
HYD-BOM	2845.67	11
AMD-HYD	2844.45	12
HYD-PNQ	2829.05	13
GOI-BOM	2827.22	14
HYD-DEL	2824.99	15
GOI-JAI	2821.05	16
PNQ-AMD	2815.88	17
JAI-BLR	2815.45	18
AMD-GOI	2804.59	19
CCU-BOM	2796.50	20
MAA-AMD	2792.63	21
PNQ-JAI	2792.56	22



PART 2 – Excel or Power BI Dashboard



✓ <input type="checkbox"/> AirlineRoutesData
<input type="checkbox"/> AircraftType
<input type="checkbox"/> Destination
> <input type="checkbox"/> <input type="checkbox"/> FlightDate
<input type="checkbox"/> Σ FlightDurationMins
<input type="checkbox"/> FlightID
<input type="checkbox"/> Σ OperationalCost
<input type="checkbox"/> Origin
<input type="checkbox"/> Σ Revenue
<input type="checkbox"/> RouteCode
<input type="checkbox"/> Σ SeatsAvailable
<input type="checkbox"/> Σ SeatsSold
✓ <input type="checkbox"/> Measures Table
<input type="checkbox"/> <input type="checkbox"/> Average Profit
<input type="checkbox"/> Column1
<input type="checkbox"/> <input type="checkbox"/> Occupancy Rate %
<input type="checkbox"/> <input type="checkbox"/> Revenue per Route
<input type="checkbox"/> <input type="checkbox"/> Total Cost
<input type="checkbox"/> <input type="checkbox"/> Total Profit
<input type="checkbox"/> <input type="checkbox"/> Total Revenue
<input type="checkbox"/> <input type="checkbox"/> Total Seats Available
<input type="checkbox"/> <input type="checkbox"/> Total Seats Sold

Airline Route Analysis

Total Cost
3bn

Total Revenue
8.13bn

Total Profit
4.64bn

Total Seats Available
2.85M

Total Seats Sold
1.80M

