

## Airline Flights SQL Queries

### 1) Total Flights Per Airline:

```
select airline, count(*) as total_flights
from airlines_flights_data
group by airline
order by total_flights DESC;
```

	airline	total_flights
1	Vistara	127859
2	Air_India	80892
3	Indigo	43120
4	GO_FIRST	23173
5	AirAsia	16098
6	SpiceJet	9011

### 2) Count Evening Flights:

```
select airline, COUNT(*) as evening_flights from airlines_flights_data
where departure_time= 'Evening'
group by airline
order by evening_flights DESC;
```

	airline	evening_flights
1	Vistara	27424
2	Air_India	18626
3	Indigo	8460
4	GO_FIRST	4904
5	AirAsia	3657
6	SpiceJet	2031

### 3) Average Ticket Price by Airline:

```
SELECT airline, AVG(cast(price as decimal(10,2))) AS avg_price
FROM airlines_flights_data
GROUP BY airline
ORDER BY avg_price DESC;
```

	airline	avg_price
1	Vistara	30396.536301
2	Air_India	23507.019111
3	SpiceJet	6179.278881
4	GO_FIRST	5652.007595
5	Indigo	5324.216303
6	AirAsia	4091.072741

#### 4) Economy vs Business flights:

```
SELECT class, count(flight) as total_flight from airlines_flights_data
where class IN ('Economy', 'business')
group by class;
```

	class	total_flight
1	Business	93487
2	Economy	206666

#### 5) Flights by Number of Stops:

```
SELECT stops, count(*) as total_flights as AVG_price from airlines_flights_data
group by stops
order by total_flights DESC;
```

	stops	total_flights
1	one	250863
2	zero	36004
3	two_or_more	13286

#### 6) Busiest Routes:

```
select source_city, destination_city, COUNT(*) as flight from airlines_flights_data
group by source_city, destination_city
order by flight DESC;
```

Results Messages

	source_city	destination_city	flight
1	Delhi	Mumbai	15289
2	Mumbai	Delhi	14809
3	Delhi	Bangalore	14012
4	Bangalore	Delhi	13756
5	Bangalore	Mumbai	12939
6	Mumbai	Bangalore	12885
7	Mumbai	Kolkata	12602
8	Delhi	Kolkata	11934
9	Kolkata	Mumbai	11467
10	Delhi	Chennai	10780
11	Kolkata	Delhi	10506
12	Mumbai	Hyderabad	10470
13	Mumbai	Chennai	10130
14	Hyderabad	Mumbai	10064
15	Bangalore	Kolkata	10028
16	Kolkata	Bangalore	9824
17	Chennai	Delhi	9783
18	Chennai	Mumbai	9338
19	Delhi	Hyderabad	9328
20	Bangalore	Hyderabad	8928
21	Hyderabad	Delhi	8506
22	Hyderabad	Kolkata	7987
23	Kolkata	Hyderabad	7897
24	Hyderabad	Bangalore	7854
24	Hyderabad	Bangalore	7854
25	Chennai	Kolkata	6983
26	Kolkata	Chennai	6653
27	Chennai	Bangalore	6493
28	Bangalore	Chennai	6410
29	Hyderabad	Chennai	6395
30	Chennai	Hyderabad	6103

## 7) Average Duration by Route:

```
select source_city, destination_city , AVG(cast(duration as float)) as AVG_duration
from airlines_flights_data
group by source_city, destination_city
order by AVG_duration DESC;
```

Results Messages

	source_city	destination_city	AVG_duration
1	Kolkata	Chennai	14.7741815637829
2	Chennai	Kolkata	14.5157740359557
3	Bangalore	Chennai	14.4802075091372
4	Bangalore	Hyderabad	14.1624327835136
5	Chennai	Bangalore	13.9525935638122
6	Kolkata	Hyderabad	13.8531075149484
7	Kolkata	Bangalore	13.792946875241
8	Hyderabad	Kolkata	13.5353224100332
9	Hyderabad	Chennai	13.2932384689121
10	Mumbai	Hyderabad	13.2633104122471
11	Chennai	Hyderabad	13.153984931733
12	Bangalore	Kolkata	13.0991434048598
13	Kolkata	Mumbai	12.9919324811505
14	Mumbai	Kolkata	12.8368481154897
15	Delhi	Kolkata	12.7359661476605
16	Mumbai	Chennai	12.6659002875646
17	Delhi	Hyderabad	12.5183501187105
18	Delhi	Chennai	12.4339647457639
19	Chennai	Mumbai	12.3746562441326
20	Hyderabad	Bangalore	12.0933167864371
21	Hyderabad	Mumbai	11.9629232957959
22	Mumbai	Bangalore	11.6120225161788
23	Kolkata	Delhi	11.6049885756171
24	Chennai	Delhi	11.1493744312541

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25	Bangalore	Mumbai	10.9050722563964
26	Hyderabad	Delhi	10.8298166025226
27	Delhi	Mumbai	10.3677742137381
28	Delhi	Bangalore	10.3541250384402
29	Mumbai	Delhi	9.81805726844943
30	Bangalore	Delhi	9.77995566082195

## 8) Count flights per departure time:

```
select departure_time, COUNT(*) as total_flights
from airlines_flights_data
group by departure_time;
```

Results Messages		
	departure_time	total_flights
1	Evening	65102
2	Early_Morning	66790
3	Afternoon	47794
4	Morning	71146
5	Night	48015
6	Late_Night	1306

### 9) Minimum and maximum flight price per class:

```
select class, MIN(price) as Min_price , MAX(price) as Max_price
from airlines_flights_data
group by class;
```

Results Messages			
	class	Min_price	Max_price
1	Business	12000	123071
2	Economy	1105	42349

### 10) Flights with the longest duration:

```
select Top 5 flight, duration, source_city, destination_city
from airlines_flights_data
order by duration DESC;
```

Results Messages				
	flight	duration	source_city	destination_city
1	AI-672	49.8300018310547	Chennai	Bangalore
2	AI-672	49.8300018310547	Chennai	Bangalore
3	AI-610	47.75	Bangalore	Chennai
4	AI-610	47.75	Bangalore	Chennai
5	UK-822	47.0800018310547	Chennai	Bangalore

### 11) Average duration of flights by departure time:

```
select departure_time, AVG(duration) as Avg_duration
from airlines_flights_data
group by departure_time;
```

Results Messages		
	departure_time	Avg_duration
1	Evening	13.6424925504654
2	Early_Morning	11.5879452030117
3	Afternoon	10.7570075735194
4	Night	14.1239625174242
5	Late_Night	7.32038286186835
6	Morning	11.3038083644419

## 12) The cheapest flight per airline:

```
SELECT airline,MIN(price) AS cheapest_price
from airlines_flights_data
group by airline;
```

Results Messages		
	airline	cheapest_price
1	Air_India	1526
2	Vistara	1714
3	Indigo	1105
4	GO_FIRST	1105
5	SpiceJet	1106
6	AirAsia	1105



## 13) The most expensive flight per route:

```
SELECT source_city,destination_city ,MAX(price) AS highest_price
from airlines_flights_data
group by source_city,destination_city
order by highest_price DESC;
```

Results		Messages	
	source_city	destination_city	highest_price
1	Kolkata	Delhi	123071
2	Delhi	Kolkata	117307
3	Hyderabad	Mumbai	115211
4	Kolkata	Hyderabad	114705
5	Chennai	Mumbai	114704
6	Mumbai	Bangalore	114523
7	Delhi	Hyderabad	114507
8	Mumbai	Chennai	111964
9	Bangalore	Delhi	111883
10	Mumbai	Delhi	111437
11	Kolkata	Mumbai	110936
12	Chennai	Bangalore	107597
13	Kolkata	Bangalore	105638
14	Bangalore	Kolkata	105168
15	Chennai	Kolkata	104624
16	Delhi	Chennai	104466
17	Bangalore	Mumbai	103819
18	Chennai	Delhi	103683
19	Mumbai	Kolkata	100909
20	Mumbai	Hyderabad	99677
21	Hyderabad	Bangalore	97767
22	Hyderabad	Kolkata	97381
23	Delhi	Mumbai	95657
24	Hyderabad	Chennai	95208
25	Kolkata	Chennai	95183
26	Chennai	Hyderabad	92752
27	Bangalore	Chennai	90720
28	Hyderabad	Delhi	86203
29	Delhi	Bangalore	85353
30	Bangalore	Hyderabad	83239

#### 14) Flights departing within the next 7 days:

```
SELECT flight, airline, departure_time, days_left
from airlines_flights_data
where days_left <= 7
order by days_left ASC;
```

 Results	 Messages
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	flight	airline	departure_time	days_left
1	UK-859	Vistara	Moming	1
2	SG-8107	SpiceJet	Early_Moming	1
3	I5-1529	AirAsia	Moming	1
4	SG-8709	SpiceJet	Evening	1
5	6E-2247	Indigo	Moming	1
6	UK-833	Vistara	Early_Moming	1
7	AI-891	Air_India	Evening	1
8	SG-8157	SpiceJet	Early_Moming	1
9	6E-2005	Indigo	Moming	1
10	UK-839	Vistara	Afternoon	1
11	AI-891	Air_India	Evening	1
12	I5-764	AirAsia	Early_Moming	1
13	6E-6205	Indigo	Afternoon	1
14	6E-6238	Indigo	Moming	1
15	6E-2178	Indigo	Early_Moming	1
16	UK-995	Vistara	Moming	1
17	AI-542	Air_India	Moming	1
18	6E-2485	Indigo	Afternoon	1
19	AI-504	Air_India	Night	1
20	UK-963	Vistara	Moming	1
21	AI-560	Air_India	Moming	1
22	AI-439	Air_India	Early_Moming	1
23	AI-542	Air_India	Moming	1
24	UK-945	Vistara	Moming	1