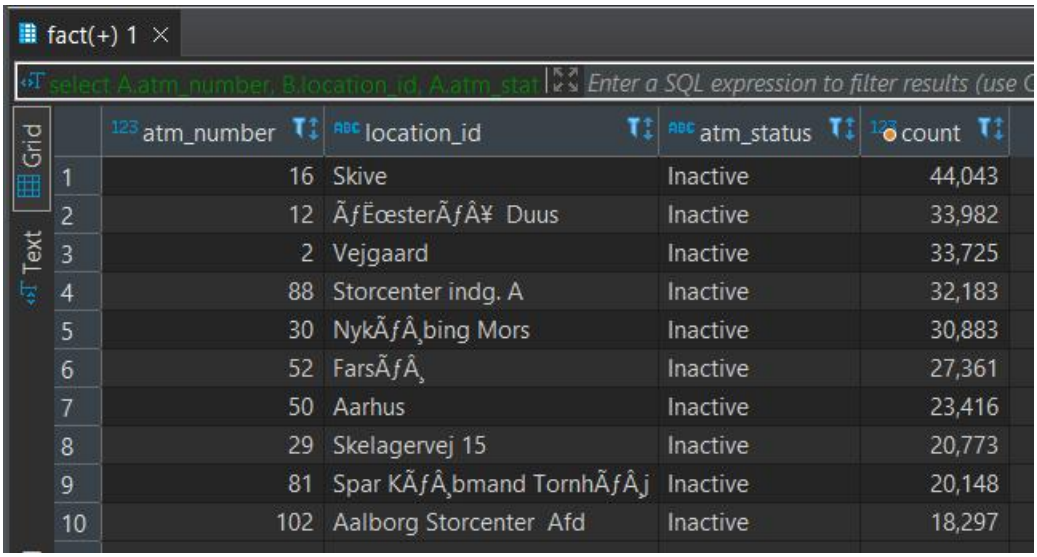
Solving analytical queries on Redshift Cluster

Here, you have to write the query used for solving the question and the screenshots of the table which is outputted after the query is run on the AWS Redshift Query editor UI.

1. **Top 10 ATMs where most transactions are in the 'inactive' state**

```
select A.atm_number, B.location_id, A.atm_status, count(*) as count
from fact_atm_trans A , dim_atm B
where A.atm_number = B.atm_number and
A.atm_status = 'Inactive'
group by A.atm_number , B.location_id , A.atm_status
order by count desc limit 10;
```



	atm_number	location_id	atm_status	count
1	16	Skive	Inactive	44,043
2	12	ÃƒÆ’Ã¦sterÃƒÂ¥ Duus	Inactive	33,982
3	2	Vejgaard	Inactive	33,725
4	88	Storcenter indg. A	Inactive	32,183
5	30	NykÃƒÂ¸bing Mors	Inactive	30,883
6	52	FarsÃƒÂ¸	Inactive	27,361
7	50	Aarhus	Inactive	23,416
8	29	Skelagervej 15	Inactive	20,773
9	81	Spar KÃƒÂ¸bmand TornhÃƒÂ¸j	Inactive	20,148
10	102	Aalborg Storcenter Afd	Inactive	18,297

2. **Number of ATM failures corresponding to the different weather conditions recorded at the time of the transactions**

```
select distinct weather_main, atm_status, count(atm_status) as count_atm_failures
from fact_atm_trans
where atm_status='Inactive'
group by weather_main, atm_status
order by count_atm_failures desc
```

fact_atm_trans 1

```
select distinct weather_main, atm_status, count
```

Enter a SQL expression to

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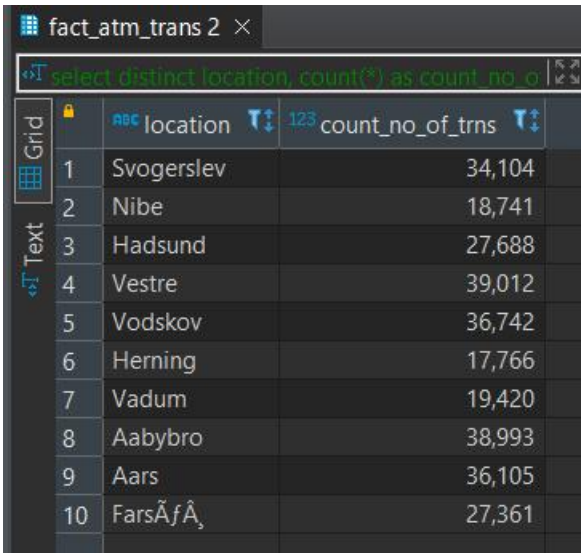
	weather_main	atm_status	count_atm_failures
1	Clouds	Inactive	194,027
2	Rain	Inactive	86,017
3	Clear	Inactive	85,531
4	Mist	Inactive	12,864
5	Drizzle	Inactive	8,670
6	Snow	Inactive	4,813
7	Fog	Inactive	3,729
8	[NULL]	Inactive	1,645
9	Thunderstorm	Inactive	361
10	TORNADO	Inactive	1

3. Top 10 ATMs with the most number of transactions throughout the year

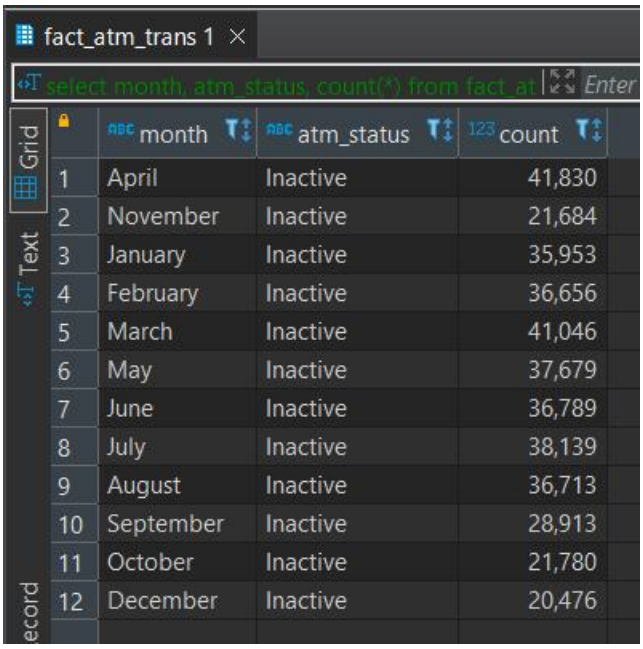
```
select location, count(*) as count_no_of_trns
from fact_atm_trans
group by location
limit 10;
```



	location	count_no_of_trns
1	Svogerslev	34,104
2	Nibe	18,741
3	Hadsund	27,688
4	Vestre	39,012
5	Vodskov	36,742
6	Herning	17,766
7	Vadum	19,420
8	Aabybro	38,993
9	Aars	36,105
10	FarsÃƒÂ¸	27,361

4. **Number of overall ATM transactions going inactive per month for each month**

```
select month, atm_status, count(*)
from fact_atm_trans
where atm_status = 'Inactive'
group by month, atm_status;
```



fact_atm_trans 1

select month, atm_status, count(*) from fact_at | Enter

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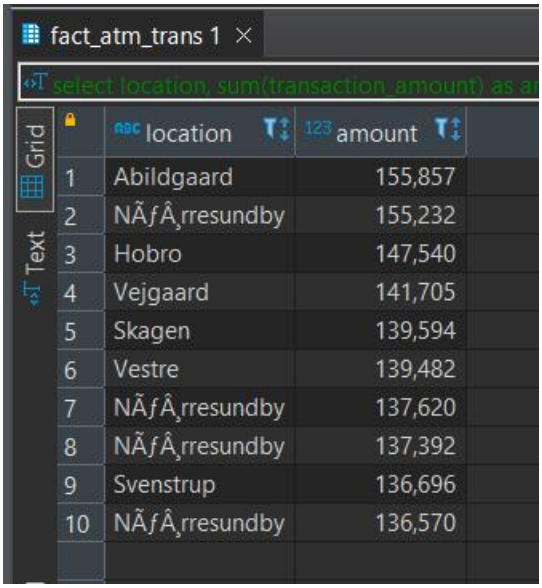
	month	atm_status	count
1	April	Inactive	41,830
2	November	Inactive	21,684
3	January	Inactive	35,953
4	February	Inactive	36,656
5	March	Inactive	41,046
6	May	Inactive	37,679
7	June	Inactive	36,789
8	July	Inactive	38,139
9	August	Inactive	36,713
10	September	Inactive	28,913
11	October	Inactive	21,780
12	December	Inactive	20,476

5. **Top 10 ATMs with the highest total withdrawn amount throughout the year**

```
select location, sum(transaction_amount) as amount
from fact_atm_trans
group by location, transaction_amount
order by amount desc
limit 10;
```



fact_atm_trans 1

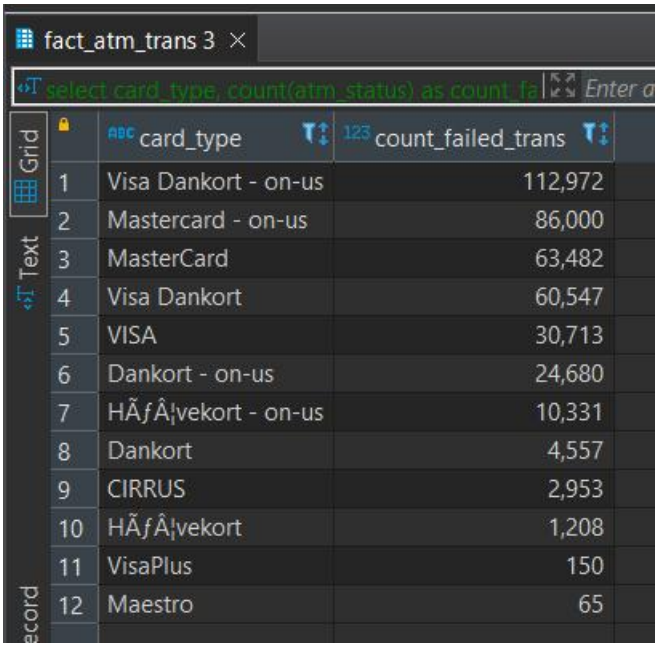
select location, sum(transaction_amount) as ar

Grid | Text

	location	amount
1	Abildgaard	155,857
2	NÃƒÂ¸rresundby	155,232
3	Hobro	147,540
4	Vejgaard	141,705
5	Skagen	139,594
6	Vestre	139,482
7	NÃƒÂ¸rresundby	137,620
8	NÃƒÂ¸rresundby	137,392
9	Svenstrup	136,696
10	NÃƒÂ¸rresundby	136,570

6. **Number of failed ATM transactions across various card types**

```
select card_type, count(atm_status) as count_failed_trans
from fact_atm_trans
where atm_status='Inactive'
group by card_type
order by count_failed_trans desc;
```



fact_atm_trans 3

```
select card_type, count(atm_status) as count_fa
```

Enter a

Grid | Text

	card_type	count_failed_trans
1	Visa Dankort - on-us	112,972
2	Mastercard - on-us	86,000
3	MasterCard	63,482
4	Visa Dankort	60,547
5	VISA	30,713
6	Dankort - on-us	24,680
7	HÃƒÂ¦vekort - on-us	10,331
8	Dankort	4,557
9	CIRRUS	2,953
10	HÃƒÂ¦vekort	1,208
11	VisaPlus	150
12	Maestro	65

7. **Number of transactions happening on an ATM on weekdays and on weekends throughout the year. Order this by the ATM_number, ATM_manufacturer, location, weekend_flag and then total_transaction_count**

Not able to solve

8. **Most active day in each ATMs from location "Vejgaard"**

```
WITH summary as (select atm_number, month, day, weekday, count(*) as
total_transaction_count,
                ROW_NUMBER() OVER(PARTITION BY atm_number
                                  ORDER BY total_transaction_count DESC) AS rank
                                  from fact_atm_trans
                                  where location='Vejgaard'
                                  group by atm_number, month, day, weekday
                            order by atm_number desc
                            )
SELECT atm_number, month, day, weekday, total_transaction_count
  FROM summary
        WHERE rank = 1
        order by total_transaction_count desc
```