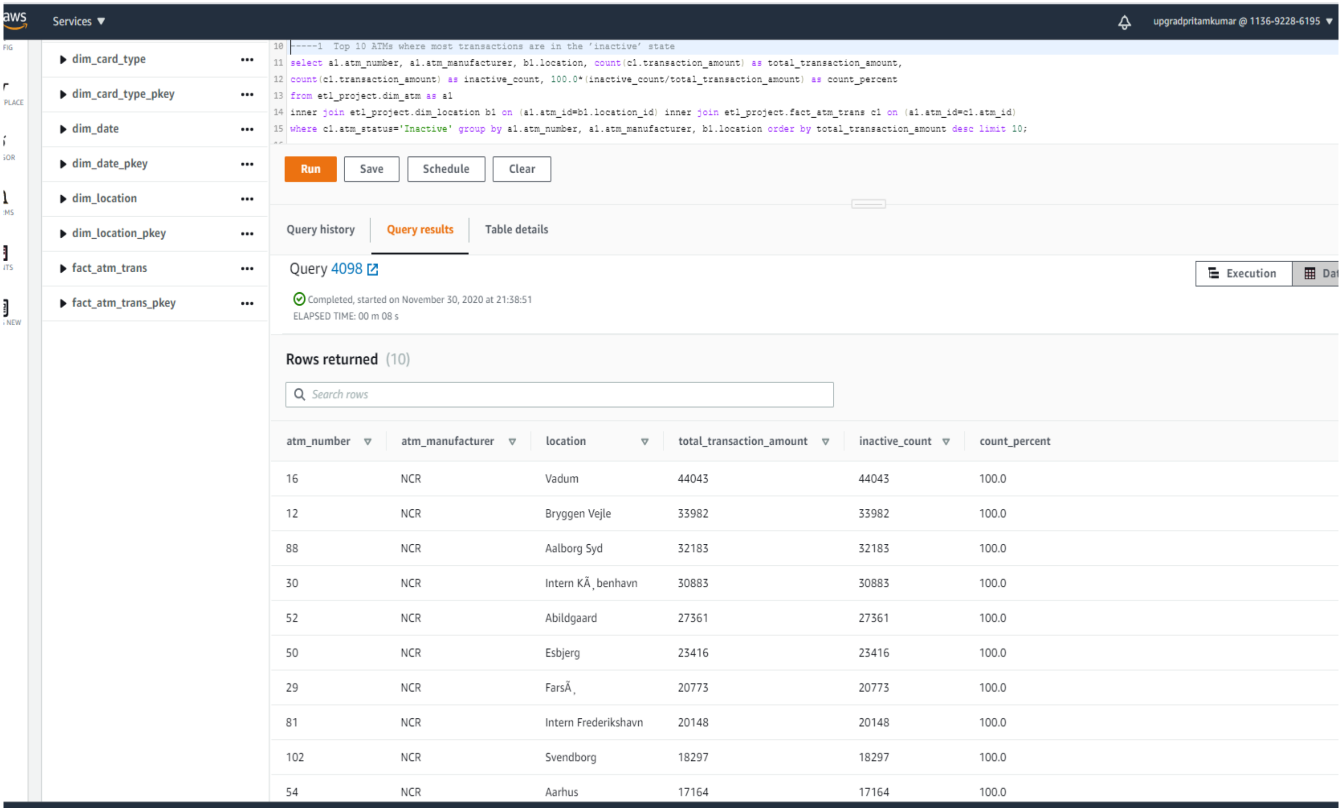
Solving analytical queries on RedShift Cluster

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 a1.atm_number, a1.atm_manufacturer, b1.location, count(c1.transaction_amount) as total_transaction_amount,
count(c1.transaction_amount) as inactive_count,
100.0*(inactive_count/total_transaction_amount) as count_percent
from etl_project.dim_atm as a1
inner join etl_project.dim_location b1 on (a1.atm_id=b1.location_id)
inner join etl_project.fact_atm_trans c1 on (a1.atm_id=c1.atm_id)
where c1.atm_status='Inactive'
group by a1.atm_number, a1.atm_manufacturer, b1.location order by total_transaction_amount desc limit 10;



```
-----1  Top 10 ATMs where most transactions are in the 'inactive' state
select a1.atm_number, a1.atm_manufacturer, b1.location, count(c1.transaction_amount) as total_transaction_amount,
count(c1.transaction_amount) as inactive_count, 100.0*(inactive_count/total_transaction_amount) as count_percent
from etl_project.dim_atm as a1
inner join etl_project.dim_location b1 on (a1.atm_id=b1.location_id) inner join etl_project.fact_atm_trans c1 on (a1.atm_id=c1.atm_id)
where c1.atm_status='Inactive' group by a1.atm_number, a1.atm_manufacturer, b1.location order by total_transaction_amount desc limit 10;
```

Query 4098

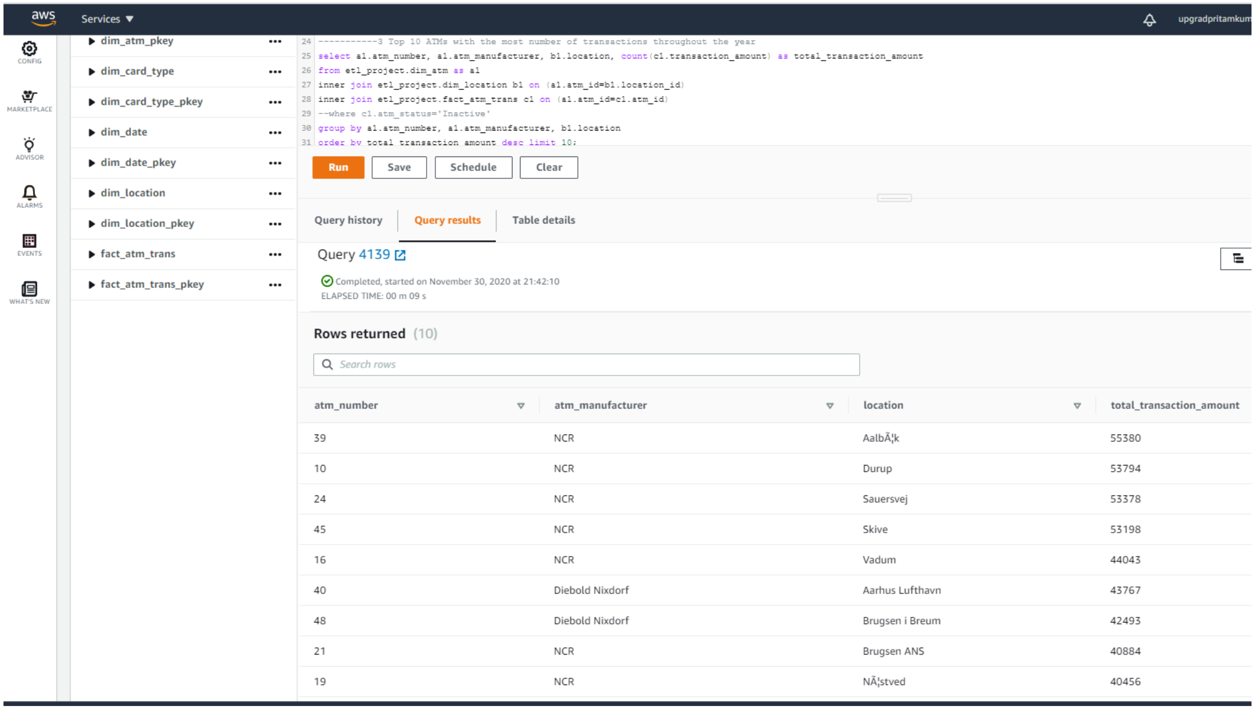
Completed, started on November 30, 2020 at 21:38:51
ELAPSED TIME: 00 m 08 s

Rows returned (10)

atm_number	atm_manufacturer	location	total_transaction_amount	inactive_count	count_percent
16	NCR	Vadum	44043	44043	100.0
12	NCR	Bryggen Vejle	33982	33982	100.0
88	NCR	Aalborg Syd	32183	32183	100.0
30	NCR	Intern KÃ¸benhavn	30883	30883	100.0
52	NCR	Abildgaard	27361	27361	100.0
50	NCR	Esbjerg	23416	23416	100.0
29	NCR	FarsÃ¸	20773	20773	100.0
81	NCR	Intern Frederikshavn	20148	20148	100.0
102	NCR	Svendborg	18297	18297	100.0
54	NCR	Aarhus	17164	17164	100.0

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

```
select a1.atm_number, a1.atm_manufacturer, b1.location, count(c1.transaction_amount) as
total_transaction_amount
from etl_project.dim_atm as a1
inner join etl_project.dim_location b1 on (a1.atm_id=b1.location_id)
inner join etl_project.fact_atm_trans c1 on (a1.atm_id=c1.atm_id)
--where c1.atm_status='Inactive'
group by a1.atm_number, a1.atm_manufacturer, b1.location
order by total_transaction_amount desc limit 10;
```



```
----------3 Top 10 ATMs with the most number of transactions throughout the year
select a1.atm_number, a1.atm_manufacturer, b1.location, count(c1.transaction_amount) as total_transaction_amount
from etl_project.dim_atm as a1
inner join etl_project.dim_location b1 on (a1.atm_id=b1.location_id)
inner join etl_project.fact_atm_trans c1 on (a1.atm_id=c1.atm_id)
--where c1.atm_status='Inactive'
group by a1.atm_number, a1.atm_manufacturer, b1.location
order by total_transaction_amount desc limit 10;
```

Query 4139

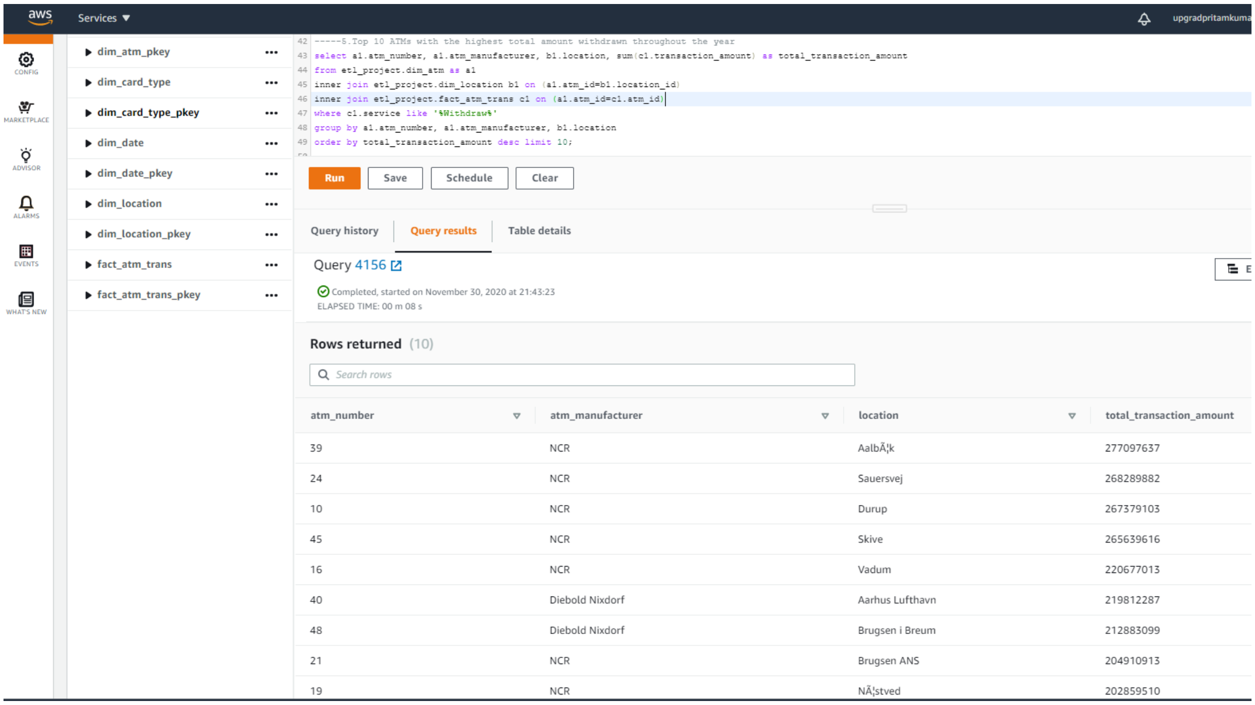
Completed, started on November 30, 2020 at 21:42:10
ELAPSED TIME: 00 m 09 s

Rows returned (10)

atm_number	atm_manufacturer	location	total_transaction_amount
39	NCR	AalbÃ¦k	55380
10	NCR	Durup	53794
24	NCR	Sauersvej	53378
45	NCR	Skive	53198
16	NCR	Vadum	44043
40	Diebold Nixdorf	Aarhus Lufthavn	43767
48	Diebold Nixdorf	Brugsen i Breum	42493
21	NCR	Brugsen ANS	40884
19	NCR	NÃ¦stved	40456

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

select a1.atm_number, a1.atm_manufacturer, b1.location, sum(c1.transaction_amount) as total_transaction_amount
from etl_project.dim_atm as a1
inner join etl_project.dim_location b1 on (a1.atm_id=b1.location_id)
inner join etl_project.fact_atm_trans c1 on (a1.atm_id=c1.atm_id)
where c1.service like '%Withdraw%'
group by a1.atm_number, a1.atm_manufacturer, b1.location
order by total_transaction_amount desc limit 10;



```
-----5.Top 10 ATMs with the highest total amount withdrawn throughout the year
select a1.atm_number, a1.atm_manufacturer, b1.location, sum(c1.transaction_amount) as total_transaction_amount
from etl_project.dim_atm as a1
inner join etl_project.dim_location b1 on (a1.atm_id=b1.location_id)
inner join etl_project.fact_atm_trans c1 on (a1.atm_id=c1.atm_id)
where c1.service like '%Withdraw%'
group by a1.atm_number, a1.atm_manufacturer, b1.location
order by total_transaction_amount desc limit 10;
```

Query 4156

Completed, started on November 30, 2020 at 21:43:23
ELAPSED TIME: 00 m 08 s

Rows returned (10)

Search rows

atm_number	atm_manufacturer	location	total_transaction_amount
39	NCR	AalbÃ¦k	277097637
24	NCR	Sauersvej	268289882
10	NCR	Durup	267379103
45	NCR	Skive	265639616
16	NCR	Vadum	220677013
40	Diebold Nixdorf	Aarhus Lufthavn	219812287
48	Diebold Nixdorf	Brugsen i Breum	212883099
21	NCR	Brugsen ANS	204910913
19	NCR	NÃ¦stved	202859510

4. Most active day in each ATMs from location "Vejgaard"

```sql
select a1.atm_number, a1.atm_manufacturer, b1.location, d1.weekday,
count(c1.transaction_amount) as total_transaction_amount
from etl_project.dim_atm as a1
inner join etl_project.dim_location b1 on (a1.atm_id=b1.location_id)
inner join etl_project.fact_atm_trans c1 on (a1.atm_id=c1.atm_id)
inner join etl_project.dim_date d1 on (d1.date_id=c1.date_id)
where c1.atm_status='Active' and b1.location = 'Vejgaard'
group by a1.atm_number, a1.atm_manufacturer, b1.location , d1.weekday
order by total_transaction_amount;
```