### 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.

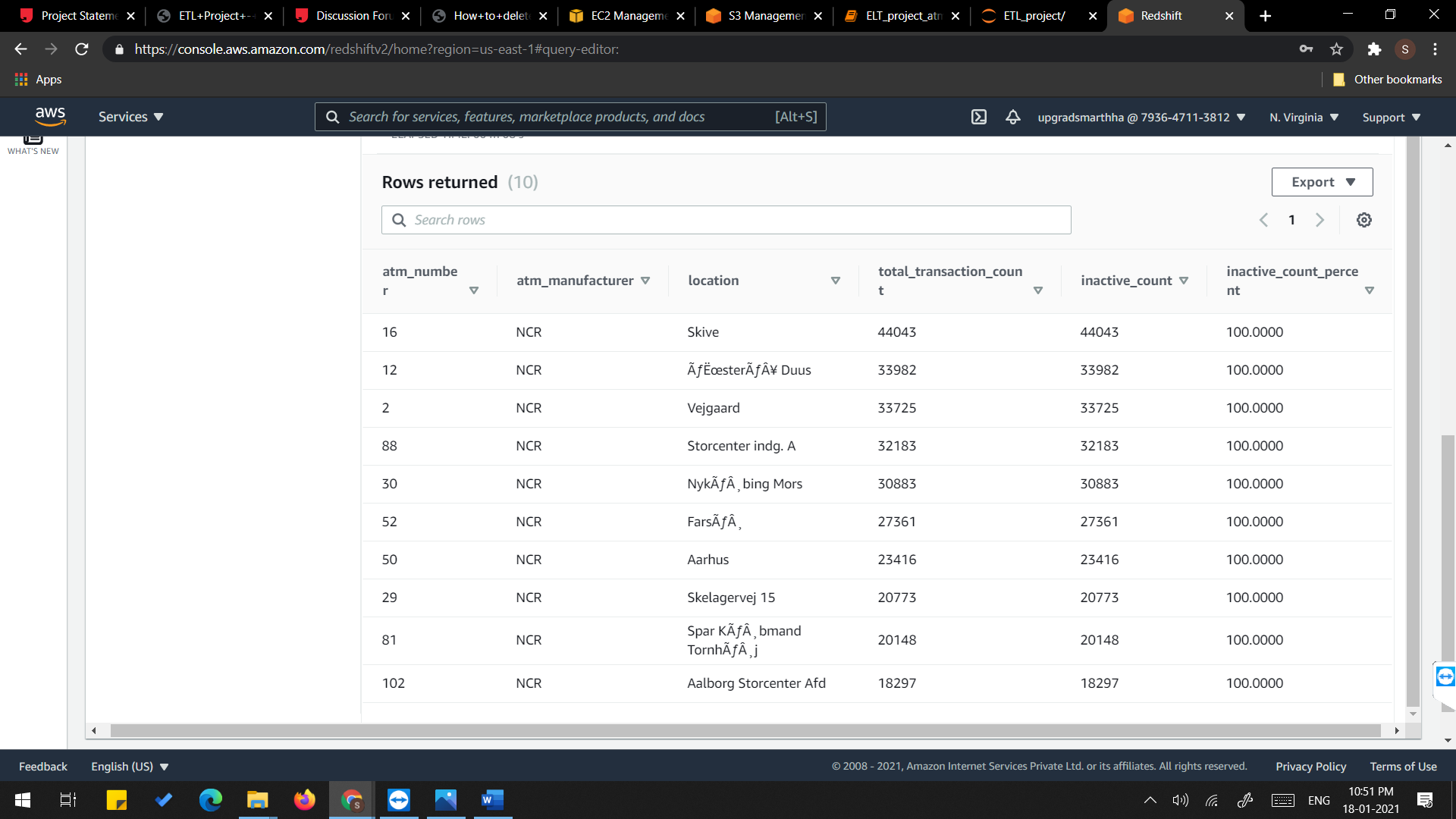
1. **Top 10 ATMs where most transactions are in the ’inactive’ state**

<Query>

#query 1

select a.atm\_number, a.atm\_manufacturer, l.location, count(a.atm\_number) as total\_transaction\_count, sum(case when atm\_status = 'Inactive' then 1 else 0 end) as inactive\_count, round((inactive\_count \* 100.00 / total\_transaction\_count), 4) as inactive\_count\_percent from etlschema.dim\_atm a, etlschema.dim\_location l, etlschema.fact\_atm\_trans f where f.atm\_id = a.atm\_id and f.weather\_loc\_id=l.location\_id and f.atm\_status = 'Inactive' group by a.atm\_number, a.atm\_manufacturer, l.location order by inactive\_count DESC limit 10;

<Screenshot of the resultant table>



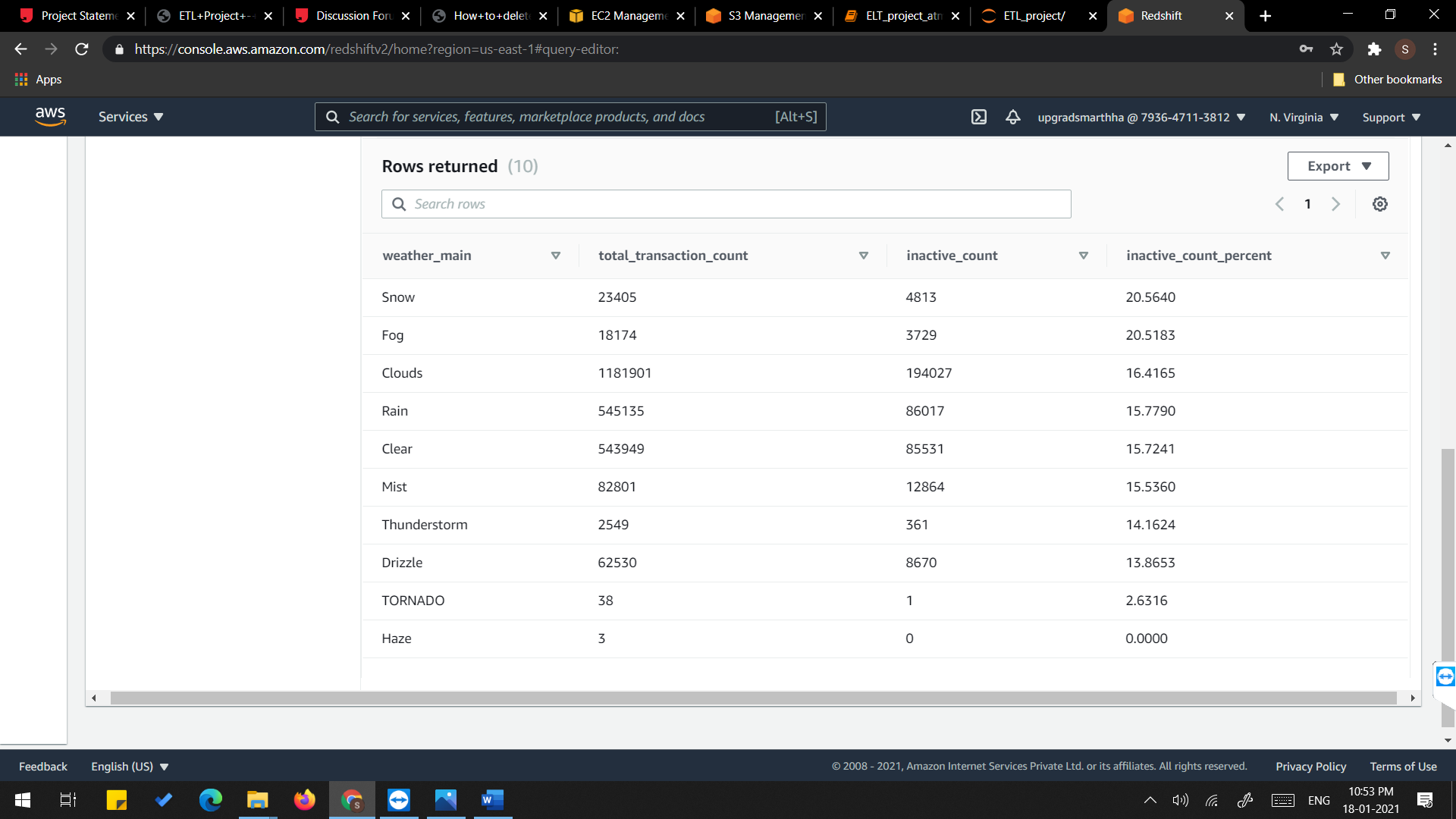
1. **Number of ATM failures corresponding to the different weather conditions recorded at the time of the transactions**

<Query>

#query 2

select weather\_main, count(trans\_id) as total\_transaction\_count, sum(case when atm\_status = 'Inactive' then 1 else 0 end) as inactive\_count, round((inactive\_count \* 100.00 / total\_transaction\_count), 4) as inactive\_count\_percent from etlschema.fact\_atm\_trans where ascii(weather\_main) != 0 group by weather\_main order by inactive\_count\_percent DESC;

<Screenshot of the resultant table>



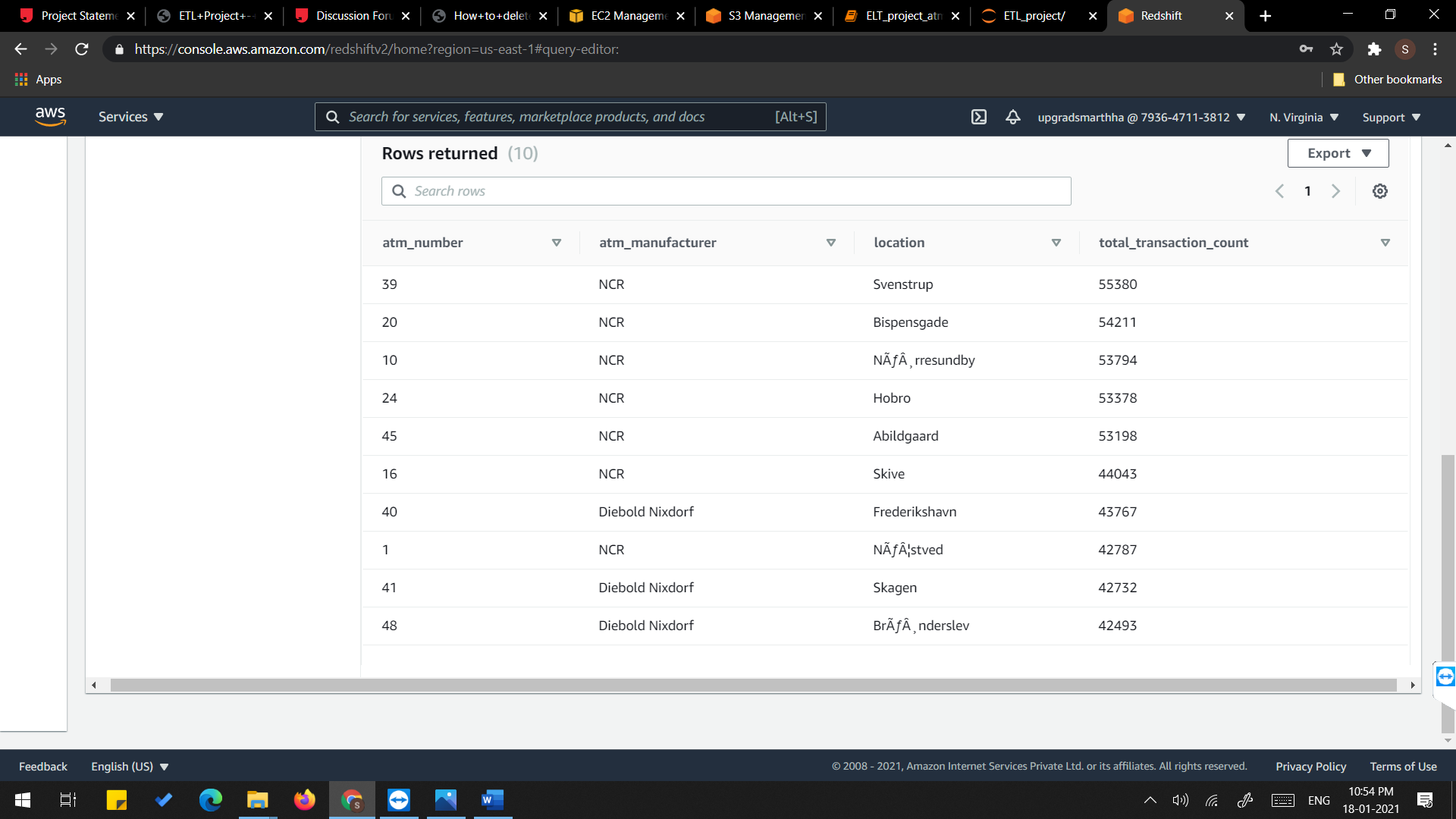
1. **Top 10 ATMs with the most number of transactions throughout the year**

<Query>

#query 3

select a.atm\_number, a.atm\_manufacturer, l.location, count(a.atm\_number) as total\_transaction\_count from etlschema.dim\_atm a, etlschema.dim\_location l, etlschema.fact\_atm\_trans f where f.atm\_id = a.atm\_id and f.weather\_loc\_id=l.location\_id group by a.atm\_number, a.atm\_manufacturer, l.location order by total\_transaction\_count DESC limit 10;

<Screenshot of the resultant table>



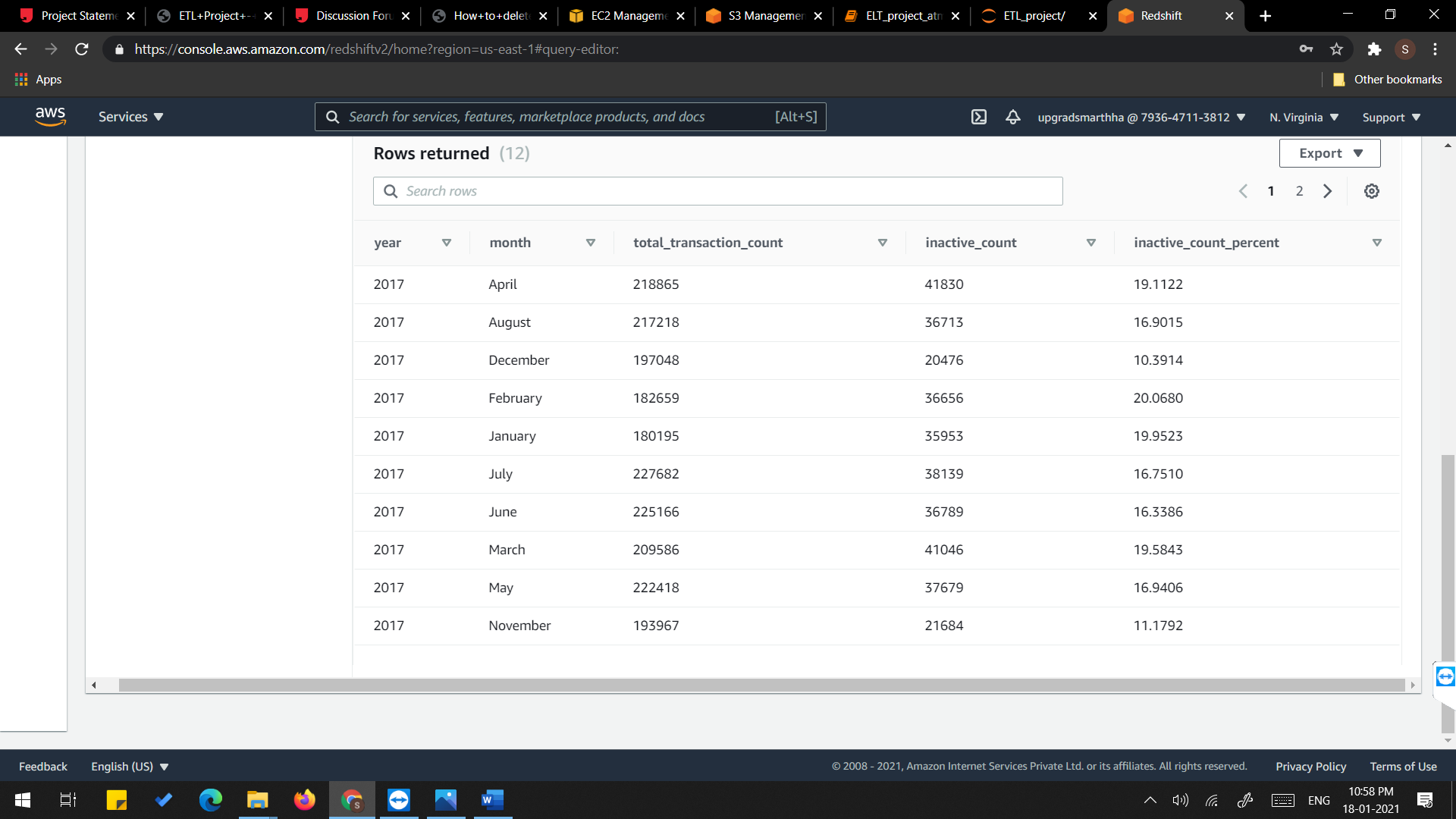
1. **Number of overall ATM transactions going inactive per month for each month**

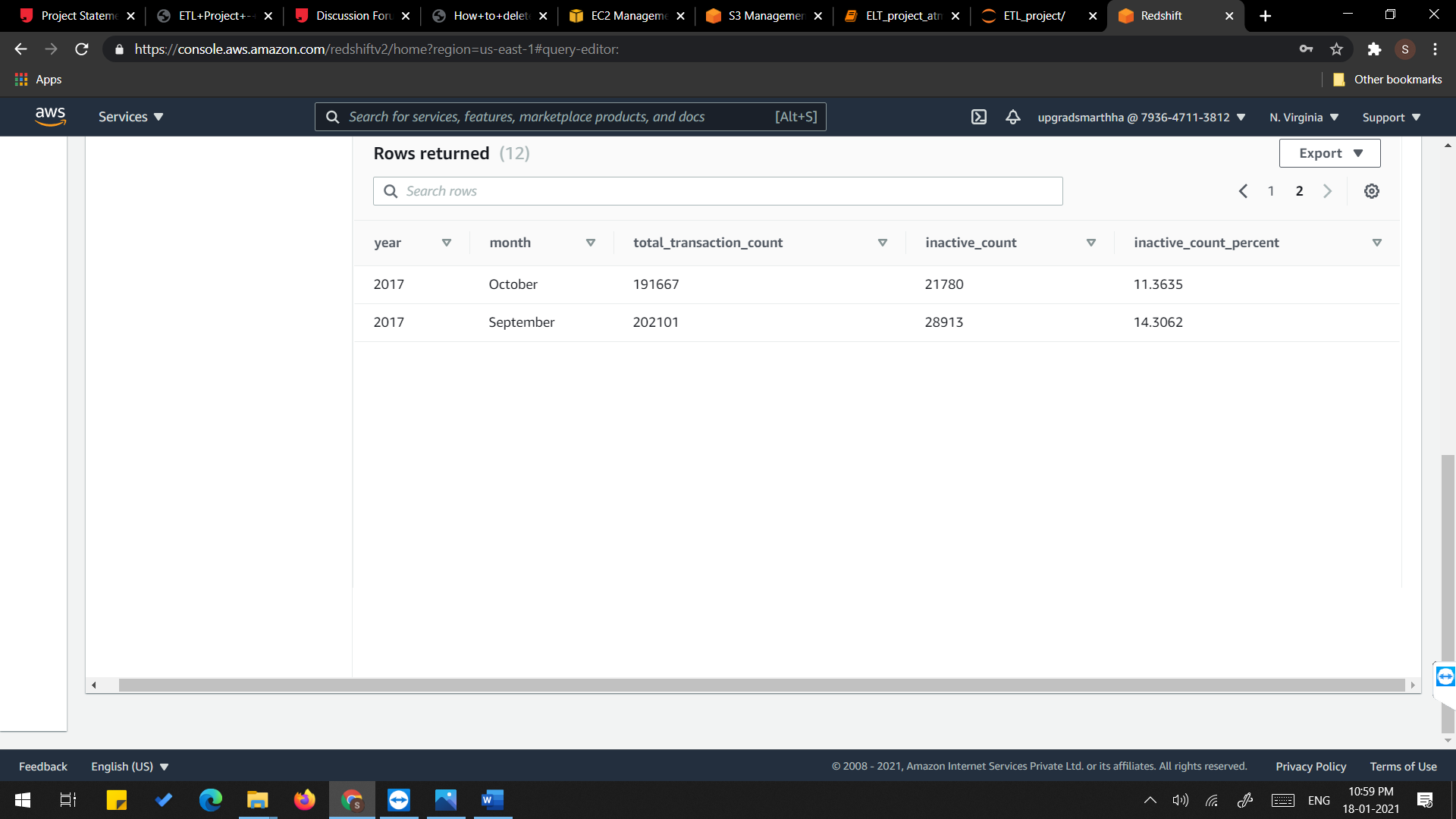
<Query>

#query 4

select d.year,d.month,count(f.trans\_id) as total\_transaction\_count,sum(case when f.atm\_status = 'Inactive' then 1 else 0 end) as inactive\_count, round((inactive\_count \* 100.00 / total\_transaction\_count), 4) as inactive\_count\_percent from etlschema.fact\_atm\_trans f,etlschema.dim\_date d where f.date\_id=d.date\_id group by d.month,d.year order by d.month;

<Screenshot of the resultant table>





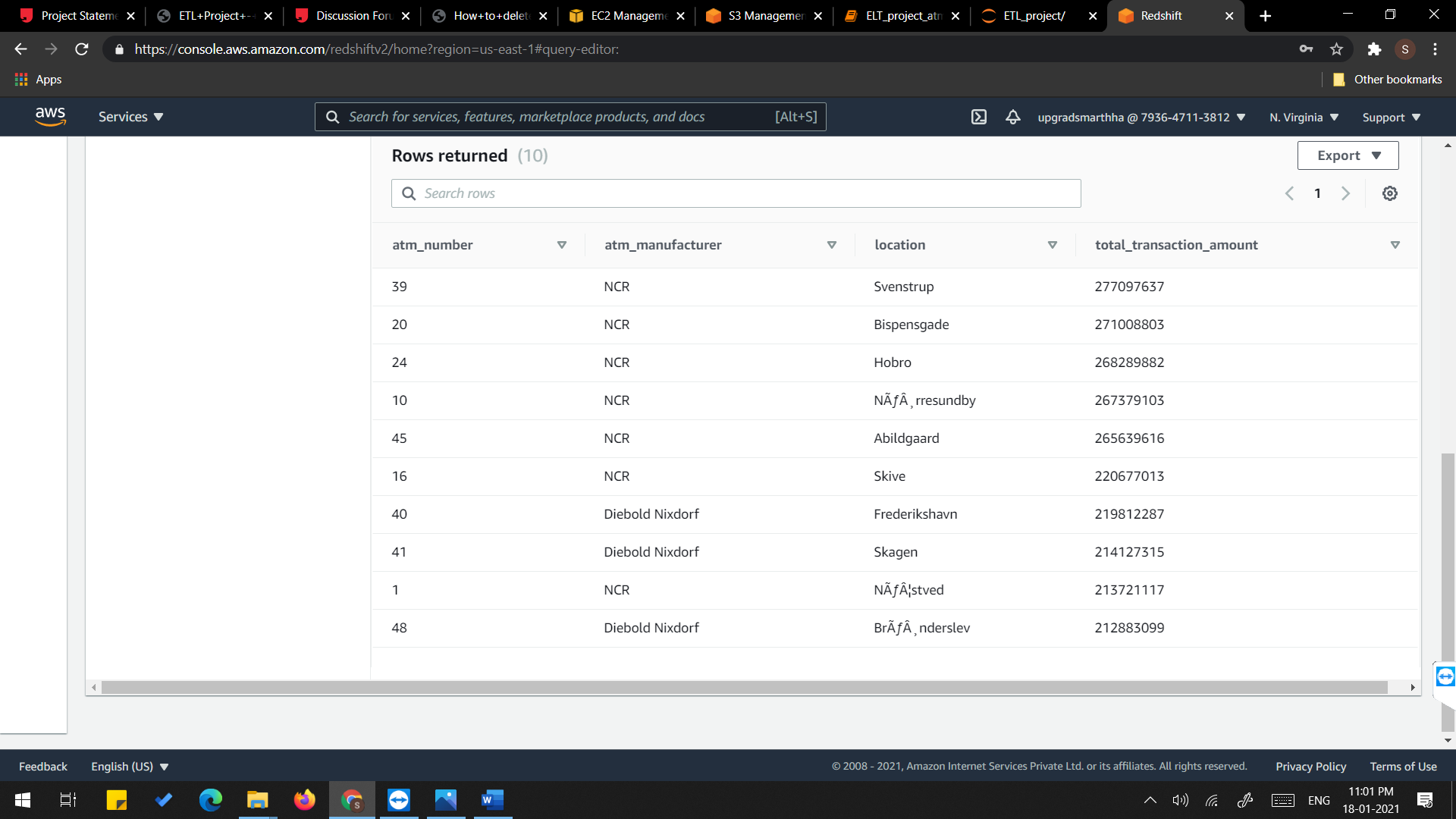
1. **Top 10 ATMs with the highest total withdrawn amount throughout the year**

<Query>

#query 5

select a.atm\_number, a.atm\_manufacturer, l.location, sum(f.transaction\_amount) as total\_transaction\_amount from etlschema.dim\_atm a, etlschema.dim\_location l, etlschema.fact\_atm\_trans f where f.atm\_id = a.atm\_id and f.weather\_loc\_id=l.location\_id group by a.atm\_number, a.atm\_manufacturer, l.location order by total\_transaction\_amount DESC limit 10;

<Screenshot of the resultant table>



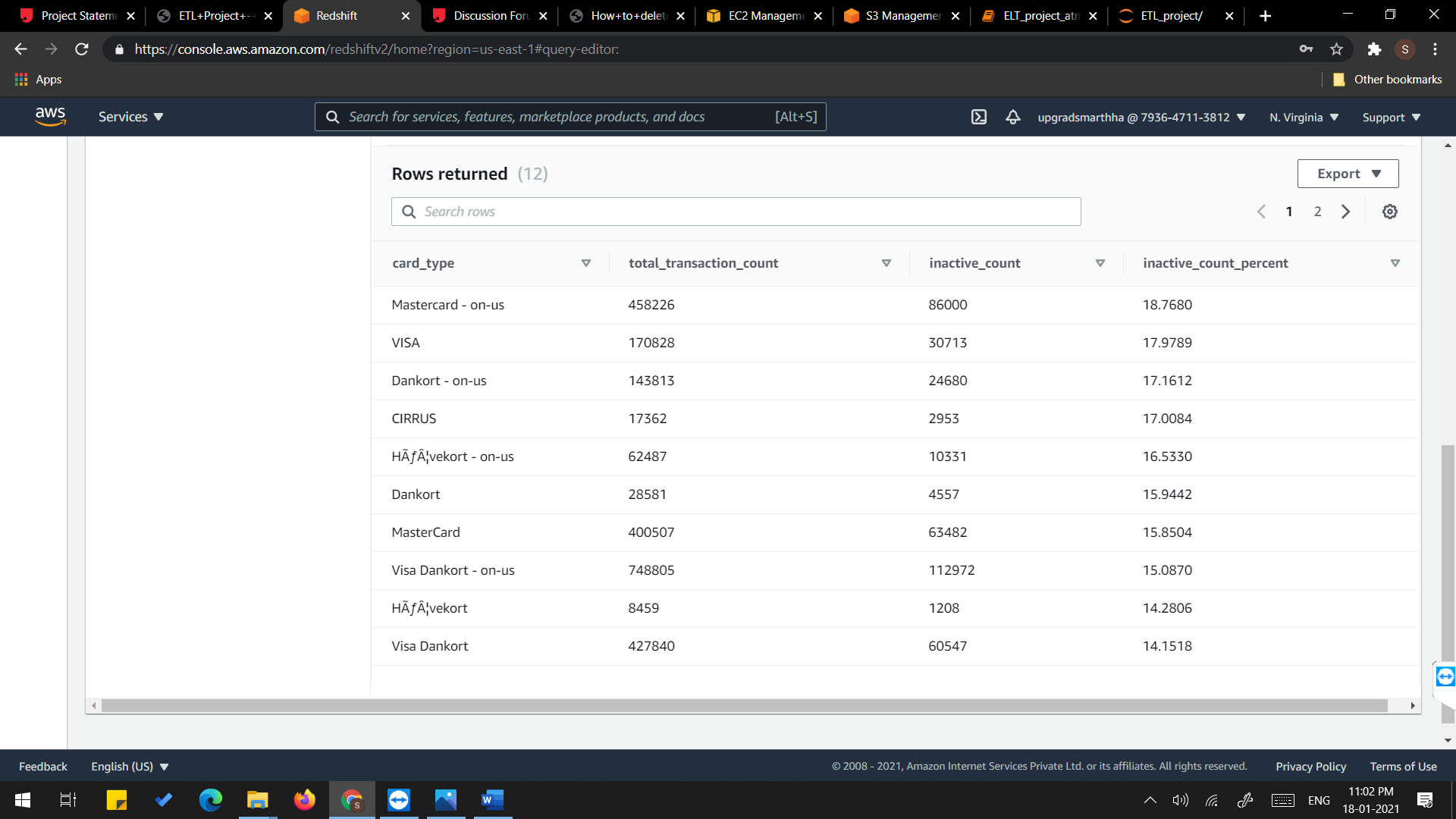
1. **Number of failed ATM transactions across various card types**

<Query>

#query 6

select c.card\_type,count(f.trans\_id) as total\_transaction\_count,sum(case when f.atm\_status = 'Inactive' then 1 else 0 end) as inactive\_count, round((inactive\_count \* 100.00 / total\_transaction\_count), 4) as inactive\_count\_percent from etlschema.fact\_atm\_trans f,etlschema.dim\_card\_type c where f.card\_type\_id=c.card\_type\_id group by c.card\_type order by inactive\_count\_percent desc;

<Screenshot of the resultant table>



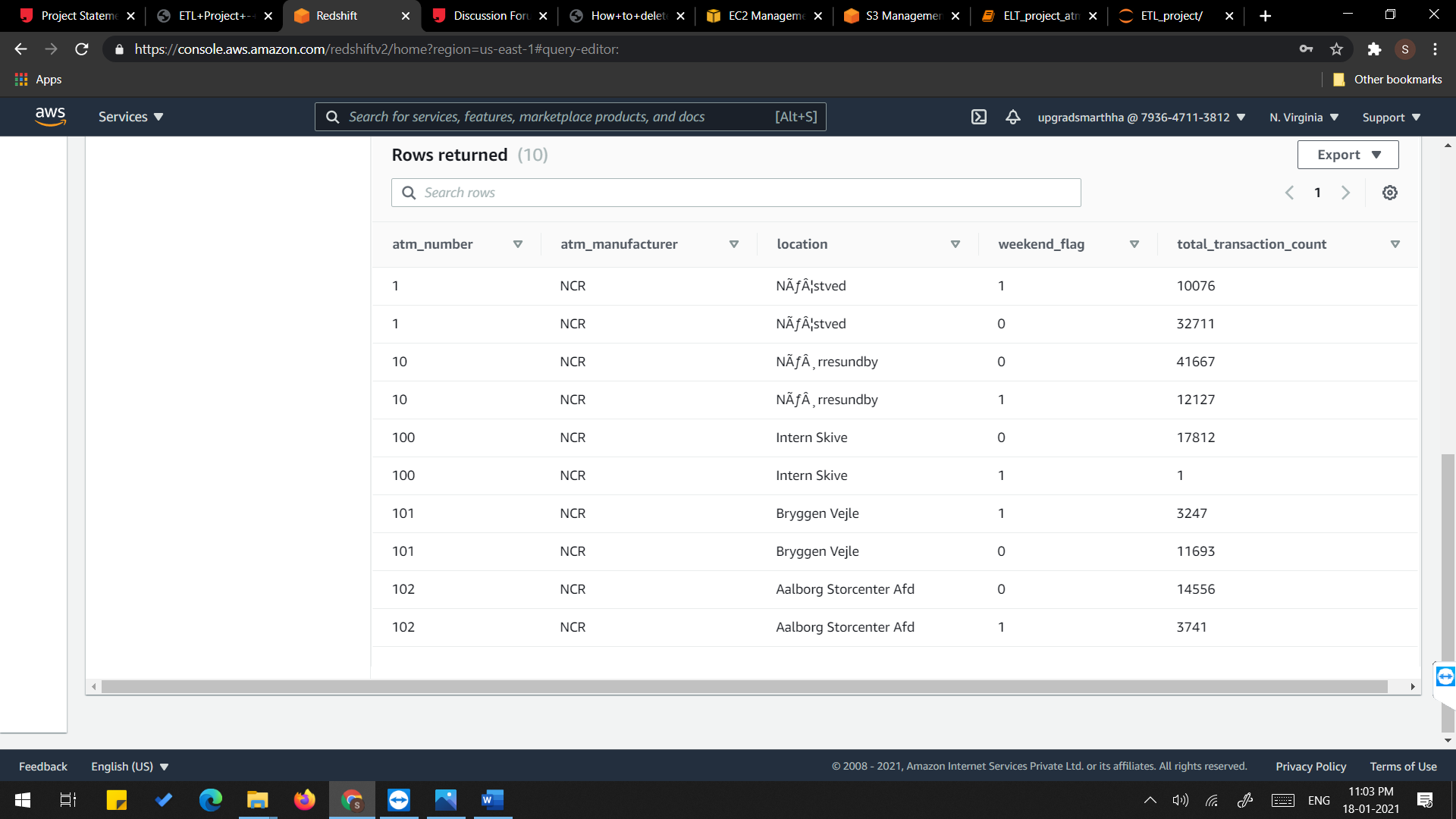
1. **Number of transactions happening on an ATM on weekdays and on weekends throughout the year. Order this by the ATM\_number, ATM\_manufacturer, location, weekend\_flag and then total\_transaction\_count**

<Query>

# query 7

select a.atm\_number, a.atm\_manufacturer, l.location,case when d.weekday='Saturday' then 1 when d.weekday='Sunday' then 1 else 0 end as weekend\_flag, count(a.atm\_number) as total\_transaction\_count from etlschema.dim\_atm a, etlschema.dim\_location l, etlschema.fact\_atm\_trans f, etlschema.dim\_date d where f.atm\_id = a.atm\_id and f.weather\_loc\_id=l.location\_id and f.date\_id=d.date\_id group by a.atm\_number, a.atm\_manufacturer, l.location,weekend\_flag order by a.atm\_number limit 10;

<Screenshot of the resultant table>



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

<Query>

#query 8

select a.atm\_number, a.atm\_manufacturer, l.location,d.weekday, count(a.atm\_number) as total\_transaction\_count from etlschema.dim\_atm a, etlschema.dim\_location l, etlschema.fact\_atm\_trans f, etlschema.dim\_date d where f.atm\_id = a.atm\_id and f.weather\_loc\_id=l.location\_id and f.date\_id=d.date\_id and l.location = 'Vejgaard' group by a.atm\_number, a.atm\_manufacturer, l.location, d.weekday order by d.weekday, total\_transaction\_count limit 2;

<Screenshot of the resultant table>

