

RedshiftQueries

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

```
SELECT atm_number, atm_manufacturer, location, COUNT(trans_id) AS  
transactions  
FROM atm_data.fact_atm_trans T  
INNER JOIN atm_data.dim_atm A ON T.atm_id = A.atm_id  
INNER JOIN atm_data.dim_location L ON A.atm_location_id = L.location_id  
WHERE atm_status = 'Inactive'  
GROUP BY atm_number, atm_manufacturer, location  
ORDER BY transactions DESC  
LIMIT 10;
```

1. Screenshot of the query from AWS Redshift

Rows returned (10)				Export ▼
<input type="text" value="Search rows"/>				< 1 > ⚙
atm_number ▼	atm_manufacturer ▼	location ▼	transactions ▼	
16	NCR	Intern Skive	44043	
12	NCR	Intern ÆfEøesterÃfÃ¥	33982	
2	NCR	Vejgaard	33725	
88	NCR	Aalborg Storcenter Afd	32183	
30	NCR	NykÃfÃ, bing Mors	30883	
52	NCR	FarsÃfÃ,	27361	
50	NCR	Aarhus	23416	
29	NCR	Skelagervej 15	20773	
81	NCR	Spar KÃfÃ, bmand TornhÃfÃ, j	20148	
102	NCR	Storcenter indg. A	18297	

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

```
WITH weather_atm_failure AS
(
    SELECT
        weather_main,
        COUNT(trans_id) AS transactions,
        SUM(CASE WHEN atm_status='Inactive' THEN 1 ELSE 0 END) AS inactive_count
    FROM
        Atm_data.fact_atm_trans
    WHERE
        weather_main != "
    GROUP BY
        weather_main
)
SELECT
    *,
    ROUND(CAST(inactive_count AS numeric(10,2)) / transactions * 100, 2) AS inactive_count_percent
FROM
    weather_atm_failure
ORDER BY
    inactive_count_percent DESC;
```

2. Screenshot of the query from AWS Redshift

weather_main	transactions	inactive_count	inactive_count_percent
Snow	23405	4813	20.56
Fog	18174	3729	20.52
Clouds	1181901	194027	16.42
Rain	545135	86017	15.78
Clear	543949	85531	15.72
Mist	82801	12864	15.54
Thunderstorm	2549	361	14.16
Drizzle	62530	8670	13.87
TORNADO	38	1	2.63
Haze	3	0	0.00

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

```
SELECT
    atm_number,
    atm_manufacturer,
    location,
    COUNT(trans_id) AS transactions
FROM
    atm_data.fact_atm_trans T
INNER JOIN
    atm_data.dim_atm A ON T.atm_id = A.atm_id
INNER JOIN
    atm_data.dim_location L ON A.atm_location_id = L.location_id
GROUP BY
    atm_number,
    atm_manufacturer,
    location
ORDER BY
    transactions DESC
LIMIT 10;
```

3. Screenshot of the query from AWS Redshift

Rows returned (10)				Export ▼
<input type="text" value="Search rows"/>				< 1 > ⚙
atm_number ▼	atm_manufacturer ▼	location ▼	transactions ▼	
39	NCR	Svenstrup	55380	
20	NCR	Bispensgade	54211	
10	NCR	NÅfÅ, rresundby	53794	
24	NCR	Hobro	53378	
45	NCR	Abildgaard	53198	
16	NCR	Intern Skive	44043	
40	Diebold Nixdorf	Frederikshavn	43767	
41	Diebold Nixdorf	Skagen	42732	
48	Diebold Nixdorf	BrÅfÅ, nderslev	42493	
13	NCR	SÅfÅby	41051	

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

```
WITH monthwise_atm_failure AS (  
    SELECT  
        month,  
        COUNT(F.trans_id) AS transactions,  
        SUM(CASE WHEN F.atm_status='Inactive' THEN 1 ELSE 0 END) AS inactive_count  
    FROM  
        atm_data.fact_atm_trans F  
    JOIN  
        atm_data.dim_date D ON F.date_id = D.date_id  
    GROUP BY  
        D.month)  
SELECT  
    *,  
    ROUND(CAST(inactive_count AS numeric(10,2)) / transactions * 100, 2) AS inactive_count_percent  
FROM  
    monthwise_atm_failure  
ORDER BY  
    inactive_count_percent DESC;
```


4. Screenshot of the query from AWS Redshift

Rows returned (12)				Export ▼
<input type="text" value="Search rows"/>				< 1 2 > ⚙
month ▼	transactions ▼	inactive_count ▼	inactive_count_percent ▼	
February	182659	36656	20.07	
January	180195	35953	19.95	
March	209586	41046	19.58	
April	218865	41830	19.11	
May	222418	37679	16.94	
August	217218	36713	16.90	
July	227682	38139	16.75	
June	225166	36789	16.34	
September	202101	28913	14.31	
October	191667	21780	11.36	

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

```
SELECT
    atm_number,
    atm_manufacturer,
    location,
    SUM(transaction_amount) AS total_transaction_amount
FROM
    atm_data.fact_atm_trans T
INNER JOIN
    atm_data.dim_atm A ON T.atm_id = A.atm_id
INNER JOIN
    atm_data.dim_location L ON A.atm_location_id = L.location_id
GROUP BY
    atm_number,
    atm_manufacturer,
    location
ORDER BY
    total_transaction_amount DESC
LIMIT
    10;
```

5. Screenshot of the query from AWS Redshift

Rows returned (10)				Export ▼
<input type="text" value="Search rows"/>				< 1 > ⚙
atm_number ▼	atm_manufacturer ▼	location ▼	total_transaction_amount ▼	
39	NCR	Svenstrup	277097637	
20	NCR	Bispenssgade	271008803	
24	NCR	Hobro	268289882	
10	NCR	NÅfÅ, rresundby	267379103	
45	NCR	Abildgaard	265639616	
16	NCR	Intern Skive	220677013	
40	Diebold Nixdorf	Frederikshavn	219812287	
41	Diebold Nixdorf	Skagen	214127315	
48	Diebold Nixdorf	BrÅfÅ, nderslev	212883099	
13	NCR	SÅfÅby	205905693	

6. Number of failed ATM transactions across various card types

```
SELECT
    atm_number,
    atm_manufacturer,
    location,
    SUM(transaction_amount) AS total_transaction_amount
FROM
    atm_data.fact_atm_trans T
INNER JOIN
    atm_data.dim_atm A ON T.atm_id = A.atm_id
INNER JOIN
    atm_data.dim_location L ON A.atm_location_id = L.location_id
GROUP BY
    atm_number,
    atm_manufacturer,
    location
ORDER BY
    total_transaction_amount DESC
LIMIT
    10;
```

6. Screenshot of the query from AWS Redshift

Rows returned (12)

Export ▼

Q Search rows

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card_type ▼	transactions ▼	inactive_count ▼	inactive_count_percent ▼
Mastercard - on-us	458226	86000	18.77
VISA	170828	30713	17.98
Dankort - on-us	143813	24680	17.16
CIRRUS	17362	2953	17.01
HÃfÃ!vekort - on-us	62487	10331	16.53
Dankort	28581	4557	15.94
MasterCard	400507	63482	15.85
Visa Dankort - on-us	748805	112972	15.09
HÃfÃ!vekort	8459	1208	14.28
Visa Dankort	427840	60547	14.15

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

```
SELECT
    atm_number,
    atm_manufacturer,
    location,
    CASE WHEN weekday IN ('Sunday', 'Saturday') THEN 1 ELSE 0 END AS weekend_flag,
    COUNT(trans_id) AS transactions
FROM
    atm_data.fact_atm_trans T
INNER JOIN
    atm_data.dim_atm A ON T.atm_id = A.atm_id
INNER JOIN
    atm_data.dim_location L ON A.atm_location_id = L.location_id
INNER JOIN
    atm_data.dim_date D ON T.date_id = D.date_id
GROUP BY
    atm_number,
    atm_manufacturer,
    location,
    weekend_flag
ORDER BY
    atm_number,
    atm_manufacturer,
    location,
    weekend_flag,
    transactions
LIMIT
    10;
```

7. Screenshot of the query from AWS Redshift

Rows returned (10)

Export ▼

Search rows

< 1 > ⚙

atm_number	atm_manufacturer	location	weekend_flag	transactions
10	NCR	NÃfÃ, rresundby	0	41667
10	NCR	NÃfÃ, rresundby	1	12127
100	NCR	Intern Skive	0	17812
100	NCR	Intern Skive	1	1
101	NCR	Bryggen Vejle	0	11693
101	NCR	Bryggen Vejle	1	3247
102	NCR	Storcenter indg. A	0	14556
102	NCR	Storcenter indg. A	1	3741
103	Diebold Nixdorf	Vejgaard	0	18570
103	Diebold Nixdorf	Vejgaard	1	2607

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

```
WITH atm_weekday_details AS (  
    SELECT atm_number, atm_manufacturer, location, weekday, COUNT(trans_id) AS transactions  
    FROM atm_data.fact_atm_trans T  
    INNER JOIN atm_data.dim_atm A ON T.atm_id = A.atm_id  
    INNER JOIN atm_data.dim_location L ON A.atm_location_id = L.location_id  
    INNER JOIN atm_data.dim_date D ON T.date_id = D.date_id  
    WHERE location = 'Vejgaard'  
    GROUP BY atm_number, atm_manufacturer, location, weekday  
),  
max_weekday AS (  
    SELECT weekday  
    FROM atm_weekday_details  
    WHERE transactions = (SELECT MAX(transactions) FROM atm_weekday_details)  
    LIMIT 1  
)  
SELECT *  
FROM atm_weekday_details  
WHERE weekday = (SELECT weekday FROM max_weekday)  
ORDER BY transactions;
```


8. Screenshot of the query from AWS Redshift

Rows returned (2)					Export ▼	
<input type="text" value="Search rows"/>					< 1 > ⚙	
atm_number ▼	atm_manufacturer ▼	location ▼	weekday ▼	transactions ▼		
103	Diebold Nixdorf	Vejgaard	Friday	4757		
2	NCR	Vejgaard	Friday	6290		