**Queries**

**Comparison of monthly average precipitation values**

Create table noaadbproject.noaaschema.Precipitation\_analysis AS

WITH MonthlyAvg AS (

SELECT

d.stationid,

da.month\_name,

da.year,

da.month,

s.name,

AVG(d.value) AS avg\_monthly\_prcp

FROM

noaadbproject.noaaschema.Data d

JOIN

noaadbproject.noaaschema.dates da ON da.dateid = d.dateid

JOIN

noaadbproject.noaaschema.stations s ON d.stationid = s.id

WHERE

d.datatypeid = 'PRCP'

AND da.year in (2013,2014,2015,2016,2017,2018,2019,2020,2021, 2022,2023)

AND d.stationid = 'AJ000037985'

GROUP BY

d.stationid, da.year, da.month\_name, da.month, s.name)

SELECT

stationid,

month\_name,

year,

month,

name,

avg\_monthly\_prcp,

LAG(avg\_monthly\_prcp) OVER (PARTITION BY stationid ORDER BY year, month) AS previous\_month\_avg\_prcp

FROM

MonthlyAvg

ORDER BY

year, month

LIMIT 200;

**Count of stations based on different countries:**

CREATE TABLE noaadbproject.noaaschema.stations\_count AS

SELECT l.id AS location\_id,sr.stationid, l.name AS location\_name, lc.name AS location\_category, COUNT (DISTINCT s.id) AS station\_count

FROM noaadbproject.noaaschema.stations s

JOIN noaadbproject.noaaschema.stationrelations sr ON s.id = sr.stationid

JOIN noaadbproject.noaaschema.locations l ON sr.locationid = l.id

JOIN noaadbproject.noaaschema.locationcategories lc ON sr.locationcategoryid = lc.id

GROUP BY l.id, l.name, lc.name, sr.stationid

ORDER BY station\_count DESC

limit 60;

**Average of weather parameters by Year and Month:**

CREATE TABLE noaadbproject.noaaschema.climate AS

SELECT

d.value AS Value,

d.datatypeid as climate\_cond,

s.name AS station\_name,

l.name AS location\_name,

lc.name AS location\_category,

s.latitude,

s.longitude,

dt.date,

dt.quarter,

dt.year,

dt.month\_name,

dt.week,

dt.dateid AS date\_id,

s.id AS station\_id

FROM

noaadbproject.noaaschema.data d

JOIN

noaadbproject.noaaschema.stations s ON d.stationid = s.id

JOIN

noaadbproject.noaaschema.stationrelations sr ON s.id = sr.stationid

JOIN

noaadbproject.noaaschema.locations l ON sr.locationid = l.id

JOIN

noaadbproject.noaaschema.locationcategories lc ON sr.locationcategoryid = lc.id

JOIN

noaadbproject.noaaschema.dates dt ON d.dateid = dt.dateid

WHERE

d.value IS NOT NULL;

**For a particular period (Dec 2022) checking the weather types:**

create table noaadbproject.noaaschema.weather\_dec22 as

select A.datatypeid as weathertype, A.value as value,

S.name as StationName, S.latitude as Latitude, S.longitude as Longitude,

D.date as date, D.year as year, D.month as month,

A.dateid as date\_id, S.id as Station\_id

from noaadbproject.noaaschema.data as A

inner join noaadbproject.noaaschema.stations as S on A.stationid = S.id

inner join noaadbproject.noaaschema.dates as D on A.dateid = D.dateid

where A.dateid between '20221201' and '20221231';

**For a particular station location ( Airports) and period (Dec 2022) checking weather types:**

create table noaadbproject.noaaschema.weather\_custom\_stations\_dec22 as

select A.datatypeid as weathertype, max(A.value) as value,

S.name as StationName, D.date as date, D.year as year, D.month as month,

A.dateid as date\_id, S.id as Station\_id

from noaadbproject.noaaschema.data as A

inner join noaadbproject.noaaschema.stations as S on A.stationid = S.id

inner join noaadbproject.noaaschema.dates as D on A.dateid = D.dateid

where A.dateid between '20221201' and '20221231'

group by A.datatypeid, S.name, A.dateid, D.date, D.year, D.month, S.id

having S.name like '%AIRPORT% CA%'

order by max(A.value) asc;

**Fetching the weather type from 2010 to 2023 for all airport stations :**

create table noaadbproject.noaaschema.weather\_stations\_2010\_2023 as

select A.datatypeid as weathertype, max(A.value) as value,

S.name as StationName, D.date as date, D.year as year, D.month as month,

A.dateid as date\_id, S.id as Station\_id

from noaadbproject.noaaschema.data as A

inner join noaadbproject.noaaschema.stations as S on A.stationid = S.id

inner join noaadbproject.noaaschema.dates as D on A.dateid = D.dateid

where A.dateid between '20100101' and '20231130'

group by A.datatypeid, S.name, A.dateid, D.date, D.year, D.month, S.id

having S.name like '%AIRPORT%'

order by max(A.value) asc;