DATA ANALYST: SQL PORTFOLIO

PREPARED BY

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Professional Background

I have a bachelor's degree in geophysics and a post graduate diploma in Applied geophysics, I have processed and interpreted multiple geophysical data during my studies.
I worked as an intern at City Business of Computers (CBC) and presently an employee at Federal College of Fisheries and Marine Technology as an administrative officer.
I am well skilled in Microsoft word, Microsoft excel and tableau. I work effectively as a team member and also independently
I am always ready to learn and i am ready and looking forward to a new challenge and new opportunities,

Portfolio Outline

Introduction

I was given a theoretical case being a data analyst for a charity organization "EDUCATION FOR ALL". The head of the fundraising team asked me to present the data on donor Insights and donation rates within the fundraising team. My objectives are to

- Increase the number of donors in your database
- Increase the donation frequency of your donors.
- Increase the value of donations in your database.

I was given a duration of 2 weeks to present insights from the donation data to my team and brief my fundraising master plan to increase donations the

I used the datasets EFO_Donation data and EFO_Donor data to answer the business problem

I analyzed my data using SQL Commands such as; JOIN, ORDER BY, WHERE, BETEEN, AND, OR SUM(), COUNT(), AVG(), GROUP BY, I applied the root mean cause analysis to acknowledge the problem and ask question.

From these, I detected the insight of the dataset provided

Root Cause Analysis

The business problem the organization is facing is; How can we bring in more donors and inspire them to donate frequently. The root cause analysis which involves an intense study of getting to the root of the problem was applied.

The root cause analysis can be in the form a 5 why approach which means asking asking questions with the word 'WHY' 5 times.

The questions asked using the root cause analysis are'

Q1: Why do we not have enough donors.

A1: There is a shortage amount of donors who can give frequently

Q2: Why do our donors lack the willingness to donate frequently

A2: There is a need to get our existing donors inspired well to give donations frequently.

Q3: Why do some of our existing donors stop giving donations anymore.

A3: The organization do not value and respect existing donors.

Q4 Why are some of our existing donor switching to other charity organizations

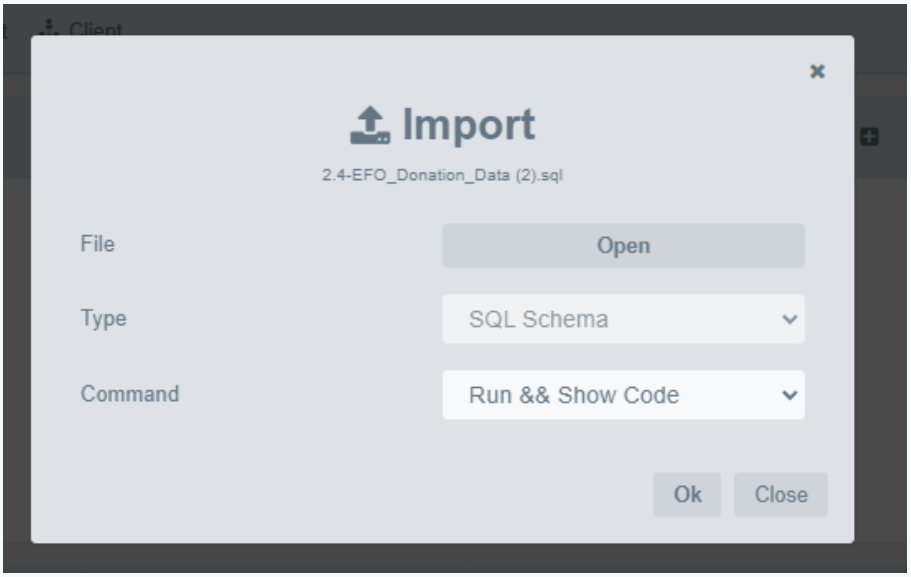
A4. They get better services and are well appreciated

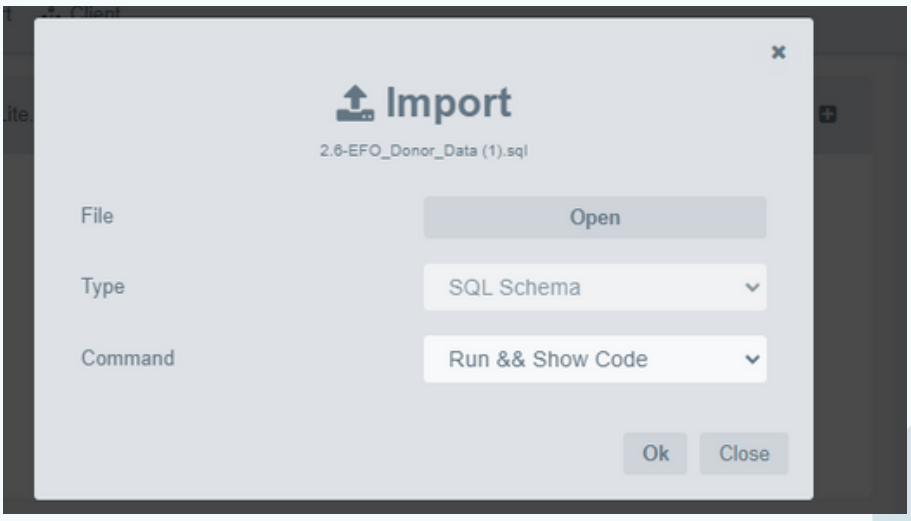
Q5 why are donors not finding our organization attractive

A5 They are not satisfied with operation of the organization

Insights

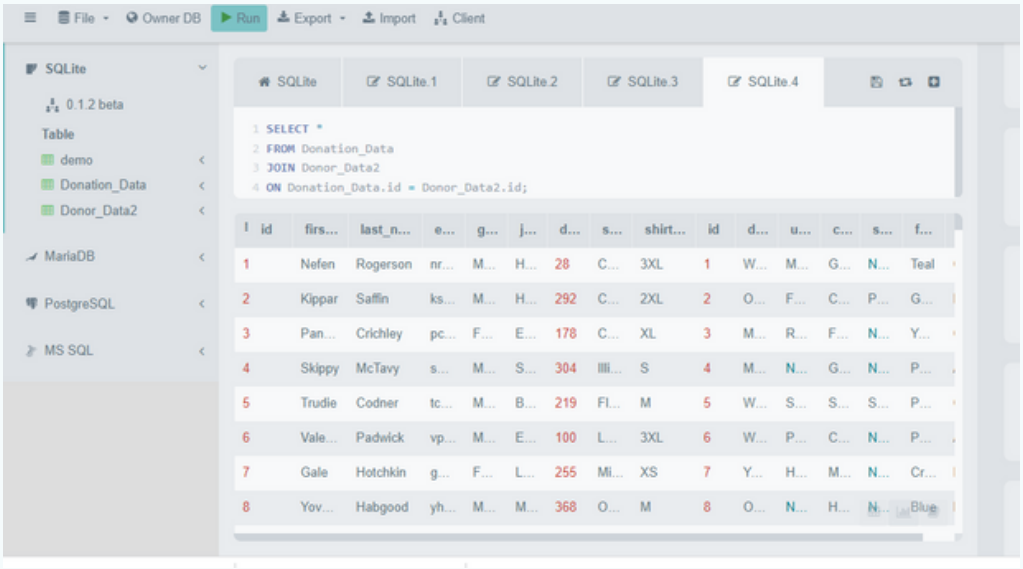
Dataset used for this project were EFO_Donation_Data and EFO_Donor_Data, both data set were imported into an online data base management system called SQLiteonline.com



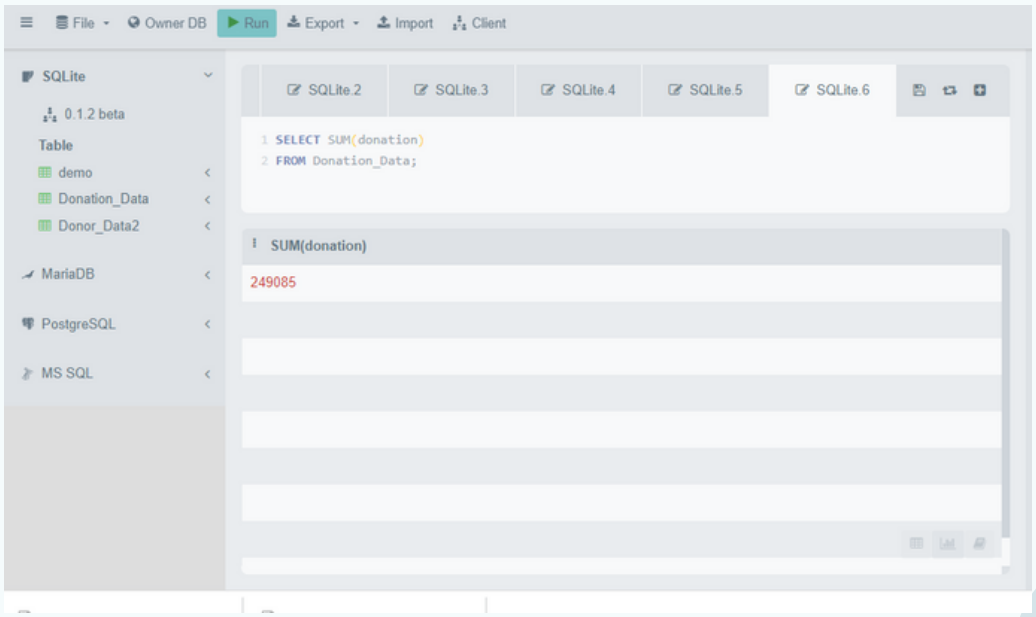


Insights

Tables extracted from the datasets were combined using the JOIN command.

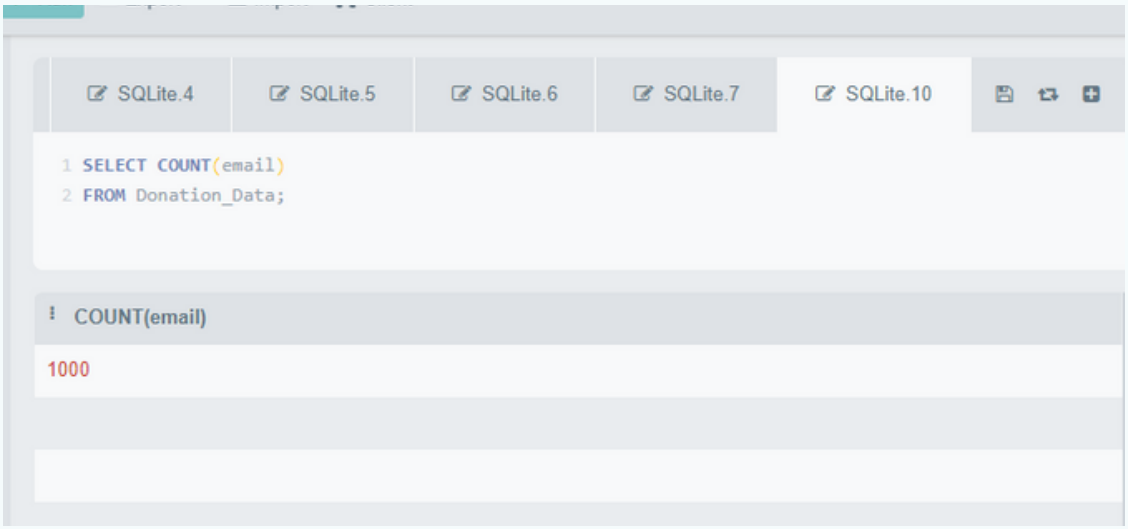


I used the command SUM() to get the total funds donated

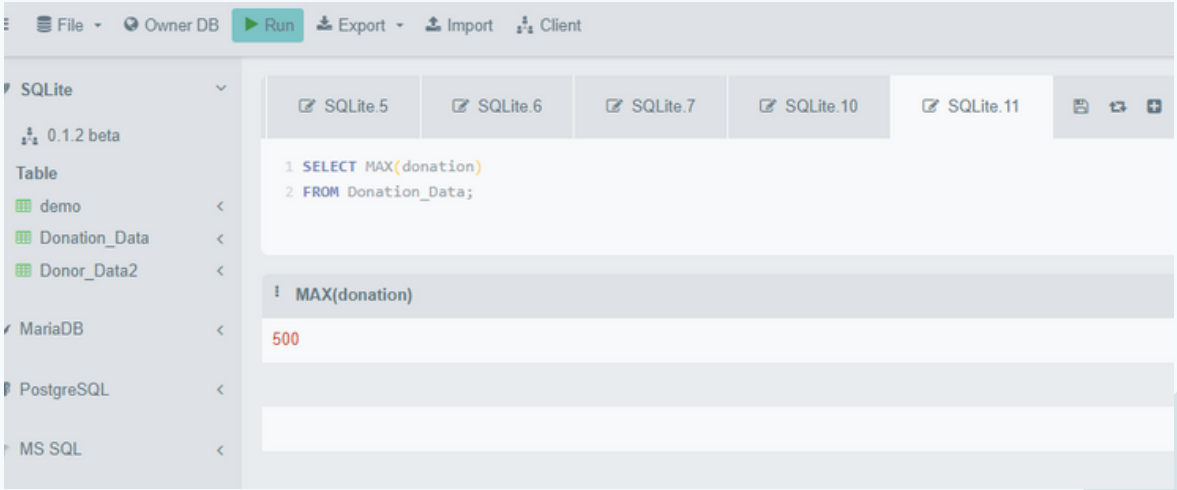


Insights

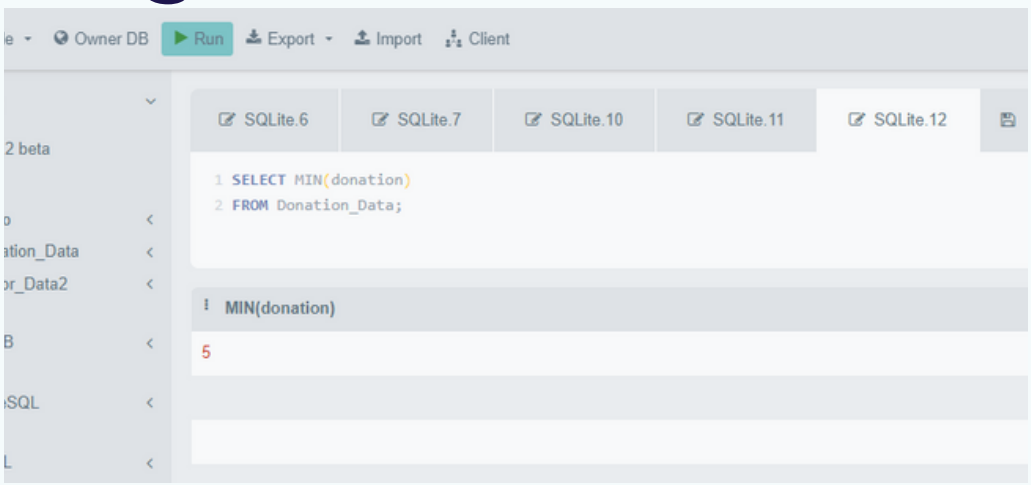
I used command COUNT() to find the number of donors we have



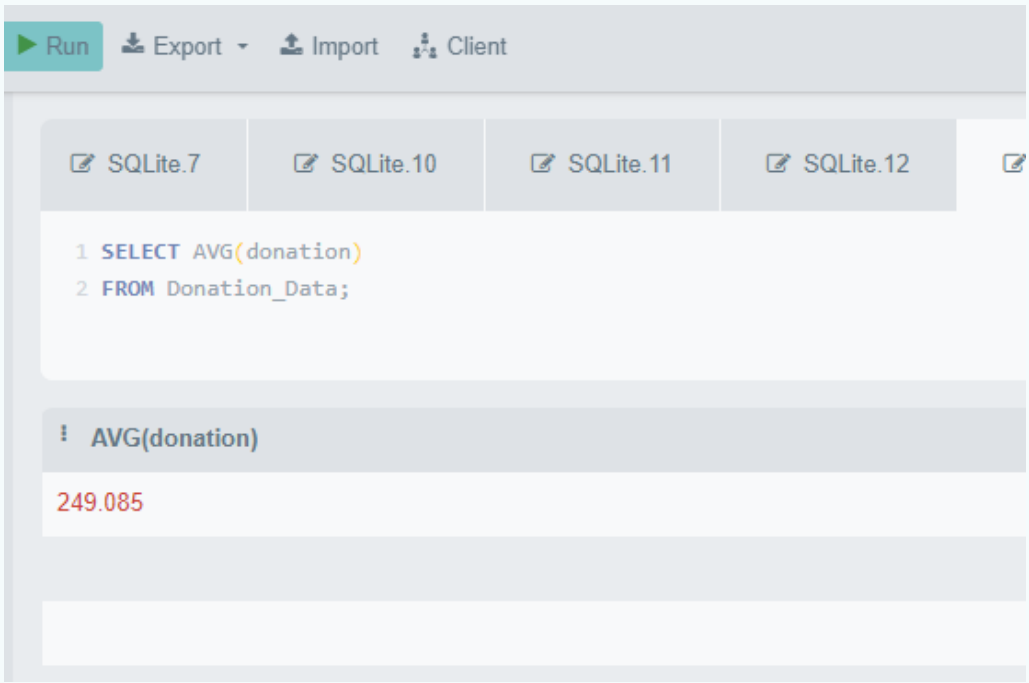
I applied the command MAX() and MIN() to the maximum and minimum donations in our organization



Insights

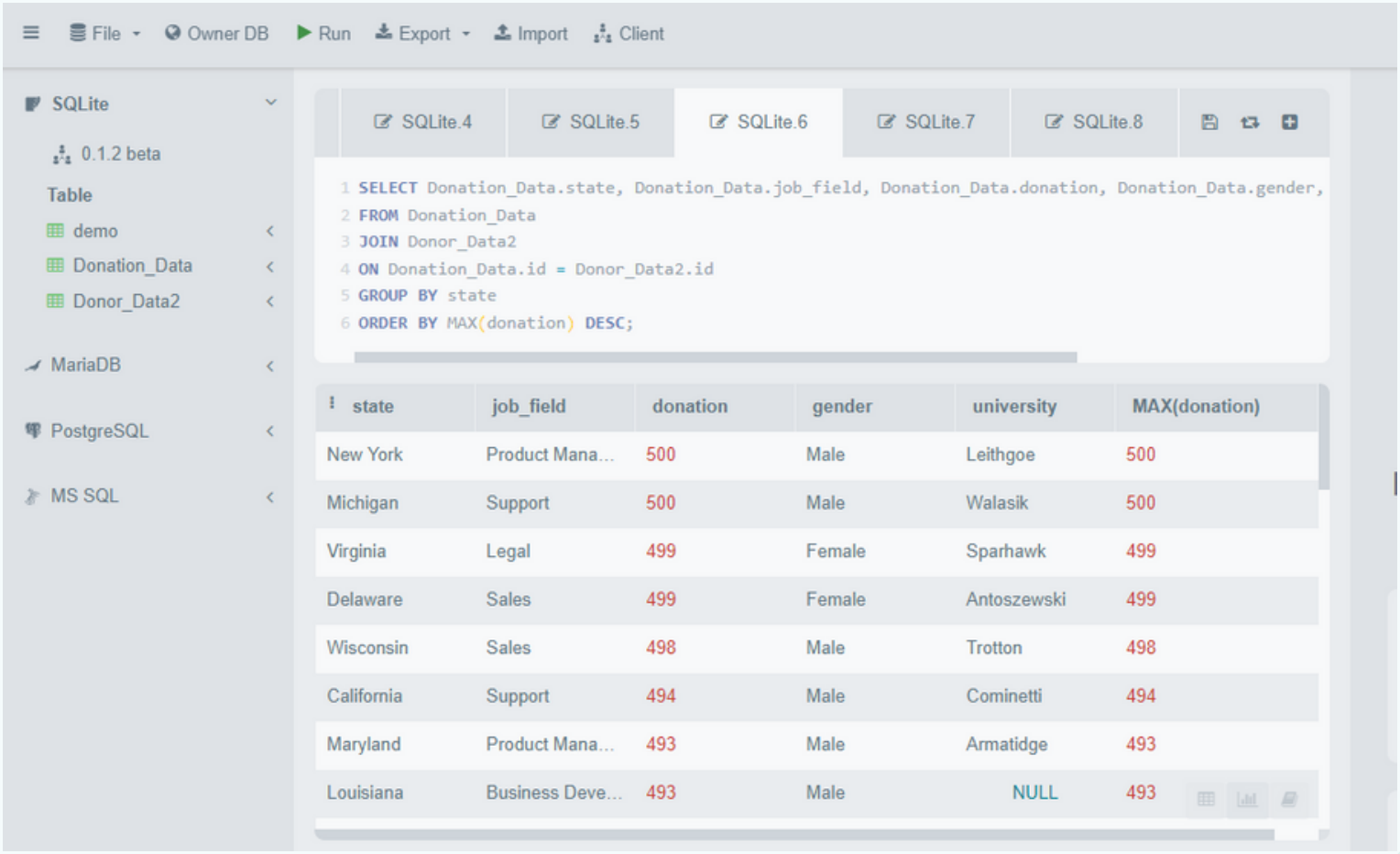


In order to determine the average donation i used the command AVG()



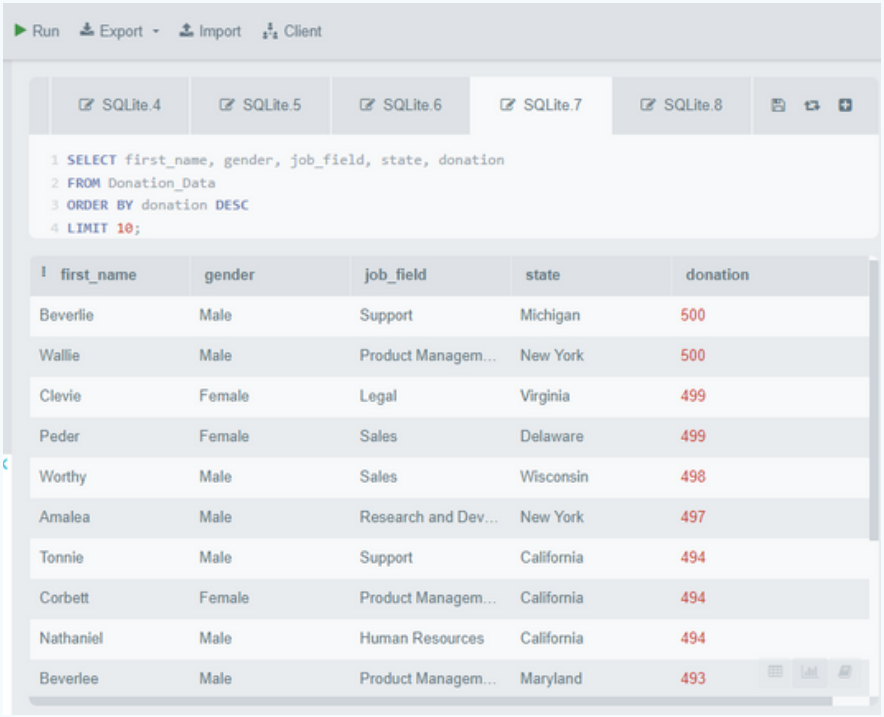
Insights

The GROUP BY () and ORDER () command was used to get the top donor in the organisation, these were arranged in a descending order using DESC command.



Insights

The LIMIT10 command was used to determine the top 10 donors of the organisation



Run Export Import Client

SQLite.4 SQLite.5 SQLite.6 SQLite.7 SQLite.8

```
SELECT first_name, gender, job_field, state, donation
FROM Donation_Data
ORDER BY donation DESC
LIMIT 10;
```

first_name	gender	job_field	state	donation
Beverlie	Male	Support	Michigan	500
Wallie	Male	Product Managem...	New York	500
Clevie	Female	Legal	Virginia	499
Peder	Female	Sales	Delaware	499
Worthy	Male	Sales	Wisconsin	498
Amalea	Male	Research and Dev...	New York	497
Tonnie	Male	Support	California	494
Corbett	Female	Product Managem...	California	494
Nathaniel	Male	Human Resources	California	494
Beverlee	Male	Product Managem...	Maryland	493

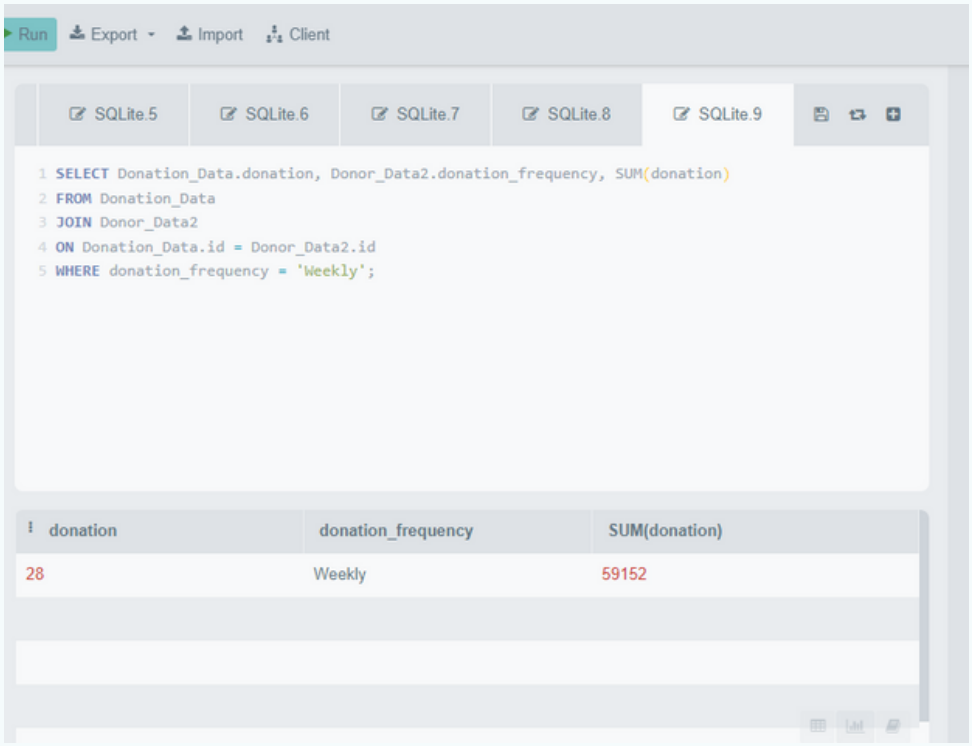
The sum total of donors who donated once, weekly, monthly, yearly was dtermined using the command below

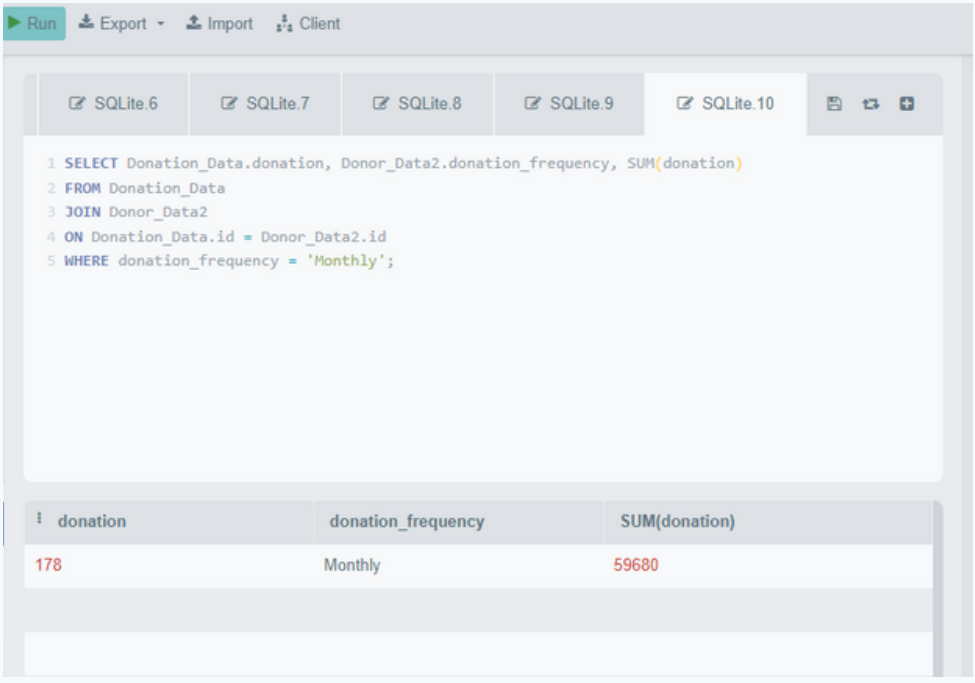
SQLite.4 SQLite.5 SQLite.6 SQLite.7 SQLite.8

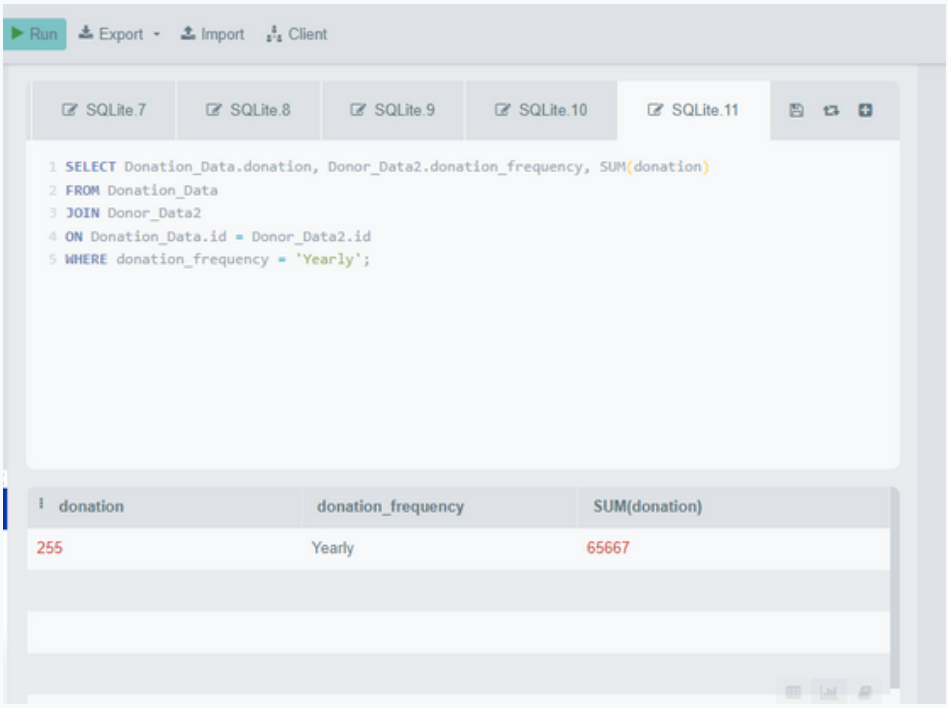
```
SELECT Donation_Data.donation, Donor_Data2.donation_frequency, SUM(donation)
FROM Donation_Data
JOIN Donor_Data2
ON Donation_Data.id = Donor_Data2.id
WHERE donation_frequency = 'Once';
```

donation	donation_frequency	SUM(donation)
292	Once	64586

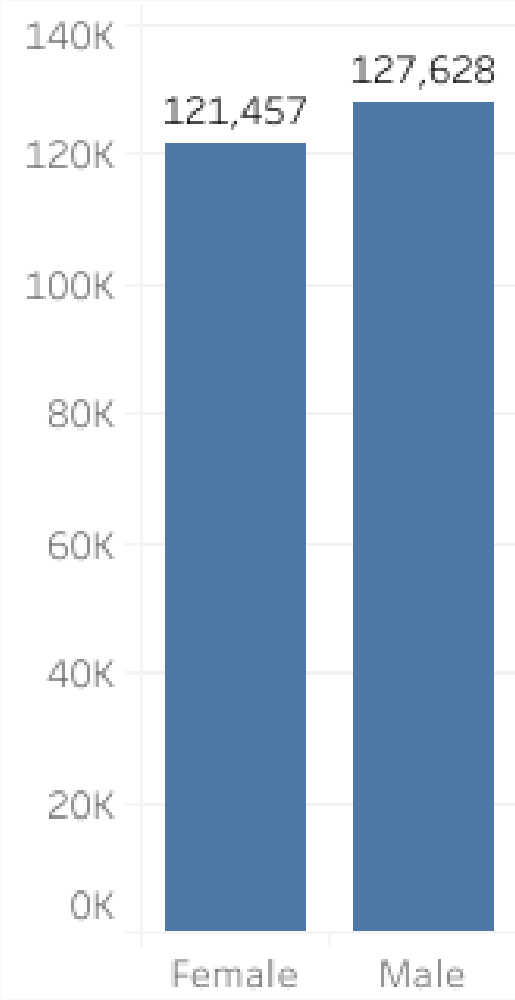
Insights

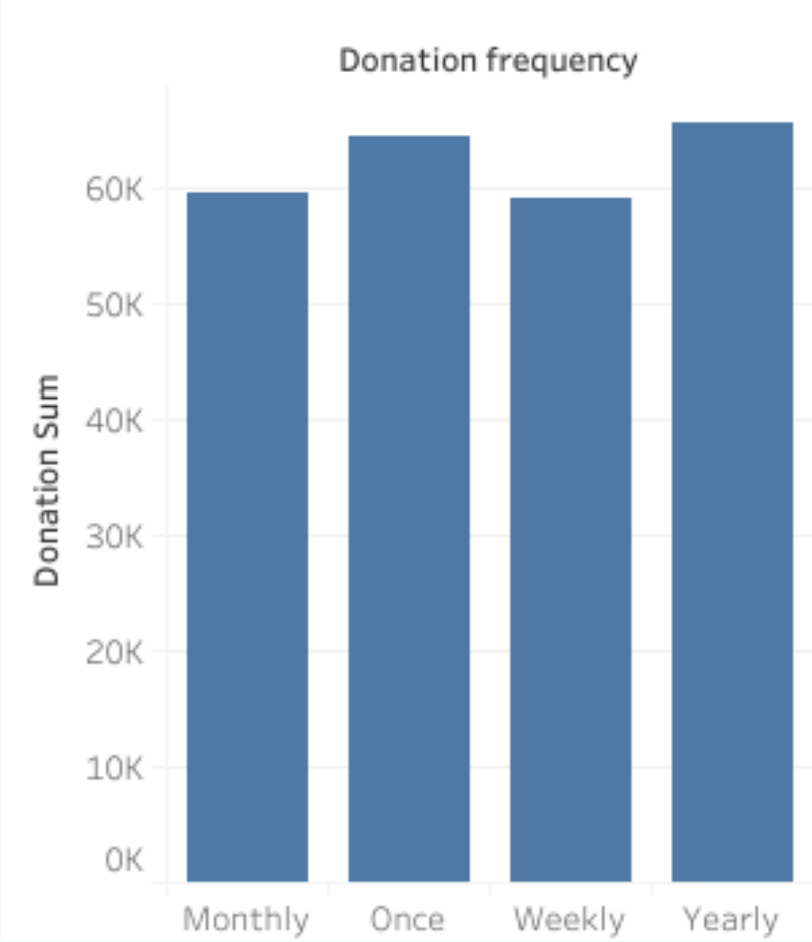

Run
Export
Import
Client
SQLite.5
SQLite.6
SQLite.7
SQLite.8
SQLite.9
1 SELECT Donation_Data.donation, Donor_Data2.donation_frequency, SUM(donation)
2 FROM Donation_Data
3 JOIN Donor_Data2
4 ON Donation_Data.id = Donor_Data2.id
5 WHERE donation_frequency = 'Weekly';
donation
donation_frequency
SUM(donation)
28
Weekly
59152

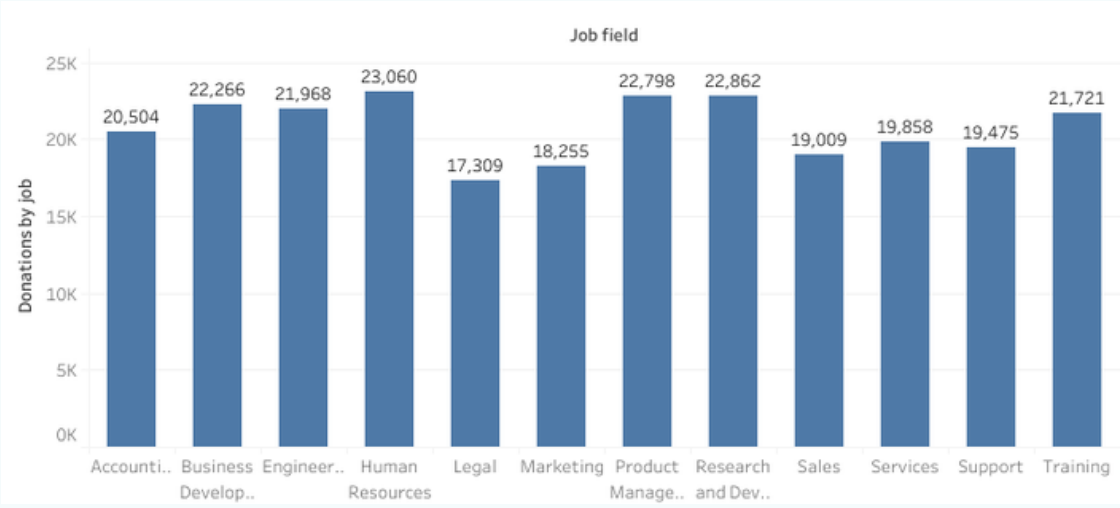

Run
Export
Import
Client
SQLite.6
SQLite.7
SQLite.8
SQLite.9
SQLite.10
1 SELECT Donation_Data.donation, Donor_Data2.donation_frequency, SUM(donation)
2 FROM Donation_Data
3 JOIN Donor_Data2
4 ON Donation_Data.id = Donor_Data2.id
5 WHERE donation_frequency = 'Monthly';
donation
donation_frequency
SUM(donation)
178
Monthly
59680

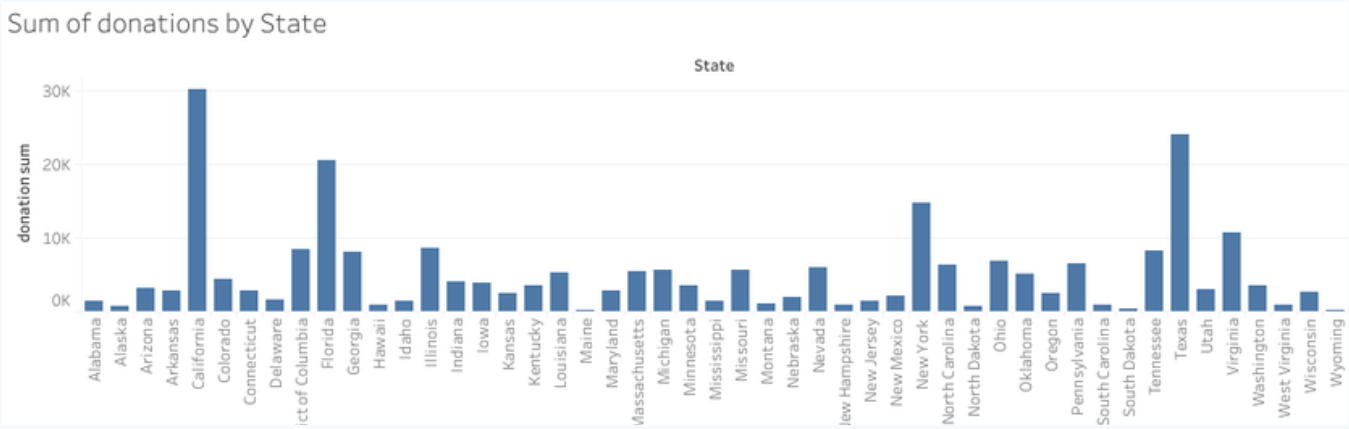


I went further by using tableau public to visualise the datasets




Donation frequency
Donation Sum
60K
50K
40K
30K
20K
10K
0K
Monthly
Once
Weekly
Yearly


Job field
Donations by job
25K
20K
15K
10K
5K
0K
20,504
22,266
21,968
23,060
17,309
18,255
22,798
22,862
19,009
19,858
19,475
21,721
Accounti..
Business Develop..
Engineer..
Human Resources
Legal
Marketing
Product Manage..
Research and Dev..
Sales
Services
Support
Training


Sum of donations by State
State
donation sum
30K
20K
10K
0K
Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
ict of Columbia
Florida
Georgia
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi
Missouri
Montana
Nebraska
Nevada
lew Hampshire
New Jersey
New Mexico
New York
North Carolina
North Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
South Carolina
South Dakota
Tennessee
Texas
Utah
Virginia
Washington
West Virginia
Wisconsin
Wyoming

Findings and Recommendations

Total sum of donations were;$249,085
Highest amount donated;$500
Least amount donated;$5
The average donation from one donor; $249.085

The following recommendations were made in order to boost the numbers of donors, their rate of donations and the amount donated;

1. The organization needs to create more awareness on social media to get more donors
2. Quarterly reports needs to prepared and be presented to donors via e-mails or conferences for accountability as these will enable donors to donate more
3. Due to busy schedules of most donors especially for those who donated frequently
4. Donors needs to be properly appreciated as these will make the organization attractive to other philanthropist.
5. Donors should have a seamless process when donating to reduce stress

Conclusion

There organization should more effort on creating publicity through social media to attract more donors and should pay more attention to donors who give weekly and monthly.

Skills
I learnt how to import and data SQL datasets.
i learnt how use the JOIN, WHERE, AVG(), SUM(), LIMIT, DESC, COUNT() queries successfully.
I was able to visualize my dataset on tableau.
I learnt how to write a concise report on project given.