SQL CAPSTONE PROJECT

Education for All Fundraising Case Study

Education for All is a charity organization and it welcomes donors to make donations towards their charity work. They have recently observed that their donors happen to be the same set of people and the donations they receive are always about the same amount every year.

10Alytics was approached to generate insights from their Donor and Donation data. The organization would like to know how to achieve the following objectives:

1. Increase the number of donors in the database.
2. Increase the donation frequency of the donors.
3. Increase the value of donations in the database.

Based on the data received, the following insights were extracted:

a) Total donation

b) Total donation by gender

```
26
27  -- b) What is the total donation by gender?
28  SELECT gender,
29      CONCAT('$',(SUM(donation))) AS total_donation
30  FROM Donation_Data
31  GROUP BY gender;
32          Loading...
33
```

Data Output Messages Notifications

	gender character varying (50)	total_donation text
1	Female	$121457
2	Male	$127628

Total rows: 2 of 2   Query complete 00:00:00.216   Ln 31, Col 17

c) Total donation and number of donations by gender

```
34  -- c)Show the total donation and number of donations by gender
35
36  SELECT gender,
37      CONCAT('$',(SUM(donation))) AS total_donation,
38      COUNT(*) AS donation_count
39  FROM Donation_Data
40  GROUP BY gender;
41          Loading...
```

Data Output Messages Notifications

	gender character varying (50)	total_donation text	donation_count bigint
1	Female	$121457	508
2	Male	$127628	492

Total rows: 2 of 2   Query complete 00:00:00.354   Ln 40, Col 17

d) Total donation made by frequency of donation

```
    10Alytics Capstone /postgres@PostgreSQL 16

Query    Query History
43    -- d) Total donation made by frequency of donation
44    SELECT d.donation_frequency,
45        CONCAT('$',(SUM(donation))) AS total_donation
46    FROM Donor_Data d
47    JOIN Donation_Data dd ON d.id = dd.id
48    GROUP BY d.donation_frequency;
49
50
```

Data Output   Messages   Notifications

	donation_frequency character varying (100)	total_donation text
1	Once	$32666
2	Weekly	$31645
3	Daily	$29249
4	Yearly	$35266
5	Seldom	$30650
6	Monthly	$26870
7	Often	$28476
8	Never	$34263

Total rows: 8 of 8   Query complete 00:00:00.184

e) Total donation and number of donation by Job field

```
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Query    Query History
52    SELECT job_field,
53        CONCAT('$',(SUM(donation))) AS total_donation,
54        COUNT(*) AS donation_count
55    FROM Donation_Data
56    GROUP BY job_field;
```

Data Output   Messages   Not   Loading...

	job_field character varying (50)	total_donation text	donation_count bigint
1	Marketing	$18255	74
2	Training	$21721	84
3	Product Management	$22798	90
4	Research and Development	$22862	84
5	Business Development	$22266	94
6	Sales	$19009	83
7	Support	$19475	79
8	Legal	$17309	66
9	Accounting	$20504	80
10	Services	$19858	80
11	Human Resources	$23060	93

Total rows: 12 of 12   Query complete 00:00:00.343   Ln 56, Col 20

f) Total donation and number of donations above $200

Query   Query History

```
9
10    -- f) Total donation and number of donations above $200
11    SELECT
12        CONCAT('$',(SUM(donation))) AS total_donation,
13        COUNT(*) AS number_of_donations
14    FROM
15        Donation_Data
16    WHERE
17        donation > 200;
18
19
```

Data Output   Messages   Notifications

	total_donation	number_of_donations
	text	bigint
1	$205892	586

Total rows: 1 of 1   Query complete 00:00:35.205   Ln 17, Col 17

g) Total donation and number of donations below $200

Query   Query History

```
1    --g) Total donation and number of donations below $200
2
3    SELECT
4        CONCAT('$',(SUM(donation))) AS total_donation,
5        COUNT(*) AS number_of_donations
6    FROM
7        Donation_Data
8    WHERE
9        donation <= 200;
10
11
```

Data Output   Messages   Notifications

	total_donation	number_of_donations
	text	bigint
1	$43193	414

Total rows: 1 of 1   Query complete 00:00:00.306   Ln 9, Col 21

h) Top 10 states contributing the highest donations

```
93  SELECT state,
94      SUM(donation) AS total_donation
95  FROM Donation_Data
96  GROUP BY state
97  ORDER BY total_donation ASC
98  LIMIT 10;
```

Data Output   Messages   Notifications

	state character varying (50)	total_donation bigint
1	Wyoming	232
2	Maine	258
3	South Dakota	401
4	North Dakota	651
5	Alaska	734
6	West Virginia	793
7	South Carolina	819
8	New Hampshire	841
9	Hawaii	875
10	Montana	1009

Total rows: 10 of 10   Query complete 00:00:00.164   Ln 98, Col 10

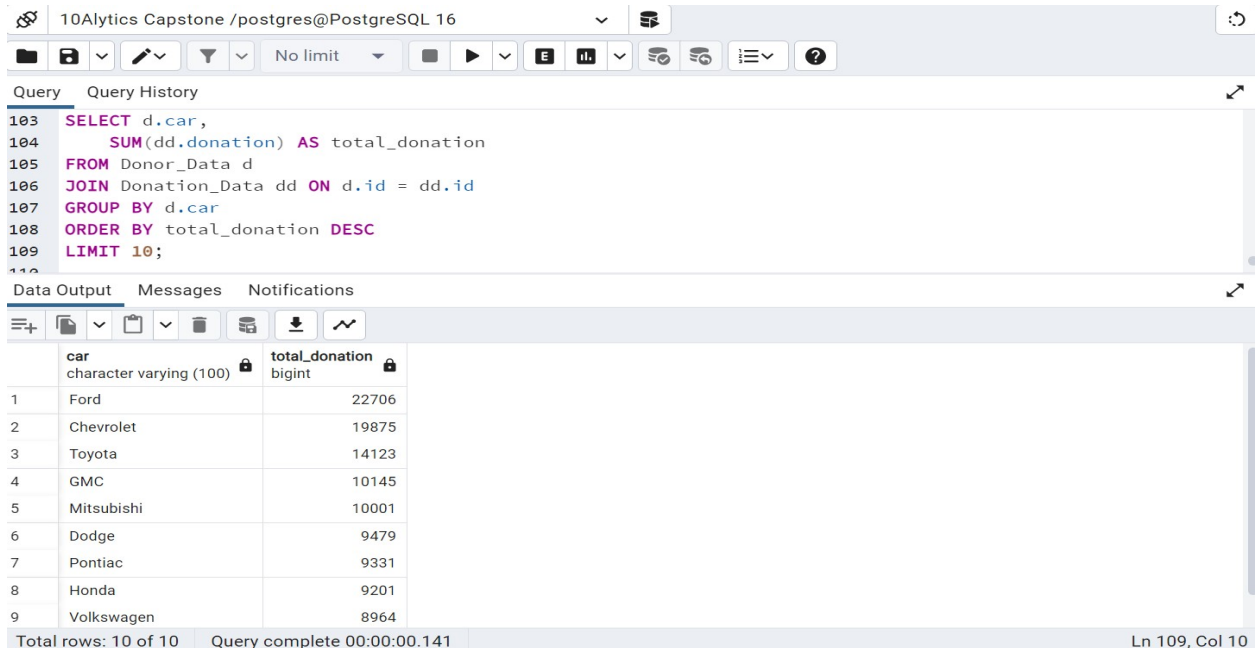## i) Top 10 states contributing the least donations

```
83  SELECT state,
84      SUM(donation) AS total_donation
85  FROM Donation_Data
86  GROUP BY state
87  ORDER BY total_donation DESC
88  LIMIT 10;
```

Data Output   Messages   Notifications

	state character varying (50)	total_donation bigint
1	California	30264
2	Texas	24097
3	Florida	20562
4	New York	14759
5	Virginia	10750
6	Illinois	8674
7	District of Columbia	8376
8	Tennessee	8316
9	Georgia	8046
10	Ohio	6876

Total rows: 10 of 10   Query complete 00:00:00.150   Ln 87, Col 29

j) Top 10 cars driven by the highest donors


```sql
103  SELECT d.car,
104      SUM(dd.donation) AS total_donation
105  FROM Donor_Data d
106  JOIN Donation_Data dd ON d.id = dd.id
107  GROUP BY d.car
108  ORDER BY total_donation DESC
109  LIMIT 10;
```

Data Output   Messages   Notifications

	car character varying (100)	total_donation bigint
1	Ford	22706
2	Chevrolet	19875
3	Toyota	14123
4	GMC	10145
5	Mitsubishi	10001
6	Dodge	9479
7	Pontiac	9331
8	Honda	9201
9	Volkswagen	8964

Total rows: 10 of 10   Query complete 00:00:00.141   Ln 109, Col 10

Based on the insights generated from the SQL queries above these are the recommendations provided:

To increase the number of donors in the database:

Implement targeted marketing campaigns to attract new donors, leveraging gender, job fields, state, and cars driven.

Offer incentives or promotions to encourage new donors to contribute.

Collaborate with community organizations or businesses to raise awareness and reach potential donors.

To increase the donation frequency of donors:

Engage with donors regularly through personalized communication, such as email newsletters or updates on the impact of their donations.

Create donation programs or events that encourage recurring donations, such as monthly subscriptions or annual fundraisers.

Provide convenient and easy-to-use platforms for making donations, such as online portals or mobile apps.

To increase the value of donations in the database:

Develop targeted fundraising campaigns for specific causes or projects that resonate with donors.

Cultivate relationships with high-net-worth individuals or corporate donors who may be able to contribute larger amounts.

Provide opportunities for donors to see the direct impact of their donations through success stories, testimonials, or site visits.