ELEVATE LABS TASK 3

Task 3: SQL for Data Analysis

1)Avatar group with highest average membership length and spending

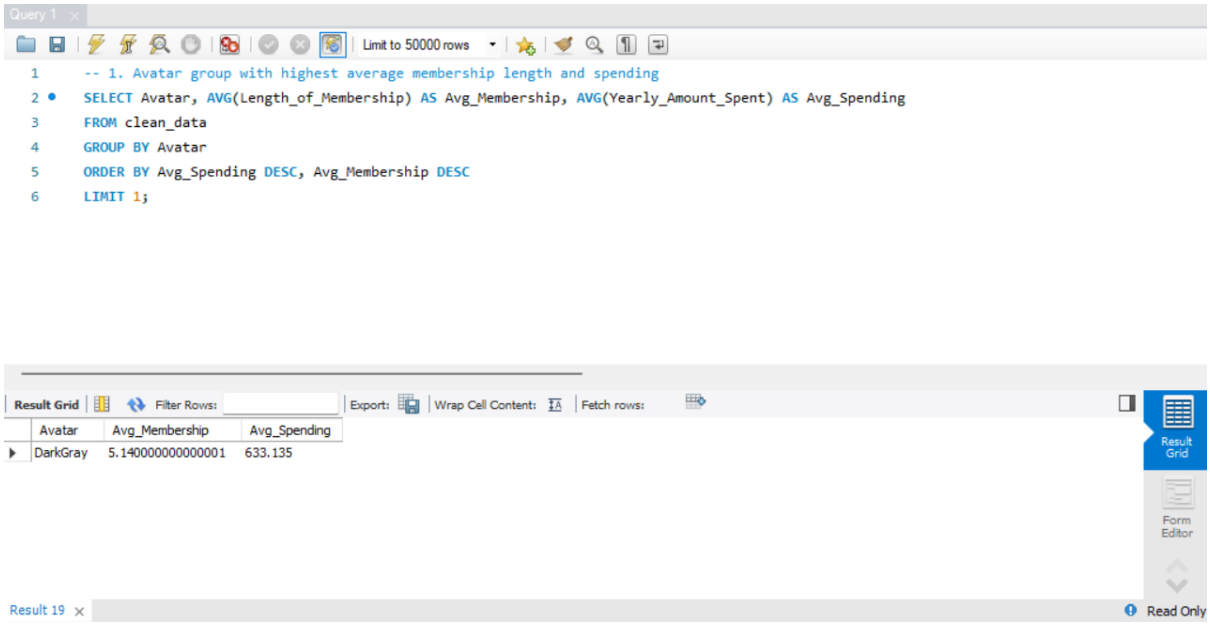
SELECT Avatar, AVG(Length_of_Membership) AS Avg_Membership, AVG(Yearly_Amount_Spent) AS Avg_Spending

FROM clean_data

GROUP BY Avatar

ORDER BY Avg_Spending DESC, Avg_Membership DESC

LIMIT 1;



2)Spending efficiency: Yearly Amount Spent per hour on App

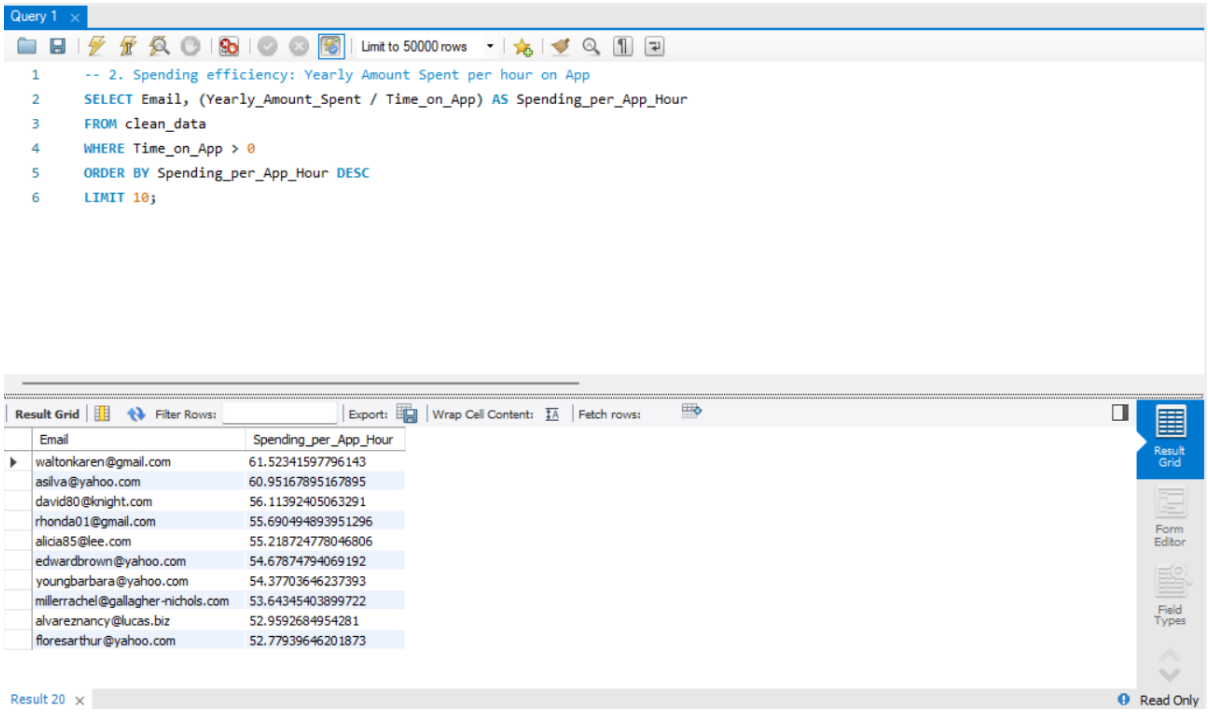
SELECT Email, (Yearly_Amount_Spent / Time_on_App) AS Spending_per_App_Hour

FROM clean_data

WHERE Time_on_App > 0

ORDER BY Spending_per_App_Hour DESC

LIMIT 10;



```
-- 2. Spending efficiency: Yearly Amount Spent per hour on App
SELECT Email, (Yearly_Amount_Spent / Time_on_App) AS Spending_per_App_Hour
FROM clean_data
WHERE Time_on_App > 0
ORDER BY Spending_per_App_Hour DESC
LIMIT 10;
```

Email	Spending_per_App_Hour
waltonkaren@gmail.com	61.52341597796143
asilva@yahoo.com	60.95167895167895
david80@knight.com	56.11392405063291
rhonda01@gmail.com	55.690494893951296
alicia85@lee.com	55.218724778046806
edwardbrown@yahoo.com	54.67874794069192
youngbarbara@yahoo.com	54.37703646237393
millerrachel@gallagher-nichols.com	53.64345403899722
alvareznancy@lucas.biz	52.9592684954281
floresarthur@yahoo.com	52.77939646201873

3) Rank customers by combined time on app and website (most engaged)

SELECT Email, (Time_on_App + Time_on_Website) AS Total_Time_Spent

FROM clean_data

ORDER BY Total_Time_Spent DESC

LIMIT 10;

Query 1

```
-- 3. Rank customers by combined time on app and website (most engaged)
SELECT Email, (Time_on_App + Time_on_Website) AS Total_Time_Spent
FROM clean_data
ORDER BY Total_Time_Spent DESC
LIMIT 10;
```

Result Grid

Email	Total_Time_Spent
pkline@hotmail.com	53.11
russellbaldwin@ferrell.info	53.06
gregoryholmes@hotmail.com	53.01
alejandro75@hotmail.com	52.96
randall85@williams.com	52.660000000000004
susanibarra@yahoo.com	52.529999999999994
michael86@yahoo.com	52.480000000000004
kyang@diaz.org	52.29
kylemelendez@hotmail.com	52.27
mstephenson@fernandez.com	52.239999999999995

Result 21

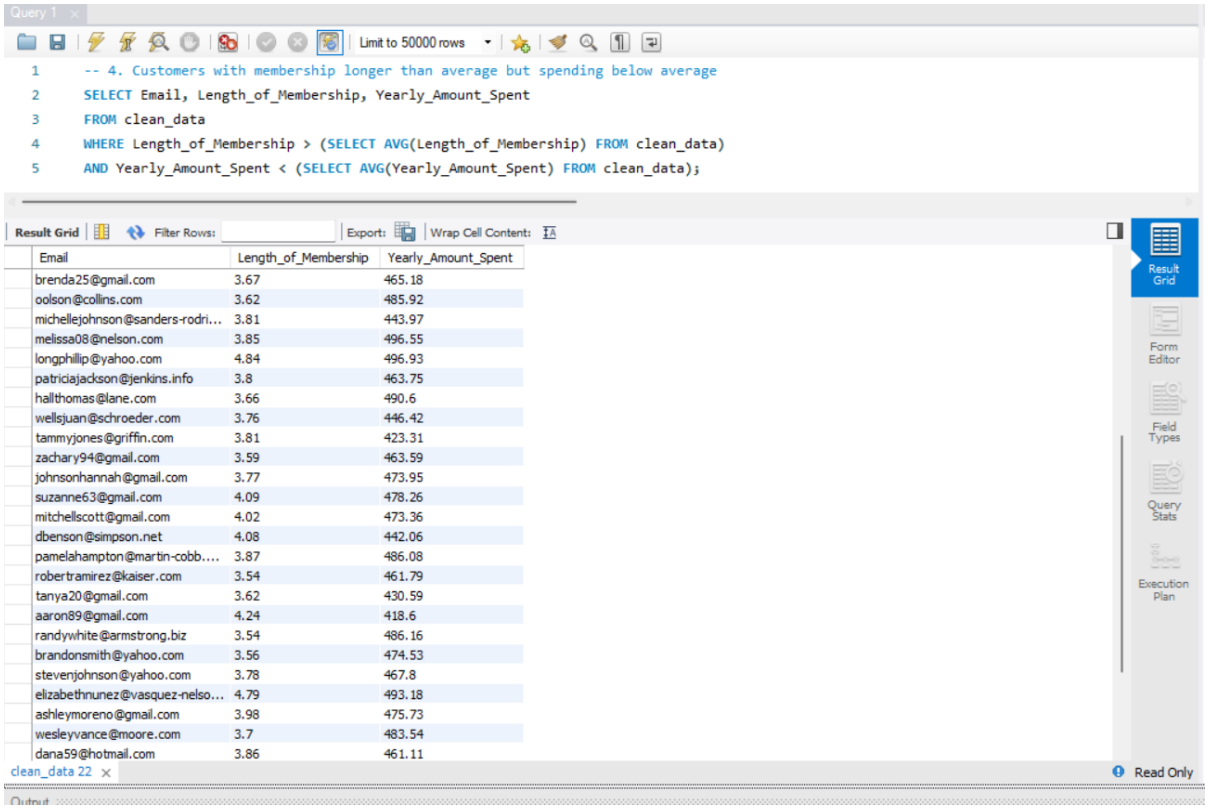
4) Customers with membership longer than average but spending below average

SELECT Email, Length_of_Membership, Yearly_Amount_Spent

FROM clean_data

WHERE Length_of_Membership > (SELECT AVG(Length_of_Membership) FROM clean_data)

AND Yearly_Amount_Spent < (SELECT AVG(Yearly_Amount_Spent) FROM clean_data);



```
-- 4. Customers with membership longer than average but spending below average
SELECT Email, Length_of_Membership, Yearly_Amount_Spent
FROM clean_data
WHERE Length_of_Membership > (SELECT AVG(Length_of_Membership) FROM clean_data)
AND Yearly_Amount_Spent < (SELECT AVG(Yearly_Amount_Spent) FROM clean_data);
```

Email	Length_of_Membership	Yearly_Amount_Spent
brenda25@gmail.com	3.67	465.18
oolson@collins.com	3.62	485.92
michellejohnson@sanders-rodri...	3.81	443.97
melissa08@nelson.com	3.85	496.55
longphillip@yahoo.com	4.84	496.93
patriciajackson@jenkins.info	3.8	463.75
hallthomas@lane.com	3.66	490.6
wellsjuan@schroeder.com	3.76	446.42
tammyjones@griffin.com	3.81	423.31
zachary94@gmail.com	3.59	463.59
johnsonhannah@gmail.com	3.77	473.95
suzanne63@gmail.com	4.09	478.26
mitchellscott@gmail.com	4.02	473.36
dbenson@simpson.net	4.08	442.06
pamelahampton@martin-cobb....	3.87	486.08
robertramirez@kaiser.com	3.54	461.79
tanya20@gmail.com	3.62	430.59
aaron89@gmail.com	4.24	418.6
randywhite@armstrong.biz	3.54	486.16
brandonsmith@yahoo.com	3.56	474.53
stevenjohnson@yahoo.com	3.78	467.8
elizabethnunez@vasquez-nelso...	4.79	493.18
ashleymoreno@gmail.com	3.98	475.73
wesleyvance@moore.com	3.7	483.54
dana59@hotmail.com	3.86	461.11

5) Percentage contribution of each avatar to total spending

SELECT Avatar,

SUM(Yearly_Amount_Spent) AS Total_Spending,

ROUND(SUM(Yearly_Amount_Spent) * 100 / (SELECT SUM(Yearly_Amount_Spent) FROM clean_data), 2) AS Percent_Contribution

FROM clean_data

GROUP BY Avatar

ORDER BY Percent_Contribution DESC;

Query 1

```sql
-- 5. Percentage contribution of each avatar to total spending
SELECT Avatar,
       SUM(Yearly_Amount_Spent) AS Total_Spending,
       ROUND(SUM(Yearly_Amount_Spent) * 100 / (SELECT SUM(Yearly_Amount_Spent) FROM clean_data), 2) AS Percent_Contribution
FROM clean_data
GROUP BY Avatar
ORDER BY Percent_Contribution DESC;
```

Result Grid

Avatar	Total_Spending	Percent_Contribution
Orchid	2634.69	1.06
SaddleBrown	2613.04	1.05
MediumBlue	2612.95	1.05
BlanchedAlmond	2624.5200000000004	1.05
White	2580.14	1.03
DarkMagenta	2512.02	1.01
Purple	2522.7000000000003	1.01
LightGreen	2481.6299999999997	0.99
DarkGreen	2447.44	0.98
Olive	2446.02	0.98
LemonChiffon	2391.6800000000003	0.96
LightSalmon	2389.5299999999997	0.96
MediumSpring...	2405.06	0.96

Result 23

6) Customers spending above average but with short membership (new high spenders)

SELECT Email, Length_of_Membership, Yearly_Amount_Spent

FROM clean_data

WHERE Yearly_Amount_Spent > (SELECT AVG(Yearly_Amount_Spent) FROM clean_data)

AND Length_of_Membership < (SELECT AVG(Length_of_Membership) FROM clean_data)

ORDER BY Yearly_Amount_Spent DESC;

Query 1

```sql
-- 6. Customers spending above average but with short membership (new high spenders)
SELECT Email, Length_of_Membership, Yearly_Amount_Spent
FROM clean_data
WHERE Yearly_Amount_Spent > (SELECT AVG(Yearly_Amount_Spent) FROM clean_data)
AND Length_of_Membership < (SELECT AVG(Length_of_Membership) FROM clean_data)
ORDER BY Yearly_Amount_Spent DESC;
```

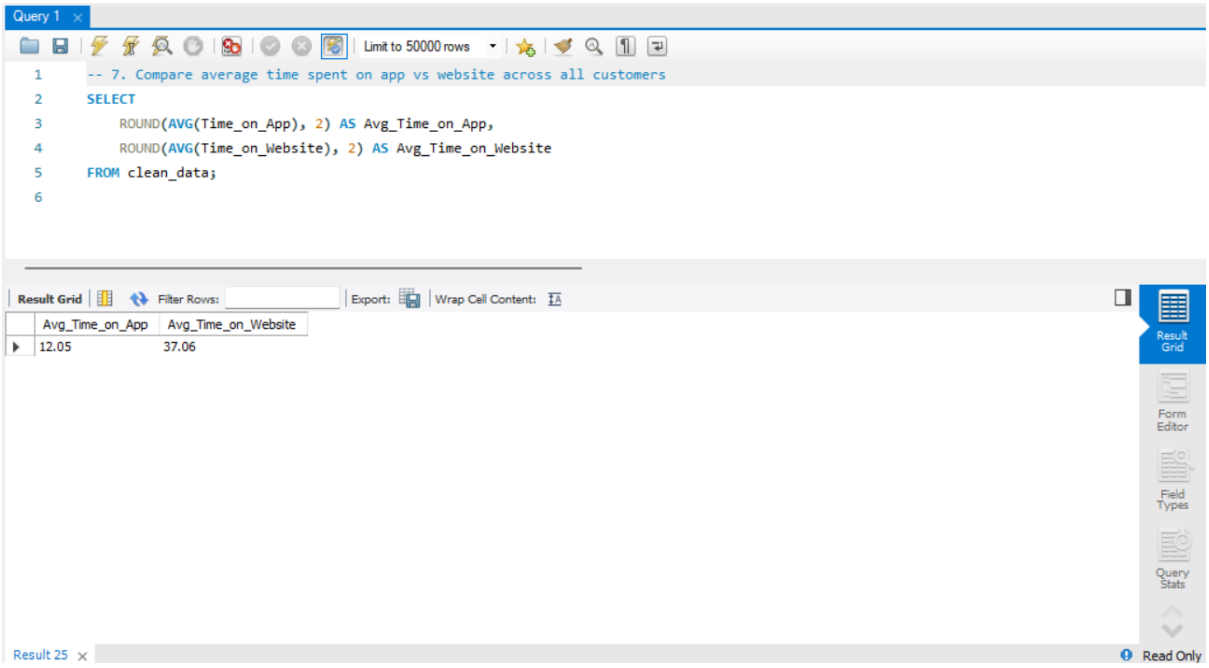
Result Grid

Email	Length_of_Membership	Yearly_Amount_Spent
leonardhancock@hotmail.com	3.45	510.5
brian28@sanchez.org	3.16	510.4
david47@hotmail.com	3.48	508.77
walkererica@scott.com	3.02	506.54
bushsharon@barber.com	3.45	506.38
davischristina@hotmail.com	2.96	506.13
linda90@yoder.org	3.35	505.77
jessica04@christian-riley.com	1.92	504.87
aaron11@luna.com	2.94	503.98
phillipscarrie@gmail.com	3.37	503.22
rcarter@crane-thompson.org	3.34	503.18
deborah48@white.com	3.38	502.13
alexandermichael@hotmail.com	3.47	501.93
vancealicia@hotmail.com	2.96	501.12
cunninghamkyle@ellis-parker.org	3.44	501.1

clean_data 24

7) Compare average time spent on app vs website across all customers

```
SELECT
    ROUND(AVG(Time_on_App), 2) AS Avg_Time_on_App,
    ROUND(AVG(Time_on_Website), 2) AS Avg_Time_on_Website
FROM clean_data;
```



8) Emails of customers who spend the most time on website but least on app

```
SELECT Email, Time_on_Website, Time_on_App
FROM clean_data
ORDER BY Time_on_Website DESC, Time_on_App ASC
```

LIMIT 10;

```
-- 8. Emails of customers who spend the most time on website but least on app
SELECT Email, Time_on_Website, Time_on_App
FROM clean_data
ORDER BY Time_on_Website DESC, Time_on_App ASC
LIMIT 10;
```

Email	Time_on_Website	Time_on_App
davisrobert@hicks-smith.com	40.01	11.19
randall85@williams.com	39.67	12.99
sharon82@saunders.info	39.6	12.6
mstephenson@fernandez.com	39.58	12.66
kaitlyn78@chang.com	39.29	11.92
anneingram@miller-alexander.com	39.25	11.61
gregoryholmes@hotmail.com	39.25	13.76
alicia28@fuller.com	39.24	11.48
pkline@hotmail.com	39.22	13.89
brianwilson@yahoo.com	39.13	12.17

9) Top 3 customers with highest spending efficiency on website (spent per website hour)

SELECT Email, (Yearly_Amount_Spent / Time_on_Website) AS Spending_per_Website_Hour

FROM clean_data

WHERE Time_on_Website > 0

ORDER BY Spending_per_Website_Hour DESC

LIMIT 3;

```
-- 9. Top 3 customers with highest spending efficiency on website (spent per website hour)
SELECT Email, (Yearly_Amount_Spent / Time_on_Website) AS Spending_per_Website_Hour
FROM clean_data
WHERE Time_on_Website > 0
ORDER BY Spending_per_Website_Hour DESC
LIMIT 3;
```

Email	Spending_per_Website_Hour
asilva@yahoo.com	21.946918313181957
kyang@diaz.org	20.60064585575888
rhonda01@gmail.com	19.56776152359923

10) Avatars with highest number of customers having spending above average

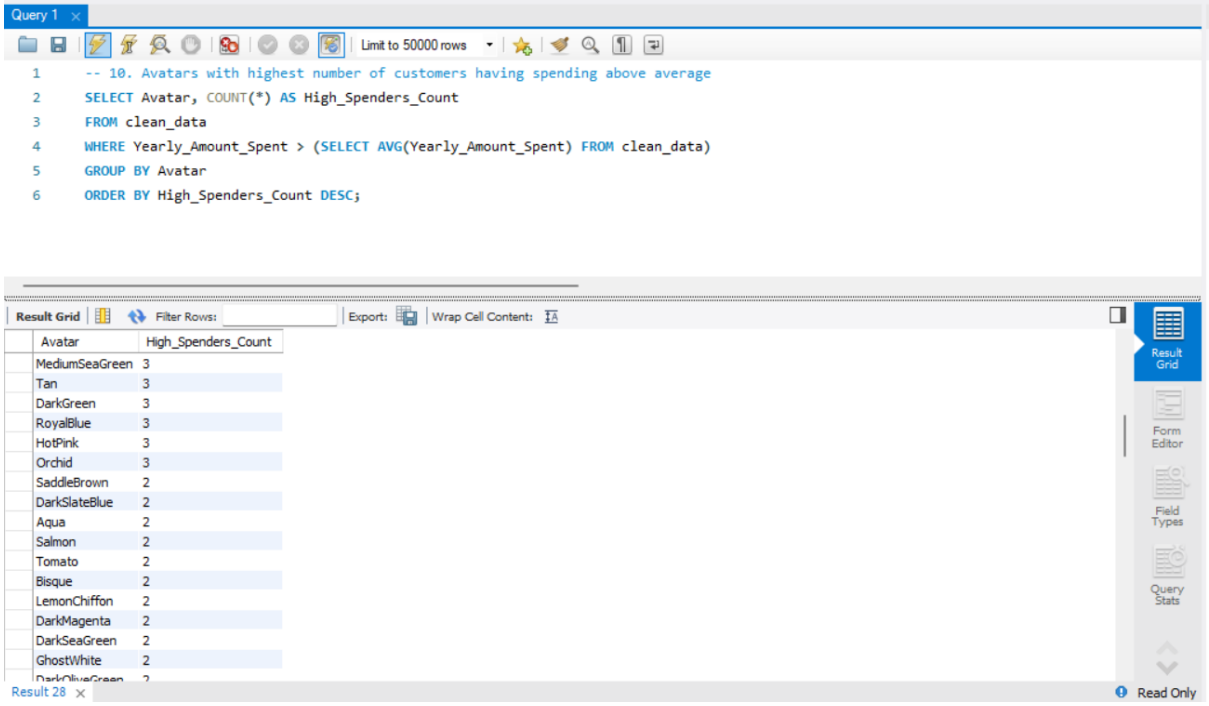
SELECT Avatar, COUNT(*) AS High_Spenders_Count

FROM clean_data

WHERE Yearly_Amount_Spent > (SELECT AVG(Yearly_Amount_Spent) FROM clean_data)

GROUP BY Avatar

ORDER BY High_Spenders_Count DESC;



Avatar	High_Spenders_Count
MediumSeaGreen	3
Tan	3
DarkGreen	3
RoyalBlue	3
HotPink	3
Orchid	3
SaddleBrown	2
DarkSlateBlue	2
Aqua	2
Salmon	2
Tomato	2
Bisque	2
LemonChiffon	2
DarkMagenta	2
DarkSeaGreen	2
GhostWhite	2

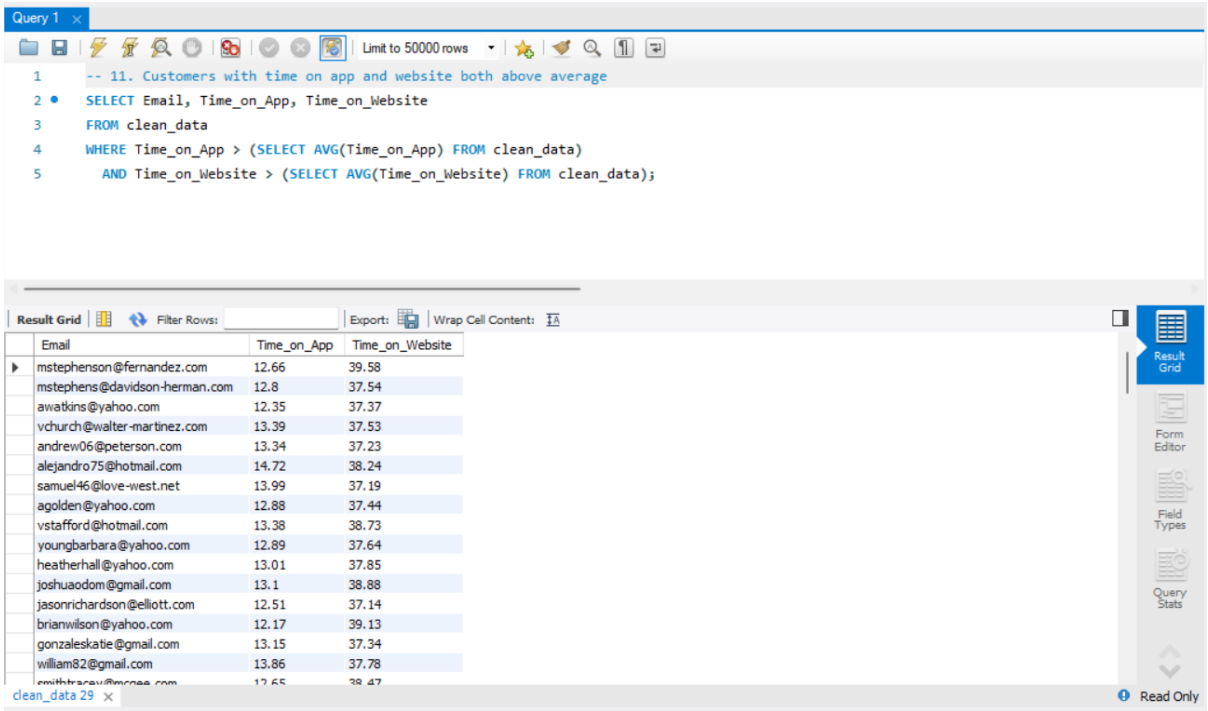
11) Customers with time on app and website both above average

SELECT Email, Time_on_App, Time_on_Website

FROM clean_data

WHERE Time_on_App > (SELECT AVG(Time_on_App) FROM clean_data)

AND Time_on_Website > (SELECT AVG(Time_on_Website) FROM clean_data);



```
-- 11. Customers with time on app and website both above average
SELECT Email, Time_on_App, Time_on_Website
FROM clean_data
WHERE Time_on_App > (SELECT AVG(Time_on_App) FROM clean_data)
  AND Time_on_Website > (SELECT AVG(Time_on_Website) FROM clean_data);
```

Email	Time_on_App	Time_on_Website
mstephenson@fernandez.com	12.66	39.58
mstephens@davidson-herman.com	12.8	37.54
awatkins@yahoo.com	12.35	37.37
vchurch@walter-martinez.com	13.39	37.53
andrew06@peterson.com	13.34	37.23
alejandro75@hotmail.com	14.72	38.24
samuel46@love-west.net	13.99	37.19
agolden@yahoo.com	12.88	37.44
vstafford@hotmail.com	13.38	38.73
youngbarbara@yahoo.com	12.89	37.64
heatherhall@yahoo.com	13.01	37.85
joshuaodom@gmail.com	13.1	38.88
jasonrichardson@elliott.com	12.51	37.14
brianwilson@yahoo.com	12.17	39.13
gonzaleskatie@gmail.com	13.15	37.34
william82@gmail.com	13.86	37.78

12) Correlation proxy: Avg spending by membership group

```
SELECT
  CASE
    WHEN Length_of_Membership < 2 THEN '<2 years'
    WHEN Length_of_Membership BETWEEN 2 AND 4 THEN '2-4 years'
    ELSE '>4 years'
  END AS Membership_Group,
  AVG(Yearly_Amount_Spent) AS Avg_Spending
FROM clean_data
GROUP BY Membership_Group
```

ORDER BY Membership_Group;

```
-- 12. Correlation proxy: Avg spending by membership group
SELECT
  CASE
    WHEN Length_of_Membership < 2 THEN '<2 years'
    WHEN Length_of_Membership BETWEEN 2 AND 4 THEN '2-4 years'
    ELSE '>4 years'
  END AS Membership_Group,
  AVG(Yearly_Amount_Spent) AS Avg_Spending
FROM clean data
```

Membership_Group	Avg_Spending
<2 years	370.2331428571429
>4 years	569.7993548387101
2-4 years	478.6453548387097

13) Customers with short membership (< 1 year) but high app usage (> avg app time)

SELECT Email, Length_of_Membership, Time_on_App

FROM clean_data

WHERE Length_of_Membership < 1

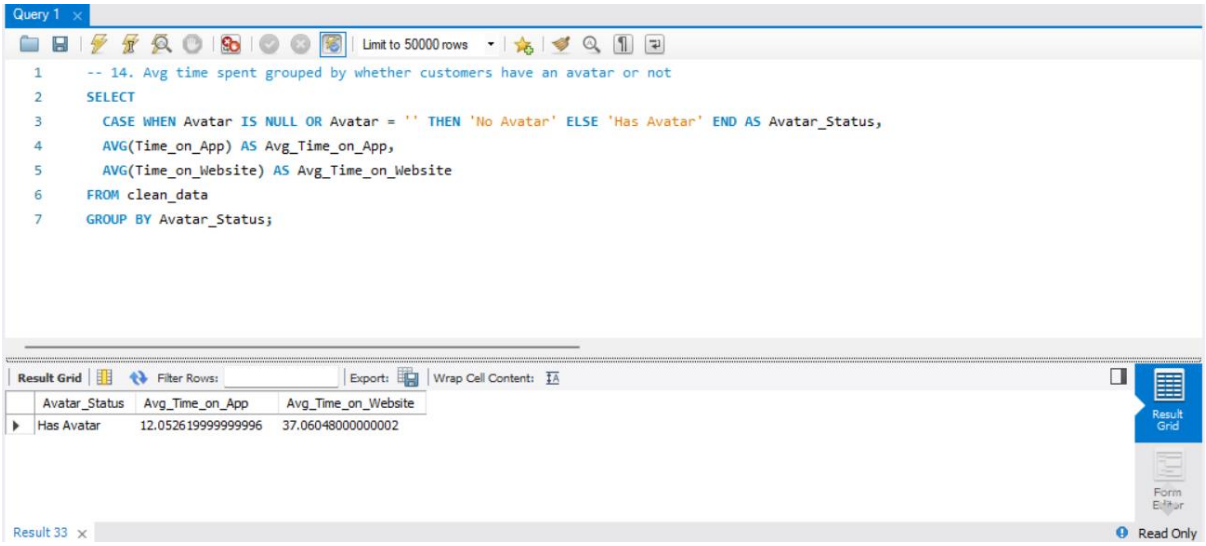
AND Time_on_App > (SELECT AVG(Time_on_App) FROM clean_data);

```
-- 13. Customers with short membership (< 1 year) but high app usage (> avg app time)
SELECT Email, Length_of_Membership, Time_on_App
FROM clean_data
WHERE Length_of_Membership < 1
  AND Time_on_App > (SELECT AVG(Time_on_App) FROM clean_data);
```

Email	Length_of_Membership	Time_on_App
stevenking@patterson.com	0.97	12.4
sharongraves@yahoo.com	0.27	12.56

14) Avg time spent grouped by whether customers have an avatar or not

```
SELECT
  CASE WHEN Avatar IS NULL OR Avatar = '' THEN 'No Avatar' ELSE 'Has Avatar' END AS Avatar_Status,
  AVG(Time_on_App) AS Avg_Time_on_App,
  AVG(Time_on_Website) AS Avg_Time_on_Website
FROM clean_data
GROUP BY Avatar_Status;
```



15) Top 5 addresses by total spending

```
SELECT Address, SUM(Yearly_Amount_Spent) AS Total_Spending
FROM clean_data
GROUP BY Address
ORDER BY Total_Spending DESC
```

LIMIT 5;

```
-- 15. Top 5 addresses by total spending
SELECT Address, SUM(Yearly_Amount_Spent) AS Total_Spending
FROM clean_data
GROUP BY Address
ORDER BY Total_Spending DESC
LIMIT 5;
```

Address	Total_Spending
223 Love Trail Suite 831Port Jeffrey, IN 46849	765.52
USNV JohnsonFPO AP 19026	744.22
11143 Park SquaresSamanthatown, UT 97073	725.58
297 Francis ValleySouth Lindsey, NY 13669-5367	725.58
939 Watson RunStaceyberg, VT 58376-0454	[illegible]

16) Customers who spend more time on website than app but spend less than average

SELECT Email, Time_on_Website, Time_on_App, Yearly_Amount_Spent

FROM clean_data

WHERE Time_on_Website > Time_on_App

AND Yearly_Amount_Spent < (SELECT AVG(Yearly_Amount_Spent) FROM clean_data);

```
-- 16. Customers who spend more time on website than app but spend less than average
SELECT Email, Time_on_Website, Time_on_App, Yearly_Amount_Spent
FROM clean_data
WHERE Time_on_Website > Time_on_App
  AND Yearly_Amount_Spent < (SELECT AVG(Yearly_Amount_Spent) FROM clean_data);
```

Email	Time_on_Website	Time_on_App	Yearly_Amount_Spent
jared39@hotmail.com	35.62	10.87	447.69
joshuaodom@gmail.com	38.88	13.1	491.07
enash@gmail.com	36.77	11.76	347.78
sandraharrison@bailey-go...	37.04	11.98	490.74
cunninghamwilliam@hotm...	37.39	9.95	478.17
christopher20@gmail.com	36.11	13.41	448.23
dongarcia@hotmail.com	36.58	11.86	479.73
kimberly46@garcia-nelson...	36.59	11.4	416.36
brenda82@maldonado-go...	37.27	10.96	442.67
josephgould@west.info	37.45	10.32	384.63
wbrady@yahoo.com	35.93	9.98	451.46
amberchase@fowler.info	35.25	11.59	483.67
jeffreydawson@gmail.com	36.17	10.57	453.17
rjohns@gmail.com	36.81	11.83	496.65

17) Calculate ratio of website to app time for each customer and show those with ratio > 2

SELECT Email, Time_on_Website, Time_on_App, (Time_on_Website / Time_on_App) AS Website_App_Ratio

FROM clean_data

WHERE Time_on_App > 0

AND (Time_on_Website / Time_on_App) > 2

ORDER BY Website_App_Ratio DESC;

Query 1

Limit to 50000 rows

```
-- 17. Calculate ratio of website to app time for each customer and show those with ratio > 2
SELECT Email, Time_on_Website, Time_on_App, (Time_on_Website / Time_on_App) AS Website_App_Ratio
FROM clean_data
WHERE Time_on_App > 0
  AND (Time_on_Website / Time_on_App) > 2
ORDER BY Website_App_Ratio DESC;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Email	Time_on_Website	Time_on_App	Website_App_Ratio
dblair@gmail.com	35.46	8.51	4.166862514688602
martinkristi@sanchez-coleman.com	35.91	8.67	4.141868512110726
david80@knight.com	37.91	9.48	3.9989451476793243
cruiz@yahoo.com	36.91	9.32	3.960300429184549
jgray@khan-allen.com	38.35	10.01	3.8311688311688314
floresarthur@yahoo.com	36.49	9.61	3.7970863683662857
christianwade@butler.info	38.07	10.08	3.7767857142857144
lauriewilson@jackson.com	39.05	10.35	3.7729468599033815
aaron89@gmail.com	38.04	10.1	3.7663366336633666
cunninghamwilliam@hotmail.com	37.39	9.95	3.7577889447236186
blakekent@smith-pena.com	37.35	9.95	3.753768844221106
tammyjones@griffin.com	36.88	9.85	3.7441624365482236
aaron04@yahoo.com	37.76	10.16	3.7165354330708658
rileyalejandro@gmail.com	37.18	10.05	3.6995024875621887

Result 36

Read Only