Assignment Question:

Moreno has assigned you this task to answer: Design marketing strategies aimed at converting casual riders into annual members.

Guiding Questions:

1. **How do annual members and casual riders use Cyclistic bikes differently?**
2. **Why would casual riders buy Cyclistic annual memberships?**
3. **How can Cyclistic use digital media to influence casual riders to become members?**

1. **A clear statement of the business task**

   We hope through analyzing data to find reasons why/how annual riders and casual riders use bikes to narrow down a possible solution to turn casual riders into annual ones. By finding the reasons as to why casual riders use the bikes and try to turn their reasoning into becoming a subscriber. Making their reasoning appeal to switch to an annual membership.

2. **A description of all data sources used**

What will be used is 6 months from 2019, to be specific between October and March from the bike service of that year. So we will be focusing on the fall and winter months of the year to see how that busy season leading up to the new year is affected. To see how best to market the subscription for the Fall season to make sure the new year is started with new flourished members. Since it is known that business dies down after the holidays, I want to analyze this period to see how to avoid this for the company through their digital media influence. This should indicate enough information to conduct the analysis further for the business task.

3. **Documentation of any cleaning or manipulation of data**

   (Note these are the tasks below I will solve with SQL and filtering the datasets)

- We will see where these kinds of subscribers/customers go with the bikes, and how far they travel.
- If there are any correlations between the stations, and if certain stations have more casual or annual riders.
- If more males or females are Casual or Subscribers users.
- Are younger people more likely to be casual users or annual same as the older audience?

- Find if there are any differences in sex amongst the ages as well for both quarters.

4. A summary of your analysis (Note all code in these sections (4) is in SQL)

(Each main "-" on farthest left answers the corresponding statements above in section 3)

– In Q1 there were 274380 males subscribed and 65043 females and 2483 nulled:

```
Unset
SELECT COUNT(*)
FROM `AF_CYC_CS_07_24.CYC_Q1`
WHERE usertype LIKE 'Subscribed'
AND gender LIKE 'Male'
/*this was the base syntax for finding these numbers, the gender was then
changed to female (and nulled afterwards to find that as well) to find the
amount subscribed (usertype was also changed to find the numbers for the
casuals users) for females and then the table used (FROM clause) was altered to
the Quarter 4 table to find the same results from there*/
```

- For casual (in Q1) there were 4,060 males and 1,875 females and 17,228 were nulled.
- In Q4 there were 5,055 nulled subs, 45,5479 males, and 13,7326 females. For casuals, there were 30,980 males, 13678 females, and 61,536 null.

– Average trip duration in Q1 for customers is 3,715.738 and subscribers are 833.467:

```
Unset
SELECT ROUND(AVG(tripduration), 3)
FROM `AF_CYC_CS_07_24.CYC_Q1`
WHERE usertype LIKE 'Subscriber'
/*the usertype is then changed to Customer to find that number and so is the
table to Q4 (quarter 4), its also rounded to avoid a long number */
```

- Q4 the average trip was 3,665.457 for customers and 749.408 for subs.

– For the age of these users, there are 248556 users born before 1990 and 81080 after 1990:

```
Unset
SELECT COUNT(*)
FROM `AF_CYC_CS_07_24.CYC_Q1`
WHERE birthyear < 1990
AND usertype LIKE 'Subscriber'
```

- Q1 Of those people there are 246,155 older than 1990 are Subscribers and 77,769 are younger (after 1990).
- Then for Customers, there are 2,401 before 1990 that are customers, and 3,311 after 1,990.
- For Q4 there were 396,068 before 1990, and 210,965 after 1990.
- From those people in Q4, there were 396,068 before 1990, from that there were 20,011 as Customers and 376,057 as Subscribers.
- Those after 1990 are 210,965, that are Subscribers are 188,293, then 22,672 customers.

– From the age difference as well as sex difference (just adding another layer (sex) to the previous statement above):

```
Unset
SELECT COUNT(*)
FROM `AF_CYC_CS_07_24.CYC_Q1`
WHERE birthyear < 1990
AND usertype LIKE 'Subscriber'
AND gender LIKE 'Male'
```

- For Q1 Subscribers, there are 201,518 males born before 1990 and 43,231 females. For males born after 1990, there are 60,230 and 17,386 females.
- For Q1 Customers, there were 1,736 males and 631 females before 1990. Then 2,113 males and 1,137 females.

- For Q4 Subscribers there were 296,310 males born before 1990 and 76,946 females. Those born after were 136,701 males and 50,123 females.
- For Q4 Customers there were 14,361 males and 5,313 females before 1990, then after that were 7,568 females and 14,857 males born after.

5. Supporting visualizations and key findings

- Tableau will be used to show the findings of this analysis.

6. Your top three recommendations based on your analysis

1) For the first recommendation, I would say make ads tailored towards the younger audience, that means those born after 1990. Since those are the ones that are lacking in numbers for the company. It is clear that through the numbers, Cyclistic's audience is for the majority older. That being there are more than 350,000 people that are subscribers already to the platform born before 1990. When you compare that to the entire group of more than 43,000 casual users (customers). You see that to bring in more subscribers we can make ads using interviews of current subscribers to show why they did so. That can be used to tailor to the casual consumers of the product by having how much they save or accessibility options as compared to lets say a car.
2) For the second recommendation, it is seen that the product's biggest source of revenue is from males. So future ads can be tailored to them since they outweigh the female audience by more than three times the size in most cases. So making ads for males would make it so they invite more of the male friends over. Hence having an ad (marketing strategy) that tailors to saving money and effectiveness of travel. An ad can be about the cost of automobiles nowadays, and traffic jams during rush hours. Since most men work typical 9-5 jobs, this ad would suit them to avoid such daily hassles of their work life. Then an ad for how subscribing can even better manage that cost effective nature of their life they all desire.
3) For the third recommendation, we also see through the data that the casual users have larger average trip durations. That being around four times larger than the average trip duration for subscribers. This means when you can tailor an ad to make them see that by subscribing to them, they would save more by traveling longer distances while having the subscription. This would make it so that casual consumers would want to switch to save more, since the company would make it less convenient to ride longer as a casual consumer and persuade that audience to switch. So an ad that would show how much is saved by being a subscriber, and how much could have been saved to a casual biker traveling the same distance.