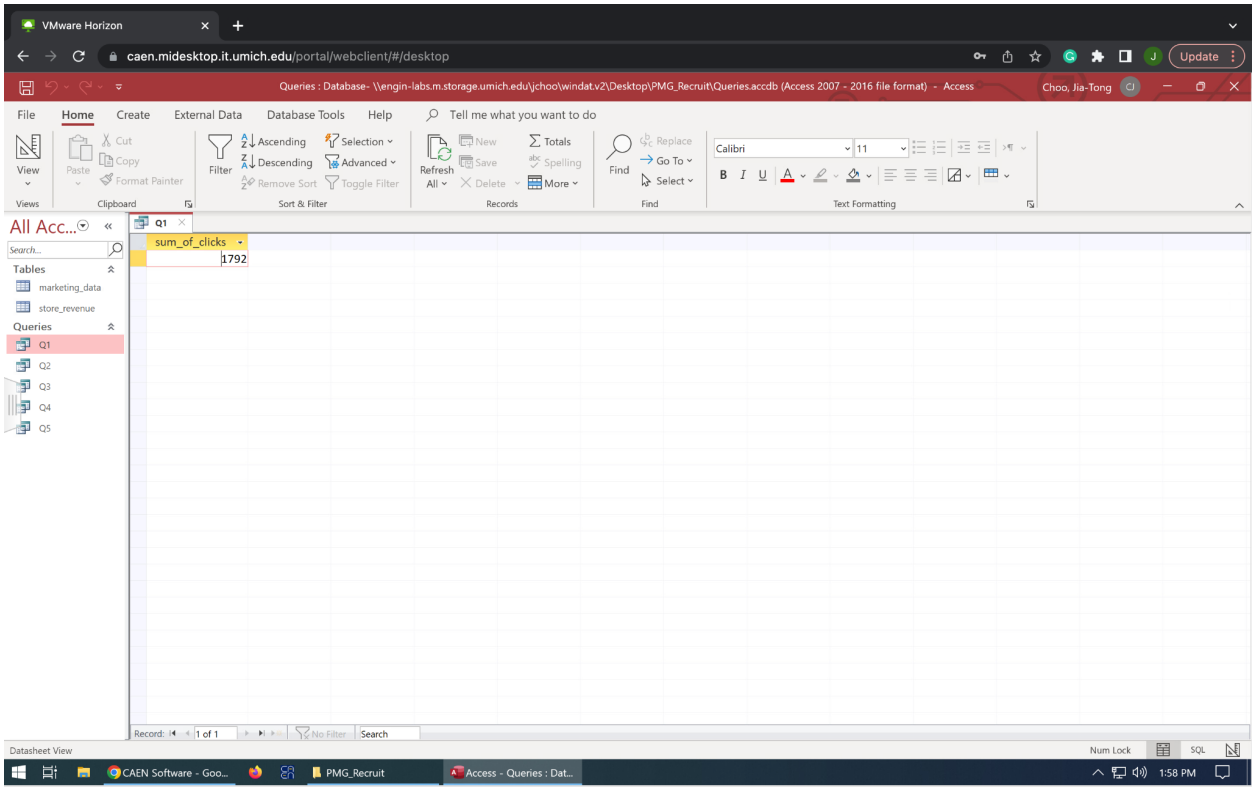
1. Generate a query to get the sum of the clicks of the marketing data

SQL query:

```
SELECT SUM(clicks) AS sum_of_clicks
FROM marketing_data;
```

Output:



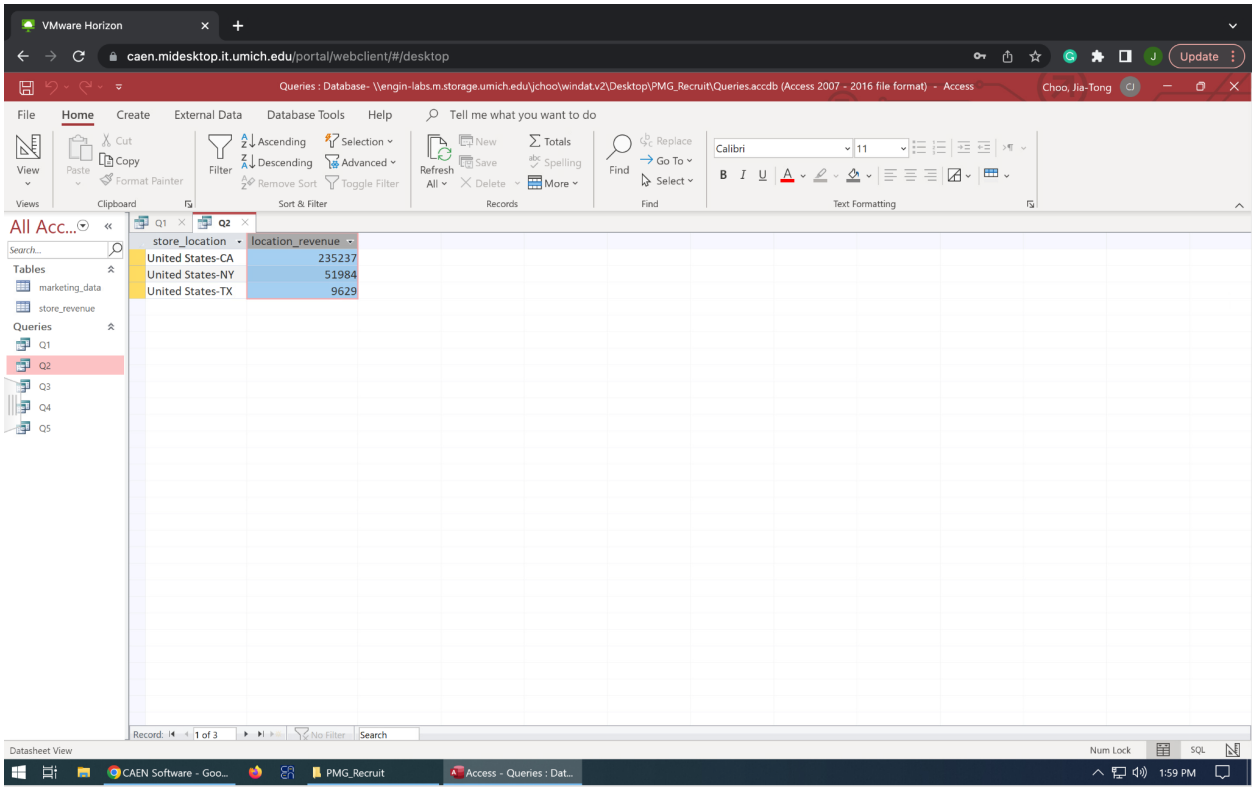
The sum of clicks of the marketing data is 1792, which means that there are 1792 clicks in total from all the documented locations.

2. Generate a query to gather the sum of revenue by store_location from the store_revenue table

SQL query:

```
SELECT store_location, SUM(revenue) AS location_revenue
FROM store_revenue
GROUP BY store_location;
```

Output:



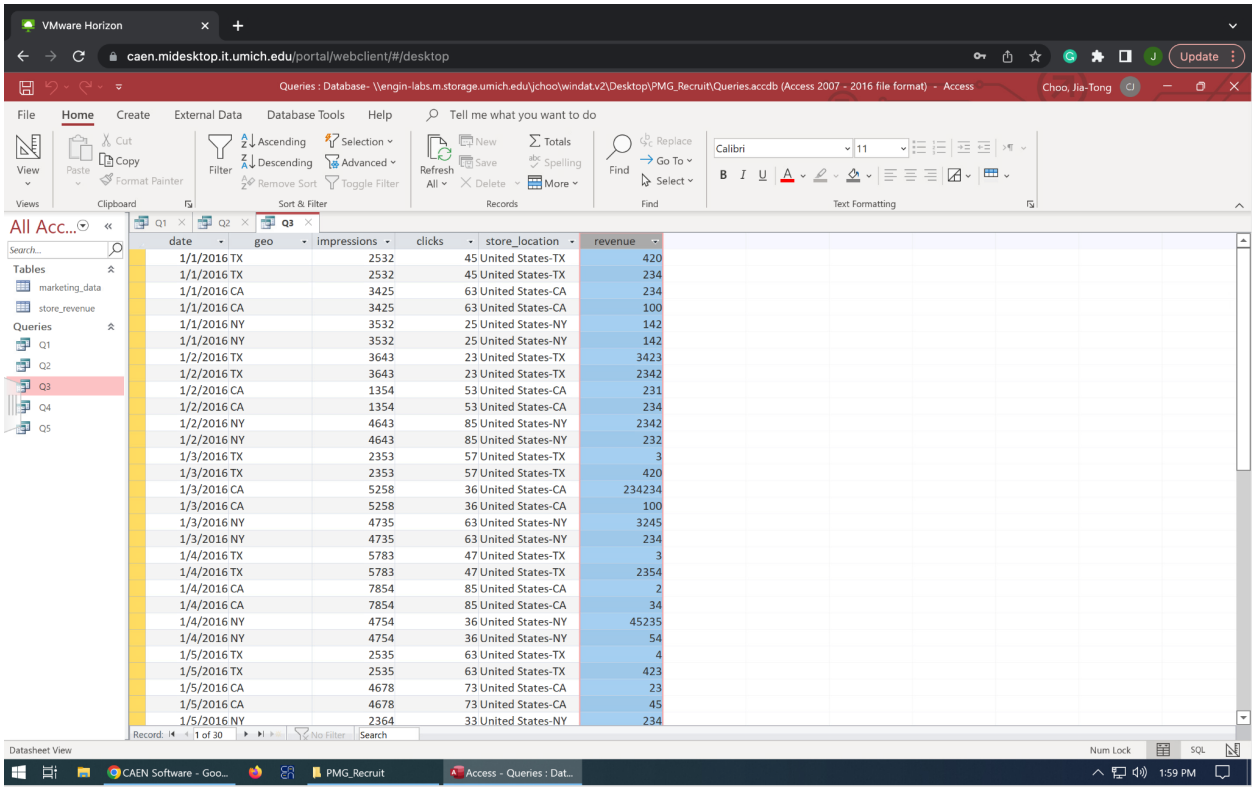
After grouping by the store location, we can see the sum of each location - CA with 125237, NY with 51984, and TX with 9629. By having this result, we are able to state that California has the most revenue, which can be caused by multiple factors including population, average income, etc.

3. Merge these two datasets so we can see impressions, clicks, and revenue together by date and geo. Please ensure all records from each table are accounted for.

SQL query:

```
SELECT marketing_data.date, marketing_data.geo, marketing_data.impressions,
marketing_data.clicks, store_revenue.store_location, store_revenue.revenue
FROM store_revenue INNER JOIN marketing_data ON (marketing_data.geo =
RIGHT(store_revenue.store_location,2)) AND (marketing_data.date =
store_revenue.date);
```

Output:



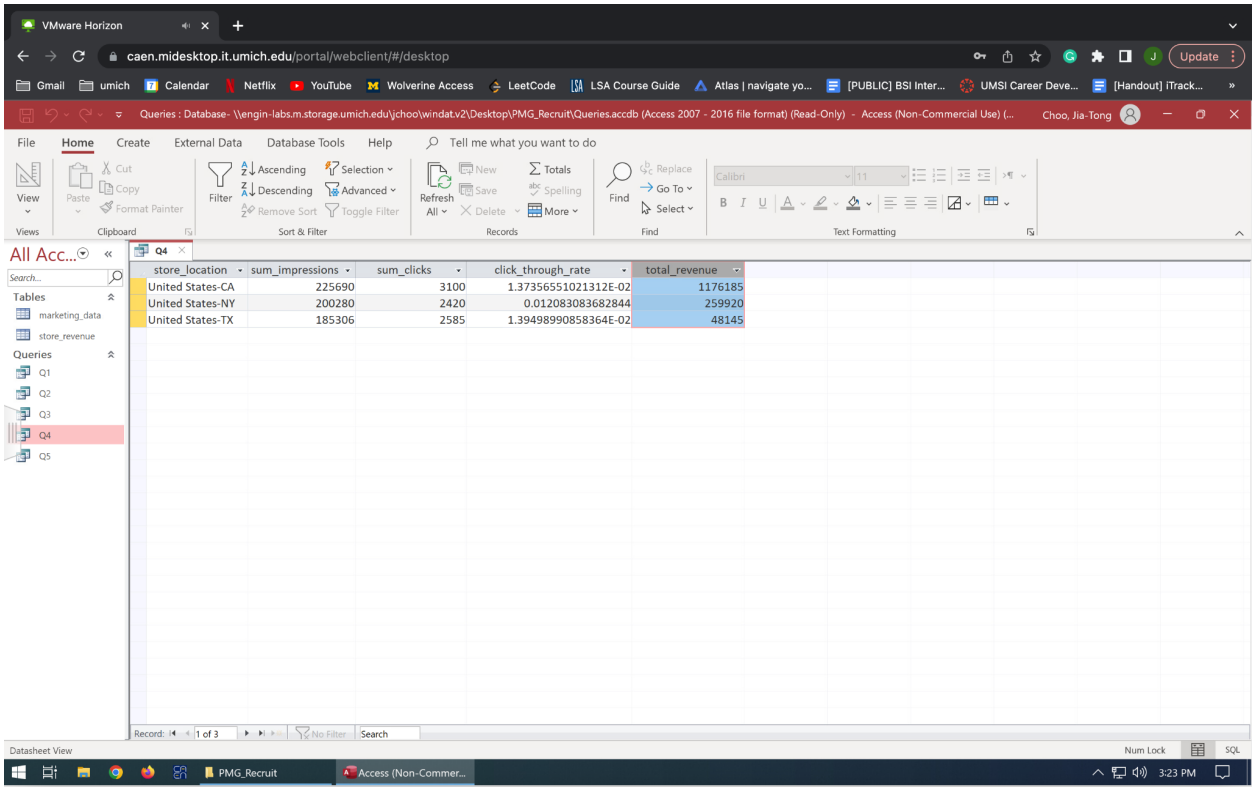
date	geo	impressions	clicks	store_location	revenue
1/1/2016	TX	2532	45	United States-TX	420
1/1/2016	TX	2532	45	United States-TX	234
1/1/2016	CA	3425	63	United States-CA	234
1/1/2016	CA	3425	63	United States-CA	100
1/1/2016	NY	3532	25	United States-NY	142
1/1/2016	NY	3532	25	United States-NY	142
1/2/2016	TX	3643	23	United States-TX	3423
1/2/2016	TX	3643	23	United States-TX	2342
1/2/2016	CA	1354	53	United States-CA	231
1/2/2016	CA	1354	53	United States-CA	234
1/2/2016	NY	4643	85	United States-NY	2342
1/2/2016	NY	4643	85	United States-NY	232
1/3/2016	TX	2353	57	United States-TX	3
1/3/2016	TX	2353	57	United States-TX	420
1/3/2016	CA	5258	36	United States-CA	234234
1/3/2016	CA	5258	36	United States-CA	100
1/3/2016	NY	4735	63	United States-NY	3245
1/3/2016	NY	4735	63	United States-NY	234
1/4/2016	TX	5783	47	United States-TX	3
1/4/2016	TX	5783	47	United States-TX	2354
1/4/2016	CA	7854	85	United States-CA	2
1/4/2016	CA	7854	85	United States-CA	34
1/4/2016	NY	4754	36	United States-NY	45235
1/4/2016	NY	4754	36	United States-NY	54
1/5/2016	TX	2535	63	United States-TX	4
1/5/2016	TX	2535	63	United States-TX	423
1/5/2016	CA	4678	73	United States-CA	23
1/5/2016	CA	4678	73	United States-CA	45
1/5/2016	NY	2364	33	United States-NY	234

4. In your opinion, what is the most efficient store and why?

SQL query:

```
SELECT store_revenue.store_location, SUM(marketing_data.impressions) AS
sum_impressions, SUM(marketing_data.clicks) AS sum_clicks,
(sum_clicks/sum_impressions) AS click_through_rate, SUM(store_revenue.revenue) AS
total_revenue
FROM marketing_data INNER JOIN store_revenue ON marketing_data.geo =
RIGHT(store_revenue.store_location,2)
GROUP BY store_revenue.store_location;
```

Output:



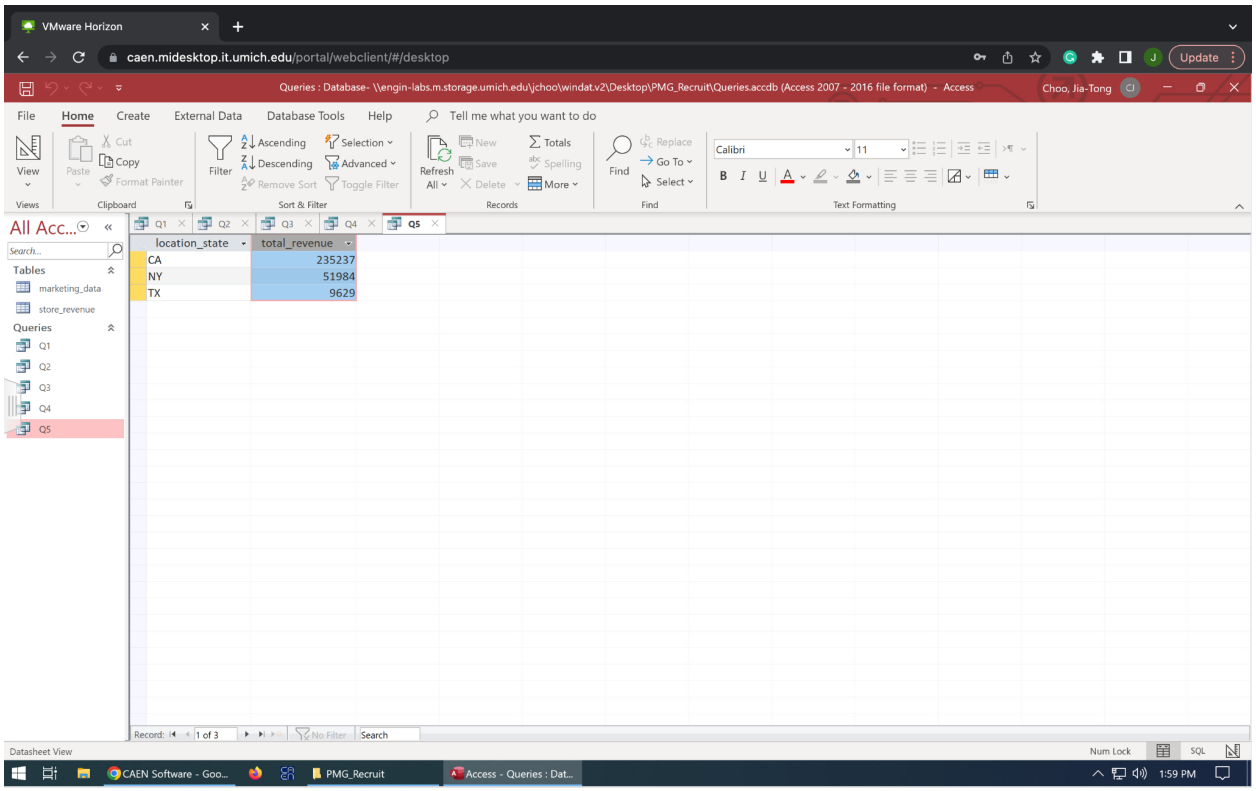
I calculated the clickthrough rate (CTR) for each store location with CTR = sum of clicks / sum of impressions. Clickthrough rates tells us how well the ads or the marketing plan are performing, which can also means the marketing efficiency of the store. As we can see, TX has the highest clickthrough rate (1.39) compared to the other two sites with CA having just a slightly lower rate (1.37). Therefore, we can have a conclusion that TX is the most efficient store. The total revenue of each store is also shown above in addition to the CTR to show that not the store that has the highest revenue is the most efficient store.

5. (Challenge) Generate a query to rank in order the top 10 revenue producing states

SQL query:

```
SELECT RIGHT(store_location,2) AS location_state, SUM(revenue) AS total_revenue
FROM store_revenue
GROUP BY store_location
ORDER BY SUM(revenue) DESC;
```

Output:



From my output, CA has the highest revenue (235237) following by NY with a revenue of 51984. TX has the lowest revenue out of all the states.