1

A screenshot of a computer

Description automatically generated

A close-up of a text

Description automatically generated

1.bA computer screen shot of text

Description automatically generated

A computer screen shot of text

Description automatically generated

A screenshot of a computer

Description automatically generated

1.c I used the Common Table Expression (CTE) to generate a temporary table denominated "top\_5\_customers," which encompasses the information of the highest 5 spending customers. By utilizing CTE, I enhanced the organization and comprehensibility of the code. Subsequently, I alluded to the CTE table in the primary query to ascertain the number of customers residing in each country and the count of customers from the top 5 list residing in each country.

2.a I feel like CTE is quicker and more organized. However when deciding which process to use the overall cost of the project needs to be considered.

2.b

|  |  |  |
| --- | --- | --- |
|  | CTE | Subquery |
| Average Paid Top 5 Customers | "Aggregate (cost=70.10..70.11 rows=1 width=32)"  Query time:00:00:00.080 | "Aggregate (cost=70.10..70.11 rows=1 width=32)"  00:00:00.00.072 |
| Top 5 Customers in each Country | "Sort (cost=140.85..140.90 rows=36 width=25)"  00:00:00.086 | "Sort (cost=140.85..142.90 rows=36 width=25)"  00:00:00.110 |

2.c The results of the EXPLAIN Query was surprising because it appears the subquery was faster when searching for the average, but the CTE was faster with the top 5 customers in each country.

3.a I find it hard to perform CTEs. Renaming the queries and looking at them individually was the hardest part. But, like subqueries I know with more practice the concept and ability to perform both will become easier.