MILESTONE 3

IE6700

Data Management for Analytics

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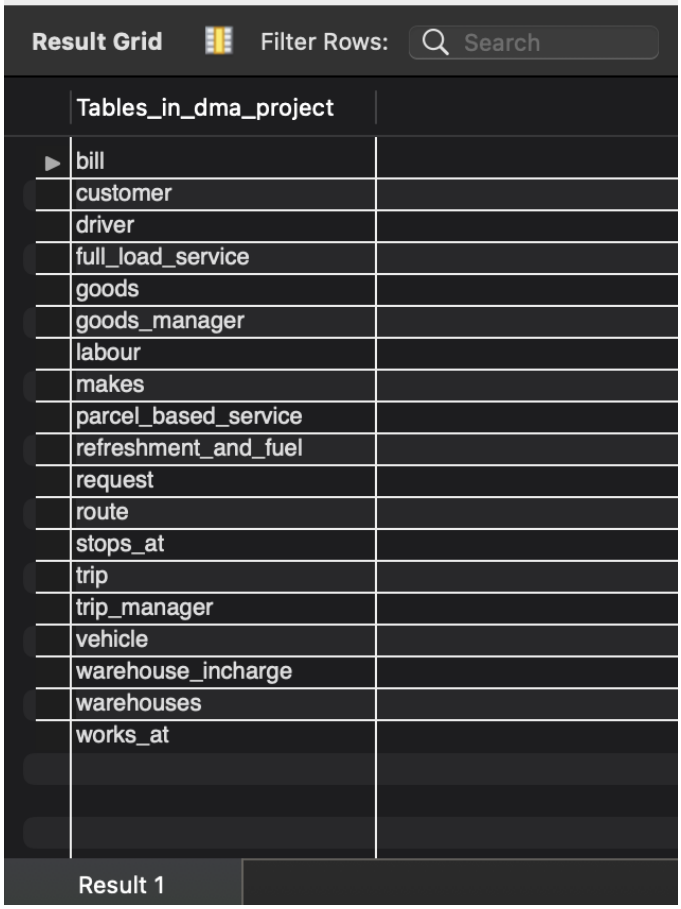
Creating our database “DMA_PROJECT”:

```
create schema DMA_PROJECT;
show schemas;
use DMA_PROJECT;
```

Displaying all the tables in our database:

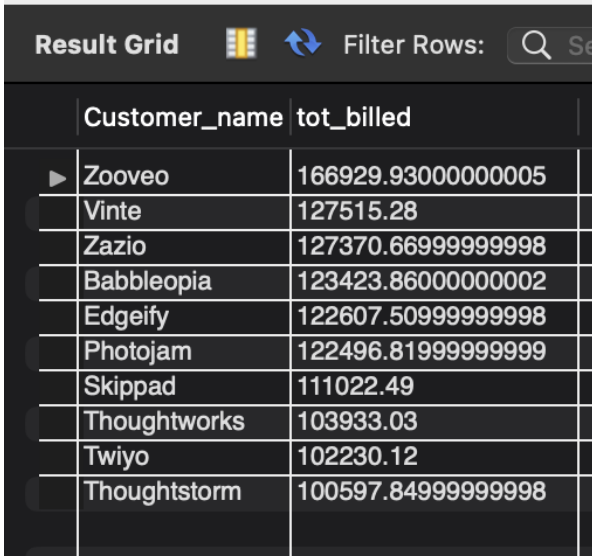
```
show tables;
```



Query 1

```
select c.Customer_name, sum(b.total_freight) as tot_billed
from customer c, bill b
where c.bill_id = b.bill_id
group by c.Customer_name
order by tot_billed desc
limit 10;
```

Output:



Customer_name	tot_billed
Zooveo	166929.93000000005
Vinte	127515.28
Zazio	127370.66999999998
Babbleopia	123423.86000000002
Edgeify	122607.50999999998
Photojam	122496.81999999999
Skippad	111022.49
Thoughtworks	103933.03
Twiyo	102230.12
Thoughtstorm	100597.84999999998

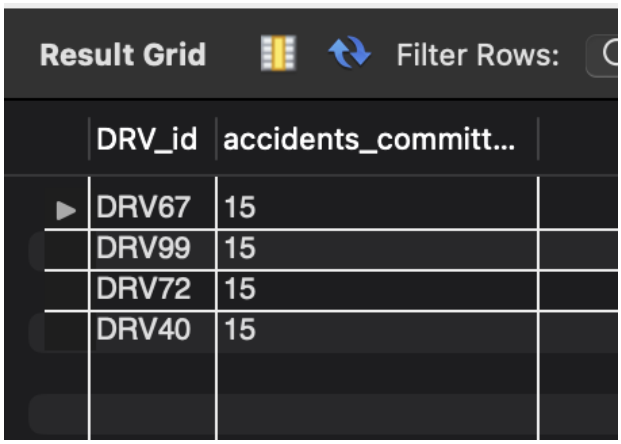
Analytic Purpose:

This query gives a list of top 10 customers who carry out the most business with Boston Convenience. To appreciate their loyalty with us, we can give them a better quote so that they continue doing business with us. We can also send them goodies for being the most loyal clients.

Query 2

```
select DRV_id, accidents_committed
from driver
where accidents_committed = (select max(accidents_committed)
                                                    from driver);
```

Output:



DRV_id	accidents_committ...
DRV67	15
DRV99	15
DRV72	15
DRV40	15

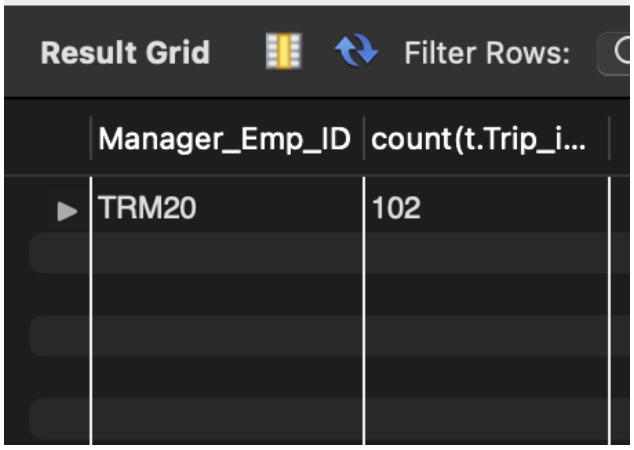
Analytic Purpose:

This query returns those drivers who have committed the most number of accidents till date. It can be used to provide a warning to these drivers, and they can be put under notice for a period of time, until they clear their record (by assigning them shorter trips or reduction in their salary).

Query 3

```
select t.Manager_Emp_ID, count(t.Trip_id)
from trip_manager tm, trip t
where tm.TRM_id = t.Manager_Emp_ID
group by t.Manager_Emp_ID
order by count(t.Trip_id) desc limit 1;
```

Output:



Analytic Purpose:

This query gives the trip manager who has overlooked the most number of trips till date. This way, we can assign this manager to high profile clients and a performance bonus would be provided to him/her.

Query 4

```
select r.Pick_up_Location,count(c.Customer_name) as cust_count
from customer c,makes m,request r
where c.Invoice_Number=m.Invoice_Number and
c.Employee_ID=m.Employee_ID and m.req_id=r.req_id
group by r.Pick_up_Location order by cust_count desc;
```

Output:

Result Grid Filter Rows:

Pick_up_Location	cust_count
Boston	358
Albany	130
Syracuse	119
New York	98
Rochester	63
Cleaveland	47
Hartford	42
Scranton	39
Blacksburg	33
Philadelphia	29
Baltimore	27
Detroit	23

Analytic purpose:

From this query, it is observed that Boston is the most frequently chosen location for the pick up of delivery by the customers. Therefore, we can arrange extra services (like transporting their goods from their warehouse to our warehouse) and work towards arranging more rented/owned warehouses in and around Boston.

Query 5

```
select r.drop_Location,count(c.Customer_name) as cust_count
from customer c,makes m,request r
where c.Invoice_Number=m.Invoice_Number and
c.Employee_ID=m.Employee_ID and m.req_id=r.req_id
group by r.drop_Location order by cust_count desc;
```

Output:

Result Grid Filter Rows:

drop_Location	cust_count
Chicago	171
Detroit	112
Cleaveland	88
Rochester	83
Syracuse	72
Charlotte	67
Columbus	64
Nashville	58
Richmond	54
Knoxville	52
Akron	41
Blacksburg	36
Washington	35

Analytic purpose:

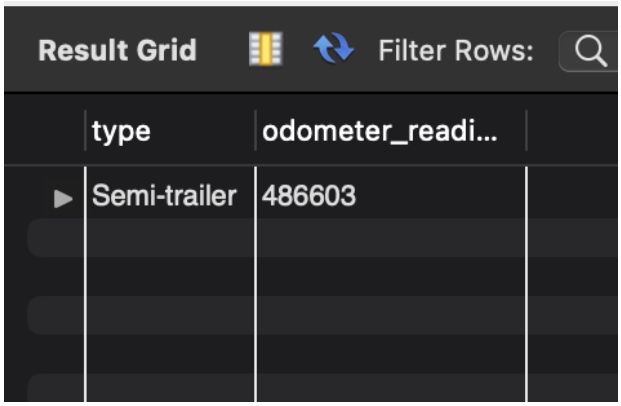
From this query, it is observed that Chicago is the most frequently chosen location for the drop off of goods by the customers. Therefore, we can arrange extra services (like transporting their goods from our warehouse to their warehouse) and work towards arranging more rented/owned warehouses in and around Chicago.

In addition to this, we can start our business expansion from these cities

Query 6

```
select v.type,(v.odometer_reading)
from vehicle v
order by v.odometer_reading desc limit 1;
```

Output:



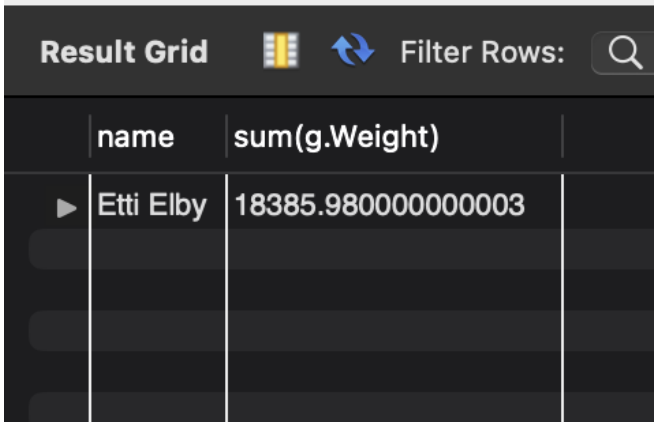
Analytic Purpose:

From this query, it is observed that Semi-trailer trucks are being preferred the most by clients. This implies that the demand is high for these trucks relative to other types of trucks. Therefore, this can be considered while purchasing new trucks in the future.

Query 7

```
select concat(gm.first_name, ' ', gm.last_name) as name, sum(g.Weight)
from goods g, goods_manager gm
where gm.emp_id = g.Employee_ID
group by name
order by sum(g.Weight) desc
limit 1;
```

Output:



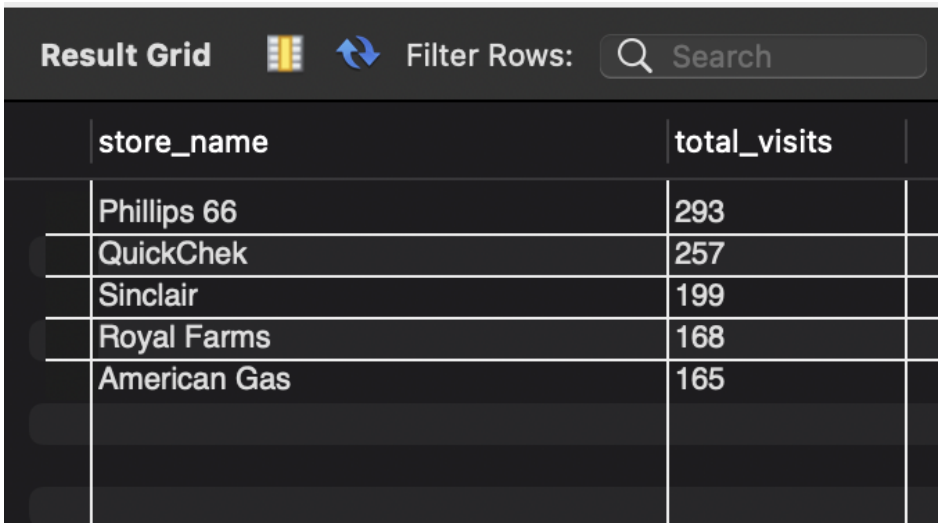
Analytic purpose:

This query returns the name of the goods manager who has prioritized our company for transportation over the rest of the competition. He can be offered extra commission to recommend our services to his client/customer list.

Query 8

```
select rf.store_name,count(rf.store_name) as total_visits
from refreshment_and_fuel rf,stops_at sa
where rf.store_id=sa.Location_ID
group by rf.store_name
order by total_visits desc limit 5;
```

Output:



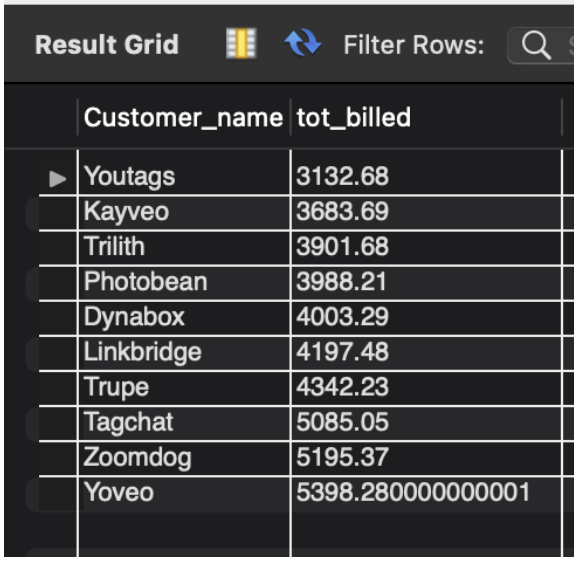
Analytic purpose:

The above five refreshment/fuel stores are the ones that are most stopped at by our trucks, during any trip. In the future, we can partner with these stores to avail loyal customer discounts, that would decrease our trip cost, and therefore increase our profit margin.

Query 9

```
select c.Customer_name, sum(b.total_freight) as tot_billed
from customer c, bill b
where c.bill_id = b.bill_id
group by c.Customer_name
order by tot_billed
limit 10;
```

Output:



Result Grid Filter Rows:

Customer_name	tot_billed
Youtags	3132.68
Kayveo	3683.69
Trilith	3901.68
Photobean	3988.21
Dynabox	4003.29
Linkbridge	4197.48
Trupe	4342.23
Tagchat	5085.05
Zoomdog	5195.37
Yoveo	5398.280000000001

Analytic Purpose:

This query gives a list of 10 companies that have done the least business with Boston Convenience. We can concentrate our marketing towards these companies and try to adjust our quote that would attract them towards our service.