

Team 8 - sql queries for business questions

The screenshot shows a SQL Studio interface with two queries and their results.

Query 1: How Many Car Accidents Are There in NYC Every Year?

```
-- How Many Car Accidents Are There in NYC Every Year?
Select Year(c.[collision_dt]) as Year, COUNT(c.[collision_id]) as Car_Accidents
from [fct_collision_crashes] c
join [fct_collisions_vehicles] fcv on fcv.COLLISION_ID = c.collision_id
join [Dim_VEHICLE_TYPE] vt on vt.VEHICLE_TYPE_SK=fcv.VEHICLE_TYPE_SK
where vt.VEHICLE_TYPE like 'car%' or vt.VEHICLE_TYPE like 'sedan%'
group by Year([collision_dt])
order by 1 desc;
```

Query 2: Which Boroughs in New York City Have the Most Accidents?

```
--Which Boroughs in New York City Have the Most Accidents?
Select [borough],COUNT([collision_id]) as Accidents
from [fct_collision_crashes]
```

Results:

Year	Car_Accidents
2021	85783
2020	94289
2019	173648
2018	197673
2017	209571
2016	101934
2015	92
2014	104
2013	31
2012	24

The screenshot shows a SQL Studio interface with two queries and their results.

Query 1: Which Boroughs in New York City Have the Most Accidents?

```
--Which Boroughs in New York City Have the Most Accidents?
Select [borough],COUNT([collision_id]) as Accidents
from [fct_collision_crashes]
group by [borough]
order by 2 desc;
```

Results:

borough	Accidents
NULL	603706
BROOKLYN	423920
QUEENS	359157
MANHATTAN	304612
BRONX	197050
STATEN ISLAND	56303

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TING_FACTOR_TNX_RE
ENSE_JURISDICTION
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```
-- How Many NYC Car Accidents Result in an Injury?  
select count(c.[collision_id]) as Car_Accidents  
from [fct_collision_crashes] c  
inner join [fct_collision_persons] p on p.COLLISSION_ID=c.collision_id  
inner join [Dim_PERSON_INJURY] dpi on dpi.PERSON_INJURY_SK = p.PERSON_INJURY_SK  
where dpi.PERSON_INJURY = 'Injured';
```

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Results Messages

	Car_Accidents
1	570237

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VG_FACTOR
VG_FACTOR_TNX
VG_FACTOR_TNX_RE
VSE_JURISDICTION
VSE_STATUS

STATUS

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```
--Which NYC Borough Has the Most Fatal Car Accidents?  
select c.[borough], count(c.[collision_id]) as CarAccidents  
from [fct_collision_crashes] c  
inner join [fct_collision_persons] p on p.COLLISSION_ID=c.collision_id  
inner join [Dim_PERSON_INJURY] dpi on dpi.PERSON_INJURY_SK = p.PERSON_INJURY_SK  
where dpi.PERSON_INJURY = 'Killed'  
group by c.[borough];
```

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Results Messages

	borough	CarAccidents
1	MANHATTAN	291
2	BRONX	236
3	STATEN ISLAND	84
4	NULL	1081
5	BROOKLYN	546
6	QUEENS	470

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AdventureWorks2019
AdventureWorksLT2019
FALLDAMG7370
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dbo.Dim_BODILY_INJURY
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dbo.Dim_CONTRIBUTING_FACTOR_TNX
dbo.Dim_CONTRIBUTING_FACTOR_TNX_RE
dbo.Dim_DRIVER_LICENSE_JURISDICTION
dbo.Dim_DRIVER_LICENSE_STATUS
dbo.Dim_EJECTION
dbo.Dim_EMOTIONAL_STATUS
dbo.Dim_PED_ACTION
dbo.Dim_PED_LOCATION

```
where dpi.PERSON_INJURY = 'Killed'  
group by c.[borough];
```

```
--When Do Most New York City Car Accidents Happen?  
select top 1 concat(c.[collision_hour],':00'), count(c.[collision_id]) as CarAccidents  
from [fct_collision_crashes] c  
GROUP BY c.[collision_hour]  
ORDER BY 2 DESC;
```

```
--How Common Are Bicycle Accidents in NYC?  
select count(c.[collision_id]) as BicycleAccidents
```

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Results Messages

	(No column name)	CarAccidents
1	16.00	141435

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 dbo.DIM_EMOTIONAL_STATUS
 dbo.DIM_PED_ACTION
 dbo.DIM_PED_LOCATION
 dbo.DIM_PED_ROLE
 dbo.DIM_PERSON_INJURY

--How Common Are Bicycle Accidents in NYC?

```
select count(c.[collision_id]) as BicycleAccidents
from [fct_collision_crashes] c
inner join [fct_collision_persons] p on p.COLLISSION_ID=c.collision_id
inner join [Dim_PersonType] dpt on dpt.PERSON_TYPE_SK=p.PERSON_TYPE_SK
where dpt.PERSON_TYPE = 'Bicyclist';
```

--How Often Are Pedestrians Involving New York Traffic Accidents?

Results Messages

BicycleAccidents	
1	58199

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 dbo.DIM_DRIVER_LICENSE_STATUS
 dbo.DIM_EJECTION
 dbo.DIM_EMOTIONAL_STATUS
 dbo.DIM_PED_ACTION
 dbo.DIM_PED_LOCATION

```
inner join [Dim_PersonType] dpt on dpt.PERSON_TYPE_SK=p.PERSON_TYPE_SK
where dpt.PERSON_TYPE = 'Bicyclist';
```

--How Often Are Pedestrians Involving New York Traffic Accidents?

```
select count(c.[collision_id]) as BicycleAccidents
from [fct_collision_crashes] c
inner join [fct_collision_persons] p on p.COLLISSION_ID=c.collision_id
inner join [Dim_PersonType] dpt on dpt.PERSON_TYPE_SK=p.PERSON_TYPE_SK
where dpt.PERSON_TYPE = 'Pedestrian';
```

Results Messages

BicycleAccidents	
1	111958

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 dbo.DIM_EJECTION
 dbo.DIM_EMOTIONAL_STATUS
 dbo.DIM_PED_ACTION
 dbo.DIM_PED_LOCATION

```
inner join [fct_collision_persons] p on p.COLLISSION_ID=c.collision_id
inner join [Dim_PersonType] dpt on dpt.PERSON_TYPE_SK=p.PERSON_TYPE_SK
where dpt.PERSON_TYPE = 'Pedestrian';
```

--How Many Motorcyclists are Injured or Killed in NYC Accidents?

```
select sum(c.[number_of_motorist_killed]) as motorist_killed,sum(c.[number_of_motorist_injured])
as motorist_injured from [fct_collision_crashes] c
```

Results Messages

How Many Motorcyclists are Injured or Killed in NYC Accidents?	
1	motorist_killed motorist_injured
	1100 412285

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 - dbo.DIM_CONTRIBUTING_FACTOR_TNX
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 - dbo.DIM_DRIVER_LICENSE_STATUS
 - dbo.DIM_EJECTION
 - dbo.DIM_EMOTIONAL_STATUS
 - dbo.DIM_PED_ACTION
 - dbo.DIM_PED_LOCATION
 - dbo.DIM_PED_ROLE
 - dbo.DIM_PERSON_INJURY
 - dbo.DIM_PERSON_SEV

```

select sum(c.[number_of_motorist_killed]) as motorist_killed,sum(c.[number_of_motorist_injured])
as motorist_injured from [fct_collision_crashes] c

--Are Trucks Involved in Many New York Accidents?
select Year(c.[collision_dt]) as Year, COUNT(c.[collision_id]) as Truck_Accident
from [fct_collision_crashes] c
join [fct_Collisions_Vehicles] v on v.COLLISSION_ID = c.collision_id
join [Dim_VEHICLE_TYPE] dvt on dvt.VEHICLE_TYPE_SK=v.VEHICLE_TYPE_SK
where dvt.VEHICLE_TYPE like '%truc%'
group by Year([collision_dt])
order by 2 desc;

```

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Results Messages

	Year	Truck_Accident
1	2018	15201
2	2017	14521
3	2019	13982
4	2016	13287
5	2015	7173
6	2020	6932
7	2013	6372
8	2021	6261
9	2014	6206
10	2012	3166