Query 1 : How many accidents have occurred in urban verses rural areas ?  
 Ans Select area,count(\*) Total\_Acc from accident

group by area  
   
 Result :   
 Urban 58533

Rural 21999

Query 2 : Which day of the week has the highest number of accidents ?  
Ans Select datename(dw,date) Day\_name,count(\*) Total\_Acc from accident

group by datename(dw,date)

Order by Total\_Acc desc  
   
Result :Friday 12937

Thursday 12431

Wednesday 12359

Tuesday 12301

Monday 11401

Saturday 10388

Sunday 8715  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
 Query 3 : What is avg of vehicle involved in accidents based on their type ?  
   
 Ans : Select Vehicletype,

count(\*) toatl\_a,

avg(agevehicle) Avg\_age

from vehicle

where agevehicle is not null

group by Vehicletype

order by toatl\_a desc  
 Result Car 137379 8

Van / Goods 3.5 tonnes mgw or under 9803 6

Motorcycle 125cc and under 6669 6

Motorcycle over 500cc 5604 10

Taxi/Private hire car 4228 6

Bus or coach (17 or more pass seats) 4174 7

Goods 7.5 tonnes mgw and over 2967 5

Motorcycle 50cc and under 1631 6

Motorcycle over 125cc and up to 500cc 1545 10

Goods over 3.5t. and under 7.5t 763 6

Other vehicle 373 7

Goods vehicle - unknown weight 315 6

Agricultural vehicle 304 7

Minibus (8 - 16 passenger seats) 193 7

Motorcycle - unknown cc 120 8

Mobility scooter 6 2

Data missing or out of range 1 4

Query 4 : Can we identify any trends in accidents based on the age of vehicles involved?   
Select

age\_group,

avg(agevehicle) Avg\_age ,

count(\*) toatl\_a

from (

select agevehicle,

case

when agevehicle between 0 and 5 then 'New'

when agevehicle between 5 and 10 then 'Regular'

else 'old'

end as age\_group

from vehicle

where agevehicle is not null

) subquery

Group by age\_group

order by toatl\_a desc

Result : New 2 61658

Regular 8 59046

Old 13 55371  
  
Query 5 : Are there any specific weather conditions that contribute to severe accidents?  
Ans. declare @severity varchar(max)

set @severity = 'serious'

Select weatherconditions, count(\*) Total

from accident

--where severity= @severity

group by weatherconditions

order by Total desc

Result: Fine no high winds 66515

Raining no high winds 8645

Unknown 1312

Raining + high winds 1207

Other 1067

Fine + high winds 1066

Fog or mist 321

Snowing no high winds 288

Snowing + high winds 111  
Query 6 : Do accidents often involve impacts on the left-hand side of vehicles?  
 Ans: Select lefthand, count(\*) Total

from vehicle

group by lefthand

having lefthand is not null

order by Total desc

Result : Right(0) 255480

Left(1) 1346  
  
  
Query 7 : Are there any relationships between journey purposes and the severity of accidents?  
Ans :   
with CTE as

(

select v.journeypurpose, a.severity ,count(a.area) total, type=

case

when count(a.area) between 0 and 1000 then 'low'

when count(a.area) between 1001 and 3000 then 'Avg'

else 'high'

end

from accident A

join vehicle V

on A.accidentIndex=V.accidentIndex

group by v.journeypurpose, a.severity

)

select \* from CTE order by total desc  
  
  
  
result :   
  
Not known Slight 171924 high

Journey as part of work Slight 36843 high

Commuting to/from work Slight 25021 high

Not known Serious 13108 high

Journey as part of work Serious 2632 Avg

Taking pupil to/from school Slight 2509 Avg

Commuting to/from work Serious 1833 Avg

Other Slight 1573 Avg

Not known Fatal 1014 Avg

Pupil riding to/from school Slight 777 low

Journey as part of work Fatal 310 low

Taking pupil to/from school Serious 120 low

Commuting to/from work Fatal 112 low

Pupil riding to/from school Serious 38 low

Data missing or out of range Slight 24 low

Taking pupil to/from school Fatal 5 low

Pupil riding to/from school Fatal 2 low  
  
Query 8. Calculate the average age of vehicles involved in accidents , considering Day light and point of impact   
Ans .  
Declare @Point varchar(max)

Declare @light varchar(max)

Set @light = 'Darkness'

Set @Point = 'Front'

select

v.PointImpact,

a.lightconditions,

avg(v.agevehicle) Avgage,

Count(a.severity) total

from accident A

join vehicle V

on A.accidentIndex=V.accidentIndex

Group by v.PointImpact,lightconditions

having a.lightconditions = @light and v.PointImpact = @Point

Order by Avgage desc

---(Here we can filter the data as per our requirements, we can filter the data as per value inserted in Variables (@Point=PointImpact, @light= lightconditions))  
 Result :   
Front Darkness 8 19897