Modern Data Management & Business Intelligence

Assignment 3

*Authors:*

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# **QUERIES**

## Query 1

SELECT

count(\*) as numofaudis

FROM

Input i

inner join Cars c on i.vehicletypeid = c.id

where c.car\_make='Audi'

group by tumblingwindow (minute,1)

## Query 2

SELECT

count(\*) as numofcars,

c.color\_name colors

FROM

Input i

left join Colors c on i.colorid = c.color\_code

where i.spottype='Speed\_Limit\_Camera'

group by c.color\_name

,hoppingwindow (minute, 3, 1.5)

## Query 3

SELECT

i.colorid color,min(c.car\_model\_year) minyear

FROM

Input i

inner join Cars c on i.vehicletypeid = c.id

left join Colors co on i.colorid = co.color\_code

where i.spottype = 'Toll\_Station'

group by

tumblingwindow (second, 20),

i.colorid

## Query 4

SELECT

i.checkpointID tolls,

count(\*) countofviolations

FROM

Input i

inner join SpeedCameras sc on i.checkpointID = sc.id

where i.spottype = 'Speed\_Limit\_Camera'

and cast(i.speed as bigint) > cast(sc.SPEED\_LIMIT as bigint)

group by

slidingwindow (second, 60),

i.checkpointID

## Query 5

SELECT

co.color\_code color,

c.car\_model model,

count(\*) countofviolations

FROM

Input i

inner join SpeedCameras sc on i.checkpointID = sc.id

inner join Cars c on i.vehicleTypeID = c.id

left join Colors co on i.colorid = co.color\_code

where i.spottype = 'Speed\_Limit\_Camera'

and cast(i.speed as bigint) > cast(sc.SPEED\_LIMIT as bigint)

group by

slidingwindow (minute, 5),

co.color\_code,

c.car\_model

## Query 6

SELECT

i.licensePlate,

count(\*)

FROM

Input i

inner join WantedCars wc on i.licensePlate = wc.id

group by

slidingwindow (minute, 1),

i.licensePlate

## Query 7

SELECT

licensePlate,

count(\*)

FROM

Input

group by

slidingwindow (minute, 1),

licensePlate

having count(\*) >1

## Query 8

SELECT

c.CAR\_MAKE make,

count(\*) countofbmwcars

Into BMWCarsTotal

FROM

Input i

inner join SpeedCameras sc on i.checkpointID = sc.id

inner join Cars c on i.vehicleTypeID = c.id

where i.spottype = 'Speed\_Limit\_Camera'

and c.CAR\_MAKE = 'BMW'

group by

tumblingwindow (minute, 2),

c.CAR\_MAKE

SELECT

c.CAR\_MAKE make,

count(\*) countofviolations

Into BMWCarsViolations

FROM

Input i

inner join SpeedCameras sc on i.checkpointID = sc.id

inner join Cars c on i.vehicleTypeID = c.id

where i.spottype = 'Speed\_Limit\_Camera'

and cast(i.speed as bigint) > cast(sc.SPEED\_LIMIT as bigint)

and c.CAR\_MAKE = 'BMW'

group by

tumblingwindow (minute, 2),

c.CAR\_MAKE

select (bcv.countofviolations\*100)/bct.countofbmwcars percentage from BMWCarsViolations bcv

left join BMWCarsTotal bct on datediff(minute, bcv, bct) between 0 and 2