#Joining all data using union

SELECT\*,

CASE

WHEN PRICE < 35000 THEN 'HATCHBACK'

WHEN PRICE BETWEEN 35000 AND 80000 THEN 'SEDAN'

WHEN PRICE > 80000 THEN 'LUXORY'

END AS CAR\_CATEGORY

FROM MERC

UNION

SELECT \*,

CASE

WHEN PRICE < 35000 THEN 'HATCHBACK'

WHEN PRICE BETWEEN 35000 AND 80000 THEN 'SEDAN'

WHEN PRICE > 80000 THEN 'LUXORY'

END AS CAR\_CATEGORY

FROM bmw

UNION

SELECT \*,

CASE

WHEN PRICE < 35000 THEN 'HATCHBACK'

WHEN PRICE BETWEEN 35000 AND 80000 THEN 'SEDAN'

WHEN PRICE > 80000 THEN 'LUXORY'

END AS CAR\_CATEGORY

FROM hyndai

UNION

SELECT \*,

CASE

WHEN PRICE < 35000 THEN 'HATCHBACK'

WHEN PRICE BETWEEN 35000 AND 80000 THEN 'SEDAN'

WHEN PRICE > 80000 THEN 'LUXORY'

END AS CAR\_CATEGORY

FROM audi

ORDER BY YEAR,PRICE ;

--------AVG PRICE AVG MILEAGE AVG ENGINE

select model\_id ,brand,avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine ,count(model\_id) number\_of\_cars

from audi group by model\_ID ,brand

UNION

select model\_id ,brand,avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine ,count(model\_id) number\_of\_cars

from bmw group by model\_ID ,brand

UNION

select model\_id,brand ,avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine ,count(model\_id) number\_of\_cars

from hyndai group by model\_ID ,brand

UNION

select model\_id,brand ,avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine ,count(model\_id) number\_of\_cars

from merc group by model\_ID ,brand order by model\_ID

----high and low price

select brand,model\_id, max(price)Highest\_price,min(price)Low\_price from bmw group by brand, model\_ID

union

select brand,model\_id, max(price)Highest\_price,min(price)Low\_price from audi group by brand, model\_ID

union

select brand, model\_id, max(price)Highest\_price,min(price)Low\_price from merc group by brand, model\_ID

union

select brand,model\_id , max(price)Highest\_price,min(price)Low\_price from hyndai group by brand ,model\_id;

-------classes of citizen according to cars

SELECT brand,price,COUNT(ID) AS NUMBER\_OF\_PEOPLE,

CASE

WHEN PRICE < 33000 THEN 'LOWER\_INCOME\_CLASS'

WHEN PRICE BETWEEN 33000 AND 70000 THEN 'MIDDLE\_INCOME\_CLASS'

WHEN PRICE >70000 THEN 'UPPER\_INCOME\_CLASS'

END AS INCOME\_CLASS

FROM AUDI GROUP BY BRAND ,price

UNION

SELECT brand,price,COUNT(ID) AS NUMBER\_OF\_PEOPLE,

CASE

WHEN PRICE < 33000 THEN 'LOWER\_INCOME\_CLASS'

WHEN PRICE BETWEEN 33000 AND 70000 THEN 'MIDDLE\_INCOME\_CLASS'

WHEN PRICE >70000 THEN 'UPPER\_INCOME\_CLASS'

END AS INCOME\_CLASS

FROM hyndai GROUP BY BRAND ,price

UNION

SELECT brand,price,COUNT(ID) AS NUMBER\_OF\_PEOPLE,

CASE

WHEN PRICE < 33000 THEN 'LOWER\_INCOME\_CLASS'

WHEN PRICE BETWEEN 33000 AND 70000 THEN 'MIDDLE\_INCOME\_CLASS'

WHEN PRICE >70000 THEN 'UPPER\_INCOME\_CLASS'

END AS INCOME\_CLASS

FROM merc GROUP BY BRAND ,price

UNION

SELECT brand,price,COUNT(ID) AS NUMBER\_OF\_PEOPLE,

CASE

WHEN PRICE < 33000 THEN 'LOWER\_INCOME\_CLASS'

WHEN PRICE BETWEEN 33000 AND 70000 THEN 'MIDDLE\_INCOME\_CLASS'

WHEN PRICE >70000 THEN 'UPPER\_INCOME\_CLASS'

END AS INCOME\_CLASS

FROM bmw GROUP BY BRAND ,price ORDER BY NUMBER\_OF\_PEOPLE DESC;

-------NUMBER OF CAR SOLD

SELECT MODEL\_ID, BRAND, YEAR,COUNT(ID) UNIT\_SOLD FROM audi GROUP BY model\_ID,BRAND ,year

UNION

SELECT MODEL\_ID, BRAND, YEAR,COUNT(ID) UNIT\_SOLD FROM bmw GROUP BY model\_ID,BRAND ,year

UNION

SELECT MODEL\_ID, BRAND, YEAR,COUNT(ID) UNIT\_SOLD FROM merc GROUP BY model\_ID,BRAND ,year

UNION

SELECT MODEL\_ID, BRAND, YEAR,COUNT(ID) UNIT\_SOLD FROM hyndai GROUP BY model\_ID,BRAND ,YEAR ORDER BY year ;

------NUMBER OF CARS SOLD ACCORDING TO FUEL TYPE

select A.BRAND,count(a.model\_id) NUMBERS\_OF\_CARS ,f.fueltype from hyndai a join fueltype f

on a.fuel\_ID=f.fuel\_ID

group by f.fueltype,A.BRAND

UNION

select A.BRAND,count(a.model\_id) NUMBERS\_OF\_CARS ,f.fueltype from audi a join fueltype f

on a.fuel\_ID=f.fuel\_ID

group by f.fueltype,A.BRAND

UNION

select A.BRAND,count(a.model\_id) NUMBERS\_OF\_CARS ,f.fueltype from merc a join fueltype f

on a.fuel\_ID=f.fuel\_ID

group by f.fueltype,A.BRAND

UNION

select A.BRAND,count(a.model\_id) NUMBERS\_OF\_CARS ,f.fueltype from bmw a join fueltype f

on a.fuel\_ID=f.fuel\_ID

group by f.fueltype,A.BRAND order by NUMBERS\_OF\_CARS desC;

use SQL\_Project

select count(a.id) cnt ,a.brand,b.transmission from bmw as a join transmission as b on a.transmission\_ID=b.ID group by a.brand,b.transmission

union

select count(a.id) cnt,a.brand,b.transmission from hyndai as a join transmission as b on a.transmission\_ID=b.ID group by a.brand,b.transmission

union

select count(a.id)cnt,a.brand,b.transmission from merc as a join transmission as b on a.transmission\_ID=b.ID group by a.brand,b.transmission

union

select count(a.id) cnt\_trans ,a.brand,b.transmission from audi as a

join transmission as b on a.transmission\_ID=b.ID where transmission= 'semi-automatic' group by a.brand,b.transmission

CREATE DATABASE SQL\_Project

use SQL\_Project

select \* from fueltype

select \* from transmission

select \* from models

select \* from audi

select \* from cclass

select \* from hyndai

select \* from merc

select \* from bmw

select model\_id ,avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine ,count(model\_id) count\_of\_cars

from audi group by model\_ID order by count\_of\_cars desc

select model\_id ,avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine ,count(model\_id) count\_of\_cars

from bmw group by model\_ID order by count\_of\_cars desc

select model\_id ,avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine ,count(model\_id) count\_of\_cars

from hyndai group by model\_ID order by count\_of\_cars desc

select model\_id ,avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine ,count(model\_id) count\_of\_cars

from merc group by model\_ID order by count\_of\_cars desc

select brand, max(price)Highest\_price,min(price)Low\_price from bmw group by brand

select min(price) from bmw

select avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize) avg\_engine ,

count(model\_id) count\_of\_cars

from bmw

select avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine,count(model\_id) count\_of\_cars

from merc

select avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine,count(model\_id) count\_of\_cars

from audi

select avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine,count(model\_id) count\_of\_cars

from hyndai

select count(distinct model\_id) from models

--------no of cars according to fuel type

select count(a.model\_id) count\_of\_cars ,f.fueltype from hyndai a join fueltype f

on a.fuel\_ID=f.fuel\_ID

group by f.fueltype order by count\_of\_cars desc

-----no of cars according to transmission

select count(m.model\_id) Count\_of\_Cars ,t.transmission from hyndai m join transmission t

on m.transmission\_ID=t.ID

group by t.transmission order by Count\_of\_Cars desc

---------sales according to model name

select count(me.model\_id) count\_of\_cars ,m.model\_name from merc me join models m

on me.model\_ID=m.model\_ID

group by model\_name order by count\_of\_cars desc

------------total sales

select count(model\_id) from bmw

-----years

select year,COUNT(ID) from audi GROUP BY ID order by year;

select model\_id,year from bmw group by year,model\_ID

select \* , count(model\_id) over(partition by year) a from bmw order by a desc

------price

select price from bmw where price< 10000 group by price order by price desc

select price from audi group by price order by price desc

select price from merc group by price order by price

select price from hyndai group by price order by price asc

-------CLASSES IN UK

WITH CTE AS(

SELECT \*,

CASE

WHEN PRICE < 33000 THEN 'LOWER\_INCOME\_CLASS'

WHEN PRICE BETWEEN 33000 AND 70000 THEN 'MIDDLE\_INCOME\_CLASS'

WHEN PRICE >70000 THEN 'UPPER\_INCOME\_CLASS'

END AS INCOME\_CLASS

FROM AUDI

)

SELECT INCOME\_CLASS,COUNT(INCOME\_CLASS) OVER (PARTITION BY INCOME\_CLASS) FROM CTE

SELECT COUNT(LOWER\_INCOME\_CLASS),COUNT(MIDDLE\_INCOME\_CLASS),COUNT(UPPER\_INCOME\_CLASS)

FROM CTE

SELECT PRICE FROM CCLASS WHERE PRICE >100000

----------------Categorize the cars on the basis of their price

WITH CTE AS(

SELECT \*,

CASE

WHEN PRICE < 35000 THEN 'LOW\_PRICE'

WHEN PRICE BETWEEN 35000 AND 80000 THEN 'MEDIUM\_PRICE'

WHEN PRICE > 80000 THEN 'HIGH\_PRICE'

END AS CAR\_CATEGORY

FROM MERC

)

SELECT CAR\_CATEGORY,COUNT(CAR\_CATEGORY) OVER (PARTITION BY CAR\_CATEGORY) FROM CTE

use sql\_project

select model\_id,fuel\_ID,count(fuel\_id) as count\_fuelid from audi group by model\_ID, fuel\_ID

union

select model\_id, fuel\_ID,count(fuel\_id) as count\_fuelid from bmw group by model\_ID, fuel\_ID

union

select model\_id,fuel\_id, count(fuel\_id) as count\_fuelid from merc group by model\_id,fuel\_ID

union

select model\_id, fuel\_id ,count (fuel\_id)as count\_fuelid from hyndai group by model\_ID, fuel\_ID

order by model\_ID asc;

select bb.model\_name,aa.\* from(

select model\_id,fuel\_ID,count(fuel\_id) as count\_fuelid,avg(mileage/mpg) as average\_mileage from audi group by model\_ID, fuel\_ID

union

select model\_id, fuel\_ID,count(fuel\_id) as count\_fuelid,avg(mileage/mpg) as average\_mileage from bmw group by model\_ID, fuel\_ID

union

select model\_id,fuel\_id, count(fuel\_id) as count\_fuelid ,avg(mileage/mpg) as average\_mileage from merc group by model\_id,fuel\_ID

union

select model\_id , fuel\_id ,count (fuel\_id)as count\_fuelid,avg(mileage/mpg) as average\_mileage from hyndai group by model\_id,fuel\_ID) as aa

join models as bb on aa.model\_ID=bb.model\_ID order by average\_mileage desc

select bb.model\_name,aa.\* from(select model\_id , fuel\_id ,count (fuel\_id)as count\_fuelid from hyndai

group by model\_id,fuel\_ID

)as aa join models as bb on aa.model\_id=bb.model\_ID

select \*from hyndai

join fueltype on hyndai.fuel\_id=fueltype.fuel\_id

select brand,model\_ID ,year from hyndai order by year

select \*from hyndai

alter table hyndai add brand varchar(100) not null default 'Hyndai';

alter table audi add brand varchar(100) not null default 'Audi';

alter table bmw add brand varchar (100) not null default ' BMW';

alter table merc add brand varchar (100) not null default ' Mercedes';

alter table Cclass add brand varchar (100) not null default ' CClass';

-----CATEGORY ACCORDING TO PRICE

SELECT \*,

CASE

WHEN PRICE < 35000 THEN 'HATCHBACK'

WHEN PRICE BETWEEN 35000 AND 80000 THEN 'SEDAN'

WHEN PRICE > 80000 THEN 'LUXORY'

END AS CAR\_CATEGORY

FROM MERC

UNION

SELECT \*,

CASE

WHEN PRICE < 35000 THEN 'HATCHBACK'

WHEN PRICE BETWEEN 35000 AND 80000 THEN 'SEDAN'

WHEN PRICE > 80000 THEN 'LUXORY'

END AS CAR\_CATEGORY

FROM bmw

UNION

SELECT \*,

CASE

WHEN PRICE < 35000 THEN 'HATCHBACK'

WHEN PRICE BETWEEN 35000 AND 80000 THEN 'SEDAN'

WHEN PRICE > 80000 THEN 'LUXORY'

END AS CAR\_CATEGORY

FROM hyndai

UNION

SELECT \*,

CASE

WHEN PRICE < 35000 THEN 'HATCHBACK'

WHEN PRICE BETWEEN 35000 AND 80000 THEN 'SEDAN'

WHEN PRICE > 80000 THEN 'LUXORY'

END AS CAR\_CATEGORY

FROM audi

ORDER BY YEAR,PRICE ;

--------AVG PRICE AVG MILEAGE AVG ENGINE

select model\_id ,brand,avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine ,count(model\_id) number\_of\_cars

from audi group by model\_ID ,brand

UNION

select model\_id ,brand,avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine ,count(model\_id) number\_of\_cars

from bmw group by model\_ID ,brand

UNION

select model\_id,brand ,avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine ,count(model\_id) number\_of\_cars

from hyndai group by model\_ID ,brand

UNION

select model\_id,brand ,avg(price) avg\_price ,avg(mileage) avg\_mileage , avg(enginesize)

avg\_engine ,count(model\_id) number\_of\_cars

from merc group by model\_ID ,brand order by model\_ID

----high and low price

select brand,model\_id, max(price)Highest\_price,min(price)Low\_price from bmw group by brand, model\_ID

union

select brand,model\_id, max(price)Highest\_price,min(price)Low\_price from audi group by brand, model\_ID

union

select brand, model\_id, max(price)Highest\_price,min(price)Low\_price from merc group by brand, model\_ID

union

select brand,model\_id , max(price)Highest\_price,min(price)Low\_price from hyndai group by brand ,model\_id;

-------classes of citizen according to cars

SELECT brand,price,COUNT(ID) AS NUMBER\_OF\_PEOPLE,

CASE

WHEN PRICE < 33000 THEN 'LOWER\_INCOME\_CLASS'

WHEN PRICE BETWEEN 33000 AND 70000 THEN 'MIDDLE\_INCOME\_CLASS'

WHEN PRICE >70000 THEN 'UPPER\_INCOME\_CLASS'

END AS INCOME\_CLASS

FROM AUDI GROUP BY BRAND ,price

UNION

SELECT brand,price,COUNT(ID) AS NUMBER\_OF\_PEOPLE,

CASE

WHEN PRICE < 33000 THEN 'LOWER\_INCOME\_CLASS'

WHEN PRICE BETWEEN 33000 AND 70000 THEN 'MIDDLE\_INCOME\_CLASS'

WHEN PRICE >70000 THEN 'UPPER\_INCOME\_CLASS'

END AS INCOME\_CLASS

FROM hyndai GROUP BY BRAND ,price

UNION

SELECT brand,price,COUNT(ID) AS NUMBER\_OF\_PEOPLE,

CASE

WHEN PRICE < 33000 THEN 'LOWER\_INCOME\_CLASS'

WHEN PRICE BETWEEN 33000 AND 70000 THEN 'MIDDLE\_INCOME\_CLASS'

WHEN PRICE >70000 THEN 'UPPER\_INCOME\_CLASS'

END AS INCOME\_CLASS

FROM merc GROUP BY BRAND ,price

UNION

SELECT brand,price,COUNT(ID) AS NUMBER\_OF\_PEOPLE,

CASE

WHEN PRICE < 33000 THEN 'LOWER\_INCOME\_CLASS'

WHEN PRICE BETWEEN 33000 AND 70000 THEN 'MIDDLE\_INCOME\_CLASS'

WHEN PRICE >70000 THEN 'UPPER\_INCOME\_CLASS'

END AS INCOME\_CLASS

FROM bmw GROUP BY BRAND ,price ORDER BY NUMBER\_OF\_PEOPLE DESC;

-------NUMBER OF CAR SOLD

SELECT MODEL\_ID, BRAND, YEAR,COUNT(ID) UNIT\_SOLD FROM audi GROUP BY model\_ID,BRAND ,year

UNION

SELECT MODEL\_ID, BRAND, YEAR,COUNT(ID) UNIT\_SOLD FROM bmw GROUP BY model\_ID,BRAND ,year

UNION

SELECT MODEL\_ID, BRAND, YEAR,COUNT(ID) UNIT\_SOLD FROM merc GROUP BY model\_ID,BRAND ,year

UNION

SELECT MODEL\_ID, BRAND, YEAR,COUNT(ID) UNIT\_SOLD FROM hyndai GROUP BY model\_ID,BRAND ,YEAR ORDER BY year ;

------NUMBER OF CARS SOLD ACCORDING TO FUEL TYPE

select A.BRAND,count(a.model\_id) NUMBERS\_OF\_CARS ,f.fueltype from hyndai a join fueltype f

on a.fuel\_ID=f.fuel\_ID

group by f.fueltype,A.BRAND

UNION

select A.BRAND,count(a.model\_id) NUMBERS\_OF\_CARS ,f.fueltype from audi a join fueltype f

on a.fuel\_ID=f.fuel\_ID

group by f.fueltype,A.BRAND

UNION

select A.BRAND,count(a.model\_id) NUMBERS\_OF\_CARS ,f.fueltype from merc a join fueltype f

on a.fuel\_ID=f.fuel\_ID

group by f.fueltype,A.BRAND

UNION

select A.BRAND,count(a.model\_id) NUMBERS\_OF\_CARS ,f.fueltype from bmw a join fueltype f

on a.fuel\_ID=f.fuel\_ID

group by f.fueltype,A.BRAND order by NUMBERS\_OF\_CARS desC;